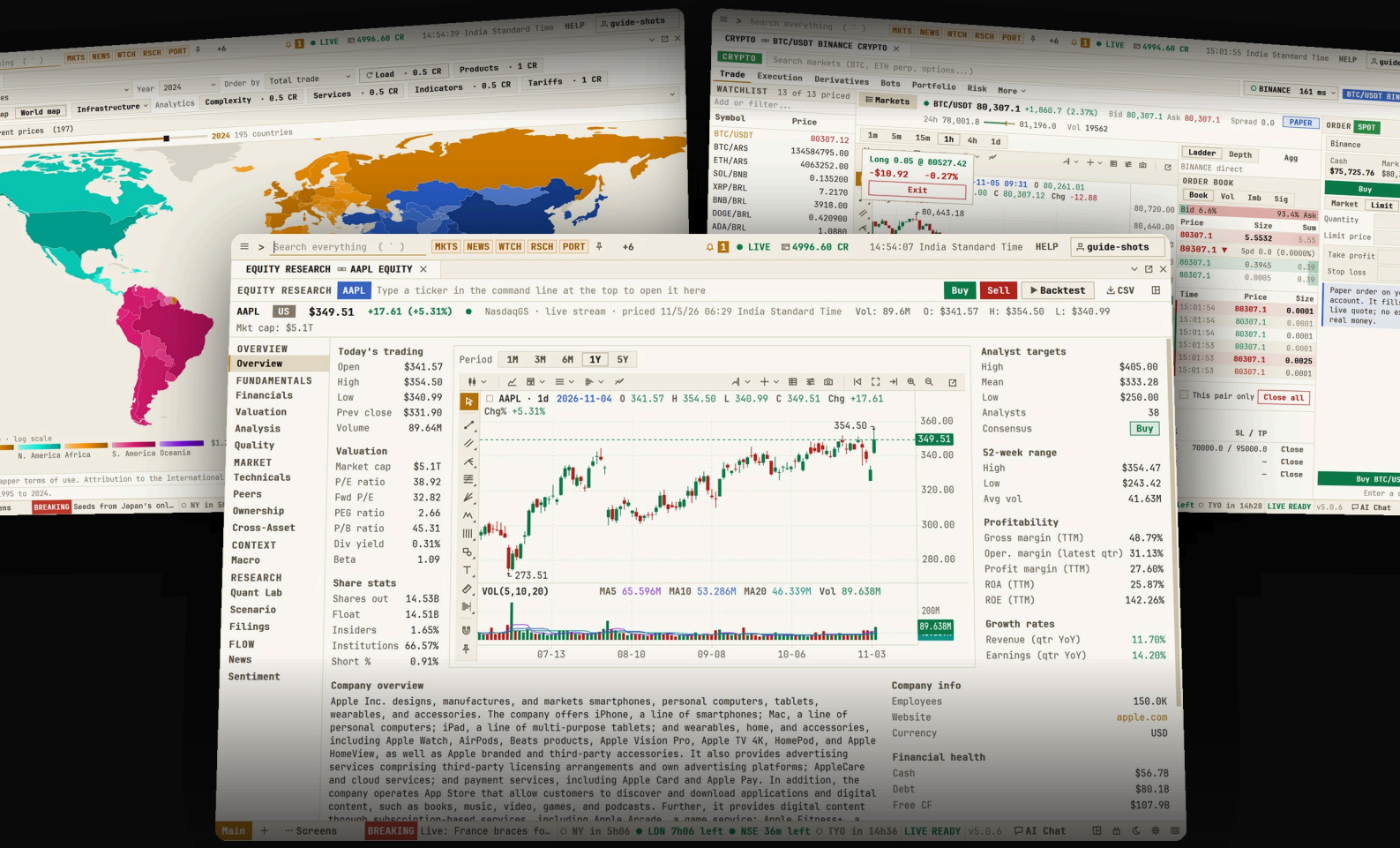
The Complete Guide to Fincept Terminal

Every screen, every button, every workflow — explained step by step for your first day, and in depth for your thousandth.



56	884	43	9
CHAPTERS	ILLUSTRATIONS	SCREENS COVERED	PARTS

For Fincept Terminal 5.0.6

Fincept Terminal — The Complete Guide

Second Edition · For Fincept Terminal 5.0.6 · November 2026

Every screenshot in this guide was captured from Fincept Terminal 5.0.6 running with live data. Prices, news and figures you see in the pictures are examples from the day they were taken; your screen will show today's data. Small differences in layout are normal when your window is a different size. Every picture shows the light theme; if you use the dark theme, the colours on your screen differ.

Fincept Terminal is updated often. When an update changes a screen, the in-app **Docs** screen and the **Release notes** on the **About** screen (**INFO**) describe what changed.

Nothing in this guide is investment advice. Examples that name companies, funds or strategies are there to show how the terminal works, not to recommend them. Trading involves risk, including the loss of your capital. Practise on Fincept Paper before you trade with real money.

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How to use this guide

This guide covers every screen of Fincept Terminal. Each chapter follows the same shape, so once you have read one you know where to look in all the others:

1. **Chapter opener** — what the screen is for, how to open it, what you need (a plan, a broker, a symbol) and what the chapter covers.
2. **Screen tour** — a full picture of the screen with numbered callouts. The numbers match the list under the picture.
3. **Quick start** — the shortest path to a useful result, in numbered baby steps. Start here on your first day.
4. **Task guides** — one section per job you will want to do, step by step with pictures.
5. **Reference** — every control, column, setting and option, in tables.
6. **For advanced users** — power features, shortcuts, automation with AI, linking screens, and how the numbers are calculated.
7. **Troubleshooting** — what to do when something does not look right.

Conventions

You see	It means
Add panel or **Add panel**	The name of a button, tab, menu item or field, exactly as it is written on the screen.
Settings › **Appearance** › **Theme**	A path: open each item in turn, left to right.
Ctrl + **K**	Press these keys together. On macOS, **Ctrl** is usually **⌘ Cmd**.
`MKTS`	A screen code. Type it in the command line at the top of the terminal and press **Enter** to open that screen.
3 on a picture	A callout. Find the same number in the list below the picture.
`AAPL`, `RELIANCE.NS`	Something you type: a ticker, a value, a formula.

Boxes

Tip

A faster or easier way to do something.

Note

Background that helps you understand what you see.

Careful

Something that can cost you money or work if you get it wrong. Read these.

Important

A rule or limit you need to know before you continue.

Why it works this way

The reason behind a behaviour that may surprise you.

If something goes wrong

The usual cause of a problem at this step, and the fix.

For advanced users

Depth for power users: precise behaviour, edge cases, automation. Safe to skip on a first read.

Plan & credits

Which plan includes a feature, and which actions use credits.

Do it with AI

The same job done by asking the terminal's AI, which can operate every screen for you.

Where to start

You do not need to read this guide from cover to cover. Pick the path that matches you, read those chapters in order, and use the rest as a reference when you need it. Every chapter name below is a link.

Everyone — your first hour

Chapter 2, Install and update p. 28 → **Chapter 3, Create your account** p. 38 → **Chapter 4, Your first ten minutes** p. 57 → **Chapter 5, The Terminal Window** p. 70 → **Chapter 6, The Command Line** p. 89. After these five chapters you can find and open anything in the terminal.

Investors and traders

Chapter 8, Dashboard p. 123 → **Chapter 9, Markets** p. 160 → **Chapter 10, Watchlist** p. 172 → **Chapter 15, Brokers & Accounts** p. 248 → **Chapter 16, Equity Trading** p. 264 → **Chapter 23, Portfolio** p. 430. Add **Chapter 17, F&O** p. 284 and **Chapter 18, Crypto Trading** p. 298 for those markets.

Research analysts

Chapter 22, Equity Research p. 392 → **Chapter 23, Portfolio** p. 430 → **Chapter 32, Global Data** p. 648 → **Chapter 45, Report Builder** p. 858 → **Chapter 46, Notes** p. 872. Add **Chapter 25, Derivatives** p. 493, **Chapter 27, M&A Analytics** p. 556 and **Chapter 28, Alternative Investments** p. 580 for specialist desks.

Quants and systematic traders

Chapter 24, Backtesting p. 464 → **Chapter 19, Algo Trading** p. 331 → **Chapter 31, AI Quant Lab** p. 623 → **Chapter 43, Code Editor** p. 833 → **Chapter 40, Node Editor** p. 776.

AI-first users

Chapter 37, AI Chat p. 719 → **Chapter 38, Agent Studio** p. 739 → **Chapter 39, Mission Control** p. 764 → **Chapter 41, MCP Servers** p. 810 → **Chapter 42, Use Your Own AI** p. 819.

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PART I

Getting Started

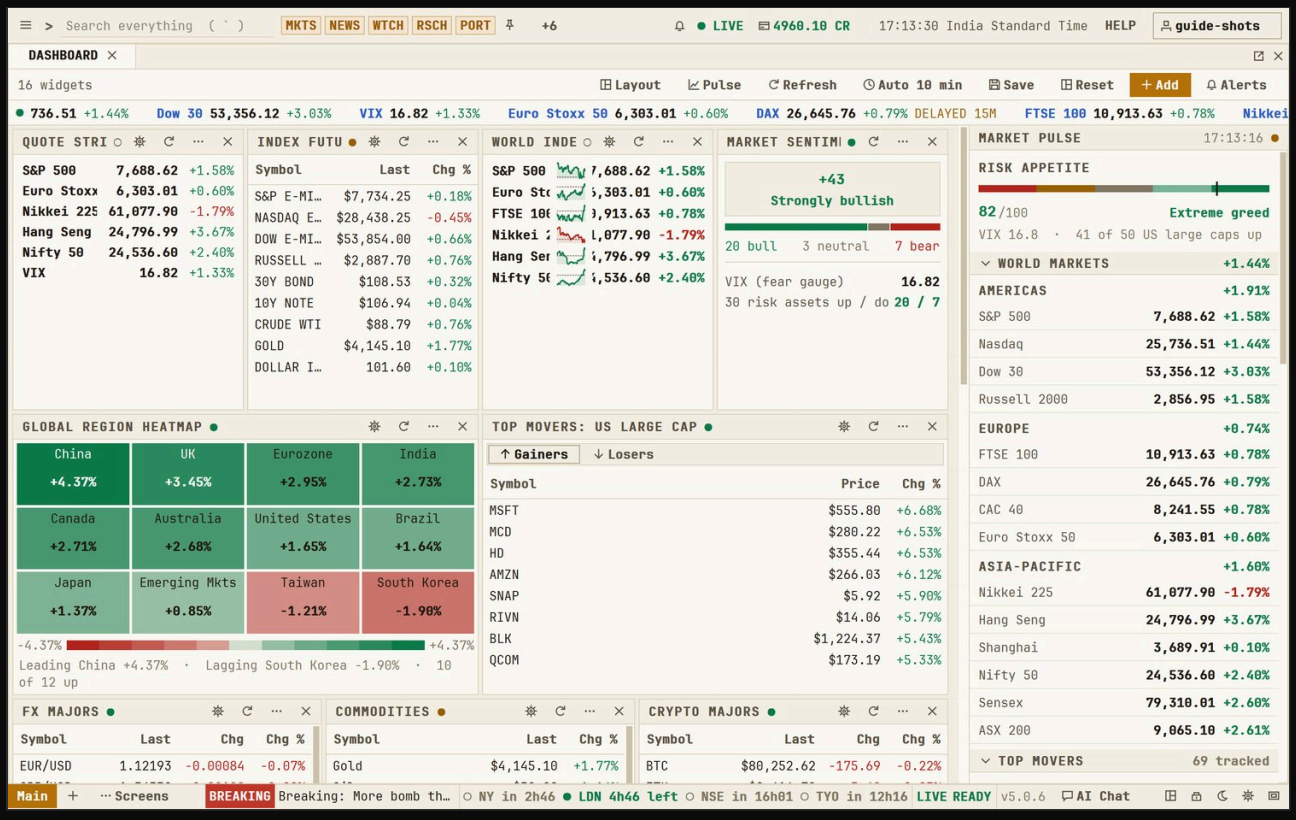
Install the terminal, create your account, and learn the shell every screen lives in — the command line, panels, workspaces and keyboard.

1	Welcome to Fincept Terminal
2	Install and update
3	Create your account
4	Your first ten minutes
5	The Terminal Window
6	The Command Line
7	Workspaces

CHAPTER 1

Welcome to Fincept Terminal

What Fincept Terminal is, a picture tour of its main areas, how the plans differ, and what is new in version 5.



At a glance

Open it	• Start Fincept Terminal and sign in
You need	• A Fincept account with an active plan
Best for	• Getting the big picture before you start • Seeing what changed in version 5
Time to learn	10 minutes to read
Related	**Chapter 2, Install and update** p. 28, **Chapter 3, Create your account** p. 38, **Chapter 4, Your first ten minutes** p. 57, **Chapter 5, The Terminal Window** p. 70

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1.1 What Fincept Terminal is

Fincept Terminal is a financial terminal for your desktop. One window brings together live market prices, company research, economic and world data, trading through your own brokers, practice trading, portfolio analysis, backtesting and an AI assistant that can work every screen for you.

It is a native application for Windows, macOS and Linux. It does not run in a web browser, so it stays fast with many screens open at once.

A few ideas run through the whole terminal:

- **Screens and panels.** Each job has its own screen — Markets, Portfolio, Equity Research, Crypto Trading and many more, over forty in all. Every screen you open is a panel. Put panels side by side, stack them as tabs, or move one to another monitor (**Chapter 5, The Terminal Window** p. 70).
- **One command line for everything.** Type a ticker, a company name, a screen code such as `MKTS`, or a command at the top of the window and press `Enter` (**Chapter 6, The Command Line** p. 89).
- **Your work lives in your account.** Workspaces, dashboards, portfolios, watchlists, notes, AI chats and settings are saved to your Fincept account. Sign in on another computer and they are there.
- **Practice before you trade.** Every account has **Fincept Paper**, a practice account with pretend money that trades at real market prices (**Chapter 15, Brokers & Accounts** p. 248).
- **AI that works the terminal.** The AI can read what is on your screen, open screens, click, type and fetch data — and asks you first before anything that spends credits, places an order or deletes something (**Chapter 37, AI Chat** p. 719).

Note

Nothing in Fincept Terminal or in this guide is investment advice. Prices and figures in the pictures are examples from the day they were captured.

1.2 A tour of the terminal

Here are some of the places you will spend time in. Each picture is the terminal as it looks with live data.

Dashboard

Your home screen: a board of live tiles — prices, charts, news, your portfolio, AI answers — that you arrange yourself. Your first dashboard is built for the job you told us you do (**Chapter 8, Dashboard** p. 123).

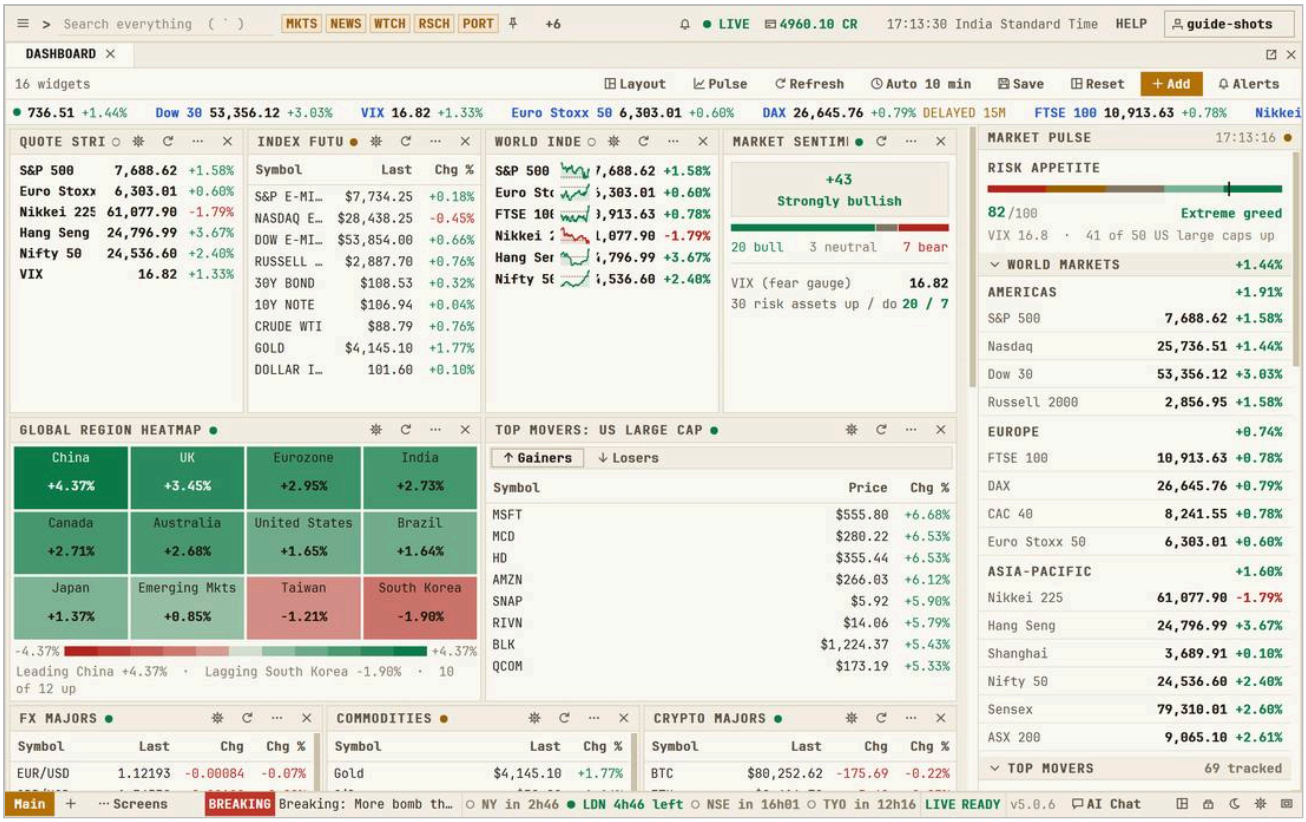


Figure 1.1 The Dashboard: live tiles on a grid, with the ticker on top.

Markets

Live prices for indices, currencies, commodities, bonds, ETFs and crypto, in panels you can edit (**Chapter 9, Markets** p. 160).

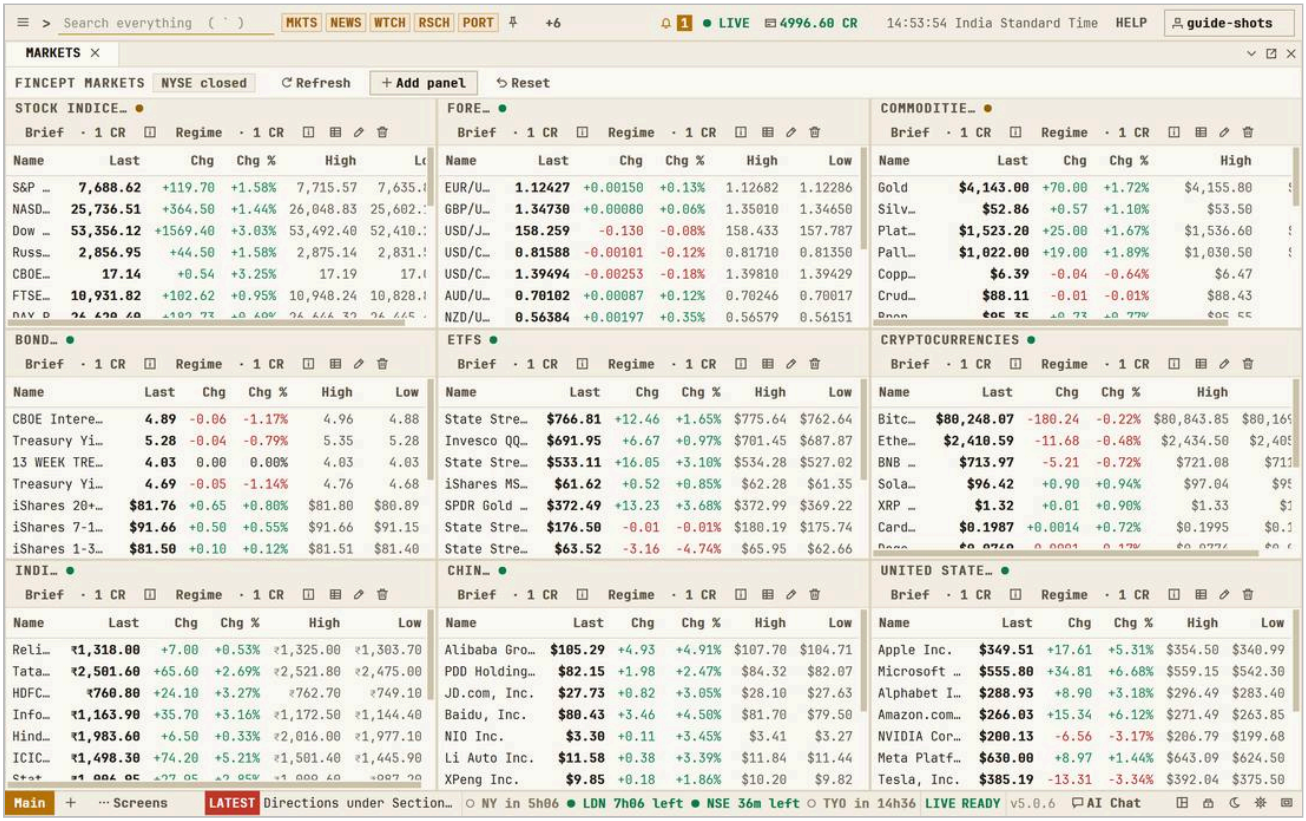


Figure 1.2 Markets: every major market on one screen.

Equity Research

Everything about one company: price and chart, financial statements, valuation, peers, ownership, filings, news and sentiment (**Chapter 22, Equity Research** p. 392).

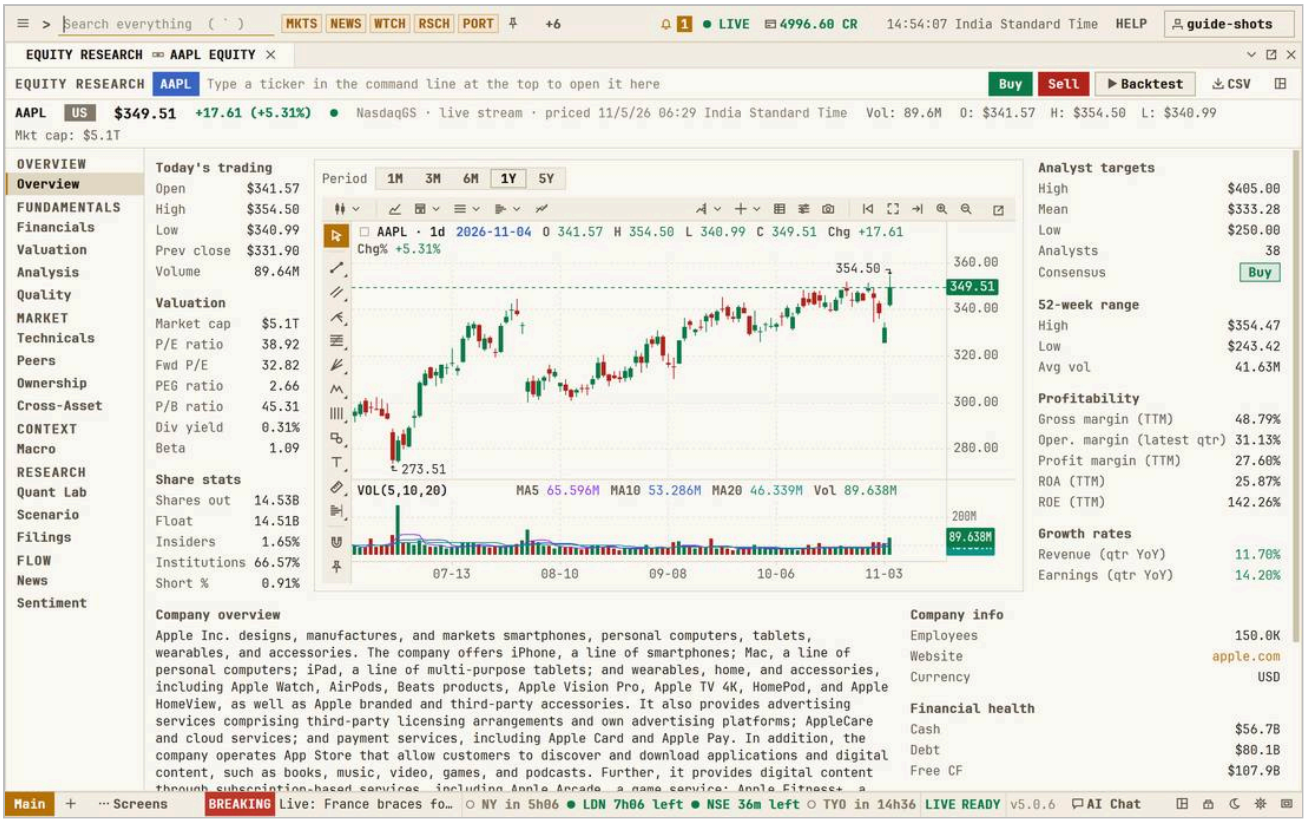


Figure 1.3 Equity Research, open on Apple (AAPL).

Portfolio

Your holdings, worked out from the transactions you record, with performance, risk, scenarios, rebalancing and reports (**Chapter 23, Portfolio** p. 430).

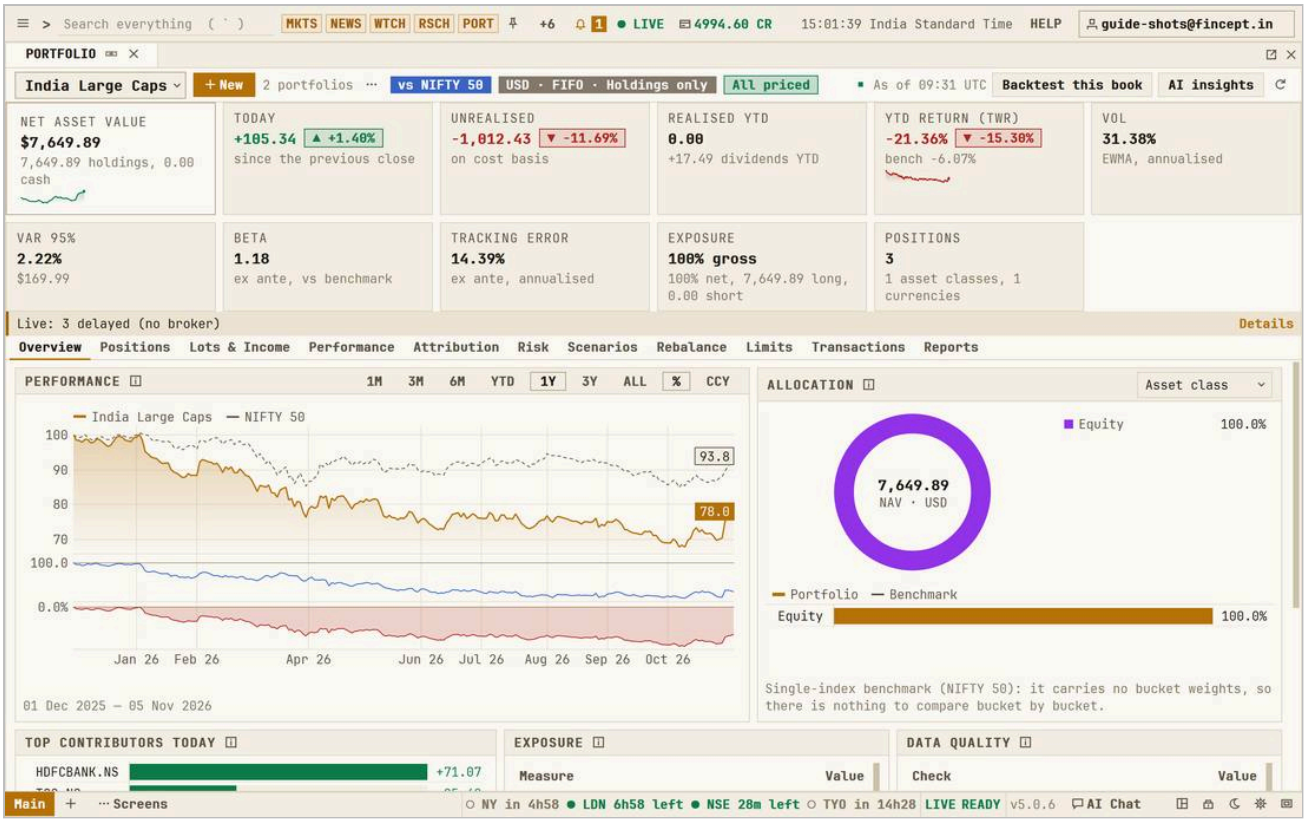


Figure 1.4 Portfolio: a book's value, risk figures and performance against its benchmark.

Trading: crypto, algorithms and derivatives

Trade crypto on fifteen exchanges, live or on paper (**Chapter 18, Crypto Trading** p. 298). Build automated strategies without code and run them on paper or with your broker (**Chapter 19, Algo Trading** p. 331). Analyse options with chains, strategies, greeks and volatility (**Chapter 25, Derivatives** p. 493).

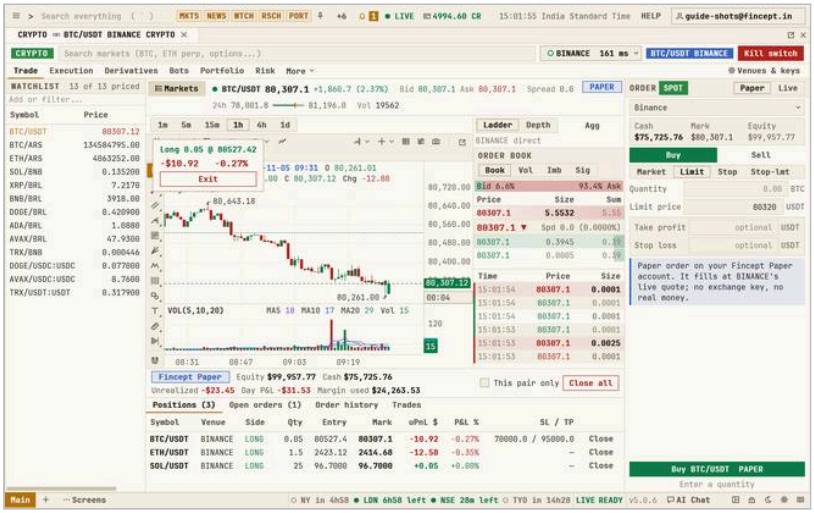


Figure 1.5 Crypto Trading: chart, order book and a paper ticket.

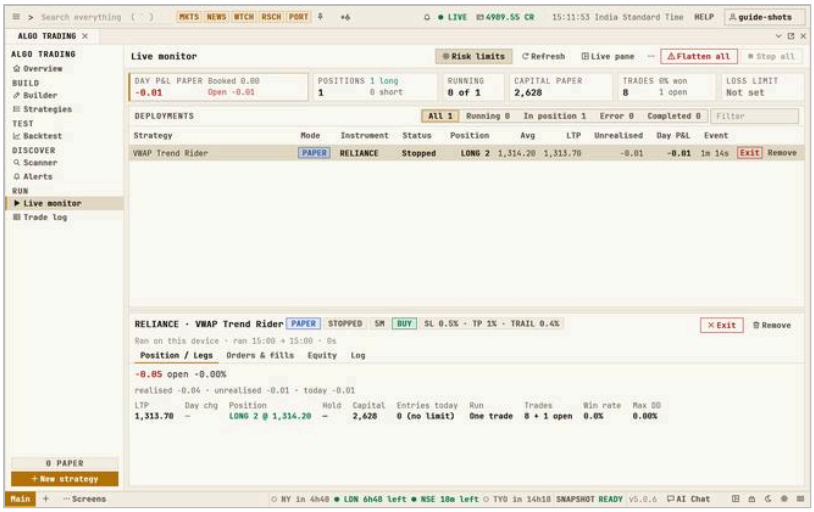


Figure 1.6 Algo Trading: the live monitor following a strategy on paper.

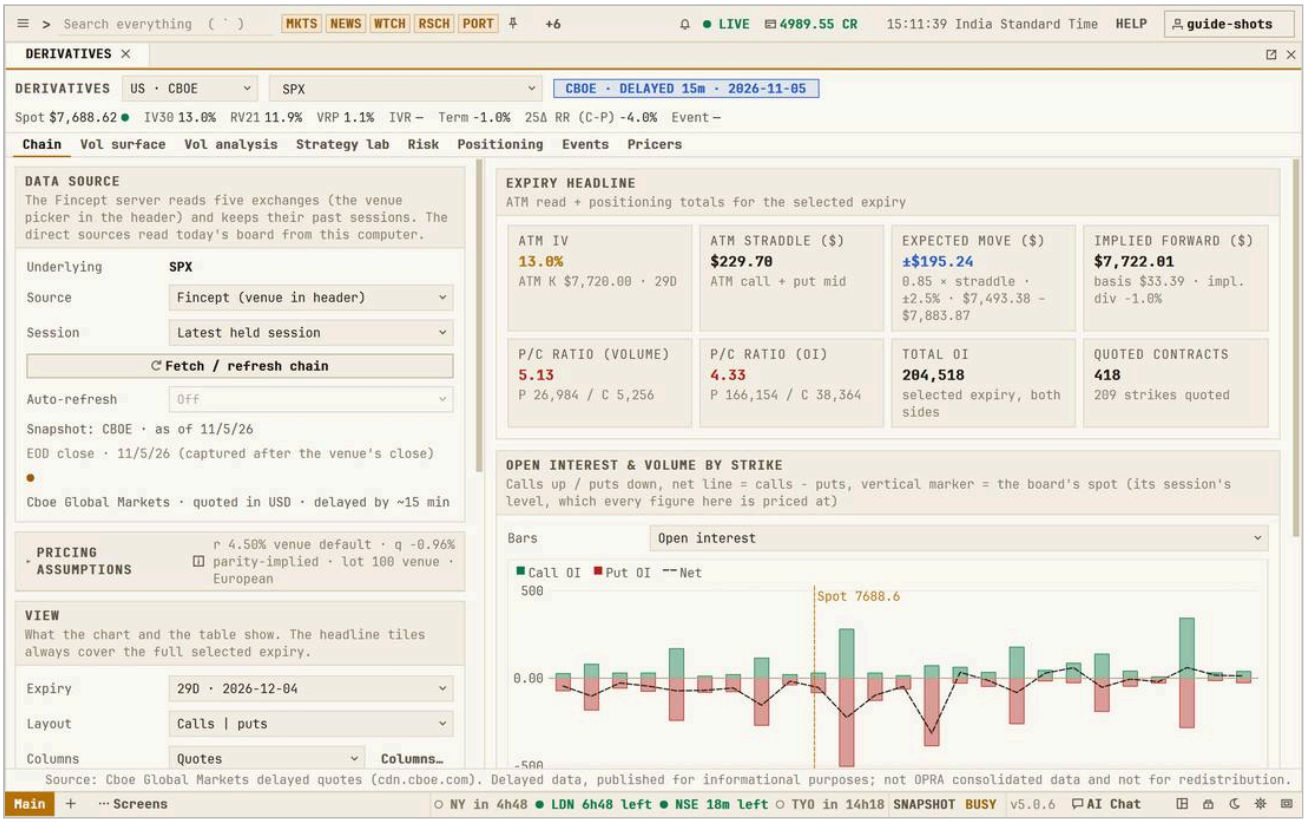


Figure 1.7 Derivatives: an option chain with its expiry headline and open interest by strike.

The world on a map

Economic data for every country, geopolitical events, global trade and shipping, drawn on maps you can explore (**Chapter 34, Global Economy** p. 672, **Chapter 35, Geopolitics** p. 688, **Chapter 36, Maritime** p. 699).

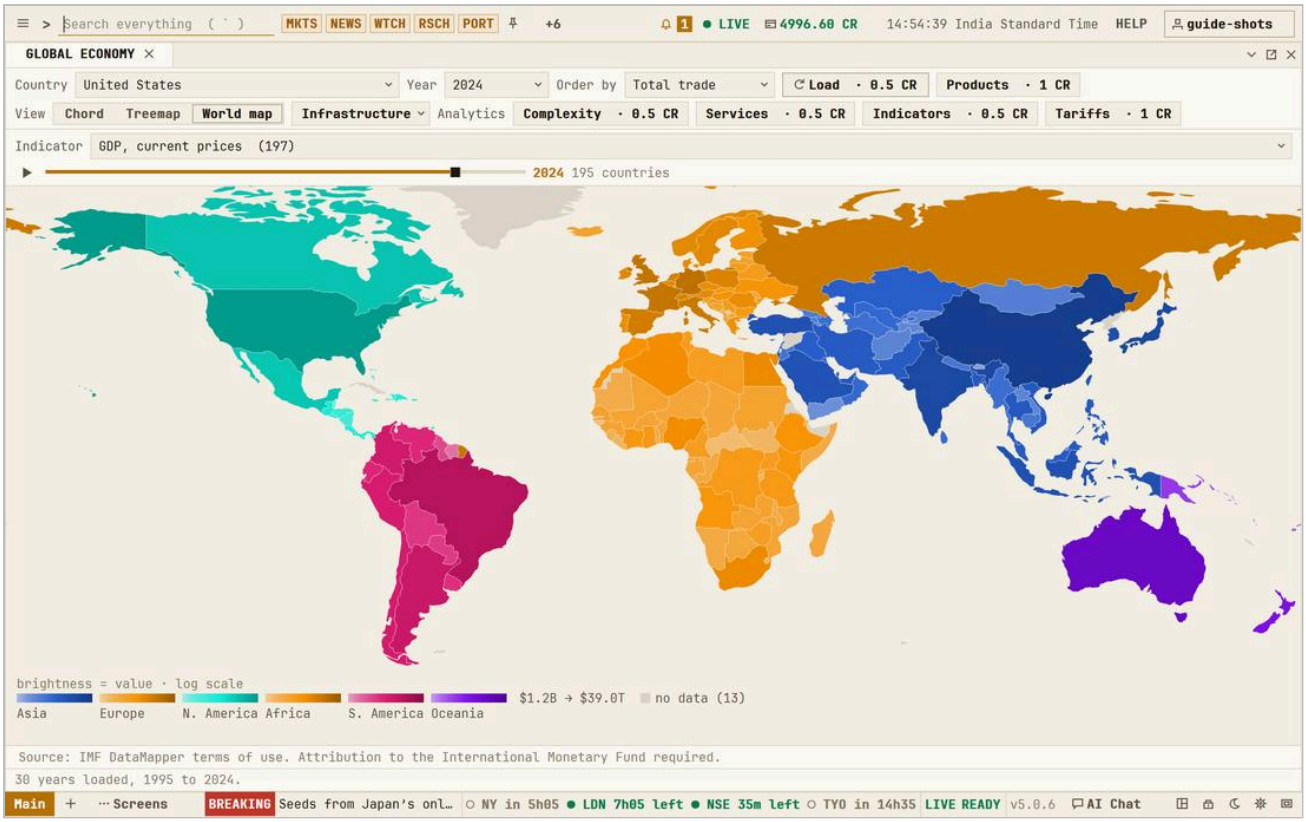


Figure 1.8 Global Economy: an economic indicator for every country on the World map.

AI Chat

Ask questions in plain words. The AI answers with live data, opens screens and works them for you (**Chapter 37, AI Chat** p. 719).

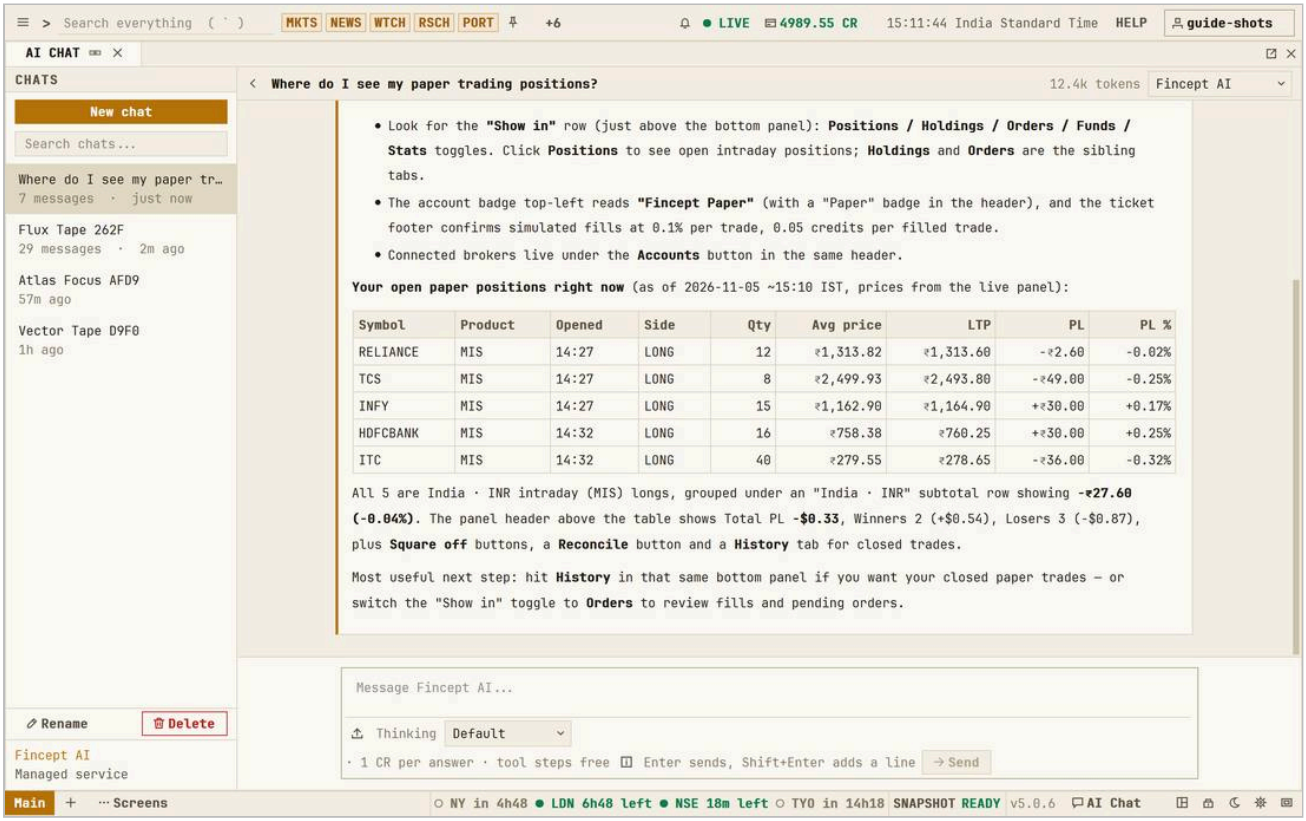


Figure 1.9 AI Chat: an answer built from live data, here about paper positions.

1.3 How the window is organised

Every screen sits in the same frame. Learn it once and every screen feels familiar. **Chapter 5, The Terminal Window** p. 70 covers it in depth.

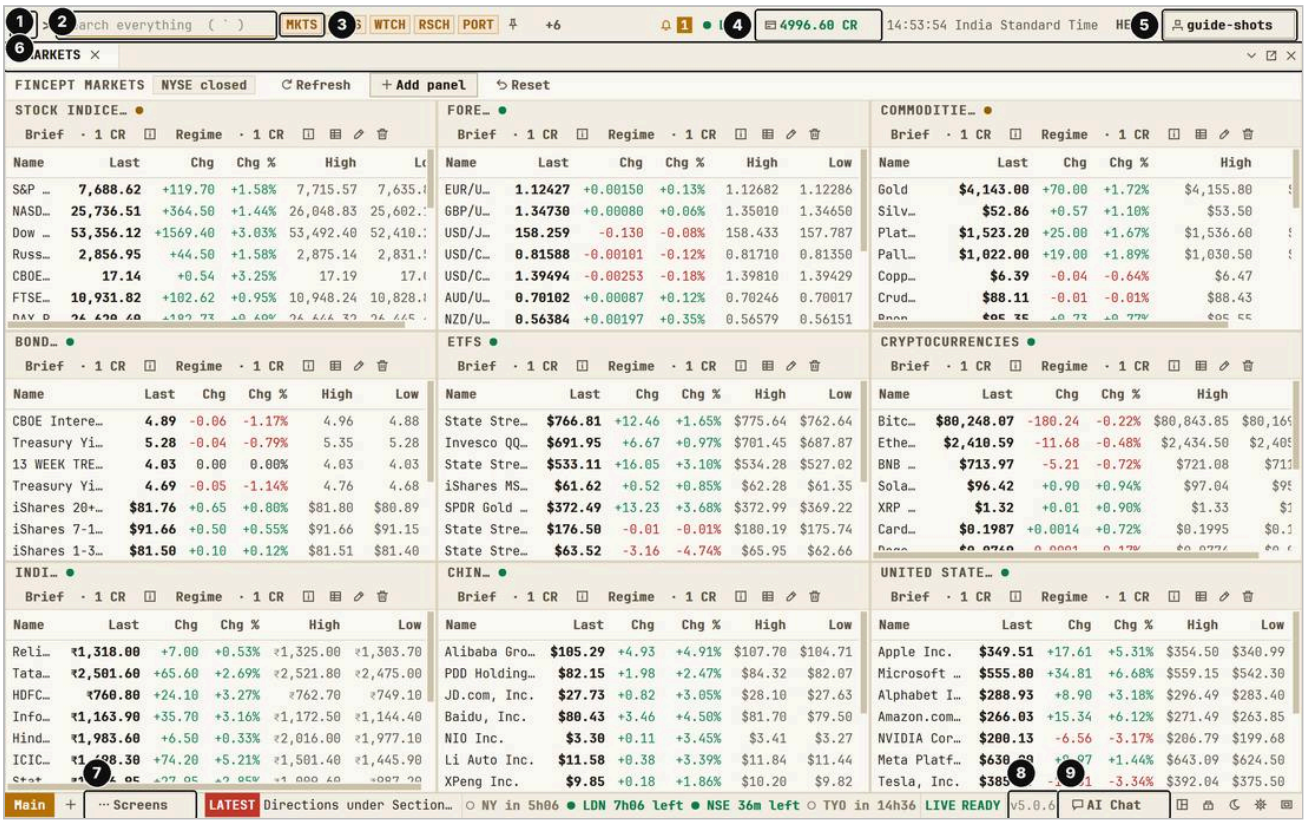


Figure 1.10 The parts of the window that are always there.

1. **Menu** — File, Navigate (every screen), View and Help.
2. **The command line.** Type a ticker, a screen or a command. Ctrl + K jumps here from anywhere.
3. **Quick launch** buttons for favourite screens.
4. Notices, live-data status and your **credits**.
5. **Account menu** — plan, profile, settings, lock, sign out.
6. **Panels.** Each open screen has a tab. Here, Markets.
7. Your **workspaces** and **Screens**, the list of every screen.
8. Market clocks, live-data status and the **version**.
9. **AI Chat** and buttons for lock, theme, settings and focus mode.

1.4 Plans at a glance

Fincept Terminal is for paying members. There are three plans, and every plan opens every screen but one ("Every tab, every tier"): **Crypto Trading** starts at Exclusive+, because it holds your own exchange keys. What changes is **how much** of each you get — credits, how many portfolios and watchlists you keep, how far back price history goes, how many broker accounts and computers you use — and a few capabilities that start on the higher plans.

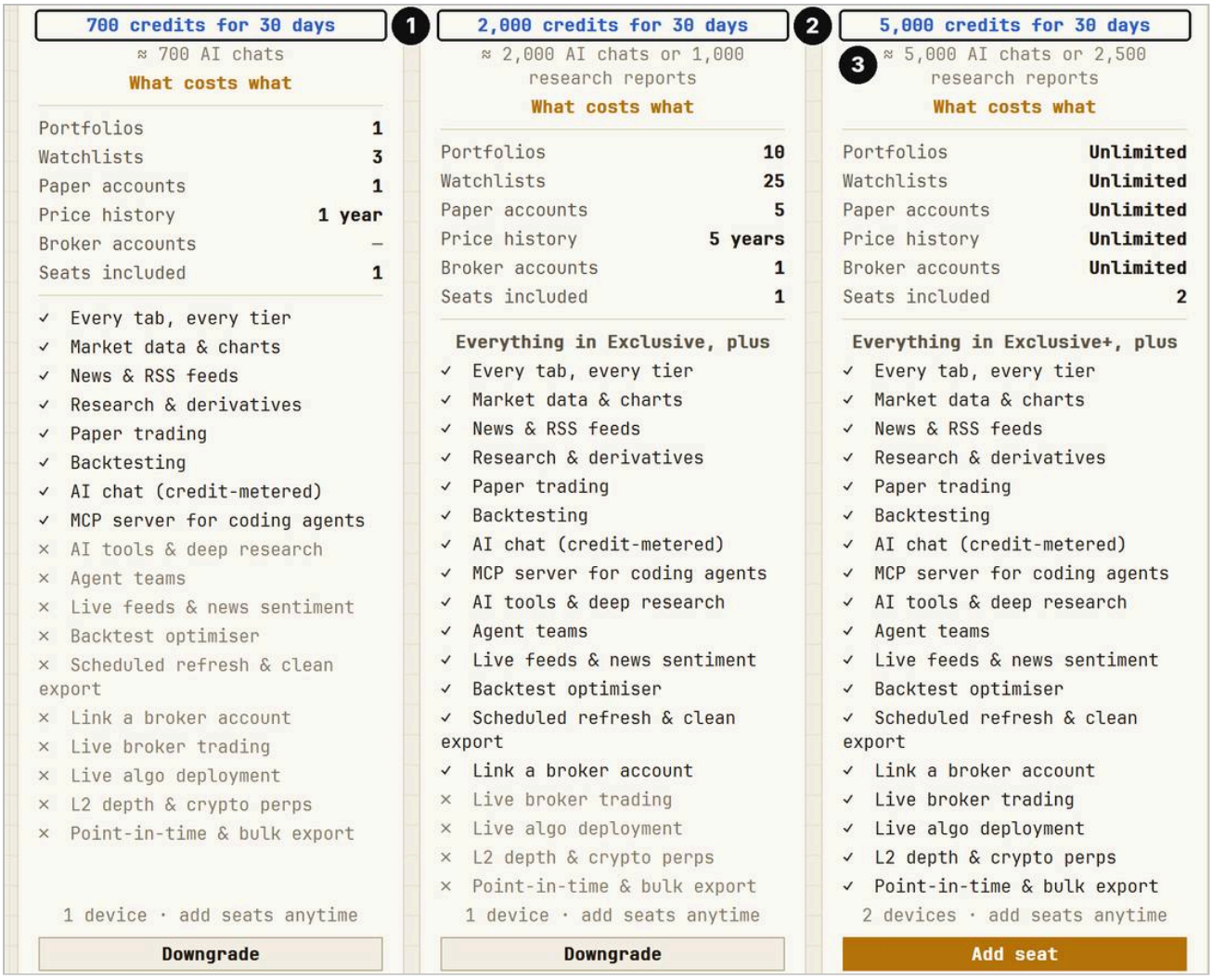


Figure 1.11 The plans page in the terminal (below the prices): what each plan includes. Type plans in the command line to open it.

1. **Exclusive** — monitor & track.
2. **Exclusive+** — research & analyse. Its list starts with "Everything in Exclusive, plus".
3. **Exclusive Pro** — execute & automate. On your own plan's card the button reads **Add seat**; the others read **Upgrade** or **Downgrade**.

The plans page showed these allowances when this guide was written. They are set by Fincept and can change; the page always shows the current ones.

	Exclusive	Exclusive+	Exclusive Pro
In a phrase	Monitor & track	Research & analyse	Execute & automate
Credits for 30 days	700 (≈ 700 AI chats)	2,000 (≈ 2,000 AI chats or 1,000 research reports)	5,000 (≈ 5,000 AI chats or 2,500 research reports)
Portfolios	1	10	Unlimited
Watchlists	3	25	Unlimited
Paper accounts	1	5	Unlimited
Price history	1 year	5 years	Unlimited
Broker accounts	—	1	Unlimited

	Exclusive	Exclusive+	Exclusive Pro
Seats (computers) included	1	1	2
Every tab, market data & charts, news & RSS feeds, research & derivatives, paper trading, backtesting, AI chat (paid in credits), MCP server for coding agents	✓	✓	✓
AI tools & deep research, agent teams, live feeds & news sentiment	—	✓	✓
Backtest optimiser, scheduled refresh & clean export	—	✓	✓
Link a broker account	—	✓	✓
Live broker trading, live algo deployment	—	—	✓
L2 depth & crypto perpetuals, point-in-time & bulk export	—	—	✓

One line is not on the plan cards: the **Crypto Trading** screen (exchange accounts, crypto paper and live trading) needs Exclusive+ or Exclusive Pro. On Exclusive it opens on a card that reads "Requires Exclusive+", with **Upgrade plan**. The Dashboard's crypto price tiles work on every plan.

In short: **Exclusive** is the whole terminal, apart from Crypto Trading, for watching markets, researching and practising on paper. **Exclusive+** adds Crypto Trading, the AI research tools, agent teams, live news sentiment, the backtest optimiser and one linked broker account. **Exclusive Pro** adds live trading through your brokers and live algo deployment, market depth and crypto perpetuals, bulk exports, the largest allowances and two seats.

What to know about plans:

- **Payment is one-time** for 30 or 90 days of access. Nothing renews by itself and there is nothing to cancel. The 90-day option costs less per month.
- **Credits** come with every plan, for each 30 or 90 days you buy. AI chats, research reports and some other actions (even a paper trade costs a few hundredths of a credit) use them; the plan card shows roughly how many AI chats the allowance buys. `Account menu › What credits cost` lists the price of every metered action, and you can buy more credits at any time.
- **Seats:** each plan card says how many devices it includes. You can add seats at any time (**§3.8 Seats and devices** p. 51).
- **Change plan:** open the plans page from the account menu (**Plan:** ***your plan***) or type `plans` in the command line. Your current plan shows **Current plan**; the others offer **Upgrade** or **Downgrade**.

A button that needs a higher plan keeps its name and shows a small lock. Clicking it opens a short window (**Not on your plan**) that says which plan includes it, with **See plans**; it never looks broken. **Chapter 50, Profile, Plan & Billing** p. 920 covers plans, credits, billing and invoices in full.

1.5 What's new in version 5

Version 5 is the subscriber edition of Fincept Terminal. These are the changes you will notice most. The full list for every version is in `About › Release notes` (**§2.6 Check for updates by hand** p. 33).

5.0.6 (November 2026)

- **The same terminal on every computer.** Sign in on a new computer and your workspaces, AI chat history, F&O strategies, data mappings, AI tasks and missions, Alpha Arena competitions, M&A deals, portfolio

insights and Excel workbooks are already there. Your language and theme follow you too.

- **Your own AI, free in every plan.** Claude Code, Codex or any model with an address and a key, found by the terminal and signed in from it (**Chapter 42, Use Your Own AI** p. 819).
- **Fincept MCP in one click:** `Settings › Fincept MCP` connects Fincept's data tools to the Claude Code and Codex on your computer, signed in by the terminal (**§42.9 Fincept MCP: Fincept inside your own coding agent** p. 825).
- **The AI works the terminal like you do:** it reads any screen, opens tabs, clicks, types and arranges panels, much faster than before, and asks first before spending credits, placing orders or deleting anything.
- **Missions and Mission Control:** give an AI agent a goal and a paper book and it works on it for days, with a journal, forecasts and a playbook you approve (**Chapter 39, Mission Control** p. 764).
- **Algo trading:** runs that end by themselves (**One trade**, **Today only** or **Every day until I stop it**), runs on Fincept's servers for a Fincept Paper strategy on one stock, weekday and days-to-expiry rules, and free F&O backtests.
- **Fincept Paper by market:** positions, holdings and orders split by market (India, US, crypto and more), each in its own currency.
- **Equity Research:** any spelling of a stock opens the same page, statements for companies outside the US, and NSE filings for Indian stocks.
- **Alternative Investments, M&A Analytics and Derivatives** reworked: more settings on every page, kept between sessions, and deeper analysis.
- **Dashboard:** 16 new widgets, three new templates (Command Center, Automation, Macro & Rates), and a tile menu to rename, duplicate or remove tiles and lock the layout.
- **Currency:** every price in its listing's own currency, and `Settings › Currency` for your home currency and number style.
- **Updates in one click:** new versions download in the background and install with one click, or when you close the terminal. On Windows the terminal now installs for your user only, so updates never ask for administrator permission.
- **Fixes:** charts no longer turn white, faster and steadier live prices with Indian brokers, price alerts that fire once, and fewer unexpected sign-outs (changing your password keeps you signed in on this computer). The sign-in pages now show the terminal's version.

Earlier 5.0 releases

Version	Highlights
5.0.5 (October 2026)	Your own Claude Code or Codex in the terminal (AI harness); nothing installed on first launch any more.
5.0.4 (September 2026)	Live prices everywhere, with a freshness label (LIVE, DELAYED, CLOSED, SNAPSHOT); your own databases and files in Data Sources; the notice bell in the header; the Help tab with support tickets.
5.0.3 (September 2026)	Portfolio rebuilt with ten views; Backtesting on a new server engine with validation; Crypto rebuilt as eleven screens; Concept Studio; Fund Research; economic calendar and world government bonds.
5.0.2 (August 2026)	Option chains with implied volatility and greeks on more exchanges; the AI can set up the F&O screen; updates replace the copy you run, including .deb and .rpm installs.
5.0.1 (August 2026)	Global Economy with a World Map and infrastructure layers (pipelines, cables, ports…); a formatting bar for spreadsheets; dashboard refresh intervals you choose.
5.0.0 (August 2026)	The first subscriber edition: trading through brokers and crypto exchanges, research desks, AI agents, your work synced to your account, in-place updates, a guided tour and built-in help.

1.6 How this guide is organised

The guide follows the terminal: Getting Started, Markets & Monitoring, Trading, Research & Analytics, Macro & World, AI & Automation, Tools & Workspace, and Account, Settings & Help, then a Reference part with every shortcut and screen code. **How to use this guide** and **Where to start**, at the front of the book, explain the chapter layout and suggest reading paths.

If you are new, read on: **Chapter 2, Install and update** p. 28, **Chapter 3, Create your account** p. 38 and **Chapter 4, Your first ten minutes** p. 57 take you from download to your first ten minutes.

1.7 Getting help

- **Ask the companion.** Click **AI Chat** in the bottom bar and ask any question about the terminal: where something is, what a screen does, what a number means.
- **Help center.** `Menu › Help › Help center` has getting-started pages and a page for every screen (**Chapter 52, Help, Docs and Support** p. 967).
- **Contact support.** `Menu › Help › Contact support...` sends a report to Fincept's support team from inside the terminal, and **My support tickets** follows the replies. You can also email support@fincept.in.

CHAPTER 2

Install and update

What your computer needs, how to install Fincept Terminal on Windows, macOS and Linux, how it keeps itself up to date, and how to remove it.



At a glance

Open it	• Download the installer from fincept.in • **Menu** › **Help** › **About Fincept** or `INFO` for the version
You need	• A 64-bit Windows, macOS (Apple silicon) or Linux computer • An internet connection
Best for	• Your first install • Knowing how updates arrive
Time to learn	5 minutes
Related	**Chapter 3, Create your account** p. 38, **Chapter 4, Your first ten minutes** p. 57, **Chapter 52, Help, Docs and Support** p. 967

In this chapter

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2.1 Screen tour

Installing happens outside the terminal, with the installer for your system. Inside the terminal, three places tell you about your version and updates: the version number at the right of the bottom bar, the **UPDATE** button that appears beside it when a new version is ready, and the **About** screen. (When the bottom bar is crowded — for example with several workspace tabs — the version number is the first thing it hides; About always shows it.)

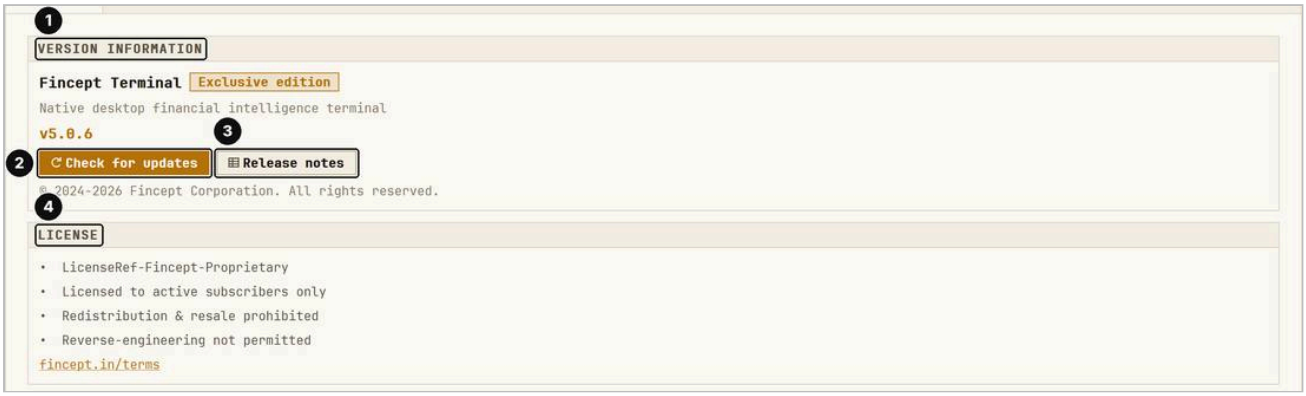


Figure 2.1 The top of the About screen (type INFO in the command line, or Menu > Help > About Fincept).

1. **Version information** — the version and edition you are running.
2. **Check for updates** asks Fincept for a newer version now.
3. **Release notes** — what changed in every version, built into the terminal.
4. **License** — the terms you use the terminal under, with a link to fincept.in/terms.

Further down the About screen:

- **Diagnostics — Crash dumps** shows the folder where crash reports are kept on this computer, and **Open folder** opens it. Support may ask for these files.
- **Resources — Official website** opens fincept.in, and **Contact support** opens the support form (**Chapter 52, Help, Docs and Support** p. 967).

2.2 Quick start

1. In your web browser, go to fincept.in and sign in to your Fincept account. The download area offers the installer for your computer.
2. Download it: `FinceptTerminal-5.0.6-windows-x64-setup.exe` on Windows, `FinceptTerminal-5.0.6-macos-arm64-setup.dmg` on a Mac, `FinceptTerminal-5.0.6-linux-x64-setup.run` on Linux.
3. Run it and follow the steps for your system below. The defaults are right for almost everyone.
4. Start **Fincept Terminal** from the Start menu, desktop, Applications folder or app menu.
5. Sign in, or create your account (**Chapter 3, Create your account** p. 38).

From then on the terminal keeps itself up to date: new versions download in the background and install with one click, or by themselves when you close the terminal.

2.3 System requirements

	Windows	macOS	Linux
System	Windows 10 or Windows 11, 64-bit (x64)	macOS 13 Ventura or later	64-bit (x64) distribution with glibc 2.35 or later, for example Ubuntu 22.04+, Debian 12+, Fedora
Processor	x64	Apple silicon (M1 or later)	x64
Installer	`.exe`	`.dmg`	`.run` (portable, self-updating), `.deb` (Debian, Ubuntu), `.rpm` (Fedora, RHEL)
Administrator rights	Not needed	Needed only to write to /Applications	Not needed for the `.run`; needed for `.deb` / `.rpm`

- **Internet:** required. Your account, live prices, AI and most data come from Fincept's servers. If the connection drops, the terminal says so and reconnects by itself.
- **Screen:** the window can be as small as 800 × 500, but most screens are designed for 1366 × 768 or larger. Several monitors work well: each can hold its own terminal window.
- **Disk space:** the Linux packages install about 0.5 GB of files. Leave room on top of that for your local data and for a downloaded update while it waits to install.
- **Seats:** each computer you sign in on uses one seat of your plan (**§3.8 Seats and devices** p. 51).

2.4 Install

Pick the section for your system. All three end the same way: start the terminal and sign in.

Windows

1. Double-click `FinceptTerminal-5.0.6-windows-x64-setup.exe`.
2. The installer wizard opens. Click **Next** through the pages. The default folder is `C:\Users\<you>\AppData\Local\Programs\FinceptTerminal`: it installs for your user only, so Windows does not ask for administrator permission.
3. Accept the licence, then click **Install**.
4. When it finishes, click **Finish**.
5. Start **Fincept Terminal** from the Start menu (folder **Fincept**) or from the new desktop shortcut.

Installing over an older copy

If Fincept Terminal is already installed, the installer asks "Fincept Terminal is already installed in: ... Update that installation?". **Yes** removes the installed version and puts the new one in its place; your data, settings and sign-in are kept. **No** lets you choose another folder, and you end up with two copies. Choose **Yes**.

Tip

An older copy in `C:\Program Files\FinceptTerminal` moves to your user folder with its next update. Windows asks for permission one last time for that move; later updates never ask. Re-pin the taskbar icon afterwards if you had pinned the old one.

macOS

1. Double-click `FinceptTerminal-5.0.6-macos-arm64-setup.dmg`. A window opens with **FinceptTerminal** and a shortcut to **Applications**.
2. Drag **FinceptTerminal** onto **Applications**.
3. Eject the disk image.
4. Open **FinceptTerminal** from Applications or Launchpad.

The app is signed and notarised by Fincept, so macOS opens it without an "unidentified developer" warning.

Careful

The Mac build is for Apple silicon (M1 and later). It does not run on Intel Macs.

Linux

Pick one of the three files.

Portable (`.run`) — recommended, updates itself

1. Make the file executable: `chmod +x FinceptTerminal-5.0.6-linux-x64-setup.run`
2. Run it: `./FinceptTerminal-5.0.6-linux-x64-setup.run`
3. Keep the file where you want it (for example `~/Applications`): the terminal runs from it, and updates replace it in place.

Debian or Ubuntu (`.deb`)

```
sudo apt install ./FinceptTerminal-5.0.6-linux-x64.deb
```

Fedora or RHEL (`.rpm`)

```
sudo dnf install ./FinceptTerminal-5.0.6-linux-x64.rpm
```

The `.deb` and `.rpm` install the terminal for every user under `/opt/fincept-terminal`, add **Fincept Terminal** to your app menu and a `fincept-terminal` command. The terminal can update these too; it asks for your password once each time, because the system package manager installs the update.

First start

The first time you start the terminal:

1. A window opens at about 90% of your screen, on the **Sign in** page. The version (for example **v5.0.6**) is at the top left.
2. Sign in, or click **Create an account** (**Chapter 3, Create your account** p. 38).
3. On a computer new to your account, set your PIN.
4. The terminal opens on your first dashboard (**Chapter 4, Your first ten minutes** p. 57).

Starting the terminal again while it is already open does not open a second copy: it brings the running window to the front. To open another window on purpose, use `Menu › File › New window` (**Chapter 5, The Terminal Window** p. 70).

2.5 Automatic updates

You never need to download a new version by hand. Here is what happens:

1. A few seconds after you sign in or unlock, and again about every six hours, the terminal asks Fincept whether a newer version exists. It also checks shortly after a new version is published.
2. If there is one, it **downloads in the background**, with no window and no question. The download is checked for tampering before it is used.
3. When the download is ready, two things appear:
   - an **UPDATE 5.0.7**-style button at the right of the bottom bar, beside the version number;
   - one **Update ready** message ("Fincept Terminal 5.0.7 is ready to install."), shown once per version. It never takes the keyboard focus, so a key you were typing into an order ticket cannot trigger it.
4. You choose:
   - **Restart & update** (or the **UPDATE** button): the terminal restarts into the new version. It takes about a minute and you stay signed in.
   - **Later**: keep working. The update installs by itself **when you close the terminal**, and the next start is the new version.
   - **Skip this version**: do not install this version. The terminal offers the next one.
5. The next start shows a notification: "Fincept Terminal was updated to 5.0.7."



Figure 2.2 The version number sits at the right end of the bottom bar. A ready update adds an UPDATE button beside it.

Note

Updates always replace the copy you are running, in the same folder, so you keep one installation, your settings and your session. The prompt never appears over the lock screen; it waits until you unlock.

Required updates

Sometimes a version is required, for example after a security fix. Then the message says **Update required** ("Fincept Terminal 5.0.7 is required. You have 5.0.6.") and offers only **Update now** / **Restart & update** or **Quit**. If the servers stop accepting your version, the terminal shows an **Update required** message with **Open Downloads Page**: download the latest installer and run it; your settings and data are kept.

2.6 Check for updates by hand

Use this when you hear about a new version and do not want to wait.

1. Click **Menu** › **Help** › **Check for updates**, or click **Check for updates** on the About screen, or type `update` in the command line and pick **Check for updates**.
2. If you are up to date, a message says "You're running the latest version (5.0.6)."
3. If a newer version exists, the **Update available** message shows what's new and its size, with **Update now**, **Later**, **Skip this version** and, when available, **View release notes**.
4. **Update now** downloads with a progress window ("Downloading Fincept Terminal 5.0.7...") and restarts into the new version with no second question. **Later** downloads it in the background and installs it when you close the terminal.

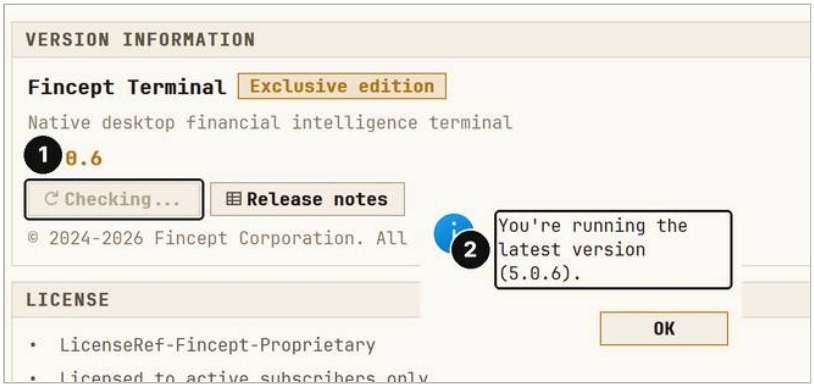


Figure 2.3 Checking for updates from the About screen when you already have the latest version.

1. The button reads **Checking...** while the terminal asks.
2. The answer when you are up to date.

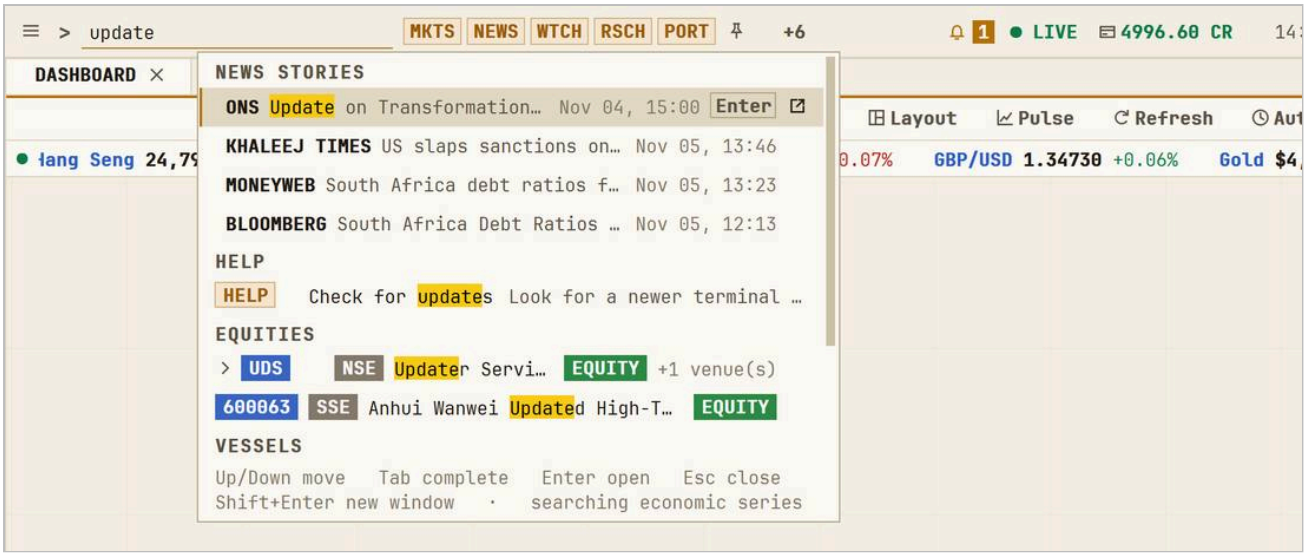


Figure 2.4 Typing "update" in the command line finds Check for updates.

Release notes

Every version carries its own release notes. Open **About** and click **Release notes** to read what changed in each version, newest first. **Back to About** returns.

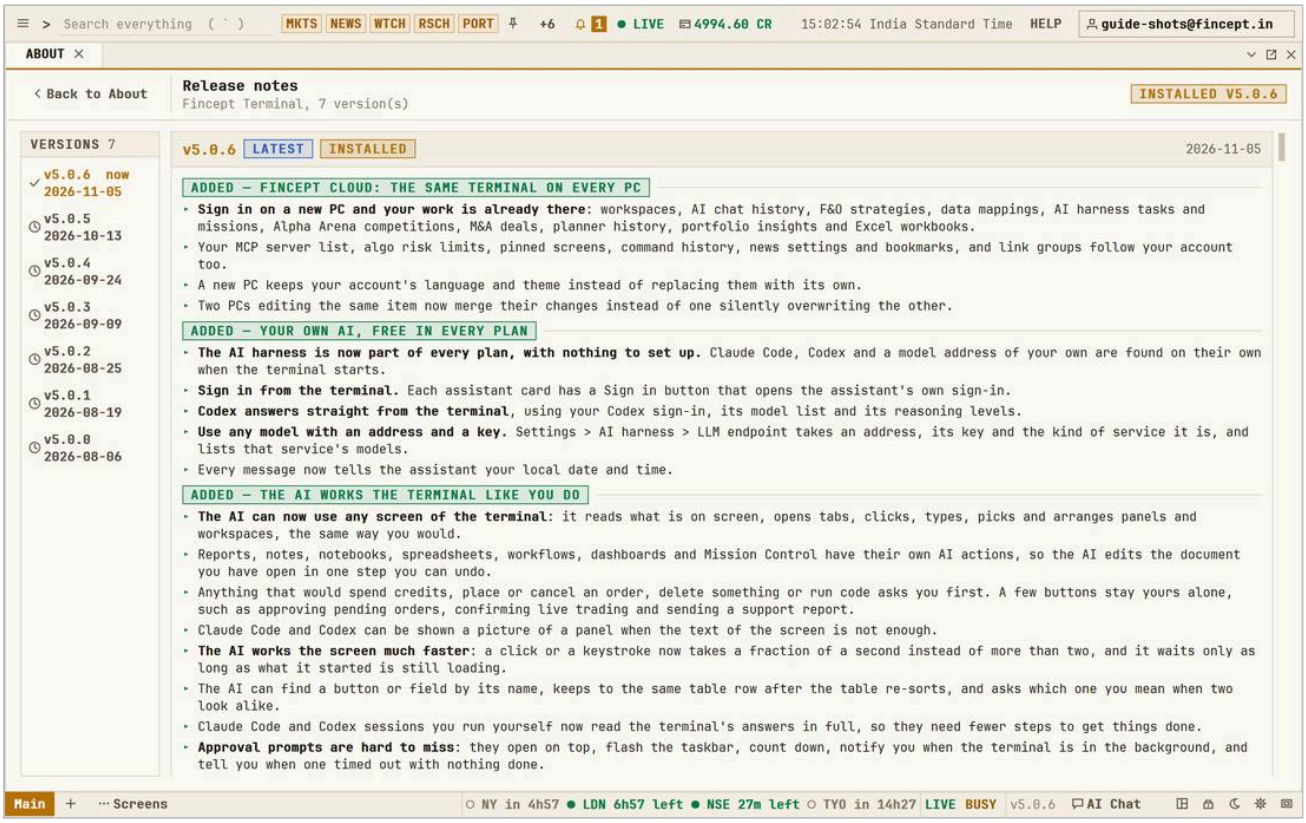


Figure 2.5 The release notes built into the terminal.

2.7 Uninstall

Your account and everything stored in it (workspaces, portfolios, chats, settings) stay safe on Fincept's servers when you uninstall. Only this computer's copy and local files are removed.

Windows

1. Open Windows **Settings > Apps > Installed apps**, find **Fincept Terminal**, and click **Uninstall**. (Or run `FinceptMaintenanceTool.exe` in the install folder.)
2. The uninstaller asks "Do you want to remove all Fincept Terminal user data?". **No** (the default) keeps your local data for a future reinstall. **Yes** also deletes this computer's local databases, logs, cached files, workspaces, saved broker and AI keys, and settings.

macOS

1. Quit the terminal and drag **FinceptTerminal** from Applications to the Trash.
2. Optional: to remove local data too, delete `~/Library/Application Support/com.fincept.terminal`.

Linux

- Portable `.run`: quit the terminal and delete the file. Local data is in `~/.local/share/com.fincept.terminal`.
- `.deb`: `sudo apt remove fincept-terminal`
- `.rpm`: `sudo dnf remove fincept-terminal`

Careful

Saved broker logins, AI keys and data-source passwords are kept only on the computer where you entered them. If you delete local data, enter them again on your next install.

Moving to a new computer

Install the terminal on the new computer and sign in. Your workspaces, dashboards, portfolios, chats and settings arrive from your account. Then release the old computer's seat in **Profile** › **Devices & seats** if you no longer use it.

2.8 Reference

Installer files

File	System	Installs to
`FinceptTerminal-<version>-windows-x64-setup.exe`	Windows 10/11 x64	`%LOCALAPPDATA%\Programs\FinceptTerminal` (you can choose another folder)
`FinceptTerminal-<version>-macos-arm64-setup.dmg`	macOS 13+ on Apple silicon	`/Applications` (drag and drop)
`FinceptTerminal-<version>-linux-x64-setup.run`	Linux x64, portable	Runs where you keep it
`FinceptTerminal-<version>-linux-x64.deb`	Debian, Ubuntu	`/opt/fincept-terminal`
`FinceptTerminal-<version>-linux-x64.rpm`	Fedora, RHEL	`/opt/fincept-terminal`

Update messages and their buttons

Message	Buttons	What each does
Update available	**Update now**, **Later**, **Skip this version**, **View release notes**	Download and restart now / download in the background and install on close / never offer this version / open the notes
Update ready	**Restart & update**, **Later**, **Skip this version**	Restart into it now / install when you close the terminal / do not install it
Update ready (copy that cannot update in place)	**Install update**, **Later**, **Skip this version**	The installer opens to finish the update and the terminal closes for it / install when you close the terminal / do not install it
Update required	**Update now** or **Restart & update**, **Quit**	Install the required version / close the terminal (a required update installs as it closes)
Update required (no build the terminal can install)	**Open Downloads Page**, **Close**	Download the latest installer and run it; your settings and data are kept
Update downloaded	**Open downloads page**, **Close**	The update could not install itself; the message shows where the downloaded file is
Updating Fincept Terminal (progress)	**Cancel** (not for required updates)	Stops the download
Update not installed	—	You dismissed the permission prompt; nothing changed and the update stays ready
Up to date	**OK**	"You're running the latest version (x.y.z)."

Where the terminal keeps local files

System	Folder
Windows	`%LOCALAPPDATA%\com.fincept.terminal`
macOS	`~/Library/Application Support/com.fincept.terminal`
Linux	`~/.local/share/com.fincept.terminal`

Downloaded updates wait in the `updates` folder inside it, with a log of the last update (`update.log`). Support may ask for it.

2.9 For advanced users

- **Only newer versions install.** The terminal never moves back to an older version, even if one is offered.
- **Every download is verified** against a checksum published with the release, and only Fincept's own download address is accepted. A mismatch deletes the file and stops the update.
- **Staged releases:** a new version may reach users in waves, so a colleague can be offered it a little before you.
- **Opening the terminal during an update:** if you start it while an update is being installed, a message says "Fincept Terminal is finishing an update and opens by itself in a moment." and the new version opens when it is ready.
- **If an update fails**, the previous version is put back and opens; the next start explains what happened.
- **Release notes in the update message** are a short extract. The full notes are in **About** › **Release notes**.

2.10 Troubleshooting

Windows asks for permission during an update

Your copy is in `C:\Program Files`. Allow it once: the update moves the terminal to your user folder, and later updates never ask. If you dismiss the prompt, nothing changes and the update stays ready ("Update not installed").

The UPDATE button never appears

Updates are checked after sign-in and every few hours. Use **Menu** › **Help** › **Check for updates** to check now. If it says you have the latest version, there is nothing to install.

The Mac says the app cannot be opened

Make sure you dragged it to Applications and that your Mac has Apple silicon (Apple menu > About This Mac shows an M-series chip). The Mac build does not run on Intel Macs.

Linux: "permission denied" when running the .run file

Make it executable first: `chmod +x FinceptTerminal-*-linux-x64-setup.run`.

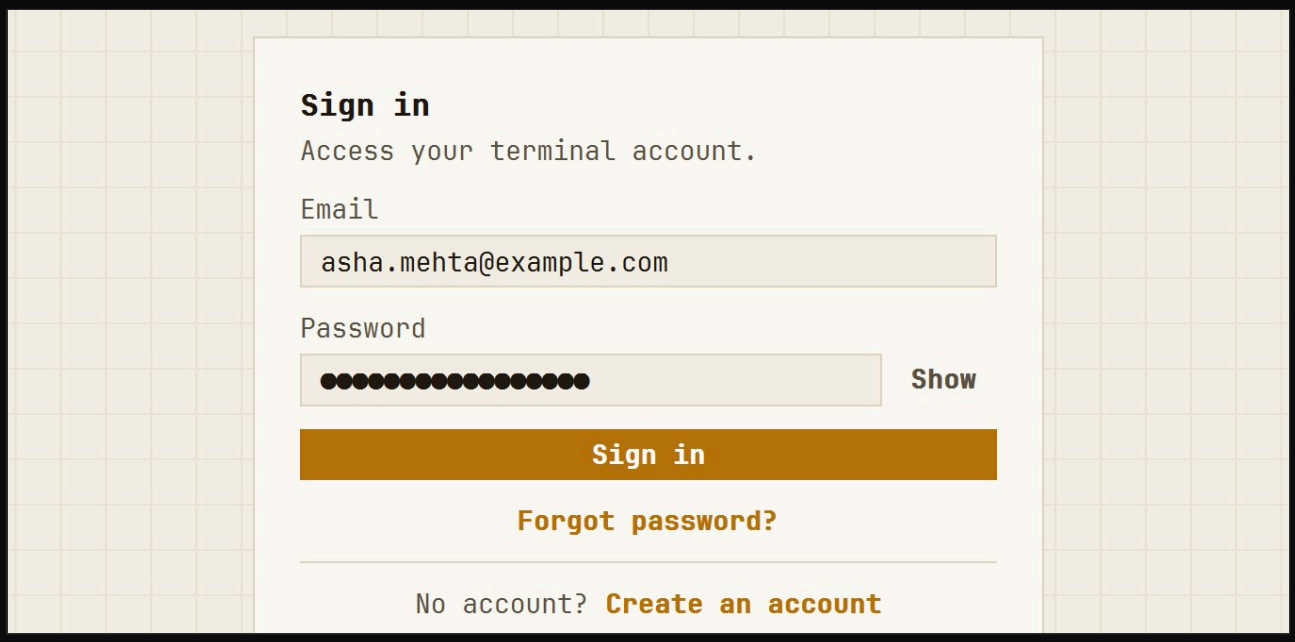
I have two copies installed

Run the newest installer and answer **Yes** to "Update that installation?". Then uninstall the other copy from Windows Settings, choosing **No** when asked about user data.

CHAPTER 3

Create your account

Sign up, confirm your email, choose a plan and set a six-digit PIN. Then signing in day to day, the lock screen, forgotten passwords and PINs, seats, and signing out.



At a glance

Open it	• The sign-in page is the first thing the terminal shows
You need	• An email address you can read • A plan to enter the terminal
Best for	• Your first start • A new computer or a forgotten password or PIN
Time to learn	10 minutes
Related	**Chapter 2, Install and update** p. 28, **Chapter 4, Your first ten minutes** p. 57, **Chapter 50, Profile, Plan & Billing** p. 920, **Chapter 51, Settings** p. 932

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3.1 Screen tour

Fincept Terminal opens on the sign-in page when nobody is signed in on this computer. It is a small card in the middle of the window. Everything you need to get in starts here.

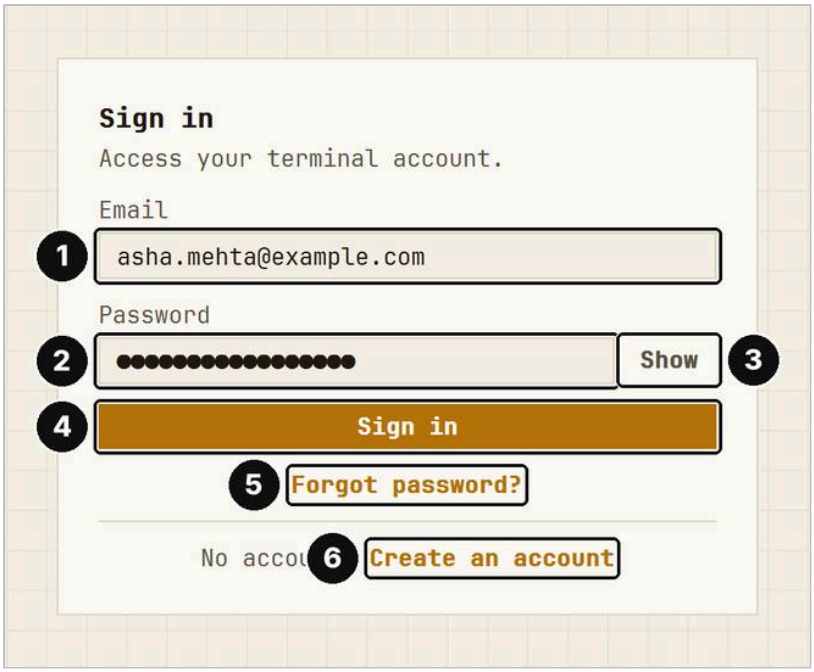


Figure 3.1 The sign-in page, with an email and password typed in.

1. **Email** — the address of your Fincept account.
2. **Password.** The dots hide what you type.
3. **Show** reveals the password so you can check it; it then reads **Hide**.
4. **Sign in** checks your email and password.
5. **Forgot password?** starts a password reset.
6. **Create an account** opens the sign-up form.

Two more things sit in the corners of the window: the terminal's version at the top left (for example **v5.0.6** — quote it when you contact support), and the **English** button at the top right, which changes the language of the screens before you sign in (**§3.5 Sign in and sign out** p. 47).

The sign-in page is one of four small pages that share the same look:

- **Sign in** — email and password (above).
- **Create account** — the sign-up form (**§3.3 Create an account** p. 41).
- **Reset password** — what to do when you forget it (**§3.7 Forgot your password or PIN** p. 49).
- **Verify your email** — where you type the six-digit code we email you (**§3.3 Create an account** p. 41).

After you sign in, more pages can appear before the terminal opens: **All seats in use** if every seat of your plan is held by another computer, **Plans & pricing** if your account has no active plan yet, and **Set up a PIN** (or **Enter your PIN**) to protect the terminal on this computer.

Note

If the computer is offline, the sign-in card shows a notice: "You're offline. We'll sign you back in automatically once the connection returns — no need to do anything." While the connection is being set up it says **Connecting to Fincept...**.

3.2 Quick start

Your very first start, from a fresh install to the terminal. Each step is explained in more detail later in this chapter.

1. Start Fincept Terminal. On the sign-in page, click **Create an account**.
2. Type your **First name**, **Last name** and **Email**. Check that **Country** shows your country, and type your **Phone** number.



Figure 3.2 The top of the sign-up form, filled in.

3. Click **Select what you do...** and pick the work closest to yours. Your first dashboard is built from this answer.
4. Type a **Password** of at least 10 characters that mixes letters with numbers or symbols, and type it again in **Confirm password**.
5. Click **Create account**. We email you a six-digit code.
6. Type the code on the **Verify your email** page and click **Verify**.
7. If your account has no plan yet, the **Plans & pricing** page opens. Choose a plan and pay in your browser. The page unlocks by itself when the payment goes through.

8 Choose a six-digit PIN, type it twice and click **Set PIN**. The terminal opens on your first dashboard.

> **Tip**
>
> Already have an account (for example, one you created on fincept.in)? Skip the sign-up: type your email and password on the sign-in page and click **Sign in**.

3.3 Create an account

Do this once, the first time you use Fincept. You can also sign up on the website; the account is the same.

1 On the sign-in page, click **Create an account** at the bottom of the card.



Figure 3.3 The empty sign-up form. Every field is required.

2 Type your **First name** and **Last name**. Together they become your user name, so they must make 3 to 50 characters.

3 Type your **Email**. This is the address you sign in with, and where we send your verification code.

4 Check **Country**. It starts on your computer's own region. To change it, click the field and start typing the country's name, then pick it from the list. You must pick a country from the list; free text is not accepted.

5 The **Code** box fills with your country's dialling code (for example **+1**). Type your **Phone** number beside it, without the code.

6. Click **Select what you do...**. The **What do you do?** window opens (next section). Pick your field and click **Continue**.

7. Type your **Password**. The bar and the line under the field tell you how good it is. Type it again in **Confirm password**.

8. Click **Create account**. The button reads **Creating...** while we set up your account, then the **Verify your email** page appears.

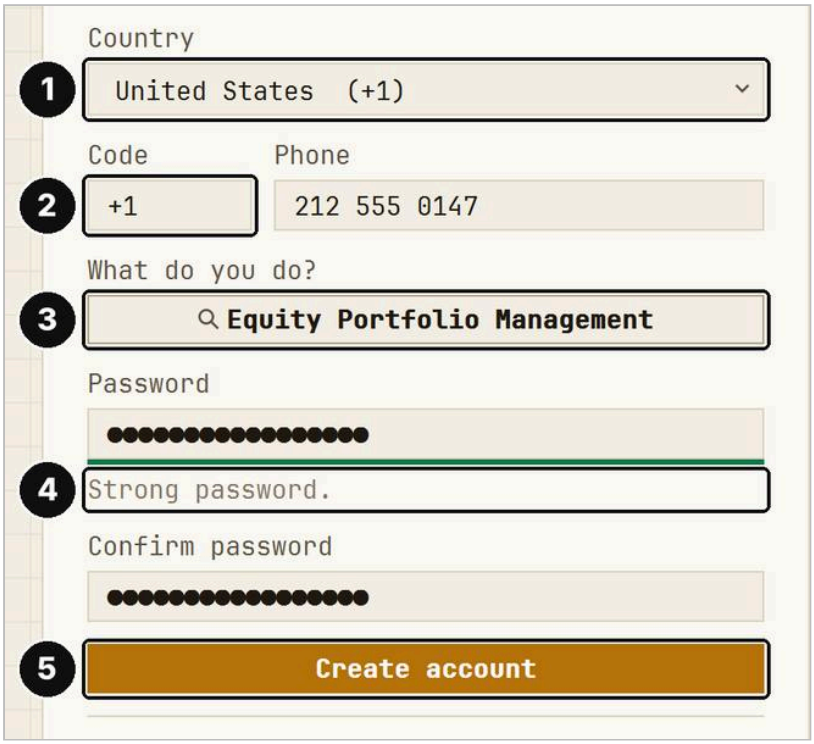


Figure 3.4 Ready to create the account: a field of work is chosen and the password is strong.

1. **Country** — pick it from the list. It sets your dialling code and points your first dashboard at your market.
2. **Code** — filled in from the country. You can change it.
3. **What do you do?** — the field you picked. Click it to change it.
4. The password check. The bar is red while the server would refuse the password, amber when it is acceptable and green when it is strong.
5. **Create account** sends the form.

Why the terminal asks what you do

Your answer decides your first dashboard: the markets, data, news and tools people in that job use, pointed at your country's exchange, currency and central bank. Nothing is locked in. You can change every tile later, or pick another desk from the dashboard's **Reset** button (**Chapter 8, Dashboard** p. 123).

Choose what you do

The **What do you do?** window lists the fields of finance. The line at the top says how many there are (in the picture, 173 specialisations across 27 areas of finance).

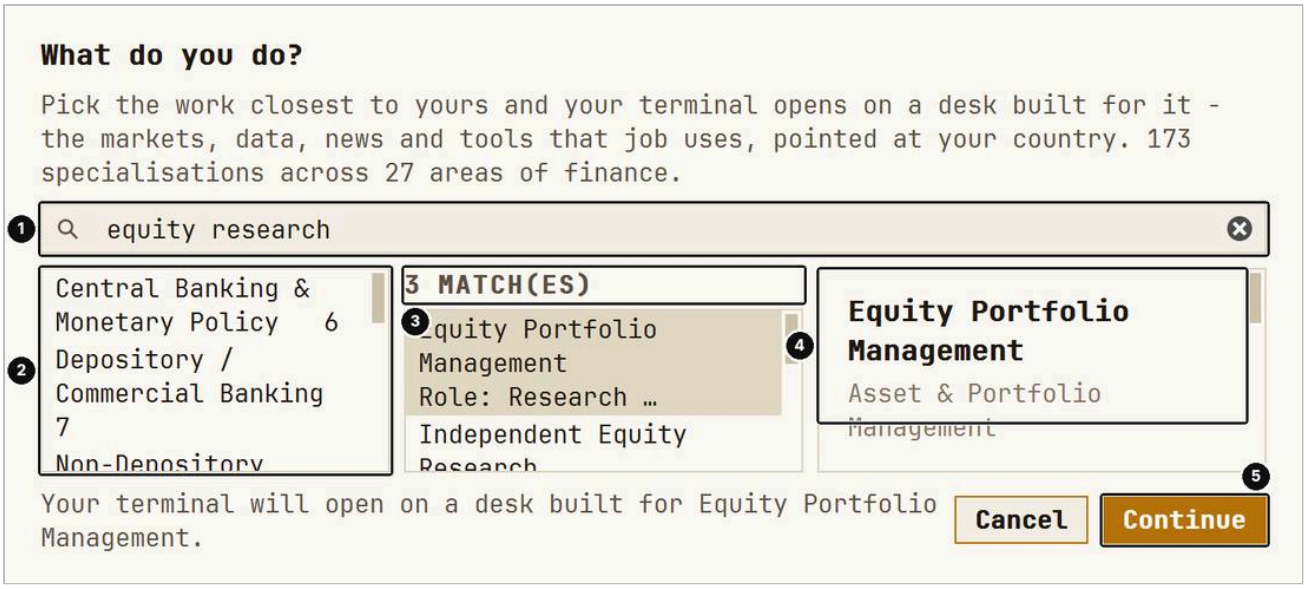


Figure 3.5 Searching the field list. The right column describes the field you picked.

1. Type a job title, a field or a skill. Results appear as you type.
2. The **areas** of finance, each with the number of fields in it. Click one to list its fields.
3. The fields that match your search, with the role or area that matched.
4. Details of the selected field: what the work looks like, your level, key skills, certifications, typical employers and education.
5. **Continue** keeps your choice and closes the window.

1. Type in the search box, for example `equity research`, `M&A`, `actuary` or `CFA`. Or click an area on the left to browse its fields.
2. Click the field closest to your work. The right column describes it. The line at the bottom reads "Your terminal will open on a desk built for ..." with your field.
3. Optional: under **Your level (optional)**, click your level. Click it again to clear it.
4. Click **Continue** (or double-click the field, or press `Enter`).

Tip

You can pick everything from the keyboard: type in the search box, press `Down` and `Up` to move through the results, and press `Enter`.

Note

If you click **Create account** before you pick a field, the **What do you do?** window opens by itself. Picking a field then creates the account straight away. If you close the window without a choice, the form says "Choose what you do to finish - your terminal is set up from it."

Some areas are for people who do not work in the finance industry (their tooltip says so). Pick one of those if you are a private investor or a student.

Password rules

Rule	What the form says
At least 10 characters	"Password must be at least 10 characters"
At most 512 characters	"Password must be at most 512 characters"
Letters mixed with numbers or symbols	"Password must mix letters with numbers or symbols"
Both password boxes match	"Passwords do not match"

The line under the password box explains the rule while you type: "At least 10 characters, mixing letters with numbers or symbols.", then "Good. Longer, or with a symbol, would be stronger." and finally "Strong password.". Upper-case letters are not required. Fincept's servers may also refuse a very common password.

Verify your email

Right after **Create account**, the terminal shows **Verify your email**. We have sent a six-digit code to the address you typed.

1. Open the email from Fincept and find the six-digit code.
2. Type it in the **6-digit code** box. The box accepts digits only.
3. Click **Verify** (or press Enter). The button reads **Verifying...** while we check the code.

- No email? Look in your spam folder, then click **Send a new code**. The page says "A new code is on its way. The previous one no longer works."
- A wrong or old code shows "That code is incorrect or has expired." Each wrong guess counts against a small limit, so check the code before you send it.
- **Back to sign in** returns to the sign-in page. Verification cannot be skipped: when you next sign in, the terminal sends a fresh code and asks again.

Why verification comes first

A plan cannot be bought until we know we can reach you, so the address is confirmed before the plans page opens.

Choose a plan

Fincept Terminal is for paying members. When an account with no active plan signs in, the terminal shows **Plans & pricing** instead of the terminal itself.

1. Pick **30 days** or **90 days** at the top. The 90-day option shows its saving.
2. Read the three plan cards: **Exclusive**, **Exclusive+** and **Exclusive Pro**. **§1.4 Plans at a glance** p. 23 explains what differs between them.
3. Click **Choose plan** on the card you want. Your web browser opens the payment page, and the button reads **Opening browser...**.

4. Pay in the browser. The terminal says "Complete your payment in the browser. This screen unlocks automatically when it goes through — you don't need to sign in again."
5. Come back to the terminal. When the payment is confirmed, it moves on to the PIN set-up.

Payments are one-time: 30 or 90 days of access, with no automatic renewal and nothing to cancel. Prices change from time to time, so this guide does not print them: the **Plans & pricing** page always shows the current price.

> **Tip**
>
> Paid already, on the website or another computer? Click **Already paid? Refresh status** at the bottom of the page. The page also checks by itself every 20 seconds while it is open.

On this page, **Sign out** is the only other way out: an account with no plan cannot enter the terminal. Once you have a plan, the same page is still there to upgrade, add a seat or compare plans; open it from the account menu (**Chapter 50, Profile, Plan & Billing** p. 920).

3.4 Set up your PIN

The first time you sign in on a computer, the terminal asks for a six-digit PIN. From then on the PIN — not your password — opens the terminal on that computer, and unlocks it after a break.

1. Think of six digits you will remember. Avoid six of the same digit (111111) and runs such as 123456 or 987654: the terminal refuses them as too simple.
2. Type the PIN in **PIN**, press `Enter`, and type it again in **Confirm PIN**.
3. Click **Set PIN** (or press `Enter`). The button reads **Working...** for a second or two while the PIN is registered with Fincept.
4. The terminal opens.

If the two PINs differ, both boxes clear and the page says "PINs do not match": type them again.

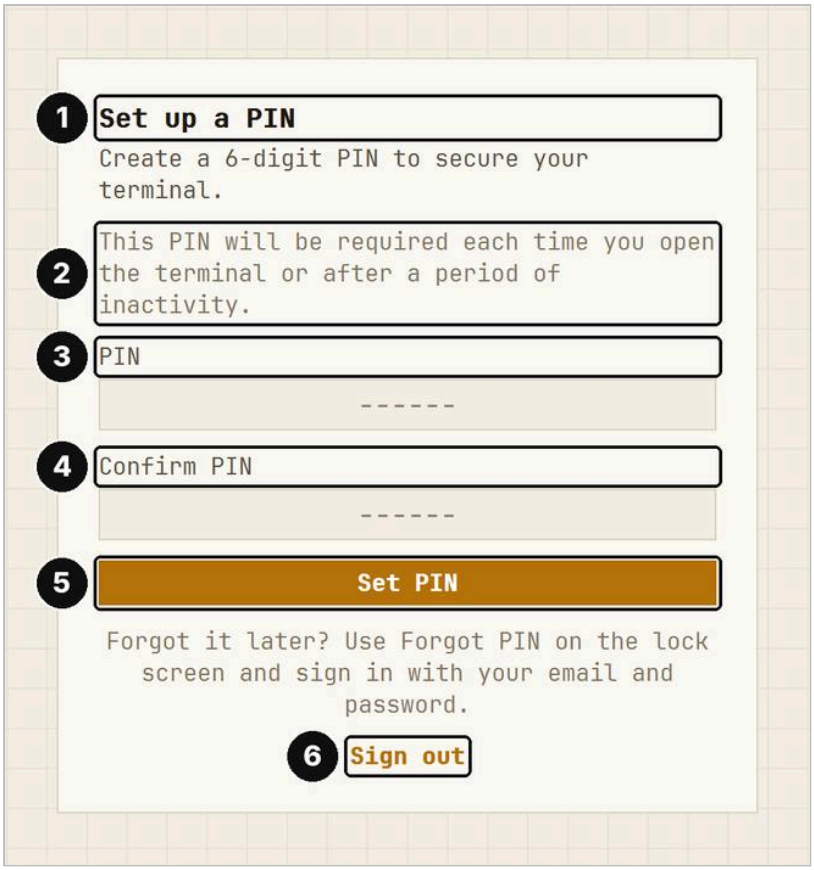


Figure 3.6 Set up a PIN appears once per computer, right after your first sign-in there.

1. Shown once per computer.
2. When you will need the PIN: every time the terminal opens, and after a period of inactivity.
3. **PIN** — six digits, shown as dots.
4. **Confirm PIN** — the same six digits again.
5. **Set PIN** saves it and opens the terminal.
6. **Sign out** leaves without setting a PIN.

One PIN for your account

Your PIN belongs to your account, not to one computer. On another computer you sign in with your password once, and the same **Set up a PIN** page registers that computer for the PIN. Type your usual PIN there: a different PIN is not refused, it replaces your account's PIN, and the old one stops working on every computer.

What the PIN protects

The PIN is more than a screen lock. Your broker logins, AI keys and data-source passwords are stored encrypted on this computer, and only an unlocked terminal can read them. Lock the terminal and they are sealed again until the PIN is typed.

3.5 Sign in and sign out

Sign in

Use this every time the terminal shows the sign-in page: after you sign out, on a new computer, or after a password reset.

1. Type your **Email** and **Password**.
2. Click **Sign in** or press `Enter` in the password box. (Pressing `Enter` in the email box moves to the password box.) The button reads **Signing in…**.
3. If this computer already has your PIN, the terminal opens straight away or after the PIN. On a computer new to your account, set up your PIN (previous section).

If the email or password is wrong, a message above **Sign in** says why. Editing either box clears it.

Already signed in on another computer

If your account is in use on another computer and the server will not run both, the card changes to **Session conflict** with the server's explanation, for example "This account is already signed in on another machine."

- **Log out the other session and continue** signs the other computer out and signs you in here.
- **Cancel** goes back to the sign-in page and leaves the other computer alone.

Sign out

Signing out ends your session on this computer. Your work is saved to your account and comes back when you sign in again.

- Open the account menu at the top right of the terminal and click **Sign out**. There is no confirmation: the sign-in page appears at once.
- On the lock screen and the PIN set-up page, **Sign out** does the same.
- To sign out on every computer at once (for example after losing a laptop), use **Sign out everywhere** in `Settings › Security`. It also signs out this computer.

Signing out keeps this computer's PIN. When you sign in again with your password, the same PIN unlocks the terminal.

> **Tip**
> Signing out does not give back the computer's seat. To let another computer use it, release the device in `Profile › Devices & seats`.

Change the language before you sign in

The **English** button at the top right of every sign-in page picks the language of the screens. It is there before you sign in, and on the lock screen too.



Figure 3.7 The language menu on the sign-in page.

The terminal is available in English, 简体中文 (Simplified Chinese), 繁體中文 (香港) and 繁體中文 (台灣) (Traditional Chinese), Bahasa Indonesia, Tiếng Việt, Türkçe, Deutsch, Português (Brasil), Español, Français and Italiano. The screens change at once. With no choice saved, the terminal starts in your computer's language when it is one of these. You can change the language later in **Settings** › **General**.

3.6 Lock and unlock the terminal

When you step away, lock the terminal. Your panels, prices and running work stay as they are behind the lock screen.

Ways to lock:

- Press Ctrl + L.
- Click the lock button in the bottom bar (its tooltip reads "Lock the terminal").
- Open the account menu at the top right and click **Lock terminal**.
- Wait: after 10 minutes without mouse or keyboard use the terminal locks by itself (you can change this; see below). While scheduled AI agent tasks are armed, this automatic lock is paused so the tasks can run; **Settings** › **Security** then shows "Paused while agent tasks are scheduled."

To unlock, type your six-digit PIN on the **Enter your PIN** page. The page names the account it belongs to ("Locked for *your email*. Enter your 6-digit PIN to unlock."). The sixth digit unlocks; you do not need to press Enter or click **Unlock**. While the PIN is checked, the button reads **Checking…**.

> **Note**
>
> Locking does not stop anything that is running: broker connections, live prices, algo deployments and scheduled AI tasks carry on behind the lock screen.

Wrong PIN

Wrong tries in a row	What happens
1-2	The page says why and shows how many attempts remain.

Wrong tries in a row	What happens
3	The PIN box is disabled for 30 seconds ("Locked for 30s — too many failed attempts").
4	Disabled for 60 seconds.
5	**Too many PIN attempts**. The only way on is **Sign in again**, which resets your PIN: you sign in with your email and password and set a new PIN.

The count is kept by Fincept's servers, so it covers every computer on your account.

Change when the terminal locks itself

Open `Settings › Security` (**Chapter 51, Settings** p. 932).

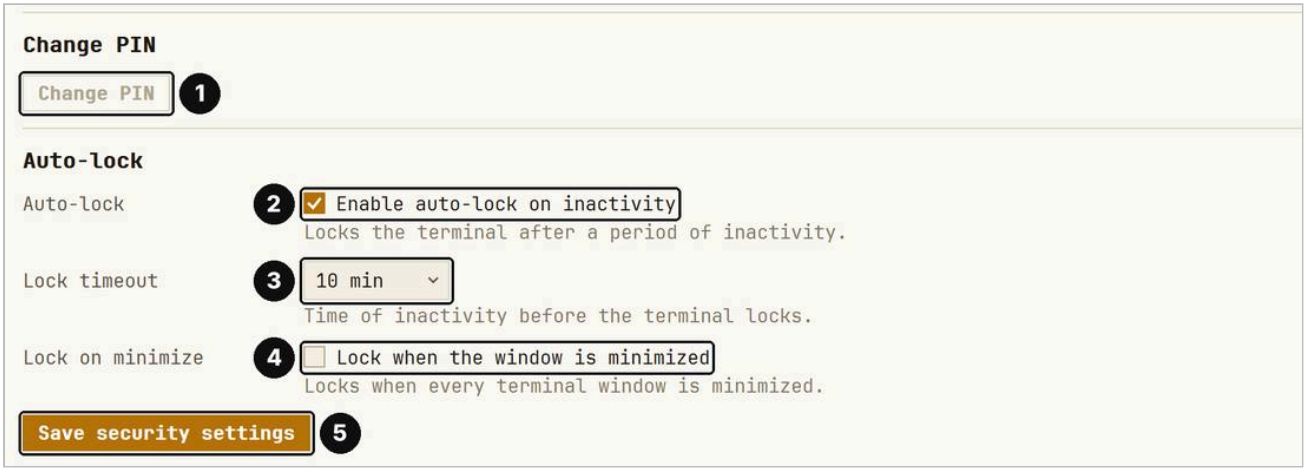


Figure 3.8 Settings > Security: the PIN and the automatic lock.

1. **Change PIN** opens the form to change it.
2. **Auto-lock** on or off.
3. **Lock timeout**.
4. **Lock on minimize**.
5. Saves the changes.

- **Auto-lock** — "Enable auto-lock on inactivity" turns the automatic lock on or off.
- **Lock timeout** — how long without activity before it locks: 1, 2, 5, 10 (the default), 15, 30 or 60 minutes.
- **Lock on minimize** — "Lock when the window is minimized" locks when every terminal window is minimised. Off by default.
- **Change PIN** — type your current PIN and a new one twice, then **Update PIN**.

Click **Save security settings** after a change.

3.7 Forgot your password or PIN

Forgot your password

The terminal shows a **Reset password** page, but resetting a password happens on the website.

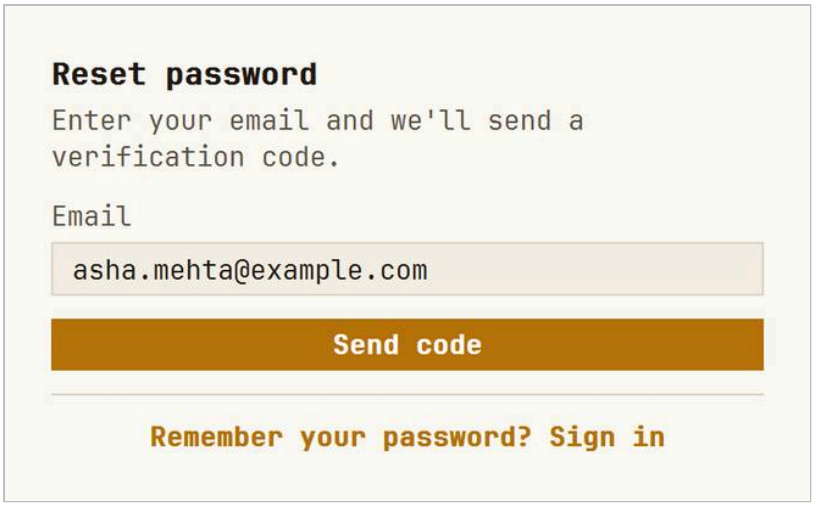


Figure 3.9 The Reset password page in the terminal.

1. On the sign-in page, click **Forgot password?**.
2. Type your email and click **Send code**. In this version the terminal answers "Password recovery isn't available in the app yet — please reset on the website."
3. Open fincept.in/enterprise/forgot-password in your browser and follow the steps there.
4. Back in the terminal, click **Remember your password? Sign in** and sign in with the new password.

Note

You can also change your password while signed in, in **Profile** › **Security: Change password**. Your other computers are then signed out ("Password changed. Your other devices have been signed out."); the computer you changed it on stays signed in.

Forgot your PIN

1. On the **Enter your PIN** page, click **Forgot PIN?**.
2. A box asks "Reset your PIN? You will sign in with your email and password and set a new PIN. The old PIN stops working on every device on this account." Click **Yes**.
3. Sign in with your email and password.
4. Set a new PIN on the **Set up a PIN** page.

Careful

A PIN reset is for the whole account: the old PIN stops working on every computer. Each of your other computers asks for the new PIN the next time it opens.

3.8 Seats and devices

Each plan includes a number of **seats.** A seat is one computer: every computer you sign in on takes one. The **Plans & pricing** cards say how many devices each plan includes, and you can buy more seats at any time.

You can see which computers hold your seats in **Profile** › **Devices & seats** : the device list (**Device**, **Activated**, **Last seen**), **Seats in use**, **Release selected device** and **Add a seat** (**Chapter 50, Profile, Plan & Billing** p. 920).

All seats in use

When you sign in on one computer more than your seats allow, the terminal shows **All seats in use** instead of opening. It lists the computers that hold your seats (**Device**, **Activated**, **Last seen**) and says "Seats in use: *n* of *m*".

- Select a computer and click **Release selected device** to free its seat, then **Yes** in the **Release device** box. That computer is signed out at once; the freed seat is claimed here ("Seat claimed — opening the terminal."), and the terminal opens. If a row marked "(this machine)" is listed (an old entry for this same computer), releasing it frees the seat and **Retry** claims it again.
- **Retry** asks again, for example after you released a seat from another computer.
- **Sign out** leaves this computer without a seat.

Other titles on the same page: **No seats on this account** (the account has no plan: click **View plans**) and **This machine is not licensed** (retry; if it keeps happening, contact support).

Careful

If this computer's seat is released from another computer while you work, this computer is signed out with the notice "This machine was released from your account on another device. Sign in again to use Fincept here." If it only notices later and no seat is free, it shows **All seats in use** with "This machine's seat was released from another device." instead. Release another device or buy a seat to continue.

3.9 Reference

Sign-in page

Control	What it does
Email	The address of your account. **Enter** moves to the password.
Password	Your password, hidden. **Enter** signs in.
Show / Hide	Shows or hides the password you typed.
Sign in	Signs in. Reads **Signing in...** while it works.
Forgot password?	Opens the **Reset password** page.
Create an account	Opens the sign-up form.
English (language)	Changes the language of the screens.
Version (top left)	The terminal's version, for example v5.0.6.

Create account page

Field	Required	Notes
First name, Last name	Yes	Together 3 to 50 characters (they form your user name; "Username must be 3-50 characters").
Email	Yes	Must look like name@domain.com.
Country	Yes	Pick from the list (type to search). Starts on your computer's region.
Code	Yes	Dialling code, filled from the country; a missing + is added.
Phone	Yes	Your number without the code.
What do you do?	Yes	Your field of work and, optionally, your level. Sets up your first dashboard.
Password	Yes	10-512 characters, letters mixed with numbers or symbols.
Confirm password	Yes	Must match.
Create account	—	Creates the account and sends the email code.
Sign in	—	Back to the sign-in page.

Each empty field says **Required** under itself. If the country and field lists cannot load, a line under the form says why and offers **Try again**.

What do you do? window

Part	What it does
Search box	Finds fields by job title, field name or skill (up to 60 results).
Areas list (left)	Areas of finance with the number of fields in each.
Fields list (middle)	The fields of the selected area, or the search results with what matched.
Details (right)	**What the work looks like**, **Your level (optional)**, **Key skills**, **Certifications**, **Typical employers**, **Typical education**.
Summary line	"Your terminal will open on a desk built for ..."
Cancel	Closes without a choice.
Continue	Keeps the choice. Disabled until a field is selected.

Verify your email page

Control	What it does
6-digit code	The code from the email; digits only.
Verify	Checks the code.
Send a new code	Emails a fresh code; the old one stops working.
Back to sign in	Returns to the sign-in page.

Reset password page

Control	What it does
Email	Your account's address.
Send code	In this version, points you to the website to reset the password.
Remember your password? Sign in	Back to the sign-in page.

PIN pages

Page	Controls
Set up a PIN	**PIN**, **Confirm PIN**, **Set PIN**, **Sign out**. Note: "Forgot it later? Use Forgot PIN on the lock screen and sign in with your email and password."
Enter your PIN	**PIN** (the sixth digit unlocks), **Unlock** (reads **Checking...** while it works), **Forgot PIN?**, **Sign out**. Shows attempts left after a wrong PIN ("*n* attempt(s) remaining").
Too many PIN attempts	**Sign in again** (resets the PIN).

PIN rule	Message
Exactly 6 digits	"PIN must be exactly 6 digits"
Digits only	"PIN must contain only digits"
Not all the same digit	"PIN is too simple — use unique digits"
Not a run (123456, 654321)	"PIN is too simple — avoid sequential digits"

Seat pages

Title	When	Buttons
All seats in use	Every seat is held by another computer.	**Release selected device**, **Retry**, **Sign out**
No seats on this account	The account has no plan.	**Retry**, **View plans**, **Sign out**
This machine is not licensed	The seat could not be claimed for another reason.	**Retry**, **View plans**, **Sign out**

Account menu

The account menu is the button with your account name at the right end of the top bar.

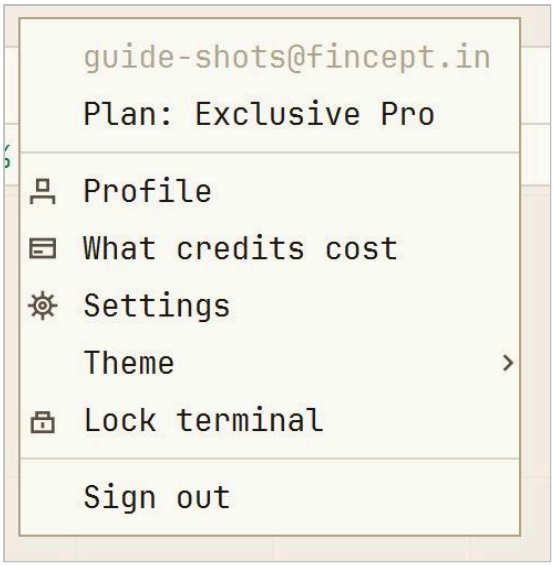


Figure 3.10 The account menu.

Item	What it does
Your email	Who is signed in (not clickable).
Plan: *name*	Opens **Plans & pricing**.
Profile	Opens your profile (**Chapter 50, Profile, Plan & Billing** p. 920).
What credits cost	The price of every action that uses credits.
Settings	Opens Settings (**Chapter 51, Settings** p. 932).
Theme	A submenu: **Light** or **Dark**.
Lock terminal	Locks now (same as Ctrl + L).
Sign out	Signs out of this computer.

3.10 For advanced users

What happens between Sign in and the terminal

The terminal checks, in this order:

1. **Email verified?** If not, **Verify your email** (a new code is sent).
2. **A seat for this computer?** If every seat is taken, **All seats in use.**
3. **A plan?** If not, **Plans & pricing.**
4. **A PIN on this computer?** If not, **Set up a PIN**; if yes, **Enter your PIN.**
5. The terminal opens, restoring your last workspace (or your first dashboard), and checks for updates a few seconds later.

Working offline

If Fincept's servers cannot be reached when you unlock, the terminal can still unlock with your PIN for a limited time after your last online unlock (by default up to 72 hours). Prices, AI and other online features wait until the connection returns, and the terminal reconnects by itself.

Staying signed in

Your session renews itself in the background, so you stay signed in for as long as you use the terminal. Short network outages, shared office networks and proxy errors do not sign you out. If a session does end (for example after **Sign out everywhere** on another computer), the terminal returns to the sign-in page.

Audit log

The **Audit log** in `Settings › Security` lists recent security events on this computer: PIN set-up and changes, wrong PINs and lockouts, locks and unlocks. Filter it with **All events**, **Failures & lockouts**, **Lock events**, **Unlocks** or **PIN changes**; **Refresh** reads it again and **Copy** copies the listed events (**Chapter 51, Settings** p. 932).

Do it with AI

The AI cannot sign you in or unlock the terminal: while a sign-in or PIN page is up, nothing is open to it. **Change PIN**, the auto-lock settings and **Sign out everywhere** stay yours alone too. It asks you before it opens a payment for a plan or credits, and the payment itself always happens in your browser. Once you are in, you can ask it things like "How many seats does my plan have?" or "Open my profile's devices".

3.11 Troubleshooting

The sign-in page says I'm offline

The terminal cannot reach Fincept. Check your internet connection, VPN or proxy. You do not need to restart: the page updates by itself, and signs you back in when the connection returns.

No verification email arrives

Look in your spam or junk folder. Click **Send a new code** (only the newest code works). Make sure you typed the address correctly; if not, click **Back to sign in** and create the account again with the right address.

I paid, but the plans page is still there

Click **Already paid? Refresh status**. The page also checks every 20 seconds. After a payment you started from this page it watches for 15 minutes, then says "This screen has stopped checking for your payment. If you completed it, use Refresh status, or reopen Plans & pricing to update." If it still does not unlock after a few minutes, contact support@fincept.in with the email you paid with.

"Could not open your browser"

The terminal could not start your web browser for the payment page. The message gives the address: open it in your browser by hand and pay there; the page unlocks by itself afterwards.

"The PIN service is unavailable right now, so the terminal stays locked."

The terminal could not reach the PIN service. Wait a moment and try again. The terminal never opens without the PIN.

The lock screen sends me to the sign-in page

The session ended while the terminal was locked (for example, a password change or **Sign out everywhere** on another computer), and the PIN alone cannot start a new one. Sign in with your email and password; your PIN still works afterwards.

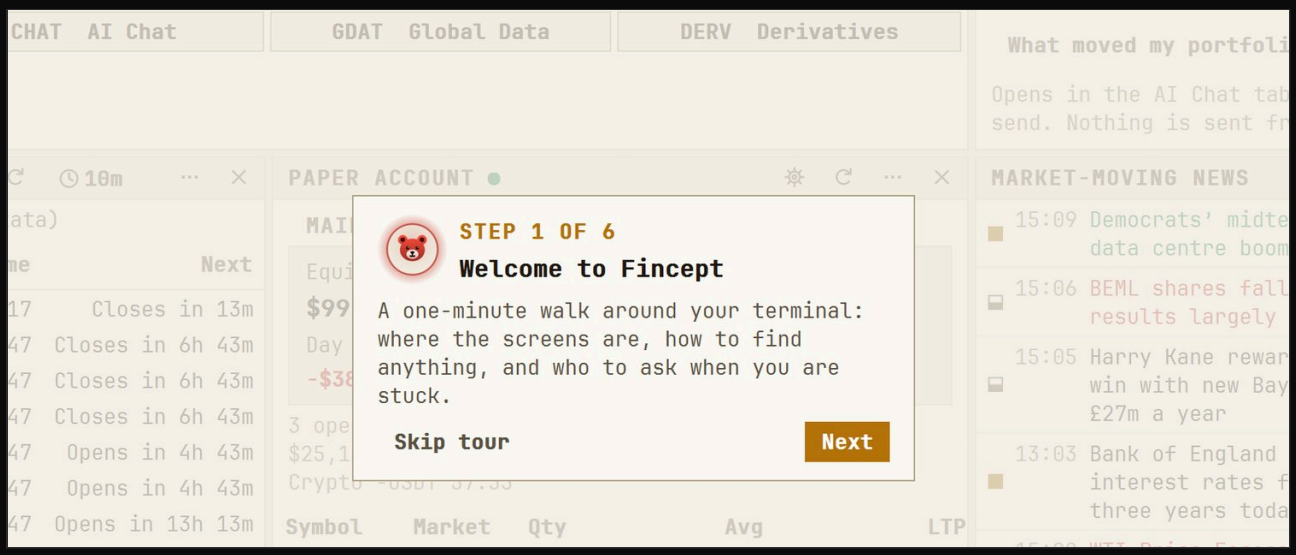
"All seats in use" on a computer I already use

The computer may have been released from another device, or reinstalled so that it looks new. Release its old row (marked "(this machine)") or another device in the list, then click **Retry**.

CHAPTER 4

Your first ten minutes

What you see the first time the terminal opens, the one-minute welcome tour, opening your first symbol, and the three ways to find anything.



At a glance

Open it	• Sign in for the first time: the terminal opens on your first dashboard
You need	• Signed in on any paid plan
Best for	• Your first session • Getting your bearings again after a while away
Time to learn	10 minutes
Related	**Chapter 3, Create your account** p. 38, **Chapter 5, The Terminal Window** p. 70, **Chapter 6, The Command Line** p. 89, **Chapter 8, Dashboard** p. 123, **Chapter 37, AI Chat** p. 719

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4.1 Screen tour

After you sign in and set your PIN, the terminal opens on the **Dashboard.** The frame around it — a bar at the top and a bar at the bottom — stays the same on every screen.

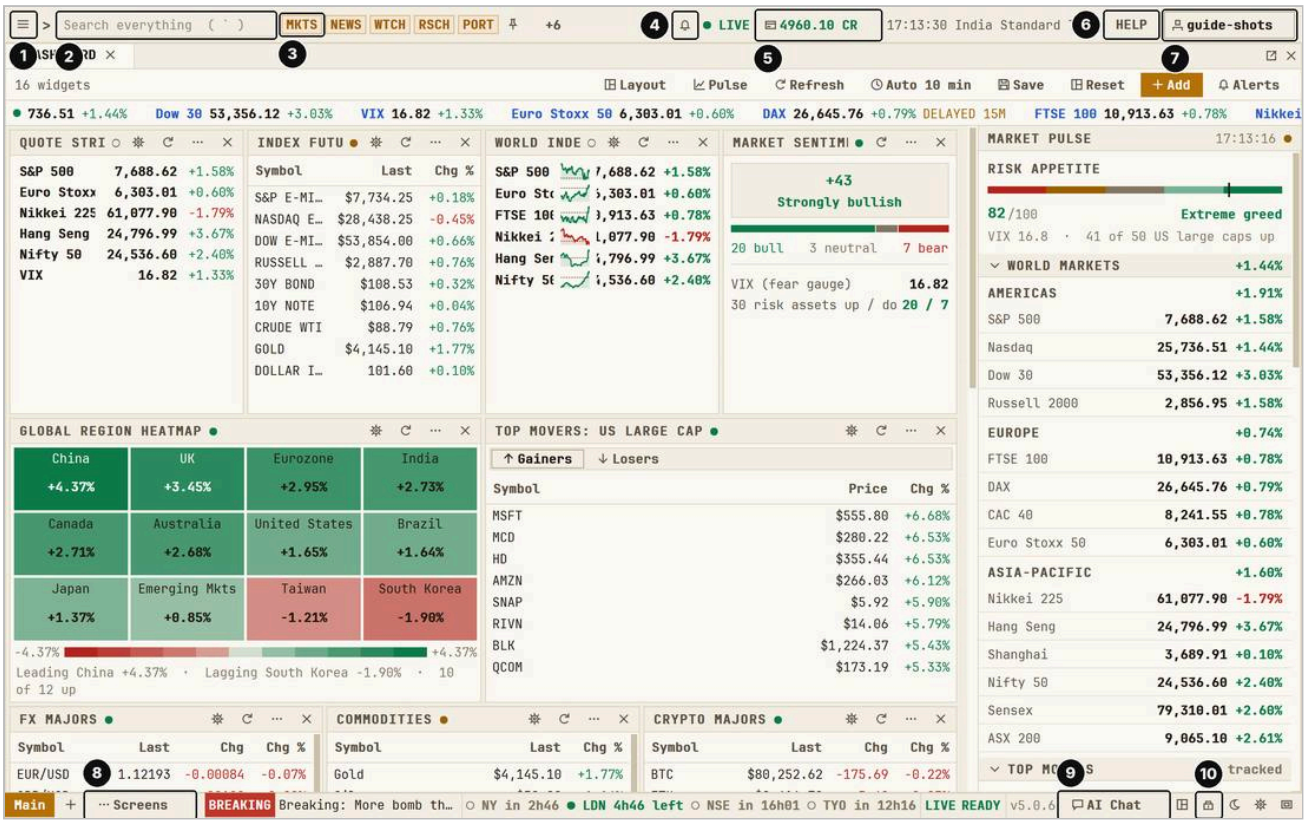


Figure 4.1 The terminal after sign-in, with the Dashboard open.

1. **Menu** — File, Navigate (every screen), View and Help.
2. **The command line.** Search for anything: a ticker, a screen, a setting, a command.
3. **Quick launch** — one click opens these screens. The pencil button beside them edits the list.
4. **Notices** from Fincept. The number counts unread ones.
5. Your **credits** balance. Click it for what everything costs.
6. **HELP** opens the Help center.
7. **Account menu** (shows your account) — plan, profile, settings, theme, lock and sign out.
8. **Workspaces** (one tab each), **+** for a new one, and **Screens** for every screen.
9. **AI Chat** — the companion. Ask anything.
10. Buttons for workspaces, **lock**, theme, settings and focus mode.

Area	What it is for	More in
Top bar	Menu, command line, quick-launch codes, notices, live status, credits, clock, **HELP**, account menu	**Chapter 5, The Terminal Window** p. 70
Panels	The screens you have open. Drag a panel's title to split the window or tear it off to another monitor.	**Chapter 5, The Terminal Window** p. 70
Bottom bar	Workspace tabs, **Screens**, the news headline, market clocks, status, version, **AI Chat**, and buttons for layout, lock, theme, settings and focus mode	**Chapter 5, The Terminal Window** p. 70

4.2 Quick start

Ten minutes, five steps. After them you can find and open anything.

1. **Look at your first dashboard.** It was built for the work you picked when you signed up. Every tile is live.
2. **Take the tour.** It starts by itself on your first sign-in. Click **Next** through the six steps (about one minute).
3. **Open a symbol.** Click the command line at the top (or press `Ctrl` + `K`), type `AAPL` and press `Enter`.
4. **Open a screen by name.** Type `news` in the command line and press `Enter`. Or click **Screens** in the bottom bar.
5. **Ask a question.** Click **AI Chat** in the bottom bar and ask, for example, "What does the Markets screen show?".

4.3 Your first dashboard

The first time an account opens the terminal, the Dashboard is set up for you:

- **If you told us what you do** when you created your account, the dashboard is laid out as a desk for that job, pointed at your country — your exchange's index, your currency, your central bank, the news and tools that job uses. The scrolling ticker at the top shows your market.
- **If your account has no field of work** (for example, an older account, or one created on the website without it), the terminal asks you to choose: the **Choose your dashboard** window.

Choose your dashboard

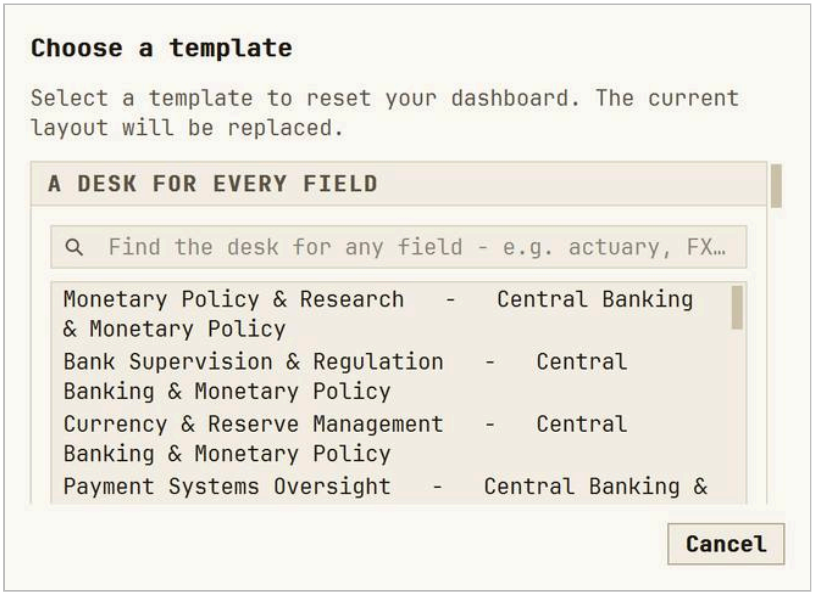


Figure 4.2 Choose a template: the same desks as the first-run window, opened from the Dashboard's Reset button.

The window has two parts:

1. **A desk for every field** at the top. Type a job or field in the search box (for example `actuary`, `FX trader`, `AML` or `REIT`), pick one from the list and click **Apply this field's desk**. If your account has a field of work, **Your profile** - with your field comes first, with **Apply my profile**.

2. **Ready-made templates** below: each card shows a small preview of its layout, a name, a description and how many widgets it holds. Click a card, or its **Apply** button.

On the first run, the bottom button reads **Start with a blank dashboard**: it closes the window and leaves the dashboard empty, ready for your own tiles. Whatever you choose, the question is not asked again.

Nothing is locked in

Move, resize and remove tiles at any time, add new ones, or start over: the Dashboard's **Reset** button opens the same window ("Choose a template" — the current layout is replaced). **Chapter 8, Dashboard** p. 123 explains every tile.

4.4 Take the welcome tour

The tour is a one-minute walk around the window. On your first sign-in it starts by itself a moment after your dashboard appears. The window dims and each step lights up the part it is about, with a card beside it.

1. **Welcome to Fincept** — the card greets you by name ("Welcome to Fincept, *your name*") and, if you picked a field of work, says what your desk was built for.



Figure 4.3 Step 1 of the tour.

2 **Every screen, one menu away** — the top bar: the menu of every screen, your plan, credits and notices.



Figure 4.4 Step 2 lights up the top bar.

1. **Skip tour** ends it.
2. **Back** — the previous step.
3. **Next** — the next step.

3 **Type anything** — the command line: try a ticker, a ticker followed by `G` for its chart, `news`, or `backtest` with a ticker. `Ctrl` + `K` or the backtick key (`` ` ``) brings you here from anywhere.



Figure 4.5 Step 3 lights up the command line.

4 **Your workspaces are tabs** — the tabs in the bottom bar. Each is a saved arrangement of screens; + makes a new one. Every screen is a panel you can drag beside another or onto another monitor.



Figure 4.6 Step 4 lights up the workspace tabs.

5 **Your dashboard** (or your desk's own name, when you picked a field of work) — what your desk was built for, and how to change it: drag a tile to move it, pull its corner to resize, use its gear icon to configure it, and **Reset** for a desk for every field.



Figure 4.7 Step 5 lights up the dashboard.

6 **Ask me anything** — the companion: ask any question about the terminal. It can open screens, fetch data and explain what you are looking at. **Ask me something** opens it.



Figure 4.8 The last step points at AI Chat in the bottom bar.

Control	What it does
Next (or `Right`, `Enter`, `Space`)	The next step.
Back (or `Left`)	The previous step.
Skip tour (or `Esc`)	Ends the tour.
Ask me something (last step)	Ends the tour and opens the companion.
STEP n OF 6	Where you are.

The tour is shown once. Skipping counts as seen, so it does not come back by itself.

Replay the tour

- Type `tour` in the command line and pick **Replay welcome tour**.
- Or open the companion (**AI Chat** in the bottom bar) and click **Take the 60-second tour**, or **Take the tour** in its history menu.

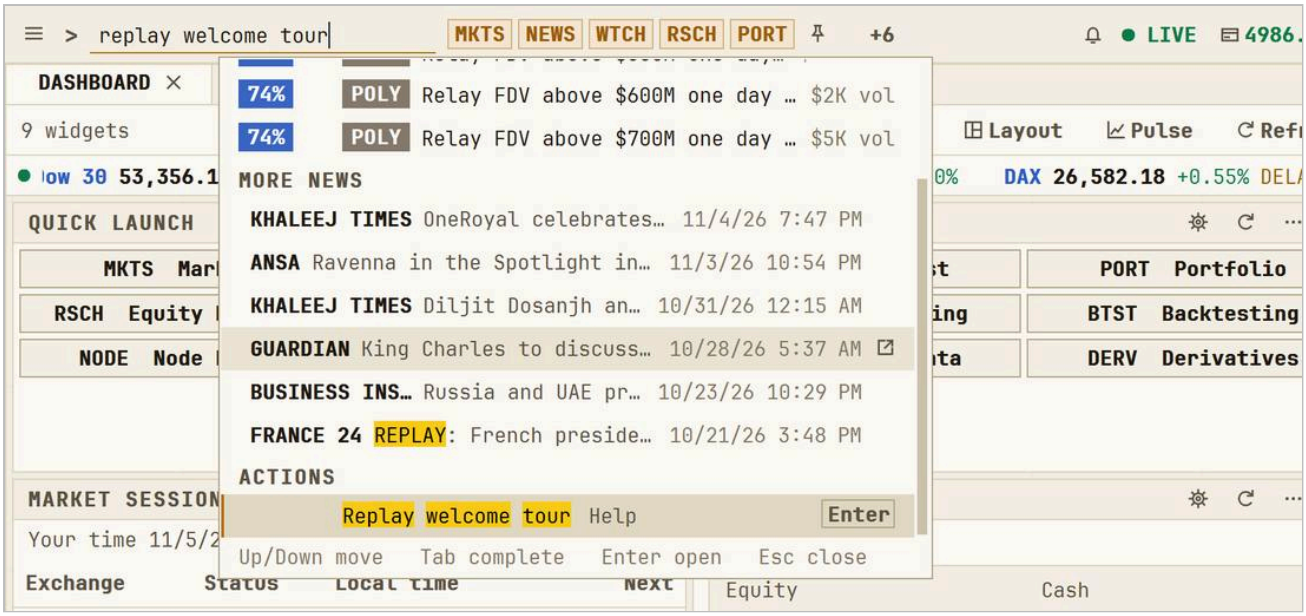


Figure 4.9 Typing "replay welcome tour" in the command line finds the Replay welcome tour action (typing just "tour" finds it too).

4.5 Open your first symbol

A **symbol** (or ticker) is the short code of an instrument: `AAPL` for Apple, `MSFT` for Microsoft, `RELIANCE.NS` for Reliance Industries on India's NSE, `BTC-USD` for Bitcoin in dollars.

1. Click the command line at the top, or press `Ctrl` + `K`.

2. Type `AAPL`. A list drops down as you type: the instrument itself, things you can do with it, and screens that match.

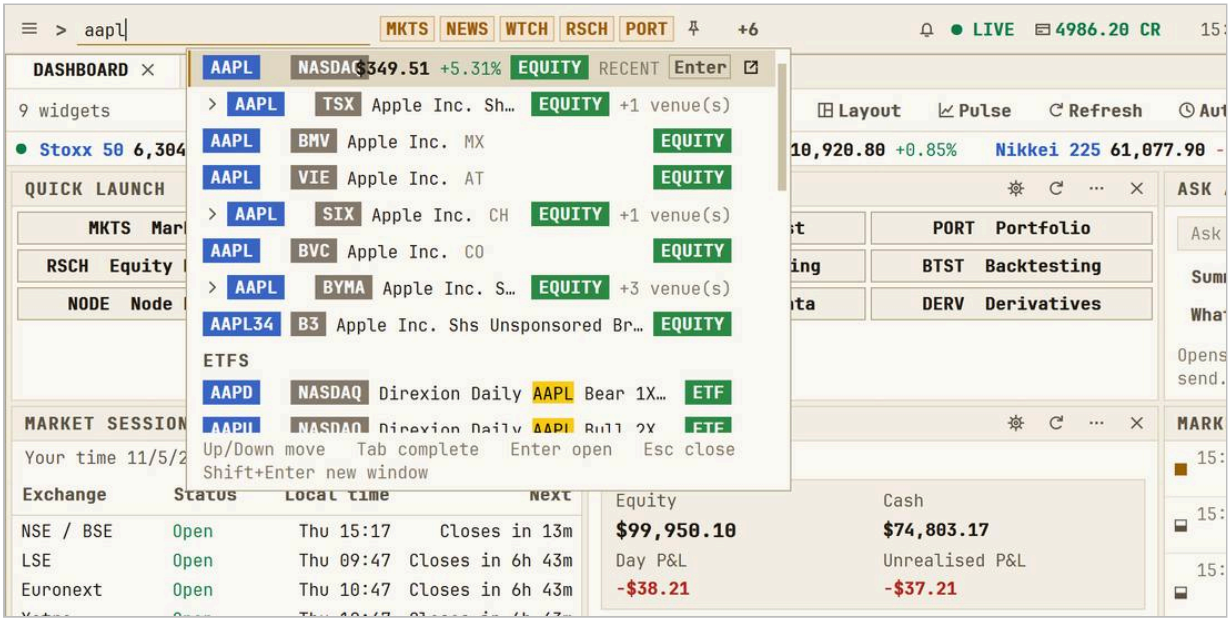


Figure 4.10 Typing a ticker in the command line.

3 Press Enter to open the first result, or click any line in the list.

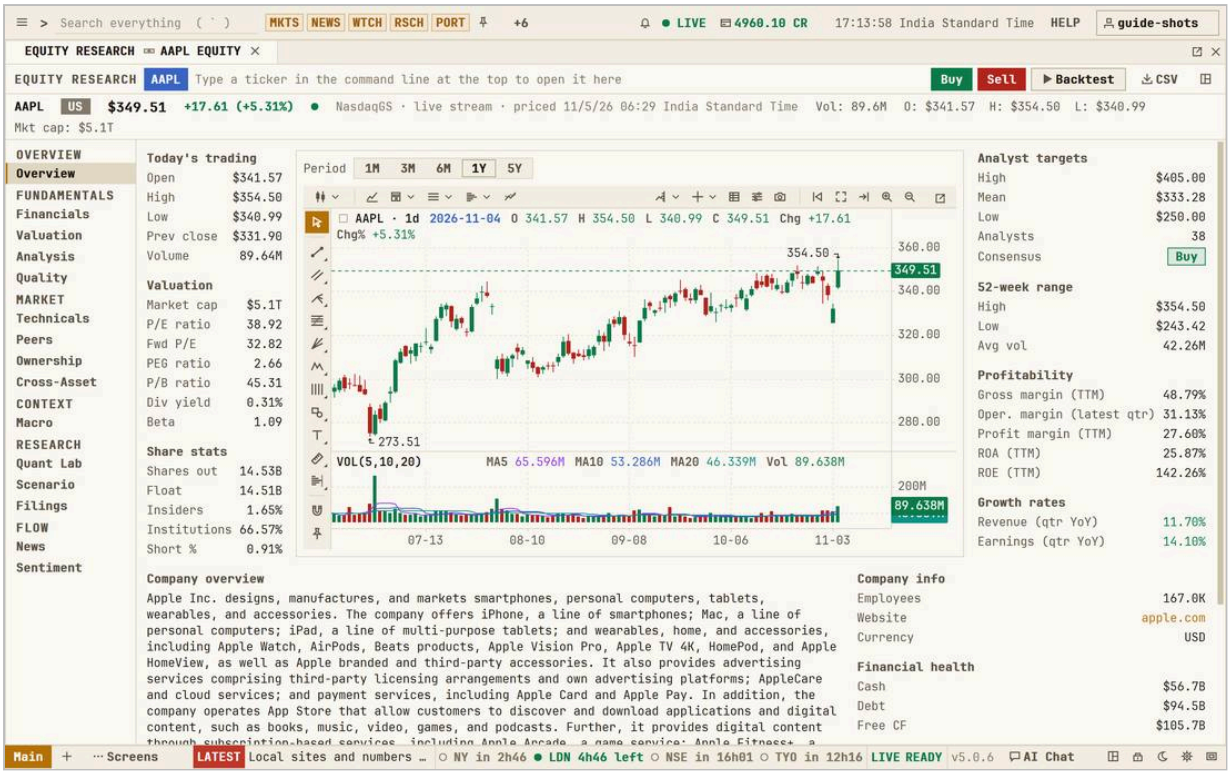


Figure 4.11 The symbol opened from the command line.

Tip

Add a function after the ticker: `AAPL G` opens its chart. **Chapter 6, The Command Line** p. 89 lists every command and screen code.

4.6 Find anything

There are three ways to reach every screen.

1. The command line

Type what you are looking for — a screen's name (`portfolio`), its four-letter code (`PORT`), a ticker, a company, a setting or a command — and press Enter. Ctrl + K or ` jumps to the command line from anywhere.

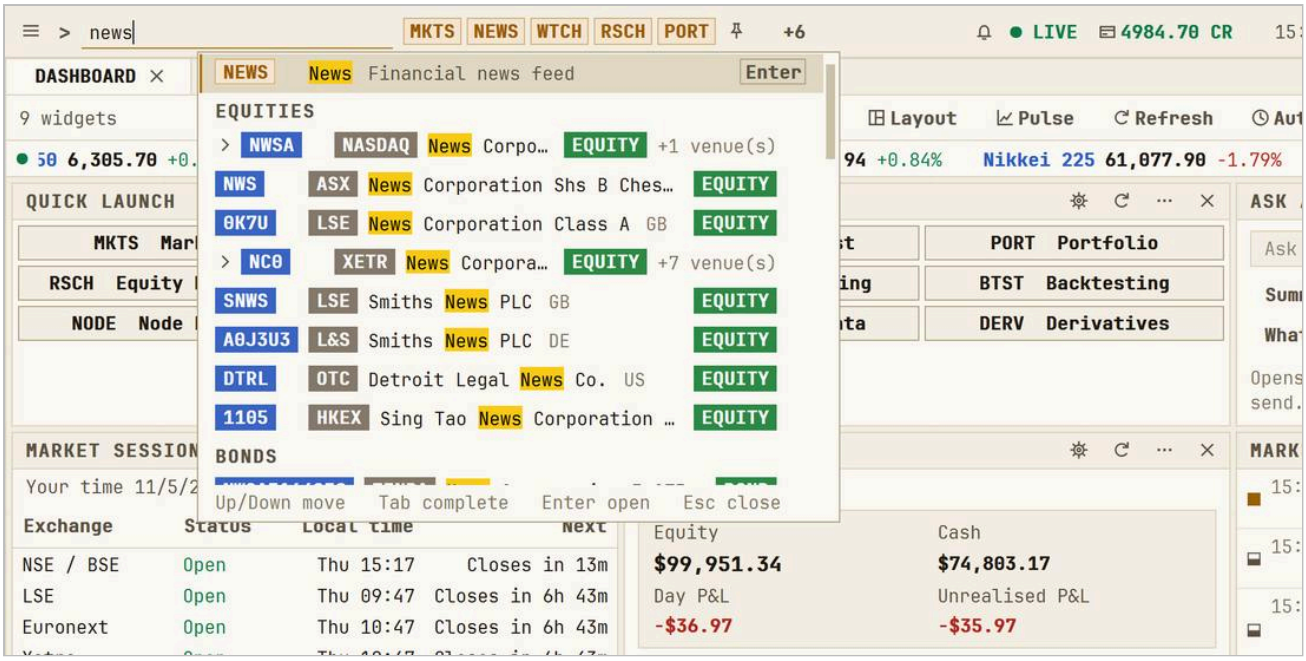


Figure 4.12 Typing "news" lists the News screen and related matches.

2. The menu

Click **Menu** (the three lines at the top left). It has four parts: **File** (windows, layouts, File manager and **Refresh all**), **Navigate** (every screen, in the groups Markets Data, Trading, Portfolio Risk, Research Intelligence, AI Quant and Tools Workspace, then Docs, Profile and Settings, and **Edit quick launch...** for the top-bar buttons), **View** (search, full screen, focus mode, always on top, floating panels, workspaces, refresh and screenshot) and **Help** (Help center, support, About, legal pages and **Check for updates**).

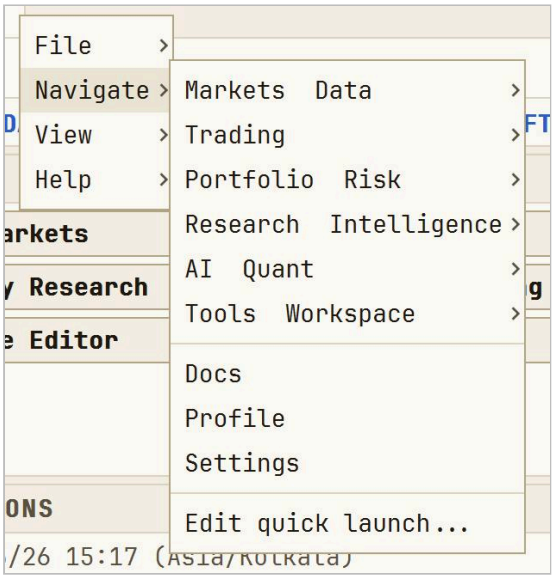


Figure 4.13 Menu > Navigate: every screen, by group.

3. Screens in the bottom bar

Screens at the bottom left opens the same groups of screens as `Menu › Navigate`.

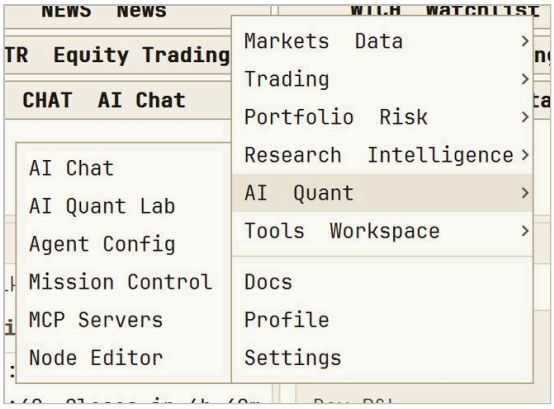


Figure 4.14 Screens (bottom bar): the same groups, here with AI & Quant open.

Note

A screen your plan does not include is marked with the plan it needs, in the menu ("Crypto Trading (Exclusive+)") and in the command line ("Requires Exclusive+"). In 5.0.6 the only such screen is Crypto Trading, on the Exclusive plan. It still opens, on a card that names the plan it needs, with **Upgrade plan**.

4.7 Ask the companion

The companion is the terminal's built-in guide. Click **AI Chat** in the bottom bar: the **COMPANION** panel ("Your guide to the terminal") opens with a greeting and a few suggestions — **Take the 60-second tour**, questions to ask and, when your account has a field of work, screens worth opening for it. Your chats are saved and shared with the full-screen AI Chat screen.

Ask in plain words: "Where do I see my portfolio?", "What is implied volatility?", "Open Markets". It can open screens for you and explain what is on screen.

Credits

Questions to the AI use credits (see **What credits cost** in the account menu). Tour and "Open ..." suggestions are free.

Chapter 37, AI Chat p. 719 covers the companion and the full-screen AI Chat.

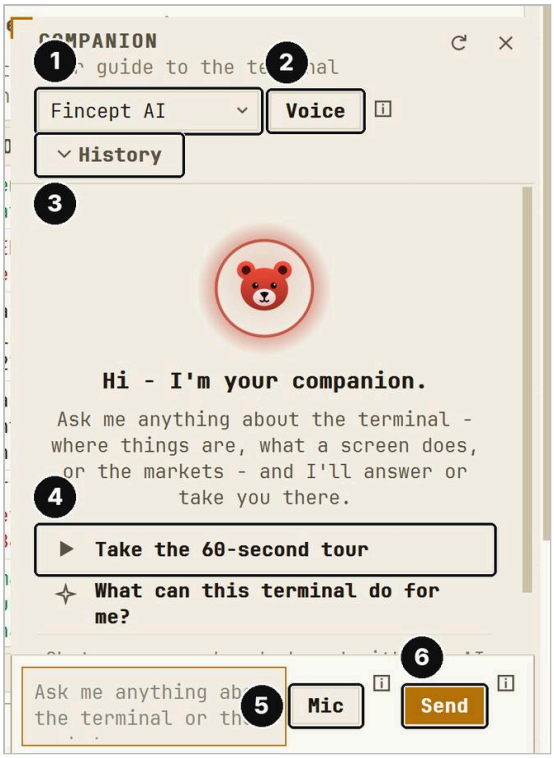


Figure 4.15 The companion panel, opened from AI Chat in the bottom bar.

1. Who answers: **Fincept AI**, or an Agent Studio persona or team (**Chapter 38, Agent Studio** p. 739).
2. **Voice** — a spoken conversation: the microphone reopens after every reply and replies are read aloud. Metered per minute while it is on.
3. **History** — new chat, earlier chats, and **Take the tour**.
4. Suggestions. **Take the 60-second tour** replays the tour.
5. **Mic** — dictate one message (priced per minute of audio).
6. Type a question and click **Send** (or press `Enter`).

4.8 Reference

What the terminal does on first start

Moment	What happens
Sign-in	Sign in, verify your email if needed, choose a plan if you have none, set your PIN (**Chapter 3, Create your account** p. 38).
Terminal opens	Your last workspace is restored; on the very first start, the Dashboard opens.
First dashboard	Your field's desk is laid out, or **Choose your dashboard** opens.
About 1 second later	The welcome tour starts (first sign-in with a field of work).
A few seconds later	The terminal checks for updates in the background (**Chapter 2, Install and update** p. 28).

Choose your dashboard window

Control	What it does
Apply my profile	The desk built for your own field and country (when your account has one).
Field search ("Find the desk for any field ...")	Finds the desk for any field.
Apply this field's desk	Lays out the selected field's desk (also: double-click a field).
Template card / Apply	Lays out that template (also: select the card and press **Enter** or **Space**).
***n* widget(s)**	How many tiles the template has.
Start with a blank dashboard (first run) / Cancel	Closes the window. On the first run this leaves an empty dashboard.

4.9 For advanced users

When the last window closes: the Launchpad

By default, closing the last terminal window quits the terminal. In **Settings** › **General** › **On last window close** you can choose **Show Launchpad** instead: a small **Fincept Launchpad** window stays open with **Continue from last session**, **New Window**, **Open Saved Layout...** and your **Recent Layouts** (type to filter them). Closing the Launchpad itself quits the terminal.

> **Note**
> While scheduled AI agent tasks are armed, closing the last window (or the Launchpad) keeps the terminal running in the menu bar or system tray, so the tasks can run. **Quit** from the tray icon still quits.

After a crash: Recover Previous Session

If the terminal did not close cleanly last time, it offers **RECOVER PREVIOUS SESSION** ("UNCLEAN SHUTDOWN DETECTED") before the window opens. It lists recent snapshots of your workspace (**SESSION**, **WHEN**, marked [autosave], [crash] or [saved]).

Button	What it does
RESTORE	Brings back the selected snapshot.
SKIP	Starts fresh. The snapshots are kept.
RENAME	Names a snapshot so you can find it later.
DELETE	Deletes a snapshot (cannot be undone).

Opening the terminal twice

Starting the terminal while it is already running brings the open window forward instead of starting a second copy. To open a second window, use **Menu** › **File** › **New window** or **Ctrl** + **Shift** + **N**.

4.10 Troubleshooting

The tour did not start

The tour starts by itself only on an account's first sign-in with a field of work, and only once. Type `tour` in the command line to start it any time.

My dashboard is empty

You chose **Start with a blank dashboard**, or closed the first-run window. Click **Reset** in the Dashboard's toolbar and pick a desk or template, or add tiles one by one (**Chapter 8, Dashboard** p. 123).

Prices show dashes for a few seconds

Live prices arrive a moment after a screen opens. If they stay blank, check the live-data status in the top bar and your internet connection.

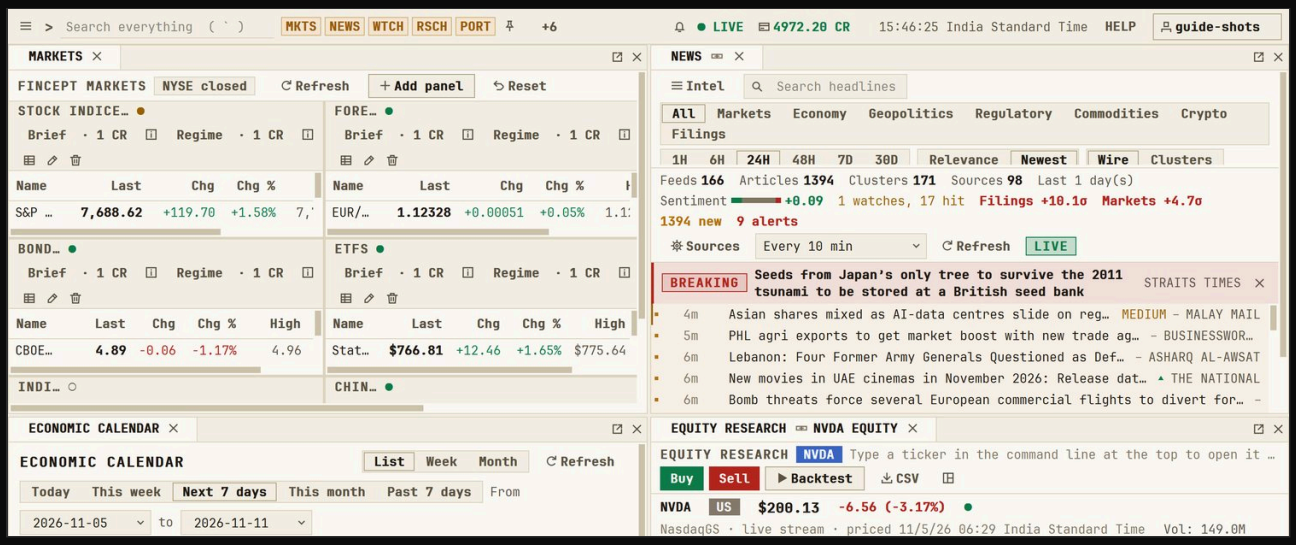
I closed a screen and cannot find it

Type its name in the command line, or open it from **Screens** in the bottom bar. To get your whole arrangement back, switch to your workspace tab in the bottom bar (**Chapter 7, Workspaces** p. 112).

CHAPTER 5

The Terminal Window

Every screen lives in the same window — a top bar to find and open things, panels you can split, stack, float and link, and a bottom bar with your workspaces, market clocks and status. Learn it once and every screen feels familiar.



At a glance

Open it	• It is always there: start the terminal and sign in
You need	• Signed in on any paid plan
Best for	• Finding your way around on day one • Building a multi-panel desk
Time to learn	20 minutes
Related	**Chapter 6, The Command Line** p. 89, **Chapter 7, Workspaces** p. 112, **Chapter 53, Keyboard Shortcuts** p. 983, **Chapter 54, Screen Codes** p. 993

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5.1 Screen tour

The terminal window has three parts: the **top bar**, the **panels** in the middle, and the **bottom bar**. Every screen (Markets, News, Portfolio and the rest) opens as a panel in the middle.

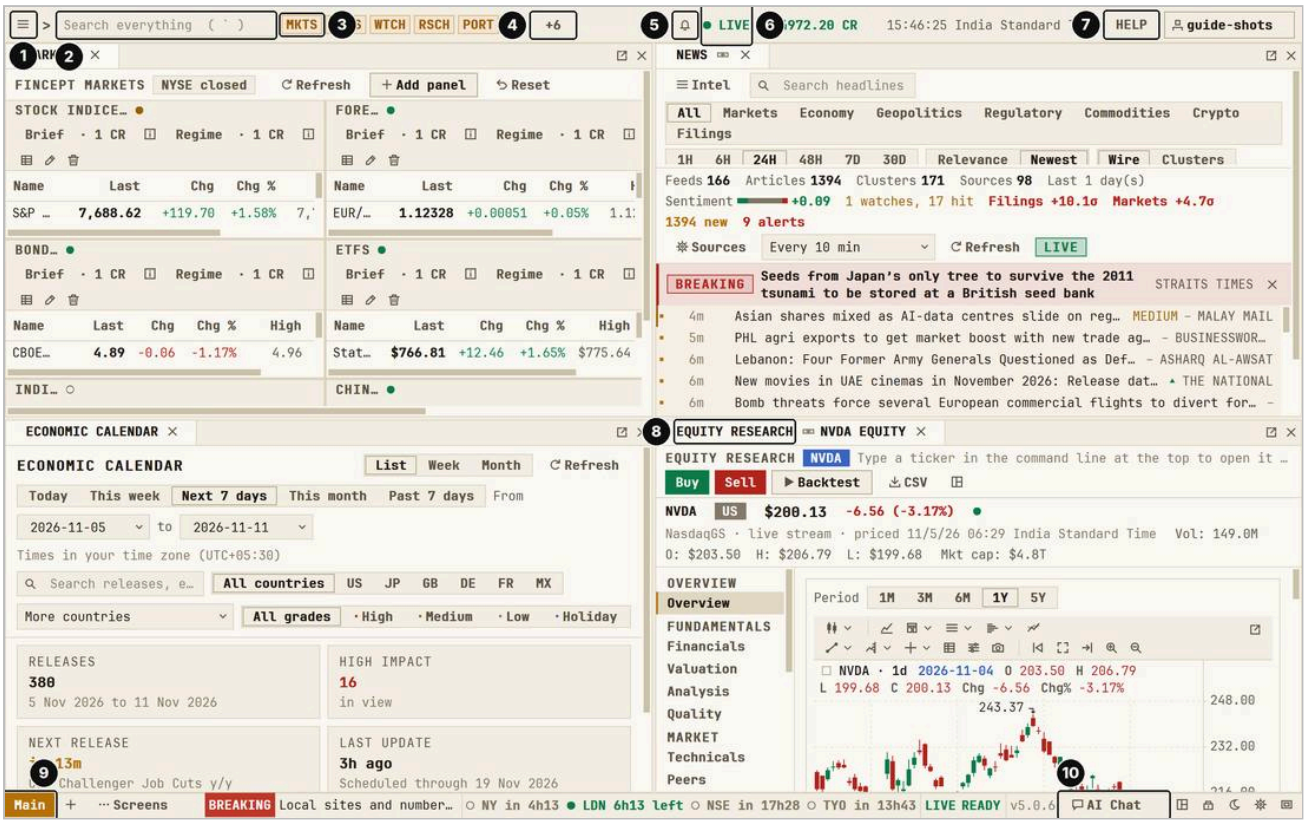


Figure 5.1 The terminal window with four panels: Markets, News, Economic Calendar and Equity Research.

1. ☰ **Menu**: File, Navigate, View and Help.
2. The **command line**: find and open anything.
3. **Quick launch**: one click opens a screen.
4. The **price strip**: symbols you pinned, with live prices. Here the window is too narrow for any of them, so **+6** lists all six.
5. **Notices** from Fincept.
6. Connection status and your **credits**.
7. **HELP** and your **account** menu.
8. A **panel**: its tab, its buttons on the right, and the screen below.
9. **Workspace tabs**, **+** and **Screens**.
10. Clocks, status, **AI Chat** and the window buttons.

1. ☰ **Menu** holds four menus: **File** (windows and layouts), **Navigate** (every screen), **View** (display, floating panels, ready-made desks) and **Help**.
2. **The command line** finds anything: a symbol, a screen, a command, a setting. Press `` ` `` to jump to it.
3. **Quick launch** chips open your favourite screens with one click.
4. **The price strip** shows symbols you pinned, with their live price and change.
5. **The notices bell** shows messages from Fincept. A number means unread notices.
6. **Connection status** says whether prices are flowing; the **credits** chip shows your balance.
7. **HELP** opens the Help screen; the **account** button (your name) opens the account menu.
8. **Panels** fill the middle. Each has a tab with its name, buttons on the right, and the screen below.
9. **The bottom bar's left end** holds your workspace tabs, **+** for a new workspace and **Screens**, a menu of every screen.
10. **The bottom bar's right end** holds the market clocks, the status words, the version, **AI Chat** and five small buttons.

When the window is narrow, the top bar hides parts in this order: the clock, the quick-launch chips, the price strip, the connection status, the credits and **HELP**. A ⋯ button then appears at the right end: it lists what is hidden.

5.2 Quick start

1. Click **MKTS** in the top bar. Markets opens and fills the middle.
2. Type `NEWS RIGHT` in the command line and press `Enter`. News opens to the right of Markets.
3. Drag the line between the two panels left or right to change their widths.
4. Drag the **NEWS** tab onto the bottom half of Markets and let go when the bottom half is shaded. News now sits under Markets.
5. Click **Main** at the bottom left with the right mouse button and choose **Save this desk as a workspace...**, type a name and click **Save**. This arrangement is now a workspace you can come back to.

5.3 The top bar



Figure 5.2 The left half of the top bar.

1. ☰ Menu.
2. The command line.
3. Quick-launch chips: MKTS, NEWS, WTCH, RSCH, PORT at first.
4. The pin: choose which screens have a chip.
5. The price strip. **+6** means six pinned symbols have no room; click it to list them.

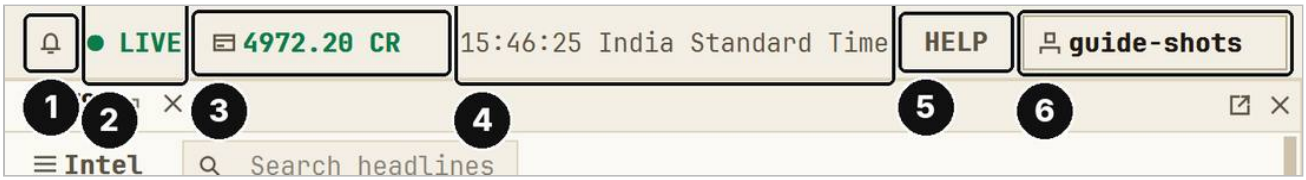


Figure 5.3 The right half of the top bar.

1. Notices (a number shows how many are unread).
2. Connection status.
3. Your credit balance. Click it for what everything costs.
4. The time, in the time zone set in Settings > General.
5. Help, keys and the commands list.
6. The account menu (your name).

The ☰ menu

Click ☰ at the top left. Point at a menu name to open it.

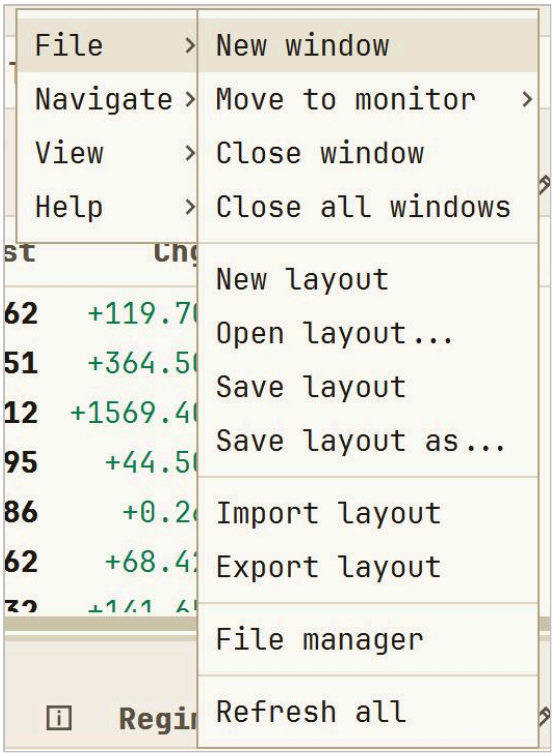


Figure 5.4 ☰ > File.

Menu	Item	What it does
File	**New window**	Opens another terminal window (it asks which monitor when you have more than one)
	Move to monitor	Moves this window to another monitor (lists each monitor with its size)
	Close window	Closes this window. Closing the last one quits the terminal, or shows the Launchpad if Settings > General > **On last window close** says so
	Close all windows	Closes every terminal window
	New layout, **Open layout...**, **Save layout**, **Save layout as...**	Workspace commands (**Chapter 7, Workspaces** p. 112)
	Import layout, **Export layout**	Read or write a workspace file
	File manager	Opens the File Manager (**Chapter 47, File Manager** p. 882)
	Refresh all	Refreshes the panel you are working in
Navigate	**Markets & Data**, **Trading**, **Portfolio & Risk**, **Research & Intelligence**, **AI & Quant**, **Tools & Workspace**	Every screen, by group (see **Chapter 54, Screen Codes** p. 993)
	Docs, **Profile**, **Settings**	Open those screens
	Edit quick launch...	Choose the quick-launch chips
View	**Search everything**	Jumps to the command line (Ctrl + K)
	Component browser	A searchable gallery of every screen (Ctrl + Shift + K)
	Fullscreen	Full screen on and off (F11)
	Focus mode	Hides the top and bottom bars (F10)

Menu	Item	What it does
	Always on top	Keeps this window above other programs (Ctrl + Shift + T)
	Float panel	**Current panel**, a list of twelve screens to open floating, and **Dock all floating panels**
	Workspaces	The ten ready-made desks and **Save current workspace...** (**Chapter 7, Workspaces** p. 112)
	Refresh screen	Refreshes the panel you are working in (F5)
	Take screenshot	Saves a picture of the window as a PNG file (Ctrl + P)
Help	**Help center**	The Help screen
	Contact support..., **My support tickets**	The support form and your tickets (**Chapter 52, Help, Docs and Support** p. 967)
	About Fincept	Version, updates and licences
	Contact us, **Terms of service**, **Privacy policy**, **Trademarks**	Those pages
	Check for updates	Looks for a newer version (**Chapter 2, Install and update** p. 28)

Note

In 5.0.6 the group names in ☰ > Navigate (and in the bottom bar's **Screens** menu) lose their "&": they read "Markets Data", "Portfolio Risk", "Research Intelligence", "AI Quant" and "Tools Workspace". This guide writes the names as they are meant to read. The same happens to the **Options & F&O Desk** in ☰ > View > Workspaces, which reads "Options FO Desk".

The keys printed in ☰ > View are the default keys. If you change a key in **Settings** › **Keybindings**, the menu still shows the old one; Help > **Keystrokes** shows the key that works now.

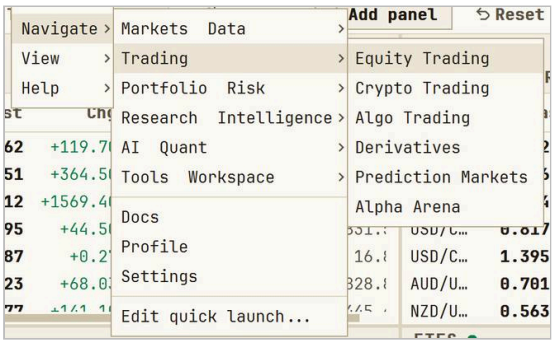


Figure 5.5 ☰ > Navigate > Trading. Each group lists its screens; a screen your plan does not include shows the plan it needs.

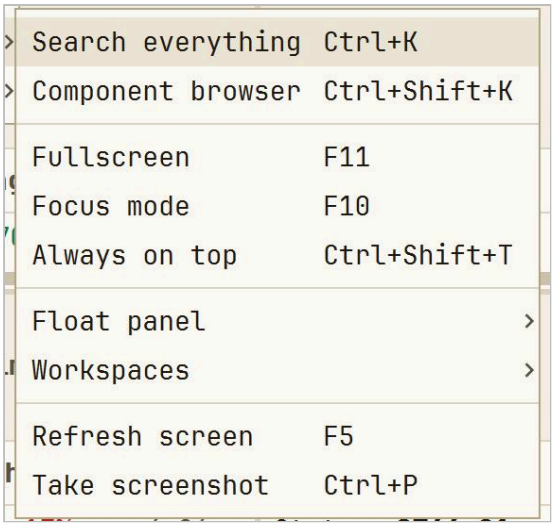


Figure 5.6 ☰ > View, with each item's key on the right.

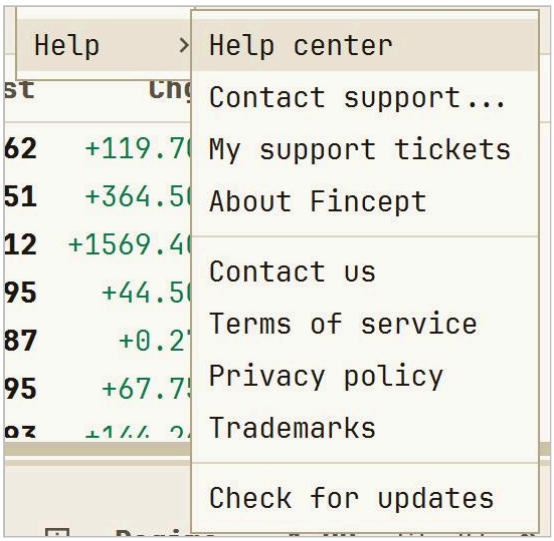


Figure 5.7 ☰ > Help.

Quick launch

The chips after the command line open a screen with one click. You can have up to six.

1. Click the pin after the chips (**Edit quick launch**), or right-click any chip and choose **Edit quick launch...**.



Figure 5.8 Customize Menu Bar: screens on the left, your chips on the right.

1. Filter the list of screens.
2. **Pin** adds the selected screen; **Remove** drops the selected chip.
3. Your chips, in order. Up to six.
4. Move the selected chip left or right.
5. **Clear All** empties the list.

2. Pick a screen in the list on the left (type in **Search screens...** to filter it) and click **Pin**.

3. Select a chip on the right and use the arrows to move it left or right, or **Remove** to drop it. **Clear All** empties the list.

4. Click **OK**.

To drop one chip quickly, right-click it and choose **Remove ... from quick launch**.



Figure 5.9 Right-click a chip to remove it or edit the list.

A screen your plan does not include shows a lock on its chip, and its tooltip names the plan it needs. The chips are saved to your account.

The price strip

The strip after the chips shows symbols you pinned, each with its live price and today's change. On a new account it holds six markets most desks watch: the S&P 500, the Nasdaq, the Nifty 50, EUR/USD, gold and Bitcoin. A letter after a price says how fresh it is: **D** delayed, **C** the market is closed, **S** stale (the price stopped updating). No letter means live.



Figure 5.10 On a wide window the strip shows each pinned symbol with its price and today's change; +4 lists the four that have no room.

When there is no room for every symbol, the strip shows + and the number hidden. Click it to list them; click a name to open it.

To	Do this
Pin a symbol	Drag it onto the strip from any table, or type the symbol and `PIN` in the command line (`AAPL PIN`)
Open a symbol	Double-click it, or right-click > **Open**
Send it to your linked panels	Click it: it goes to link group A. Right-click > **Send to** a group for another group
Copy its ticker	Right-click > **Copy ticker**
Remove it	Right-click > **Remove from the strip**
Load it into one panel	Drag it onto that panel

The pinned symbols are saved to your account.

Notices

The bell shows messages from Fincept: service news, new features, planned maintenance. A number on it counts the unread ones. Click the bell to open **NOTICES**.

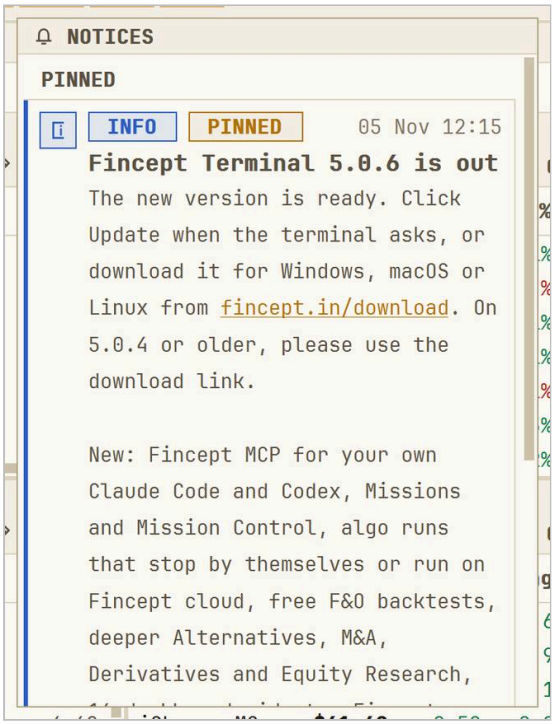


Figure 5.11 The notices panel under the bell.

Notices are grouped **PINNED**, **TODAY**, **YESTERDAY**, **THIS WEEK** and **EARLIER**; a pill at the top counts the unread ones (**2 NEW**). A notice counts as read once it has been in view in the panel, or as soon as you click it. **MARK ALL READ** clears the count; **LOAD OLDER** fetches older ones. Some notices have a button that opens the screen they talk about. Esc or a click outside closes the panel.

Note

Alerts, order fills and other events from your own activity are not notices. They appear as desktop notifications from your computer, and in the Action Center (**Chapter 21, Action Center** p. 381). Choose which ones you get in **Settings** › **Notifications** .

Connection status and credits

Status	Meaning
● **LIVE**	Connected to Fincept's servers.
● **CONNECTING**	Waiting for the first answer from the servers (just after start).
● **RECONNECTING**	A request failed and is being tried again; data may be a few seconds old.
● **OFFLINE**	The servers cannot be reached. Prices, portfolios and AI are paused.
● **SIGNED OUT**	No one is signed in, so nothing streams.

The credits chip shows your balance, for example **5000.00 CR**. When an action spends credits, the chip shows the amount spent (such as **-1 CR**) for a moment. Its tooltip splits the balance into plan credits and purchased credits (purchased credits never expire) and says when your plan ends. Click it to see what every action costs. **Chapter 50, Profile, Plan & Billing** p. 920 explains credits.

Clock, HELP and the account menu

The clock shows the time with its time zone, in the zone chosen in **Settings** › **General** (your computer's zone unless you pick one). Hover it for the full date.

HELP opens the Help screen: how the command line works, keyboard shortcuts, the commands list and support.

Click your name for the account menu.

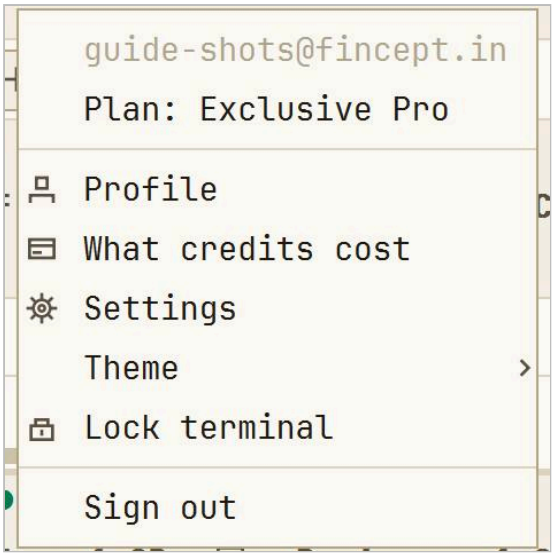


Figure 5.12 The account menu.

Item	What it does
Your email	(for reading only)
Plan: *your plan*	Opens the plans and pricing page
Profile	Opens your profile (**Chapter 50, Profile, Plan & Billing** p. 920)
What credits cost	The price of every metered action
Settings	Opens Settings
Theme	Pick the terminal's theme
Lock terminal	Locks the terminal at once (Ctrl + L)
Sign out	Signs you out of this computer

5.4 Panels

Every screen opens as a **panel**. A panel has a tab with the screen's name in capitals, buttons at the right end of its title bar, and the screen underneath.



Figure 5.13 The parts of a panel's title bar (here News, top right).

1. The tab: the panel's name. Double-click to rename; right-click for the panel menu.
2. The link square (on screens that can be linked).
3. Closes this panel.
4. Floats the panel in a window of its own.
5. Closes the panel and any tabs stacked with it.

Open, place and close panels

To	Do this
Open a screen alone	Click its quick-launch chip, pick it in **Screens** or ☰ > **Navigate**, or type its code (`MKTS`)
Open it beside the others	Type its code and a side: `NEWS RIGHT`, `NEWS DOWN`, `NEWS TL` (see **§6.6 Open screens side by side** p. 97)
Open it as a tab of a panel	`NEWS TAB`
Add it from the gallery	☰ > View > **Component browser** (**Ctrl** + **Shift** + **K**) and double-click a screen
Close a panel	The **×** on its tab, the **×** at the end of its title bar, `NEWS CLOSE`, or right-click > **Close panel**
Keep only one panel	`NEWS ONLY`

A screen opened from a chip, a menu or by its code alone **replaces** the panels on screen. A screen opened with a side word or from the Component Browser is **added**. When it is added without a side, the panels re-arrange by themselves: two sit side by side, a third goes full width below them, four make a 2 by 2 grid, and from the fifth on, new panels stack as tabs in the bottom-right panel.

Move and resize panels

- **Resize**: drag the line between two panels.
- **Move**: drag a panel's tab. As you drag, the terminal shows where it can go: a side of another panel, its middle (to stack as a tab), or the edge of the window. Let go on the place you want.
- **Stack**: drop a tab in the middle of another panel. Panels stacked together show their tabs side by side; click a tab to bring it forward. When the tabs do not fit, a ⌄ button lists them all.

The panel menu

Right-click a panel's tab for its menu:



Figure 5.14 The menu of a docked News panel. Floating panels show Dock back into window instead of Float panel.

Item	What it does
Rename panel…	Gives the panel your own title in a small **Rename Tab** window (**New name:**). Or double-click the tab title and type in place: Enter keeps it, Esc cancels
Duplicate panel	Opens a second copy of the screen with the same settings, as a tab beside it
Float panel	Moves the panel into a floating window of its own
Dock back into window	(floating panels) Puts it back into the terminal window
Float in its own window	(a panel stacked with others in a floating window) Gives it a window of its own
Always on top	(floating panels) Keeps the floating window above other windows
Link to group	**None**, or one of the link groups (see below). Only on screens that can be linked
Open in new window	Moves the panel into a new terminal window
Move to window	Moves it to another open terminal window (**Window 1**, **Window 2** …). Shown only while more than one terminal window is open
Copy panel title	Copies the panel's title to the clipboard
Close panel	Closes it

Floating panels

A floating panel is a window of its own that still belongs to the terminal. Put a chart on a second monitor, or keep a watchlist on top of other programs.

To float a panel, use any of these: the pop-out button on its title bar; right-click its tab > **Float panel**; `NEWS FLOAT`; ☰ > View > **Float panel**; or drag its tab out of the window. To put it back: right-click its tab > **Dock back into window**, `NEWS DOCK`, or ☰ > View > Float panel > **Dock all floating panels**.

Floating panels are saved with your workspace, hidden when the terminal locks, and close with their terminal window. Keyboard shortcuts work inside them too, except the backtick: it jumps to the command line only while the main terminal window is the active one. From a floating window, click the command line instead.

5.5 Link panels with link groups

A **link group** makes several panels follow the same symbol. Link Equity Research and News to group A, and when you pick a symbol in one, the other changes too.

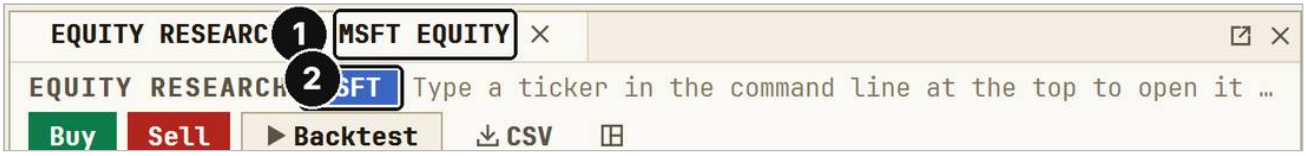


Figure 5.15 Equity Research in link group B, loaded with MSFT. Every panel in the group shows the group's symbol on its tab.

1. The group's symbol, shown on the tab of every panel in the group.
2. The panel itself on that symbol.

1. Click the small square on a panel's tab. Each click moves the panel to the next group (A, B, C …); the square takes the group's colour. After the last group the next click unlinks the panel again. Or right-click the tab and choose **Link to group** and a group.
2. Do the same on another panel, with the same group.
3. Pick a symbol in one of them (click a row of the watchlist, load a company in Equity Research). The other panels of the group load it too.



Figure 5.16 The bottom bar names the linked symbol: the group letter, then the symbol.

1. Group **B** follows **MSFT**.

The screens that can be linked: **AI Chat**, **Backtesting**, **Crypto Trading**, **Equity Research**, **Equity Trading**, **F&O**, **News** (it filters headlines to the symbol), **Portfolio**, **Surface Analytics** and **Watchlist**. Other screens show no square.

Seven groups, **A** to **G**, are ready to use; **H**, **I** and **J** are spare slots you can switch on. Right-click a panel's square for the group menu:



Figure 5.17 The group menu of an unlinked panel. On a small screen its last items move to a second column.

Item	What it does
Unlink	Takes the panel out of its group
Group A (A) … Group J (J)	Moves the panel to that group (a switched-off slot is greyed)
Rename *group*…	Gives the group your own name, such as "Tech" (window **Rename group**)
Change colour for *group*…	Picks another colour for the group
Disable slot *letter* / **Enable slot *letter***	Switches a group off or on
Reset *letter* to defaults	Puts the group's name, colour and switch back

The last four items act on the panel's own group; on an unlinked panel they act on group A.

Other ways to use groups:

- Click a symbol on the price strip: it goes to group A.
- Type `publish A NVDA` in the command line to send NVDA to group A, `link A` to link the panel you are in, `unlink` to unlink it.
- A command typed without a security (`G`, `FA`, `N`) works on the linked symbol.

Group names, colours and switches are saved to your account. A panel's group is saved with the workspace.

5.6 The bottom bar



Figure 5.18 The left half of the bottom bar.

1. Workspace tabs (see **Chapter 7, Workspaces** p. 112).
2. **+**: a new workspace.
3. **Screens**: every screen, by group.
4. The headline line: **BREAKING** or **LATEST**. Click to open News.



Figure 5.19 The right half of the bottom bar.

1. Market clocks: New York, London, India (NSE), Tokyo.
2. Price status (here LIVE) and READY or BUSY.
3. The terminal's version.
4. **AI Chat** opens the chat panel.
5. Workspaces menu.
6. Lock.
7. Switch theme.
8. Settings.
9. Focus mode (F10).

Part	What it shows or does
Workspace tabs	One tab per saved workspace; the highlighted one is on screen. Click to switch, right-click for its menu, scroll with the mouse wheel when they do not fit.
+	A new workspace on a fresh desk
Screens	A menu of every screen, grouped as in ☰ > Navigate
Headline line	Important headlines from the last six hours, up to eight, each shown for ten seconds. **BREAKING** marks an urgent story, **LATEST** the others. Hover for the source and time; click to open News. The line is empty when nothing is recent.
Market clocks	**NY**, **LDN**, **NSE**, **TYO**. A filled dot ● means open, with the time until the close ("2h05 left"); a hollow dot ○ means closed, with the time until the open ("in 6h27"). Hover a clock for the exchange's local time. Regular hours only; holidays are not shown.
Linked symbol	The group letter and symbol your linked panels follow (appears once you use a link group)
Price status	One word for the pinned symbols' prices: **LIVE**, **DELAYED**, **STALE** (a price that stopped updating), **CLOSED** or **SNAPSHOT**. Hover for details.
READY / BUSY	**BUSY** while the terminal waits on data for more than a moment; hover it to see what it is waiting for
Version	The terminal's version, such as **v5.0.6**
UPDATE *x.y.z*	Appears when a new version is downloaded and ready: one click restarts into it (you stay signed in). It also installs by itself when you close the terminal. See **Chapter 2, Install and update** p. 28
AI Chat	Opens the AI chat panel over the desk. For the AI Chat screen, type CHAT (it opens alone) or press F9 (it opens beside your panels) (**Chapter 37, AI Chat** p. 719)

Part	What it shows or does
Workspaces button	**Save workspace**, **Save workspace as...**, **Open workspace...**, **New workspace**
Lock button	Locks the terminal (Ctrl + L)
Theme button	Switches between the light and the dark theme
Settings button	Opens Settings
Focus mode button	Hides both bars (F10)

When the window is narrow, the headline shrinks first, then the clocks show only their codes, then the version hides.



Figure 5.20 Screens > Trading at the bottom left.

5.7 Focus mode, full screen and always on top

Focus mode hides the top and bottom bars so the panels get the whole window. Turn it on with F10, the focus button at the bottom right, or ☰ > View > **Focus mode**. An **Exit focus** button stays in the top-right corner; click it or press F10 again to bring the bars back.



Figure 5.21 Focus mode: the top bar is gone, so the panels start at the very top of the window; the Exit focus button sits in the corner.

1 **Exit focus** brings the bars back.

Full screen (F11 or ☰ > View > **Fullscreen**) fills the monitor. **Always on top** (Ctrl + Shift + T) keeps the window above other programs; it is remembered for that window.

5.8 Several windows

You can open as many terminal windows as you like, for example one per monitor. Each window has its own panels, top bar and bottom bar.

To	Do this
Open a window	☰ > File > **New window**, or Ctrl + Shift + N. With several monitors the terminal asks which one (**Choose Monitor**; ★ marks the main monitor)
Move a panel to a new window	Right-click its tab > **Open in new window**
Move a panel to another window	Right-click its tab > **Move to window**, or drag its tab onto the other window
Move a window to a monitor	☰ > File > **Move to monitor**, or Ctrl + Shift + 1 ... Ctrl + Shift + 9
Go to a window	Ctrl + 1 ... Ctrl + 9, or Ctrl + Alt + Tab for the next one
Close it	☰ > File > **Close window**, or the window's close button

A screen can be open in one window at a time; moving it to a window where it is already open is refused with a message. Workspaces save every window (**Chapter 7, Workspaces** p. 112).

The window's title bar shows *Fincept Terminal*, your workspace's name and the screen you are on.

5.9 The Component Browser

☰ > View > **Component browser** (Ctrl + Shift + K) shows every screen as a card, sorted so the ones you use most come first (the stars on a card count your visits; hover them for the exact count). Filter by category on the left or type in **Search components...**, then double-click a card to add that screen beside your panels.

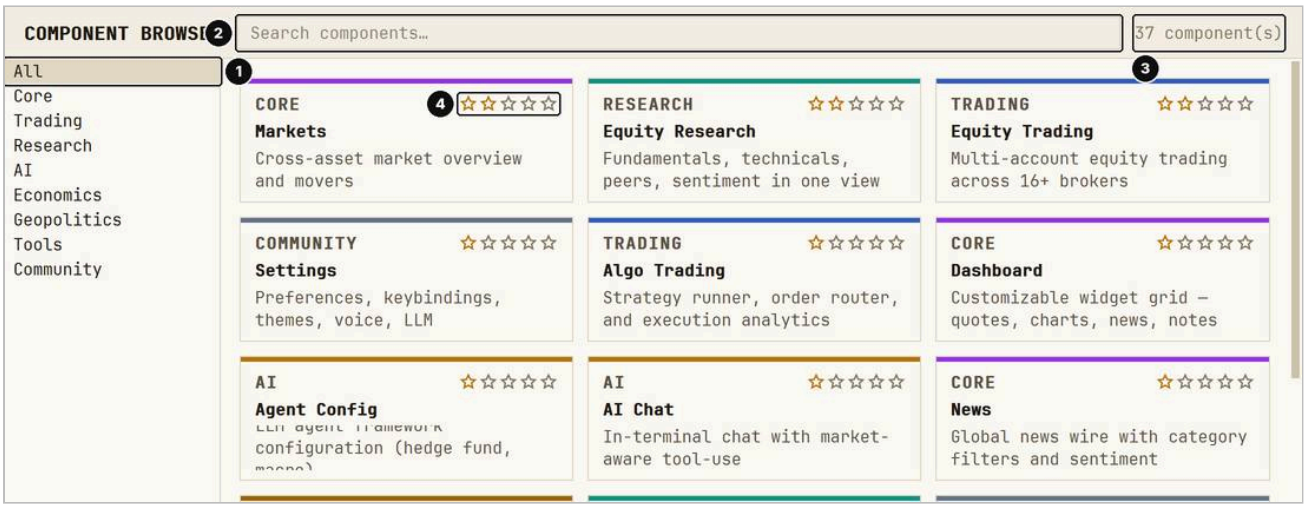


Figure 5.22 The Component Browser: categories on the left, a card per screen.

1. Categories: show one group of screens.
2. Search by name or description.
3. How many screens match.
4. Stars show how often you open the screen: one after your first visit, five after 150.

5.10 Reference

Top bar

Element	What it is
☰	**Menu**: File, Navigate, View, Help
>	The prompt before the command line
Search everything (`)	The command line (**Chapter 6, The Command Line** p. 89)
Quick-launch chips	Up to six screens; default MKTS, NEWS, WTCH, RSCH, PORT
Pin	**Edit quick launch**
Price strip	Pinned symbols; **+N** lists those without room
Bell	**Notices**; the number counts unread ones
Status	LIVE, CONNECTING, RECONNECTING, OFFLINE or SIGNED OUT
***n* CR**	Credit balance; click for what everything costs
Clock	Time and time zone
HELP	The Help screen
Your name	Account menu
…	Items hidden to fit the window (only when narrow)

What is saved where

Thing	Saved
Quick-launch chips, pinned symbols, link group names and colours, keyboard shortcuts, command history, saved workspaces	To your account: they follow you to every computer
The desk on screen before you save it (open panels, sizes, floating windows, window positions)	On this computer

5.11 For advanced users

- **Refresh** (F5) asks only the panel you are working in for fresh data, not the whole terminal.
- **Take screenshot** (Ctrl + P) takes a picture of the whole window and asks where to save it; the PNG file is named `fincept_` with the date and time, in your home folder unless you pick another.
- **A service notice strip** can appear above the panels when Fincept needs to tell everyone something while it lasts (for example a paused service). It disappears by itself.
- **Duplicate panel** gives you two of the same screen, each with its own state: two charts on different symbols, or two watchlists.
- **The AI arranges panels too.** In AI Chat, ask "put News on the right and the Watchlist bottom-left" or "float the chart".

Do it with AI

- "Open Markets, put News on the right and Equity Research bottom-right."
- "Float the News panel."
- "Close every panel except Portfolio."

5.12 Troubleshooting

The top bar or bottom bar is gone

You are in focus mode. Press `F10` or click **Exit focus** in the top-right corner.

A panel disappeared when I opened another screen

A screen opened from a chip, a menu or by its code alone replaces the panels on screen. Open the other screen with a side word (`NEWS RIGHT`) or from the Component Browser to keep both. Your earlier arrangement is still in your workspace: click its tab at the bottom.

The status says OFFLINE or RECONNECTING

The terminal cannot reach Fincept's servers. Check your internet connection. Prices, portfolios and AI resume by themselves when the connection is back.

A floating panel is lost behind other windows

Use ☰ > View > Float panel > **Dock all floating panels** to bring every floating panel back into the window.

Two panels do not follow each other

Both must be in the same link group (same letter on the square), and both must be screens that can be linked. Check that the group is not switched off.

CHAPTER 6

The Command Line

One box at the top of the window finds and opens everything — any instrument on any market, every screen, commands, workspaces, settings, news and economic data — and arranges your panels with a few typed words.



At a glance

Open it	• Click the box that says **Search everything** at the top left • Press `` ` `` (backtick) or **Ctrl** + **K** from anywhere
You need	• Signed in on any paid plan
Best for	• Opening any symbol or screen in two seconds • Arranging panels without the mouse
Time to learn	15 minutes
Related	**Chapter 5, The Terminal Window** p. 70, **Chapter 54, Screen Codes** p. 993, **Chapter 53, Keyboard Shortcuts** p. 983, **Chapter 7, Workspaces** p. 112

In this chapter

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6.1 Screen tour

The command line is the box at the top left of every terminal window. It shows **Search everything (`)** until you click it. As you type, a list of answers opens under it, grouped into sections.

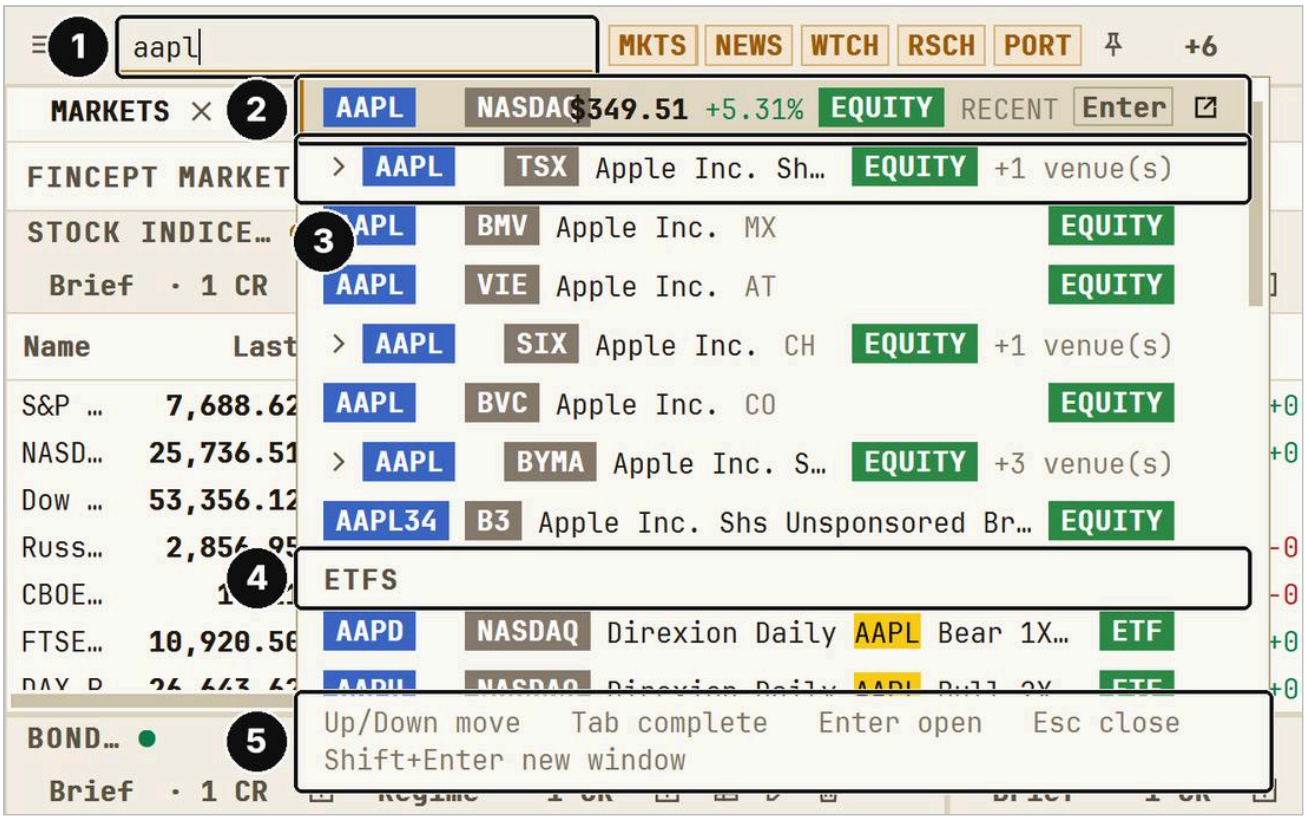


Figure 6.1 Typing `aapl`. Each row is something you can open; the highlighted row opens on Enter.

1. The command line. Type a symbol, a name, a screen code or a command.
2. The highlighted row: symbol, exchange, live price and change, the kind of instrument (EQUITY) and a **RECENT** tag. **Enter** opens it; the window icon means **Shift** + **Enter** works too.
3. **+1 venue(s)**: the same security on more exchanges. Press **Right** to list them.
4. A section header. Instruments are grouped by kind: Equities, ETFs, Funds, Indices ...
5. The footer: the keys you can use for the highlighted row.

The list groups its rows into sections. The section titles are in capitals on screen. Which ones you see depends on what you type:

Section	What its rows are	What a row does
RECENT, QUICK LAUNCH	(empty line) What you opened lately and your quick-launch screens	Opens it again
SCREEN, PANELS	The screen a code or name opens, and the placement words for it	Opens or places the screen
SECURITY, COMMANDS FOR ...	A security you typed and the commands for it (`AAPL G`)	Opens that view of the security
COMMAND, ACTION	A command with words after it (`backtest AAPL`, `save layout Morning`)	Runs it
EQUITIES, ETFS, FUNDS, INDICES, CRYPTO, FUTURES, OPTIONS, BONDS ...	Instruments, one section per kind	Opens the instrument on the screen that can show it

Section	What its rows are	What a row does
SOVEREIGN BONDS	Government bonds by country and maturity, with the yield	Opens Sovereign Bonds on that bond
ECONOMIC SERIES, ECONOMIC DATA, ECONOMIC CALENDAR	Data series and scheduled releases	Charts the series, or opens the calendar on that release
PREDICTION MARKETS, VESSELS, GEOPOLITICS, TRADE FLOWS	Markets, ships and countries from those screens	Opens that screen on the pick
COMMANDS, SCREENS, ACTIONS, WORKSPACES, SETTINGS	Matching commands, screens, terminal actions (`fullscreen`), workspaces and settings	Opens or runs it
NEWS STORIES, MORE NEWS	Headlines that match	Opens the story on News
HELP	Help topics, what credits cost, plans, updates	Opens the topic
SEARCH ONE ASSET CLASS	(a `/` alone) The slash searches	Starts that search

Rows can carry a small label on the right: **WATCHLIST** (in one of your watchlists), **HOLDING** (in your active portfolio), **PINNED** (on the price strip) or **RECENT** (opened lately). Those rows rank first.

6.2 Quick start

1. Press `` ` `` (the backtick key, left of `1`). The cursor jumps to the command line and a short list opens: things you opened recently, your quick-launch screens and a few examples.

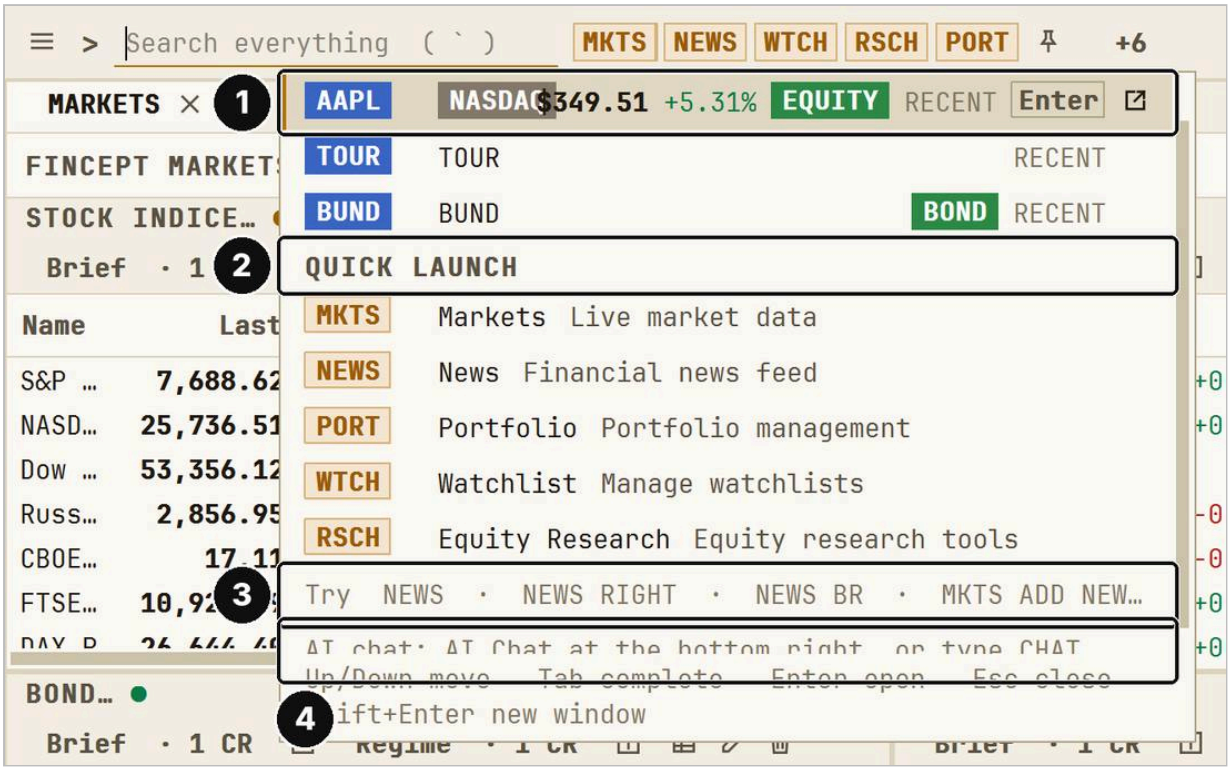


Figure 6.2 The empty command line shows what you opened recently, your quick-launch screens and examples to try.

1. **RECENT**: things you opened lately, newest first.
2. **QUICK LAUNCH**: the screens pinned to your top bar.
3. Examples of what you can type.
4. Where to find the AI chat.

2. Type `aapl`. The list fills with Apple's listings, its ETFs and anything else that matches.

3. Press **Enter**. Apple opens on Equity Research, because it is a company share.

4. Press `` ` `` again and type `AAPL G`. The list now shows commands for Apple, with **G** (chart) highlighted.



Figure 6.3 A security followed by a command. G is the price chart.

1. The security you typed.
2. The command, highlighted. **Enter** opens Apple's chart.

5. Press **Enter**. Equity Research opens on the chart.

6. Type `NEWS RIGHT` and press **Enter**. News opens to the right of the chart, and both stay on screen.

Tip

You never have to finish a word. Type `micro` and Microsoft is there; type `equity res` and Equity Research is there. **Tab** completes the highlighted row into the line.

6.3 Find and open an instrument

Do this to open any stock, ETF, index, currency pair, crypto coin, future, option, bond or fund.

1. Press `` ` `` and type a symbol (`MSFT`, `RELIANCE`, `BTC`) or a name (`apple`, `tata motors`, `gold`).
2. Move to the row you want with **Up** and **Down**, or click it.
3. Press **Enter**.

What opens depends on the kind of instrument:

Kind	Opens on
Company shares and depositary receipts	Equity Research (**Chapter 22, Equity Research** p. 392)
Funds and ETFs	Fund Research
Crypto	Crypto Trading (**Chapter 18, Crypto Trading** p. 298)
Futures and options	F&O (**Chapter 17, F&O** p. 284)
Economic indicators	Global Data (**Chapter 32, Global Data** p. 648)
Anything else (indices, currencies, bonds)	Asset Research

The terminal first searches what it already holds (your watchlists, holdings, pins and a large list of symbols), so the first rows appear at once. It then asks Fincept's servers for every market, and those rows join the list a moment later. While that happens the footer says **searching all markets**.

> **Note**
>
> **One company, several exchanges.** A row with **+1 venue(s)** (or more) stands for the same company listed elsewhere. Press `Right` with the row highlighted to show each listing, and pick the exchange you want.

If nothing matches, the list says **No match yet. Enter opens ... as a security.** Pressing `Enter` then opens the word you typed as a symbol, which is useful for a ticker the search has not seen.

Open it in a window of its own

Hold `Shift` when you press `Enter` on an instrument row, or on `G` or `N` after a security. The chart or the headlines open in a separate window, and the screen you were looking at stays as it was. A row that can do this shows a small window icon when it is highlighted, and the footer says **Shift+Enter new window**.

Close such a window with `Ctrl` + `W` or its close button.

6.4 Run a command on a security

Type a security, a space, and a short command. The list shows every command that fits the security as soon as you type the space.

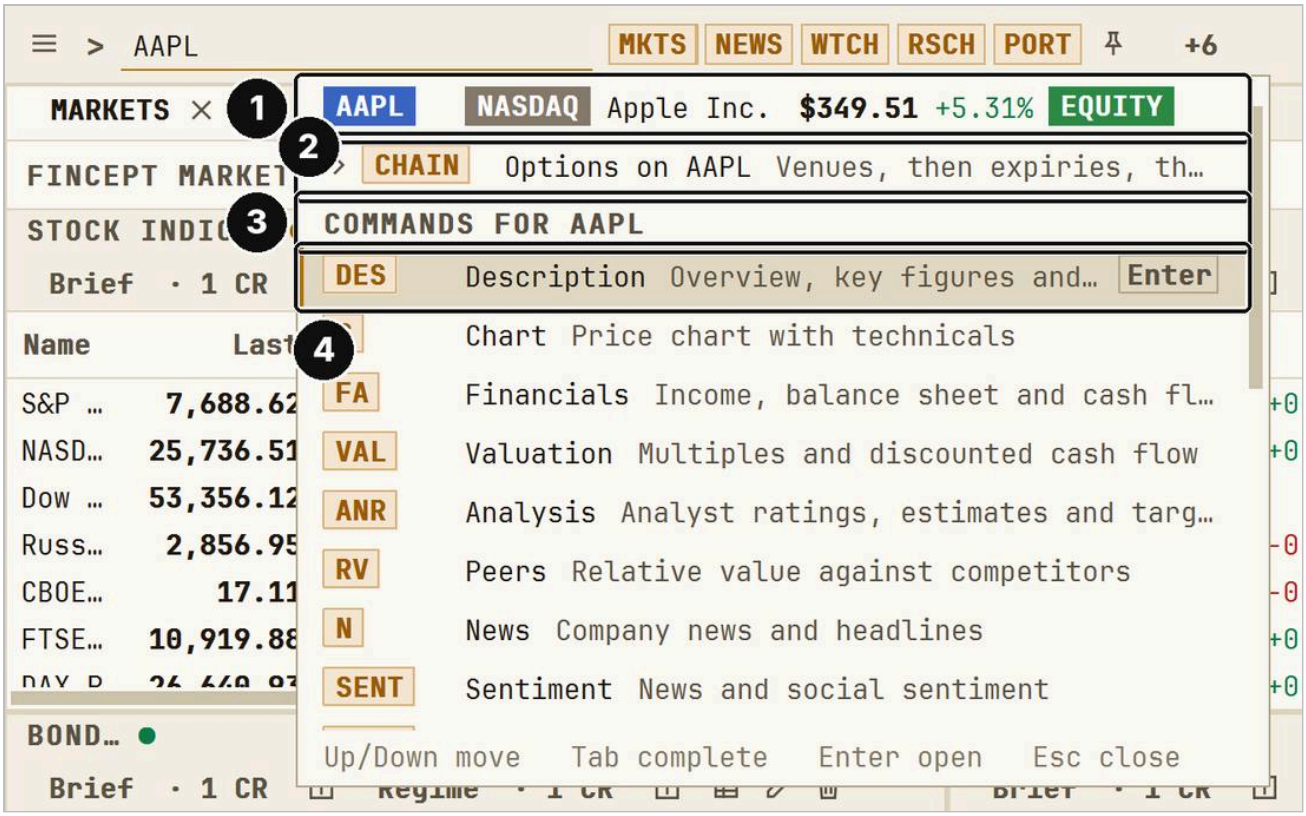


Figure 6.4 `AAPL` (with a space) lists every command for Apple.

1. The security the commands apply to.
2. **CHAIN**: Apple's listed options. Press **Right** to go through venues, expiries and strikes.
3. Every command that fits a company share.
4. **DES** is highlighted: Enter opens the description.

The commands, in the order the list shows them:

Command	Also	Opens
`DES`	`DESC`	The description: the screen that suits the instrument
`G`	`GP`, `CHART`	Price chart with technicals
`FA`	`FIN`	Financials
`VAL`	`DCF`	Valuation
`ANR`	`EST`	Analyst ratings, estimates and targets
`RV`	`PEERS`, `COMP`	Peers
`N`	`CN`, `NEWS`	Company news
`SENT`		Sentiment
`QUAL`		Earnings quality and distress scores
`HDS`	`OWN`	Ownership
`CF`	`SEC`, `FIL`	Filings
`SCEN`	`STRESS`	Scenarios and stress tests
`XA`		Cross-asset correlation and beta

Command	Also	Opens
`QL`	`QUANT`	Quant lab
`MACRO`		Rates and macro sensitivity
`OMON`	`OPT` , `OPTIONS`	Options chain, greeks and volatility (Derivatives)
`FNO`		Futures and options chain (India)
`TRADE`	`BUY` , `SELL`	An order ticket. It always opens on the buy side, even after `SELL` : switch the side on the ticket
`BT`	`BACKTEST`	Backtesting with the security
`W`	`WATCH`	Adds it to your default watchlist
`PIN`		Pins it to the price strip in the top bar

§54.4 Command forms p. 999 says which kinds of instrument each command works for.

After a security that has listed options, a **CHAIN** row (**Options on …**) leads to its option chain.

A command typed **without** a security uses the symbol your panels are linked to (see **§5.5 Link panels with link groups** p. 82). With no linked symbol, the footer asks for one: **Type a security before G, for example AAPL G**.

To keep one asset class when a symbol means several things, put a class word in the middle: `AAPL EQ DES` , `GOLD FUT DES` . The words are listed in **§54.4 Command forms** p. 999.

6.5 Open a screen

Type a screen's four-letter code (`MKTS`), its name (`markets`) or one of its other words (`live`) and press `Enter` .

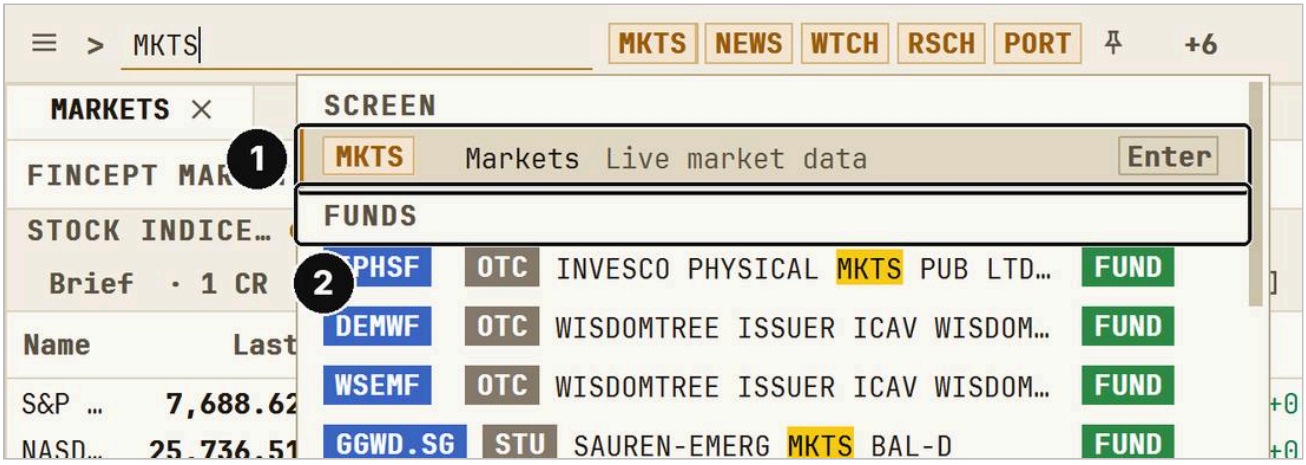


Figure 6.5 An exact code leads the list, so Enter always opens that screen.

1. **SCREEN**: the screen the code opens. **Enter** opens it.
2. Other matches (here funds with MKTS in their names) come after it.

You can also find a screen by what it is about. Typing `options` lists Derivatives first (`options` is one of its words), then everything else about options.

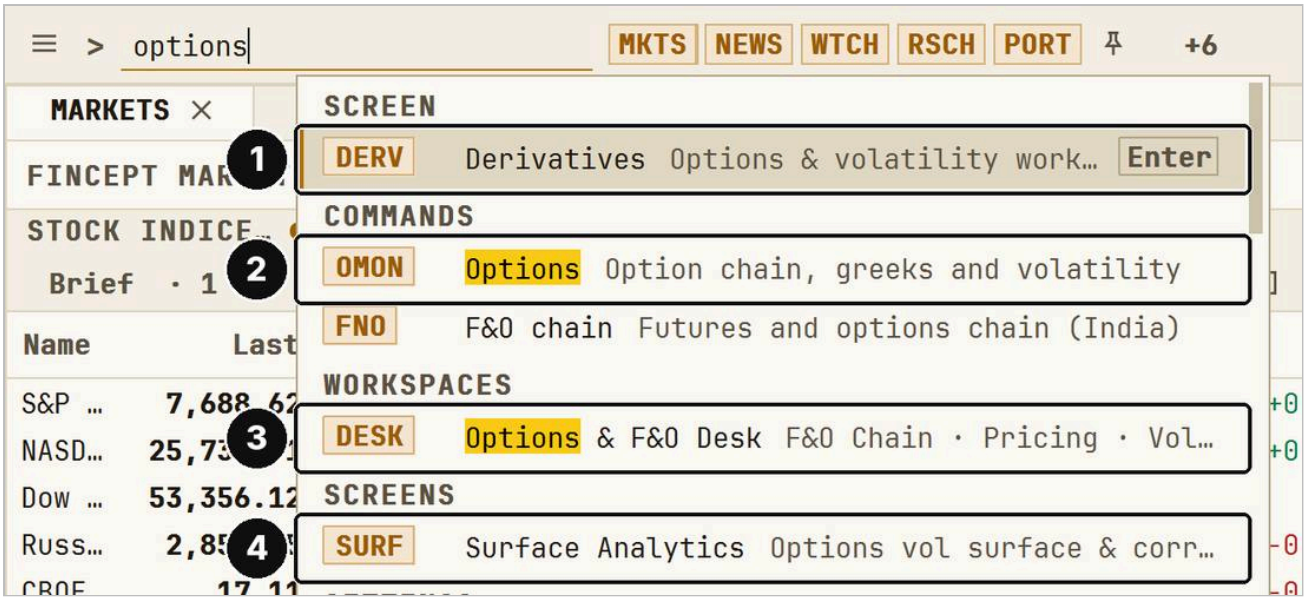


Figure 6.6 `options` is another word for Derivatives, so Derivatives leads; commands, a desk and other screens about options follow.

1. The screen this word opens.
2. Commands with a matching name.
3. A ready-made desk.
4. Other screens about the subject.

A plain code shows that screen **alone**: the panels on screen close and the screen fills the window. Floating panel windows are left alone. To keep what is on screen, add a placement word (next section). Every code is listed in **Chapter 54, Screen Codes** p. 993.

6.6 Open screens side by side

Add a word after a screen to say where it goes. These are **panel commands**; they work the same when the AI does it for you.

1 Type a screen and a space: `markets`. The list shows every word you can add.

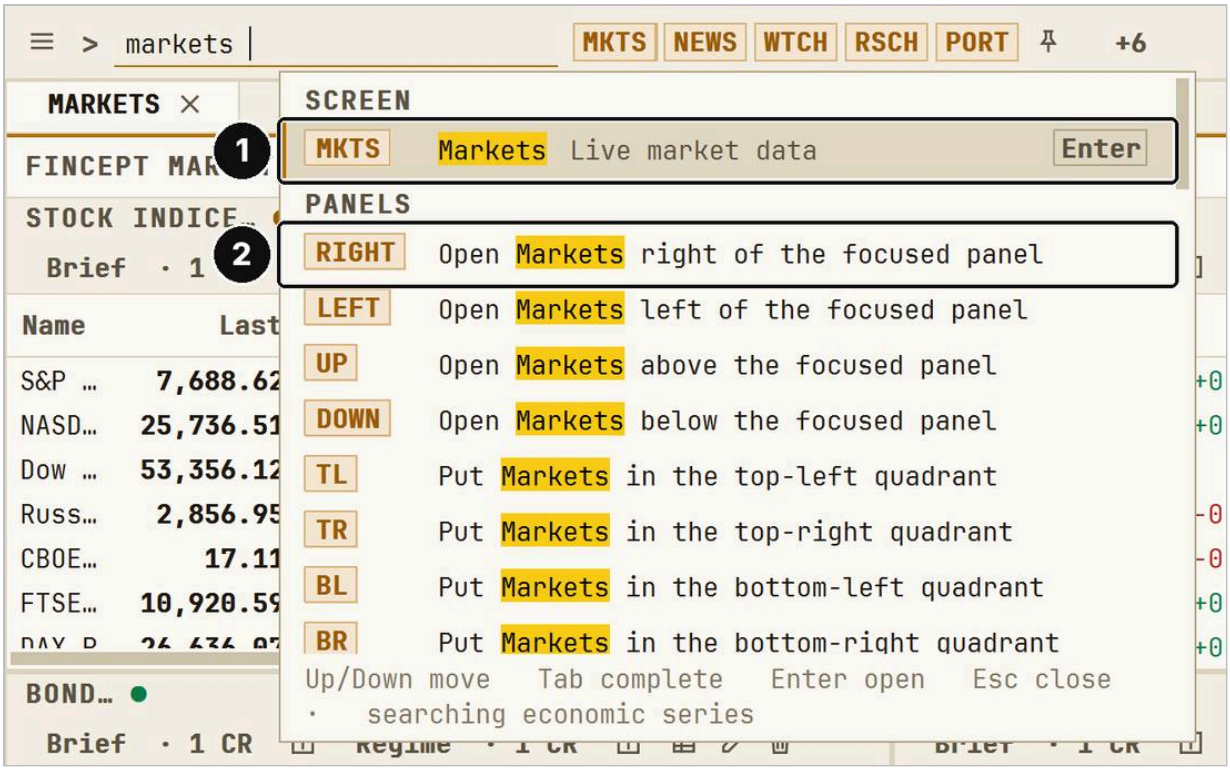


Figure 6.7 A screen name and a space lists the placement words.

1. `Enter` now opens Markets alone.
2. Each placement word with what it will do. Click one, or type it.

2 Type `RIGHT` (or pick it) and press `Enter`.

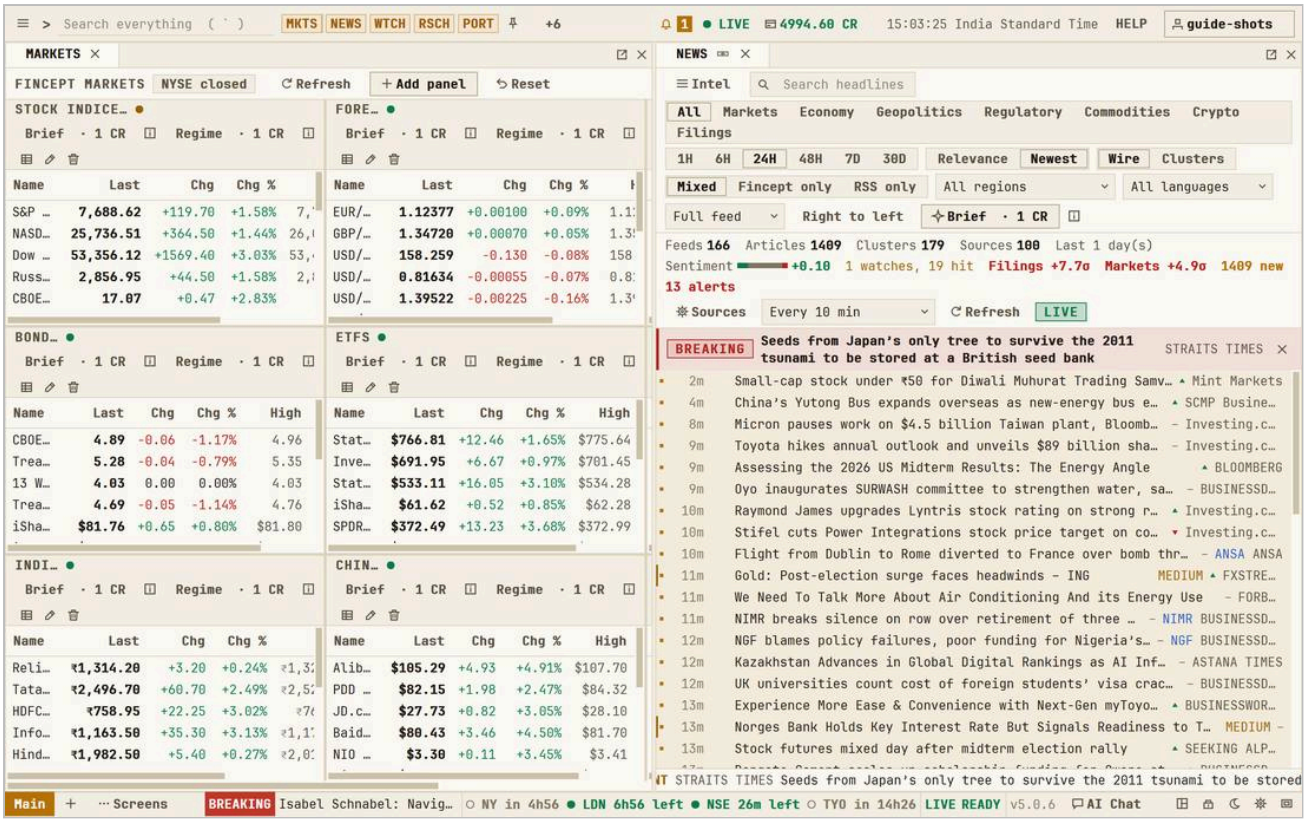


Figure 6.8 After `NEWS RIGHT`: News opened to the right of Markets.

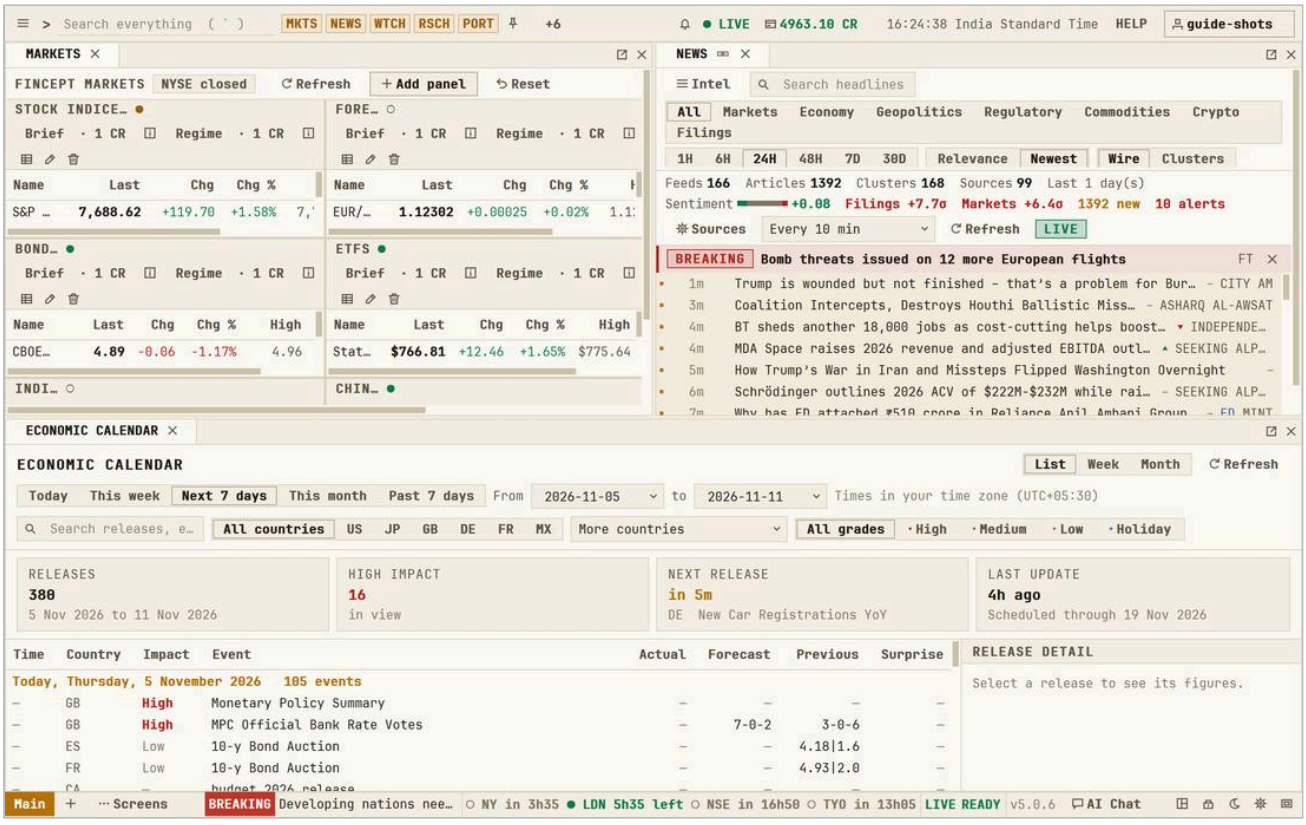


Figure 6.9 After `ECAL BL`: the Economic Calendar goes to the bottom-left quarter. With only three panels, it takes the whole bottom row.

Word	Where the screen goes
`RIGHT`, `LEFT`, `UP`, `DOWN`	Beside the panel you last used, on that side

Word	Where the screen goes
`TL` , `TR` , `BL` , `BR`	In a quarter of the window (top-left, top-right, bottom-left, bottom-right). The other panels fill the other quarters.
`TAB`	As another tab of the panel you last used
`ONLY`	Keeps only this screen and closes the other panels
`CLOSE`	Closes this screen
`FLOAT`	Moves it into a floating window of its own
`DOCK`	Puts a floating screen back into the window
`ADD`	Opens another screen beside this one: `MKTS ADD NEWS` , `MKTS ADD NEWS DOWN`
`REPLACE`	Puts another screen in this one's place: `MKTS REPLACE NEWS`

After `ADD` or `REPLACE` the list asks for the second screen:

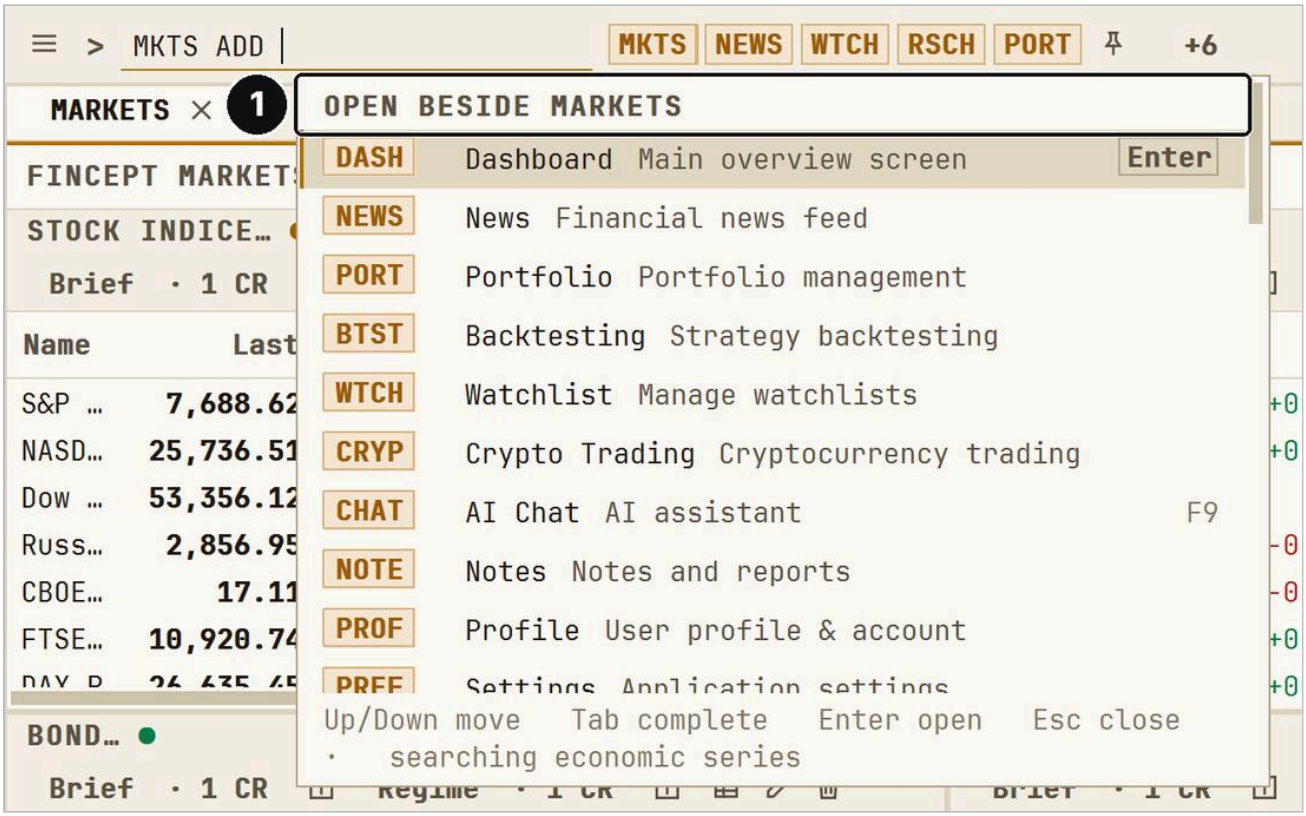


Figure 6.10 `MKTS ADD` asks which screen to open beside Markets.

1 Pick the second screen, or type its code.

You can also start with the verb: `ADD NEWS` , `ADD NEWS LEFT` , `CLOSE NEWS` , `FLOAT NEWS` , `DOCK NEWS` , `OPEN NEWS RIGHT` . A complete panel command leads the list with a sentence that says what it will do, for example **Open News right of the focused panel.**



Figure 6.11 A complete panel command says what Enter will do.

1 What `NEWS RIGHT` will do.

Short and other forms work too: `R`, `L`, `U`, `D`; `Q1` to `Q4` for the quarters; `STACK` for TAB; `X` or `REMOVE` for CLOSE; `POP` or `POPOUT` for FLOAT. The full list is in **§54.4 Command forms** p. 999.

Tip

"The panel you last used" is the one with the coloured edge. Click inside a panel before you type `RIGHT` or `TAB` to choose where the new one goes.

6.7 Search one kind of instrument

Start the line with a slash word to search only one kind. Type `/` alone to see them all.

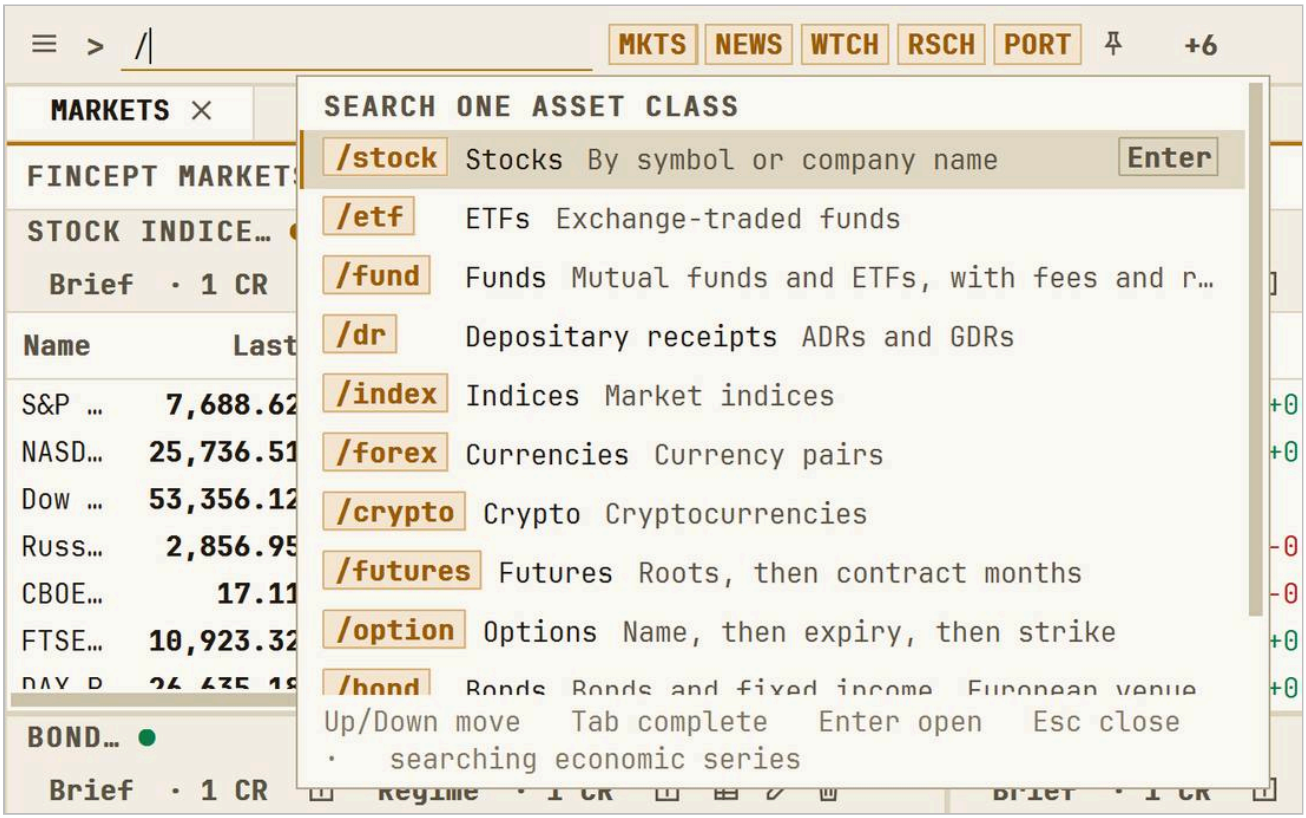


Figure 6.12 `/` lists the asset-class searches.

Slash word	Searches
`/stock`	Shares, by symbol or company name
`/etf`	Exchange-traded funds
`/fund`	Mutual funds and ETFs, with fees and ratings
`/dr`	Depositary receipts (ADRs and GDRs)
`/index`	Market indices
`/forex`	Currency pairs
`/crypto`	Cryptocurrencies
`/futures`	Futures: roots first, then contract months
`/option`	Options: the name, then the expiry, then the strike
`/bond`	Bonds and fixed income, European venues included
`/economic`	Economic indicators



Figure 6.13 `/crypto btc` keeps only crypto rows.

Futures

`/futures gold` lists futures **roots** (the commodity or index the contracts are on). Press Right on a root to list its contract months; Left closes the list again. Enter on a root opens the continuous series; Enter on a month opens that contract. Both open on the F&O screen's futures page.

Options

`/option aapl` lists the names that have listed options, one row per exchange. Press Right to list the expiry dates, then Right on a date to list its strikes. On a strike row, Left and Right choose the **call** or the **put**, and Enter opens that option on the F&O chain. Enter on a name or a date opens the whole chain (or that date).

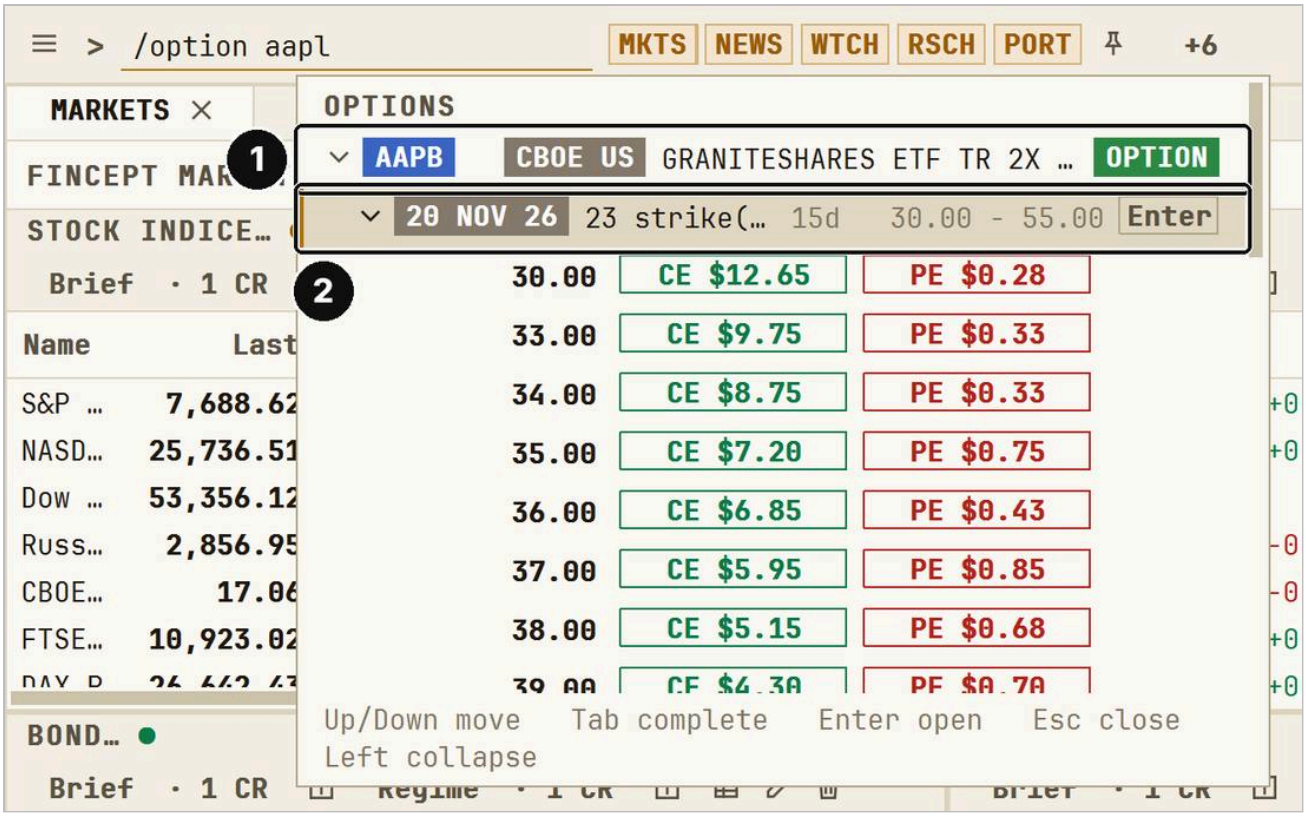


Figure 6.14 Strikes under an expiry. Each row shows the strike, the call (CE) and the put (PE) with their prices; Left and Right pick one.

1. The name, on one exchange.
2. The expiry, opened: 23 strikes with calls and puts, 15 days away.

> **Note**
>
> An option is named by its exchange as well as its symbol: many companies have options on two exchanges. Pick the row of the exchange you mean.

Bonds, funds and economic data

- `/bond` searches bond names, issuers, ISINs (the international bond code) and symbols. A European bond opens in a bond window of its own.
- `/fund` searches funds by name, ISIN or ticker and opens Fund Research.
- `/economic` searches economic series (inflation, jobs, GDP, rates) and charts the one you pick on Global Data. Shift + Enter charts it in a window instead.

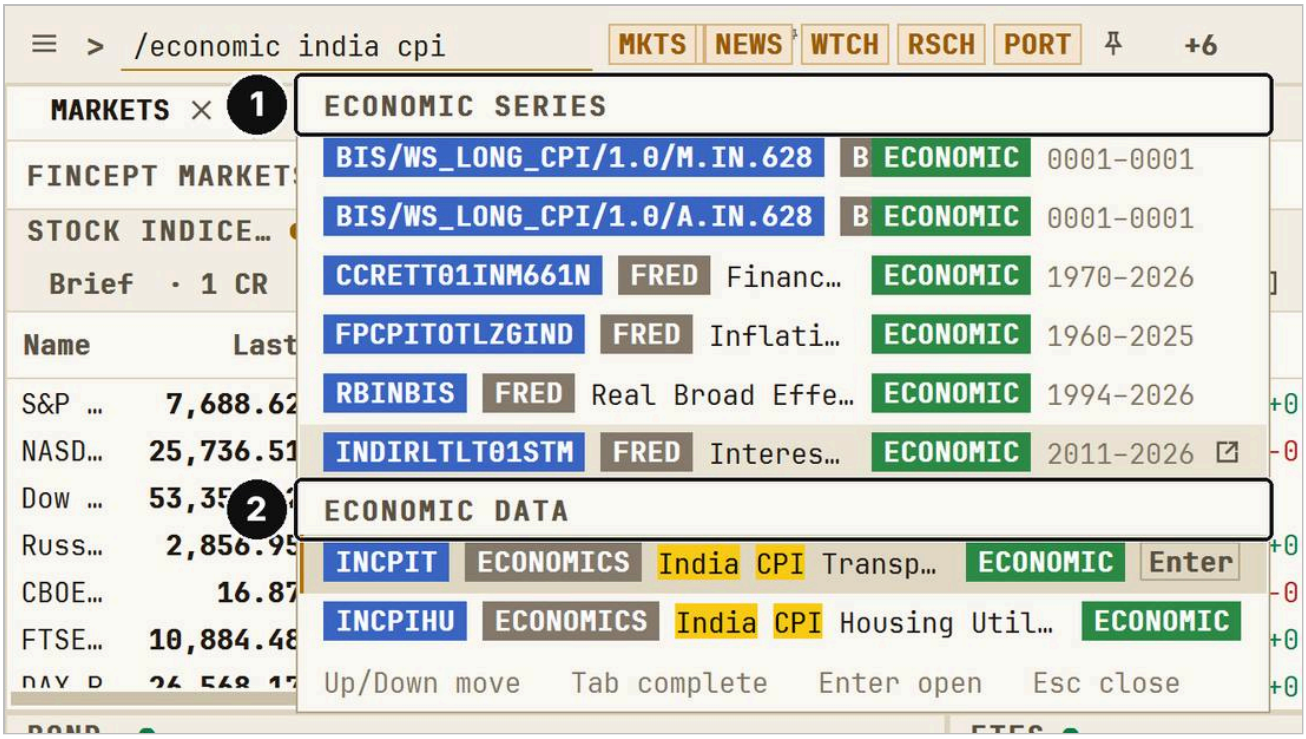


Figure 6.15 `/economic india cpi` lists economic series and data that match.

1. Data series: the frequency, the country and the units.
2. More indicators for the same search.

You do not always need the slash. Typing `india 10 year` finds the Indian 10-year government bond on Sovereign Bonds, and typing an indicator's name finds the series too. The search also finds economic calendar releases, ships, countries for the Geopolitics and trade maps, and prediction markets.

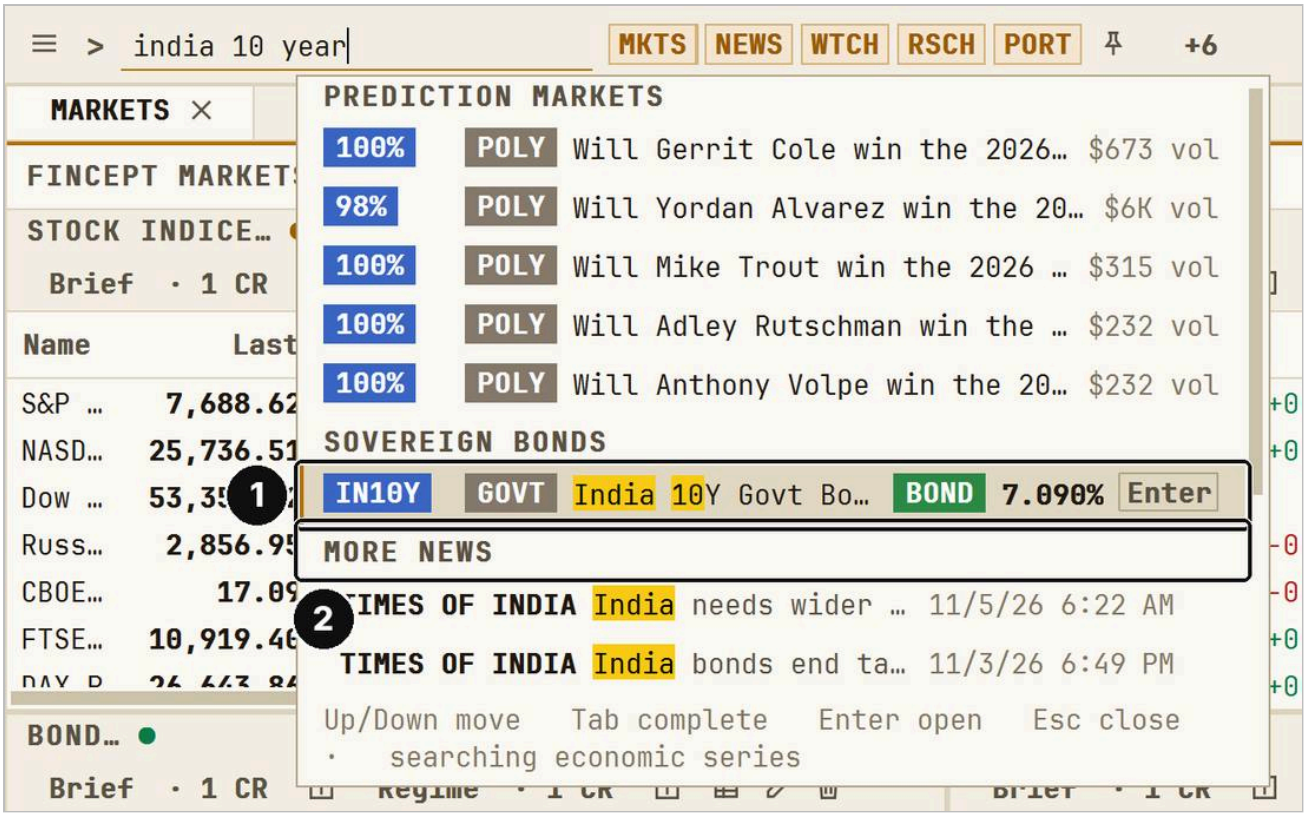


Figure 6.16 `india 10 year` finds the Indian 10-year government bond and its yield, with prediction markets and news that match.

1. The bond, with its yield. Enter opens it on Sovereign Bonds.
2. Headlines that match.

6.8 Run actions, change settings, open workspaces

The command line also runs the terminal's own actions. Type what you want to do:

Type	Row	What it does
`lock`	**Lock terminal**	Locks the terminal (same as Ctrl + L)
`fullscreen`	**Toggle full screen**	Same as F11
`focus mode`	**Toggle focus mode**	Same as F10
`screenshot`	**Save screenshot**	Same as Ctrl + P
`new window`	**New window on next monitor**	Opens a terminal window
`next panel`, `next window`	**Cycle panels forward** …	Moves the focus
`tile` or `2x2`	**Tile current layout 2x2**	Re-arranges the open panels into a 2 by 2 grid
`pop out` or `tear off`	**Open panel in new window**	Moves the panel you are in to a new window
`components`	**Browse components**	The Component Browser (Ctrl + Shift + K)
`always on top`	**Toggle always on top**	Same as Ctrl + Shift + T
`refresh` or `reload`	**Refresh focused panel**	Same as F5
`zoom panel`	**Full screen focused panel**	Turns focus mode on or off, as F10 does

Type	Row	What it does
`window 2`	**Focus window 2**	Brings terminal window 2 to the front (1 to 9)
`monitor 2`	**Move window to monitor 2**	Moves this window to monitor 2 (1 to 9)
`tour`	**Replay welcome tour**	Shows the welcome tour again
`contact support` or `report bug`	**Contact support**	Opens the support form in Help
`tickets`	**My support tickets**	Opens your support tickets in Help

`support` alone is also one of the Help screen's words, so `Enter` on it opens Help; type `contact support` (or move down to the row) for the form.

The action rows are in the **ACTIONS** section. When a word also matches instruments (`lock` matches the LOCK ETF and Lockheed Martin), the instruments come first: type more of the action's name (`lock terminal`) or move down to it.

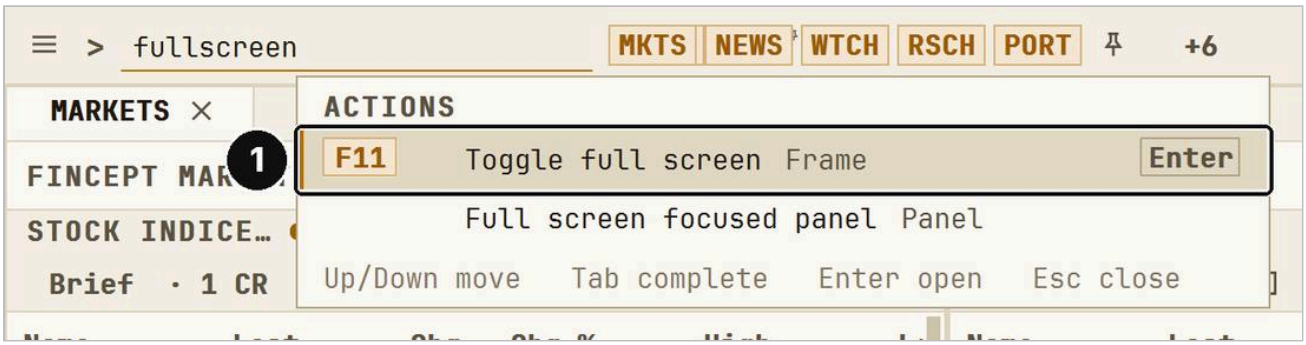


Figure 6.17 Typing `fullscreen` shows the actions that match, with their keys.

1 The action, its key (`F11`) and its group.

Careful

Action and setting rows act as soon as you press `Enter`. `lock` locks the terminal; `theme` rows switch the theme. Read the highlighted row first.

Settings. `theme`, `text size`, `density` and the name of any settings page (`currency`, `keys`, `notifications`, `security`, `python`, `harness`, `cloud sync`, `storage`, `logging`) list rows that change the setting or open that page.

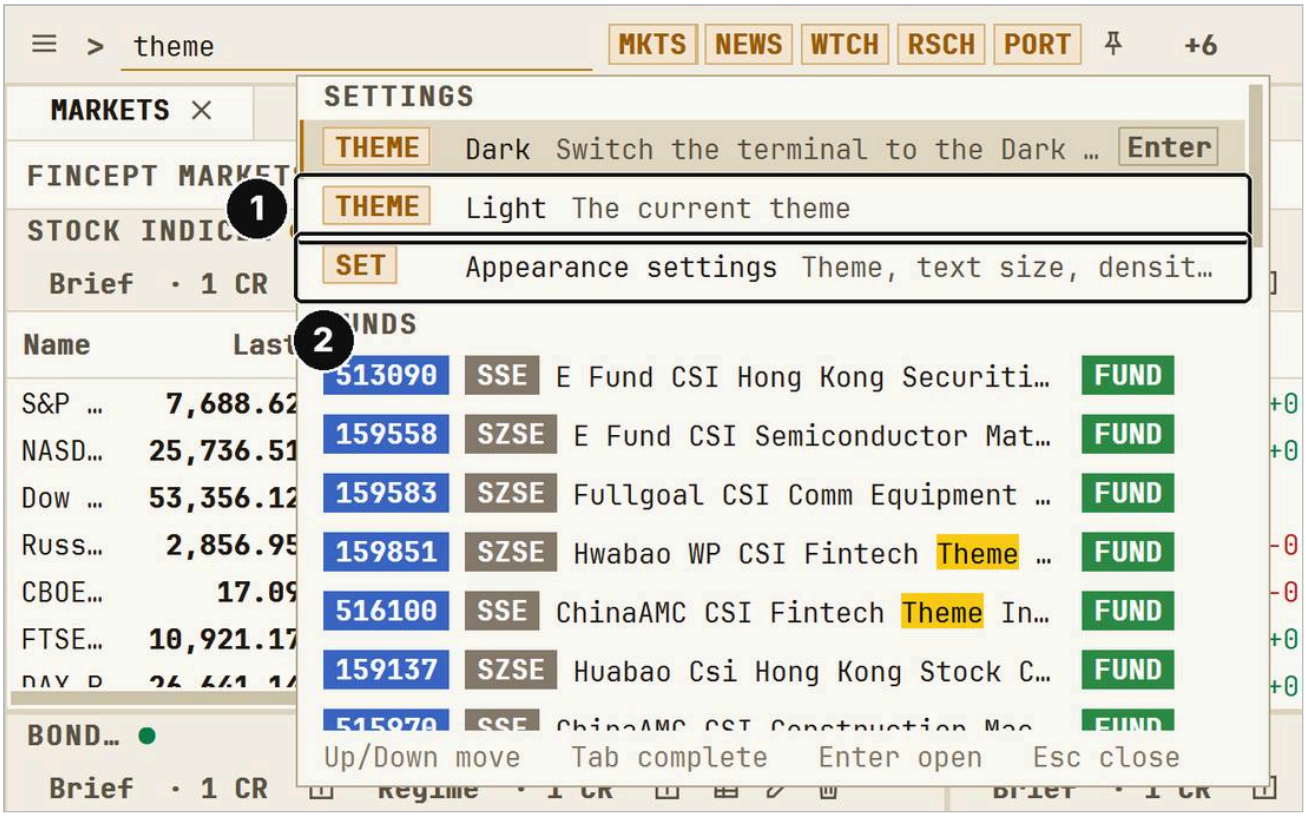


Figure 6.18 Typing `theme` lists the themes; the current one says so.

1. The theme in use. Picking the other row switches the theme at once.
2. Opens the settings page.

Workspaces. Type a workspace's name, or `desk`, to see your saved workspaces (**LAYOUT**) and the ready-made desks (**DESK**). See **Chapter 7, Workspaces** p. 112.

6.9 Commands with words after them

A few commands take what you type after them.

You type	What happens
`backtest AAPL`	Backtesting opens with AAPL. Add more symbols: `backtest AAPL MSFT NVDA`
`backtest AAPL sma_crossover`	The same, with a strategy template
`optimize AAPL`	The optimiser opens with AAPL
`bt history`	Opens Backtesting on the page you left it on. A page word (`history`, `results`, `trades`, `validate`, `build`) does not switch pages, and after a symbol it is read as another symbol
`backtest book`	Your active portfolio, backtested with its own weights
`backtest watchlist US Tech`	A whole watchlist as one strategy
`compare <run> <run>`	Two to four backtest runs side by side
`portfolio risk`	Portfolio opens on a tab (`risk`, `perf`, `positions`, `scenarios`, `reports` …)

You type	What happens
`save layout Morning`	Saves the workspace on screen as "Morning"
`switch layout Morning`	Switches to the workspace "Morning"
`link A` / `unlink`	Links the panel you are in to group A / unlinks it
`move panel 2`	Moves the panel you are in to terminal window 2 (only while two or more windows are open)
`new layout Trading`, `export layout Morning <file>`, `import layout <file>`	The other workspace commands (**§7.7 Workspaces from the command line** p. 119)
`publish A AAPL`	Sends AAPL to link group A

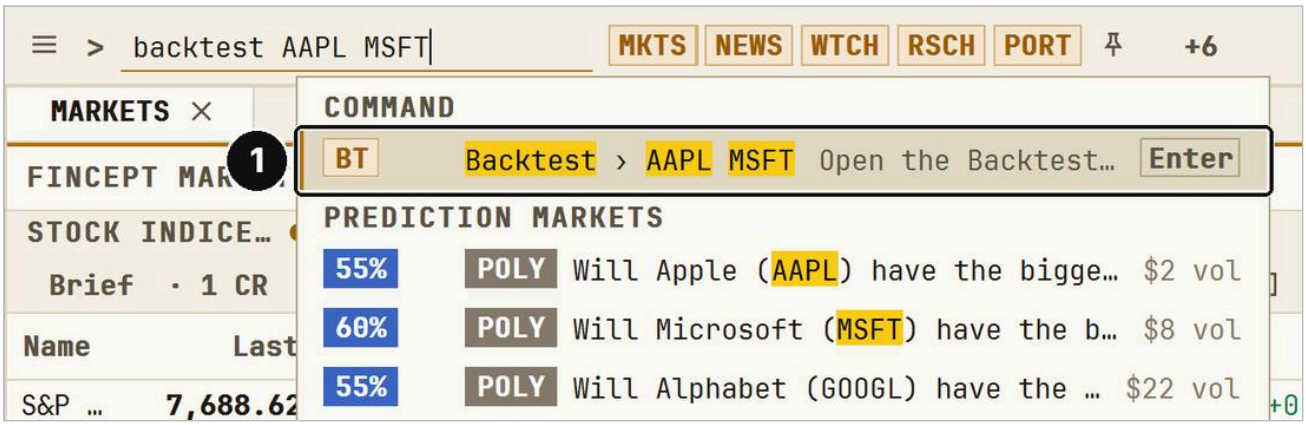


Figure 6.19 `backtest AAPL MSFT` leads with a Command row; Enter opens Backtesting with both symbols.

1 The command and what it will open.

The backtest and portfolio commands lead the list, so Enter runs them. Terminal actions with a word after them (`save layout Morning`, `link A`) are listed last, under **ACTION**. That way a word that only starts an action never runs it by accident. To run one, click its row, or press Up (from the top of the list it jumps to the last row) and then Enter.

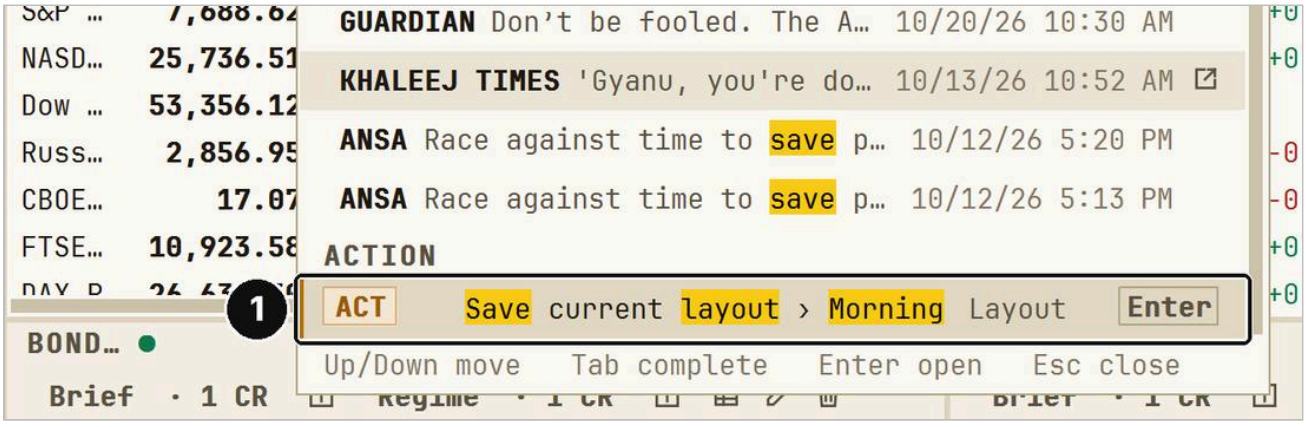


Figure 6.20 `save layout Morning` appears under Action at the end of the list.

1 The action and the name it will use.

If an action still needs a word, the line is filled in for you and the footer says what is missing, for example **Save current layout needs: Layout name.**

6.10 Reference

Keys

Key	What it does
` or Ctrl + K	Puts the cursor in the command line. The backtick works outside text fields, and only while the main terminal window is active (not from a floating panel window)
Up / Down	Moves through the rows; on an empty line, steps through commands you ran before
Page Up / Page Down	Moves eight rows at a time
Tab	Completes the highlighted row into the line
Shift + Tab	Moves to the previous row
Enter	Runs what you typed, or opens the highlighted row
Shift + Enter	Opens the highlighted chart, news or series in a window of its own
Right / Left	Opens or closes a group (venues, futures months, option expiries and strikes) when the cursor is at the end of the line; on a strike, picks call or put
Esc	Clears the line; a second Esc leaves it

The footer under the list always shows the keys that work for the highlighted row.

What Enter does

When you press Enter without moving to a row, the terminal reads the line in this order:

1. A complete panel command (`NEWS RIGHT`, `MKTS ADD NEWS`).
2. An exact screen code, name or other word (`NEWS`).
3. The highlighted row.
4. A command with words after it (`backtest AAPL`).
5. A single word that looks like a ticker, opened as a security.

Once you move to a row with the arrow keys or the mouse, Enter opens that row.

History

The command line remembers the last 60 commands you ran. On an empty line, Up steps back through them and Down forward. The history is saved to your account, so it follows you to other computers.

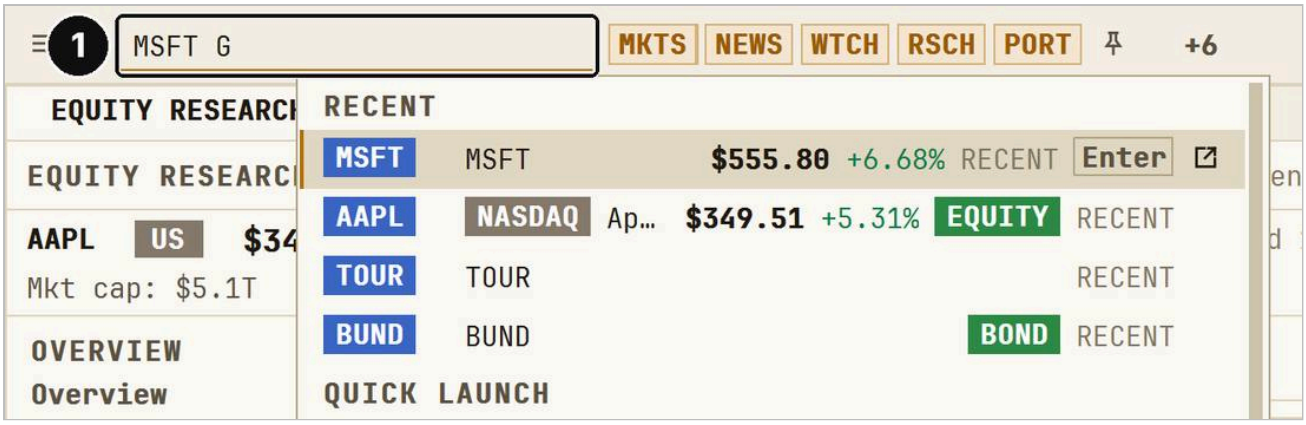


Figure 6.21 Up on an empty line brings back the last command you ran (here `MSFT G`).

1 The last command, back in the line.

What ranks first

Rows you pick often rise in the list: the terminal counts your picks (the 400 most used are kept, saved to your account). Within instruments, symbols you opened recently come first, then your holdings, your pinned symbols and your watchlist symbols, then busier listings before quieter ones.

6.11 For advanced users

- **The AI uses the same command line.** When you ask the AI chat to "put News on the right" or "open Apple's financials", it types the same panel command or `AAPL FA`. What you learn here is what it does.
- **Locked rows.** A screen your plan does not include shows **Requires** and the plan name on its row. It still opens and explains what it needs.
- **Nothing is charged by searching.** Typing in the command line never spends credits. A screen opened from it may offer charged actions, and those always say their price first.
- **Shift+Enter windows** keep their own live price and close with `Ctrl` + `W`. They are a quick look that does not disturb your panels. There is one window per symbol: opening the same chart again brings its window forward. The next window of a kind opens where you closed the last one. They close when you close the terminal's last window.
- **Speed.** The local search answers in a few milliseconds; hover the footer to see the time of the last search.

Do it with AI

Ask the AI chat in plain words and it runs the command line for you:

- "Open Markets, then put News on the right and the Watchlist below Markets."
- "Show me Reliance's financials."
- "Close every panel except Portfolio."

6.12 Troubleshooting

The backtick key types a character instead of jumping to the command line

The backtick only jumps when the cursor is not in a text field, and only from the main terminal window (not from a floating panel window). Click an empty part of a panel first, or use Ctrl + K.

I typed a code and something else opened

You probably moved to another row before pressing Enter. Clear the line with Esc, type the code and press Enter straight away.

An instrument I know is not in the list

Wait a second: the full market search answers after the first rows (the footer says **searching all markets**). Try the exact ticker with its exchange suffix (`RELIANCE.NS`, `VOD.L`), or a slash search (`/stock vodafone`). If you see **Could not load. Check your connection.**, the terminal could not reach Fincept's servers.

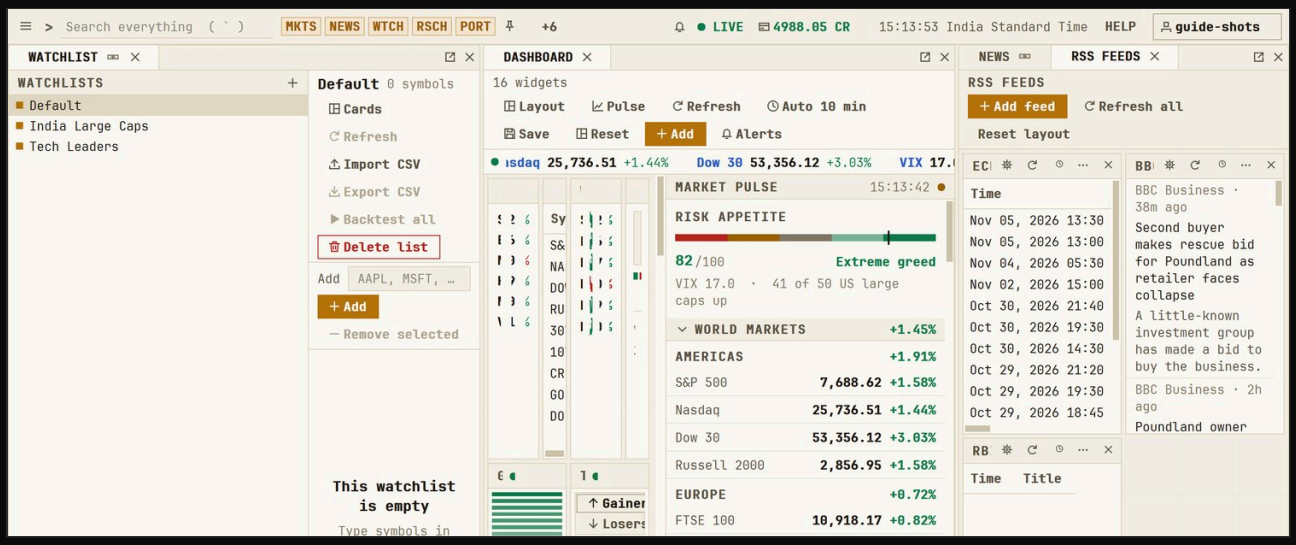
My panels disappeared when I opened a screen

A plain code shows one screen alone. Use `RIGHT`, `TAB` or another placement word to keep the others, or switch back to your workspace in the bottom bar (**Chapter 7, Workspaces** p. 112).

CHAPTER 7

Workspaces

A workspace is a saved arrangement of panels — which screens are open, where they sit, what each one shows. Keep one for every job (a morning scan, a trading desk, a research desk) and switch between them with one click at the bottom of the window.



At a glance

Open it	• The workspace tabs at the bottom left of the window • The **Workspaces** button at the bottom right • ☰ › **View** › **Workspaces** for the ready-made desks • ☰ › **File** for New, Open, Save, Import and Export
You need	• Signed in on any paid plan
Best for	• Switching between jobs without rebuilding your screen • Starting from a ready-made desk
Time to learn	10 minutes
Related	**Chapter 5, The Terminal Window** p. 70, **Chapter 6, The Command Line** p. 89, **Chapter 4, Your first ten minutes** p. 57

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7.1 Screen tour

Your workspaces are the tabs at the left end of the bottom bar. The highlighted tab is the workspace on screen. A desk you have not saved yet is called **Main** (then **Main 2**, and so on). When you switch away from an unsaved desk that has panels on it, the terminal saves it as a workspace under that name, so it is never lost.

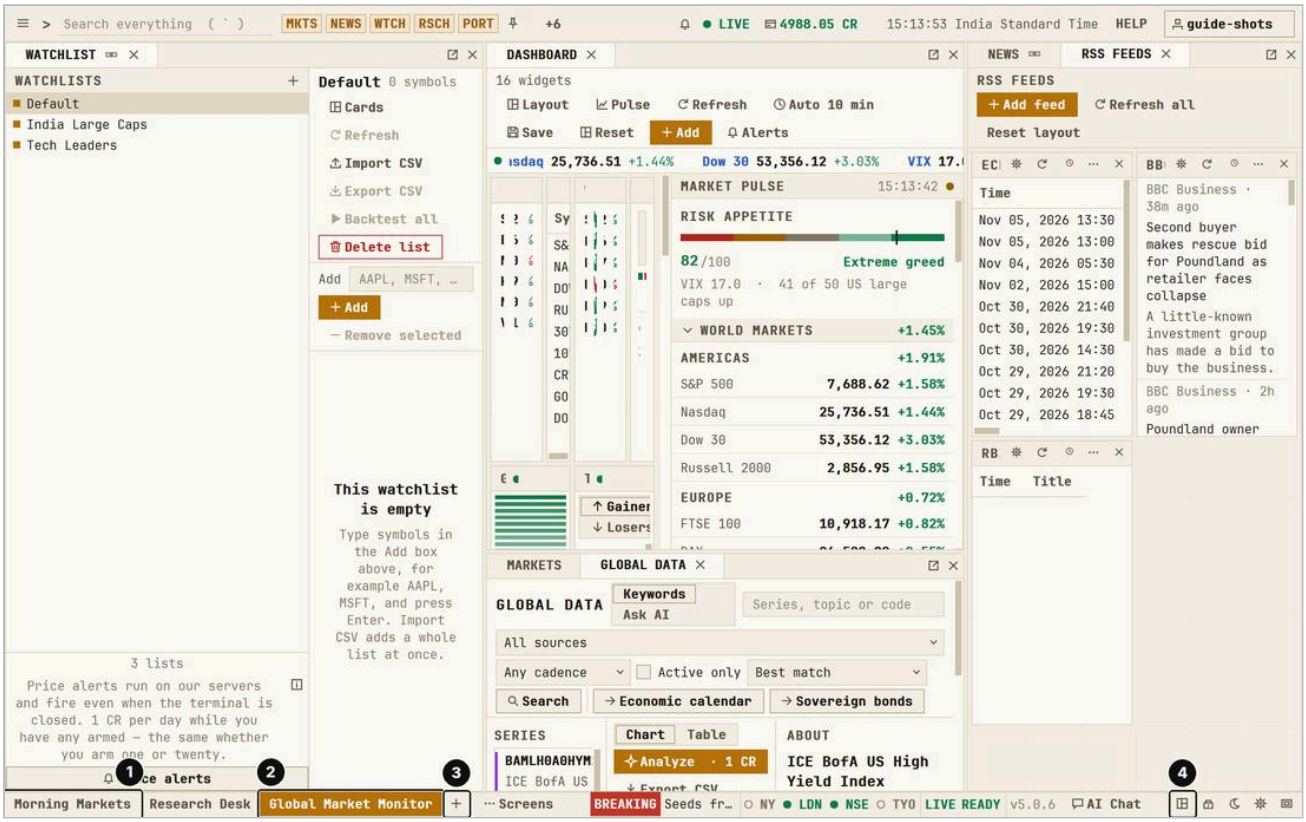


Figure 7.1 The Global Market Monitor desk: six panels, saved as a workspace tab at the bottom beside two others.

1. The workspace tabs. Click one to switch; right-click for its menu.
2. The current workspace is highlighted.
3. **+** starts a new workspace on a fresh desk.
4. The **Workspaces** menu: save, save as, open, new.

A workspace remembers, for each terminal window:

- which screens are open and where: side by side, stacked as tabs, in quarters, or floating in their own windows;
- the size of every panel;
- what each screen was showing: the symbol, the page or tab, its filters;
- the link group of each panel;
- the window's size and position, for each monitor set-up you used it on.

7.2 Quick start

1. Arrange the panels you want, for example type `MKTS` and press **Enter**, then `NEWS RIGHT` and **Enter**.

2. Right-click the **Main** tab at the bottom left and choose **Save this desk as a workspace...** in its menu.

3. Type a name, for example `Morning Markets`, and click **Save**. The tab now carries that name.



Figure 7.2 The Save Layout As window asks for the workspace's name.

4. Click **+** next to the tabs. The same window asks for a name: type `Research Desk` and click **Save**. A fresh desk opens with the Dashboard.

5. Open what you need on the new desk, for example `RSCH`.

6. Click the **Morning Markets** tab. Your first desk comes back exactly as you left it.

Tip

Switching never loses work: the desk you leave is saved under its own name first, then the other one opens.

7.3 Start from a ready-made desk

The terminal has ten ready-made desks for common jobs. Each one opens as a new workspace tab with its panels already arranged.

1. Click ☰ (top left), then **View**, then **Workspaces**.

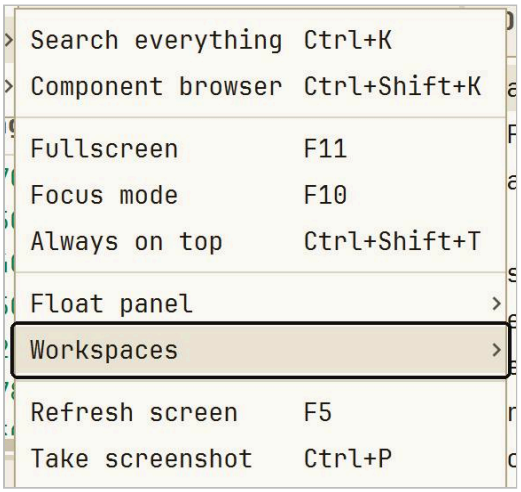


Figure 7.3 ☰ > View. Point at Workspaces: the ready-made desks open in a list beside it (names in the table below).

2. Click a desk, for example **Global Market Monitor**.

3 The desk opens and a tab with its name appears at the bottom.

Desk	What it holds
Equity Trading Desk	Trading · Watchlist · Algo · Positions · News · Research. Execution first, with algos and live positions.
Options & F&O Desk	F&O Chain · Pricing · Vol Surface · Execution · Positions. Option chain, greeks and volatility over an execution blotter.
Crypto Trading Desk	Crypto · Watchlist · Cross-Asset · Portfolio · Arena · News.
Portfolio Management	Portfolio · Live P&L · Risk · Rebalance · Research · Reporting.
Equity Research	Research · Coverage · M&A · Ownership · News · Notes. A single-name deep dive.
Macro Research	Global Data · Markets · News · Geopolitics · Notes.
Quant Research	Quant Lab · Notebook · Backtest · Live Algos · Global Economy. Build, test and deploy in one place.
Global Market Monitor	Dashboard · Markets · Global Data · News · Feeds · Watchlist. A read-only world view for the morning check or a wall screen.
Geopolitical Intelligence	Geopolitics · Maritime · Relationships · News · Markets · Notes.
AI Agent Desk	AI Chat · Agent Studio · Workflows · MCP Tools · Dashboard.

If you already have a workspace with that desk's name, the menu switches to it instead of making a second one, so your changes to it are kept. A desk opens in the window you are in; your other windows are not touched.

Note

In 5.0.6 the menu shows the **Options & F&O Desk** as "Options FO Desk" (the "&" signs drop out). It is the same desk.

You can also type `desk` in the command line: the ready-made desks are listed under **WORKSPACES** with the tag **DESK**, and your own saved workspaces with **LAYOUT**.

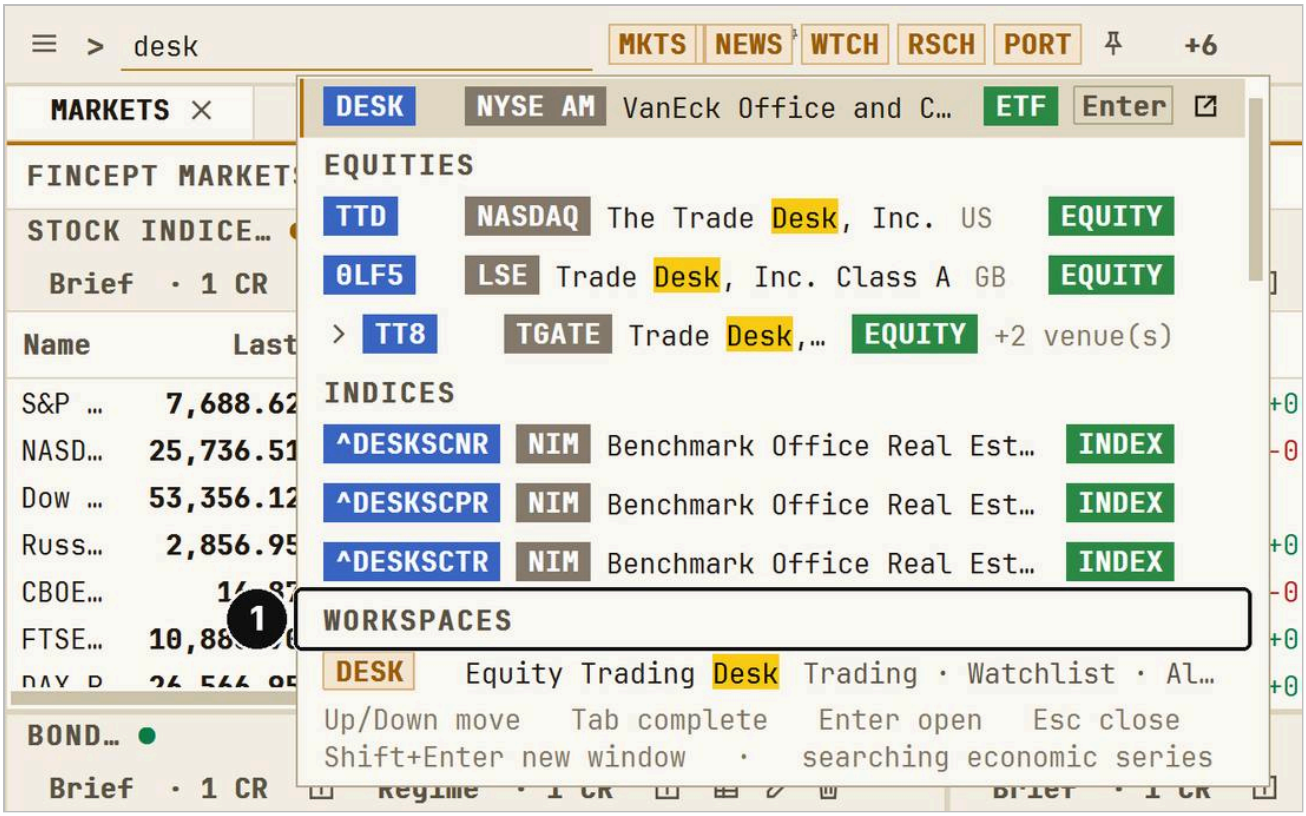


Figure 7.4 Typing `desk` lists the ready-made desks under Workspaces, after the instruments that match.

1 The **WORKSPACES** section: ready-made desks (**DESK**) and your saved workspaces (**LAYOUT**).

7.4 Switch workspaces

- Click a tab at the bottom. The desk you are leaving is saved, and the other one fades in.
- Or right-click a tab and choose **Switch to** and its name.

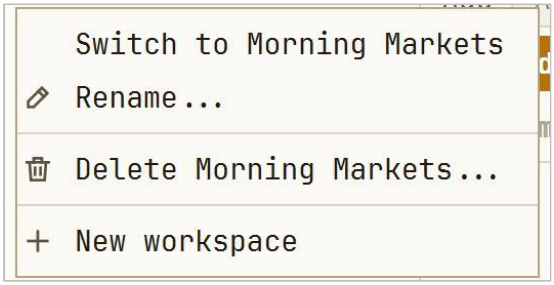


Figure 7.5 The menu of a workspace that is not on screen.

- Or type its name in the command line and pick the row tagged **LAYOUT**.
- Or **Workspaces button** › **Open workspace...**, pick one in the list and click **Open**.

When there are more tabs than fit, scroll them with the mouse wheel. The current tab always scrolls into view.

7.5 Save, rename and delete

Right-click a workspace tab for its menu.



Figure 7.6 The menu of the current workspace's tab.

Item	When you see it	What it does
Save this desk as a workspace...	On the unsaved **Main** tab	Asks for a name and saves the desk.
Switch to *name*	On a tab that is not current	Switches to it.
Save changes to *name*	On the current tab	Saves the desk as it is now under that workspace's name.
Rename...	On a saved workspace	Opens **Rename workspace** with the current name, ready to change.
Delete *name*...	On a saved workspace	Asks first (*Delete the workspace ...? The panels on screen stay open; only the saved arrangement is removed.*), then removes it.
New workspace	Always	Starts a new workspace (as **+** does).

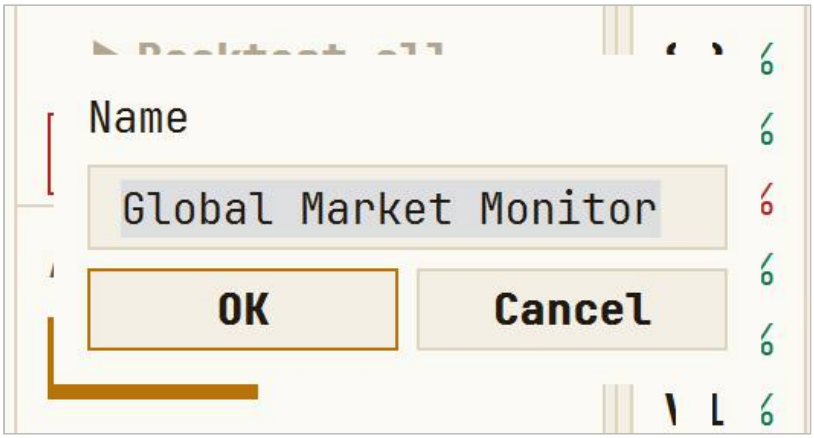


Figure 7.7 Rename workspace opens with the current name selected.

Note

The terminal does not save a workspace by itself while you work in it. It saves the desk you leave when you switch, and it keeps your desk for the next start (below). To keep a version you like, use **Save changes to** or **Save workspace**.

7.6 Save under a new name, open, import and export

The same commands live in two menus:

Workspaces button (bottom right)	☰ › **File**	What it does
Save workspace	**Save layout**	Saves the desk under the current workspace's name (asks for a name if it has none)

Workspaces button (bottom right)	☰ › File	What it does
Save workspace as...	**Save layout as...**	Saves the desk under a new name; that becomes the current workspace
Open workspace...	**Open layout...**	Lists every saved arrangement to open
New workspace	**New layout**	Keeps the current desk and starts a fresh one (with the Dashboard) under a new name
	Import layout	Reads a workspace file (`.flayout` or `.fwsp`)
	Export layout	Writes the current workspace to a `.flayout` file

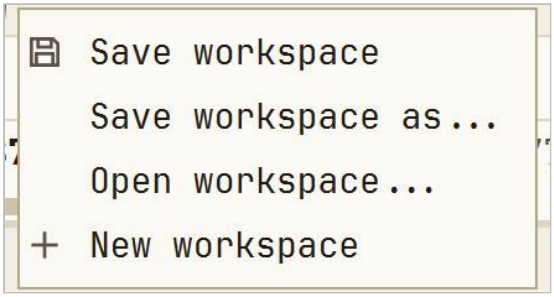


Figure 7.8 The Workspaces button's menu.

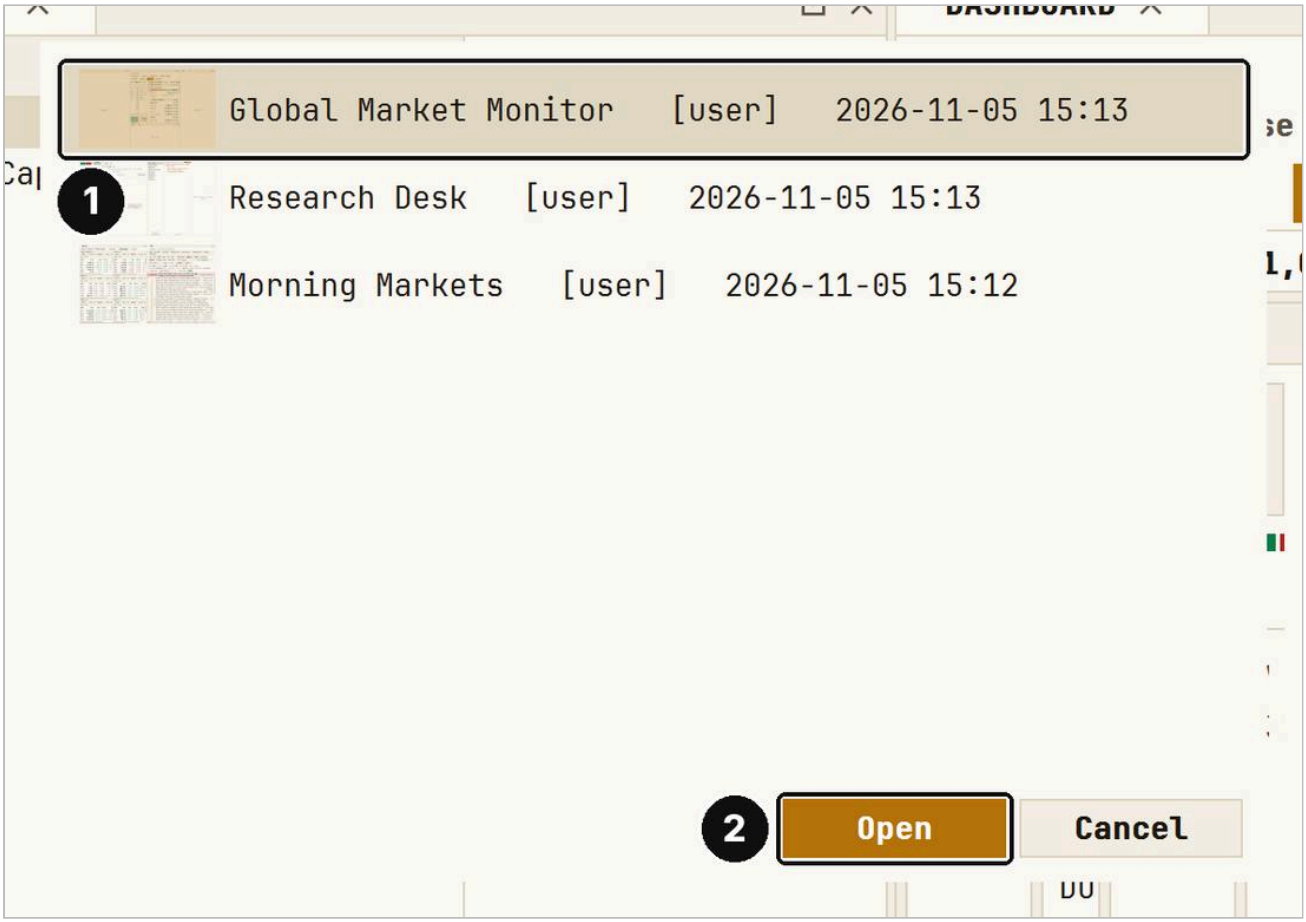


Figure 7.9 Open Layout lists every saved arrangement with its kind and when it was last saved.

1. Name, kind and the time it was last saved. Double-click to open.
2. **Open** switches to the selected one.

Each row of **Open Layout** shows the name, the kind in brackets (**user** for workspaces you saved) and the date and time it was last saved. A small picture of the desk shows beside it when there is one. Double-click a row, or select it and click **Open**.

Export and import move a workspace to another computer or share it with a colleague. Export needs a saved workspace on screen; with none, the terminal says **Open or save a layout first, then export it.**

7.7 Workspaces from the command line

You type	What it does
`save layout Morning` (or `save workspace Morning`)	Saves the desk as "Morning"
`save as Morning`	The same
`switch layout Morning` (or `load layout Morning`)	Switches to "Morning"
`new layout Trading`	Starts a new workspace named "Trading"
`tile` (or `2x2`)	Re-arranges the open panels into a 2 by 2 grid
`export layout Morning C:\Users\me\morning.flayout`	Writes the workspace to a file
`import layout C:\Users\me\morning.flayout`	Reads a workspace file

These rows appear under **ACTION** at the end of the command line's list: click the row, or press `Up` to jump to it and then `Enter`. If the name is missing, the line asks for it.

7.8 Reference

Where workspaces are kept

Workspaces you save are kept on your account: they sync to every computer you sign in on, with their panels, each panel's state, docking and link groups. Window positions are applied only on a computer with the same monitor set-up. Automatic snapshots, the ready-made desk designs and the small pictures in **Open Layout** stay on the computer that made them. You can switch workspace sync off in **Settings › Cloud sync**.

The desk on screen right now (which panels are open, their sizes, the window's position) is kept on this computer until you save it as a workspace.

What happens when you start the terminal

1. The terminal reopens the workspace you had on screen when you closed it.
2. If there is none, it reopens the most recent automatic snapshot of your desk. The terminal keeps these snapshots as you work (at most one a minute).
3. On a first start, the first-launch steps choose your desk (**Chapter 4, Your first ten minutes** p. 57).

If the terminal closed unexpectedly, it can offer **RECOVER PREVIOUS SESSION** with a list of snapshots to restore (**Chapter 4, Your first ten minutes** p. 57).

Several windows and monitors

A workspace saves **every** terminal window that is open, with its own panels. When you open it again, missing windows are created. Each workspace also remembers where its windows sat on each monitor set-up it was saved on, for example your desk's three screens and your laptop alone. It then uses the arrangement that fits the monitors you have now.

New workspace and + start a fresh desk in the window you are in only; your other windows are not touched.

Names

- A name must be unique. **New workspace** with a name that exists says **A workspace named "..." already exists**.
- The window title shows the workspace and the screen you are on: *Fincept Terminal — Morning Markets — Markets*.

7.9 For advanced users

- **Panel state comes along.** A workspace keeps each screen's own state (the symbol on Equity Research, the tab on Portfolio, a chart's interval). Switching back restores it, not just the layout.
- **Duplicates.** A duplicated panel (two Watchlists, two charts) is saved as its own panel with its own state.
- **A workspace saved with no panels** opens as a fresh desk with the Dashboard.
- **Ask the AI.** The AI chat can list, switch, save and create workspaces and open the ready-made desks: "Open the Quant Research desk", "Save this as Friday Review".

Do it with AI

- "Save my screen as a workspace called Earnings Week."
- "Switch to my Morning Markets workspace."
- "Open the Options & F&O desk."

7.10 Troubleshooting

My workspace came back different

The terminal saves a workspace when you switch away from it, not every minute. If you closed panels and then switched, the closed state was saved. Rebuild it and use **Save changes to** to keep it.

A workspace I saved on another computer is missing

Saved workspaces sync to your account. Check that workspace sync is on in **Settings** › **Cloud sync** on both computers, and that you saved the workspace: a desk that was never saved and never left (the **Main** tab while you are still on it) stays on its computer. To move a workspace without sync, use ☰ › **File** › **Export layout** and **Import layout**.

Export layout does nothing useful

Export writes the current saved workspace. Save the desk first (**Save workspace as…**), then export.

PART II

Markets & Monitoring

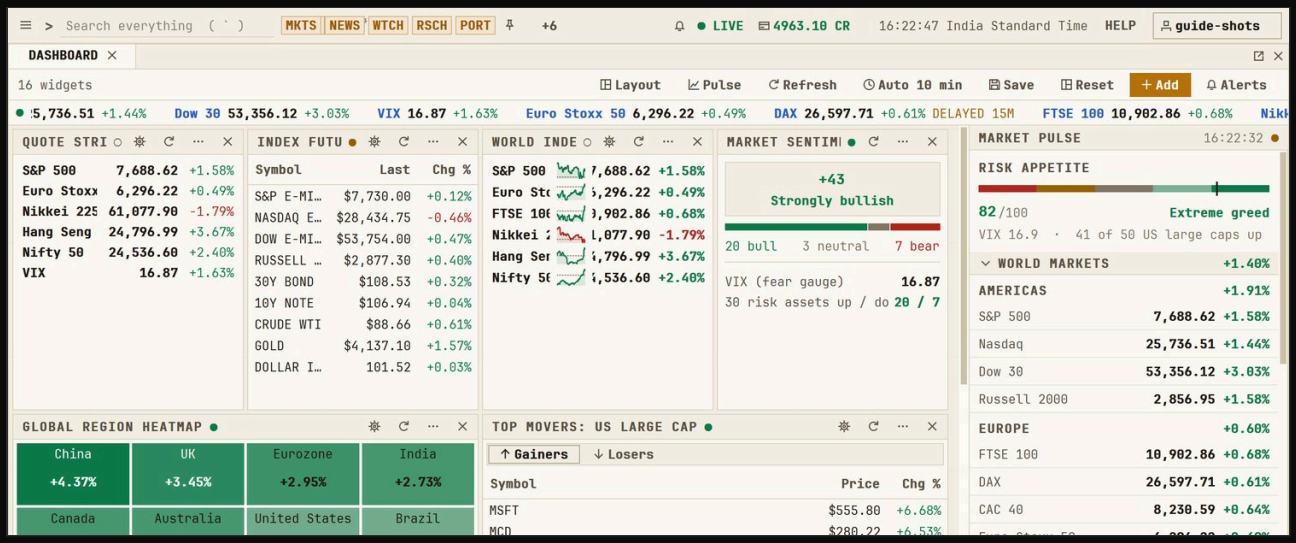
Watch the world move. Live prices, your own watchlists, news from more than a hundred sources, the economic calendar and prediction markets.

8	Dashboard	DASH
9	Markets	MKTS
10	Watchlist	WTCH
11	News	NEWS
12	RSS Feeds	RSSF
13	Economic Calendar	ECAL
14	Prediction Markets	PRED

CHAPTER 8

Dashboard DASH

Your home screen — a board of live tiles you arrange yourself, from 59 widget types, with a ticker, a Market Pulse panel and ready-made desks.



At a glance

Open it	• Type DASH (or home, overview, main) in the command line and press Enter
You need	• Signed in • Credits only for AI insight, trade flows, geopolitics events and vessel tiles
Best for	• A one-look morning view of everything you follow • A desk built for your job
Time to learn	20 minutes
Related	**Chapter 4, Your first ten minutes** p. 57, **Chapter 9, Markets** p. 160, **Chapter 10, Watchlist** p. 172, **Chapter 5, The Terminal Window** p. 70

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8.1 Screen tour

The Dashboard is a **board** of **tiles**. Each tile is a small window that shows one thing: an index board, a news feed, a chart, your paper account. A tile is also called a **widget**. You choose which tiles are on the board, where they sit and how big they are.

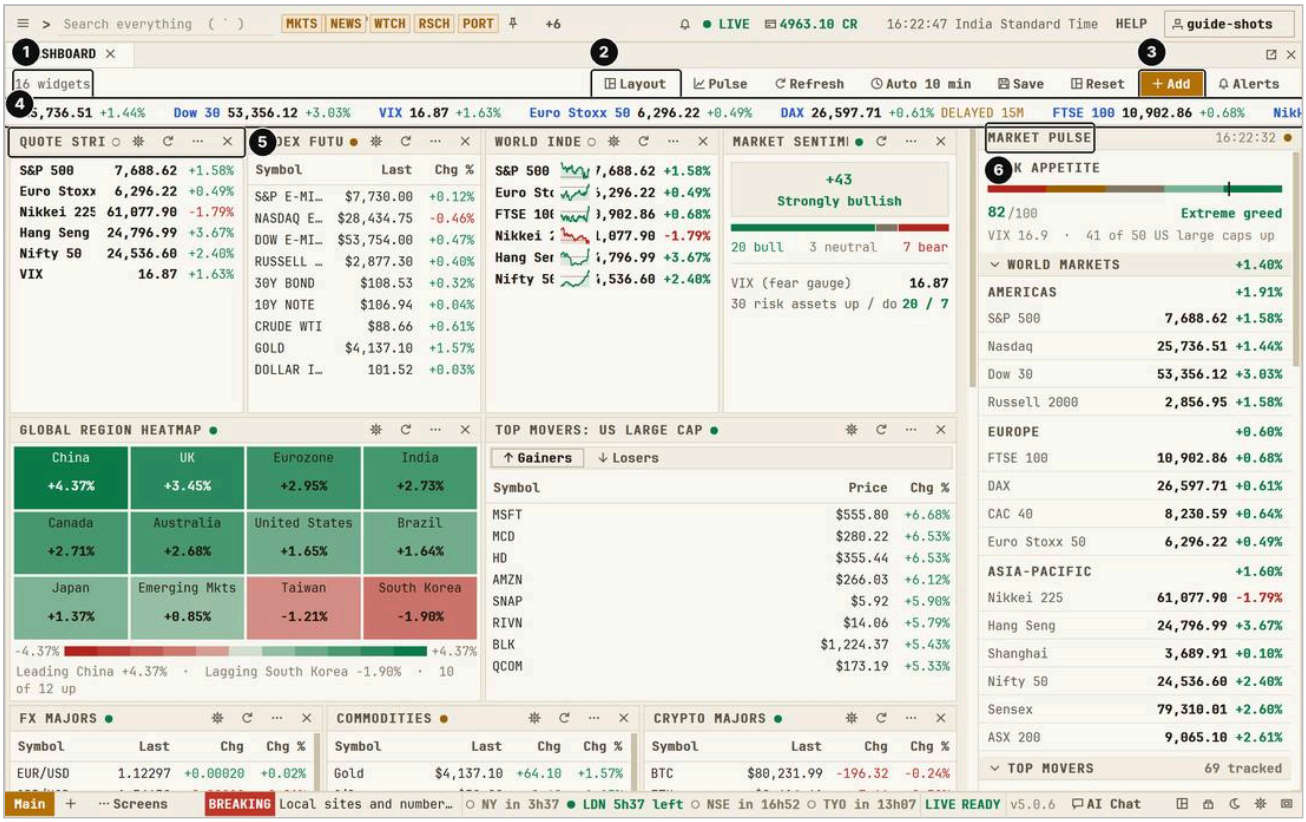


Figure 8.1 The Dashboard with the Global Market Monitor desk.

1. How many tiles are on the board.
2. **Layout** — row height, spacing and the layout lock.
3. **Add** — put a new tile on the board.
4. The ticker bar: prices that scroll across the top.
5. A tile's header: its title and its own buttons.
6. The Market Pulse panel: risk appetite, world markets, movers and more.

The board is a grid of 12 columns. Tiles snap to the grid when you move or resize them. When the board is taller than the window, scroll down to see the rest.

The toolbar



Figure 8.2 The Dashboard toolbar.

1. **Layout** — row height, spacing between tiles, and **Lock layout**.
2. **Pulse** — show or hide the Market Pulse panel.
3. **Refresh** — fetch fresh data for every tile now.
4. **Auto 10 min** — how often tiles refresh on their own.
5. **Save** — save the board now (it also saves itself).
6. **Reset** — replace the board with a template.
7. **Add** — add a tile.
8. **Alerts** — your recent alerts and notifications.

A tile

Every tile has the same header. The buttons on the right work the same way on every tile.



Figure 8.3 The parts of a tile's header (the Market sessions tile).

1. The tile's title (or your own name for it).
2. The gear: this tile's settings (only on tiles that have settings).
3. Refresh this tile now.
4. How often this tile refreshes on its own. Click to change it for this tile only.
5. The tile menu: rename, settings, duplicate, open its screen, remove.
6. Remove the tile from the board.

A tile that shows live prices has a small freshness dot after its title instead of the clock: its prices move on the live stream, not on a timer. Hover the dot to see how current they are.

8.2 Quick start

Add a tile, point it at what you want, and put it where you want it.

1. Type `DASH` in the command line and press `Enter`. The Dashboard opens.
2. Click **Add** in the toolbar. The **Add widget** window opens with every widget type.

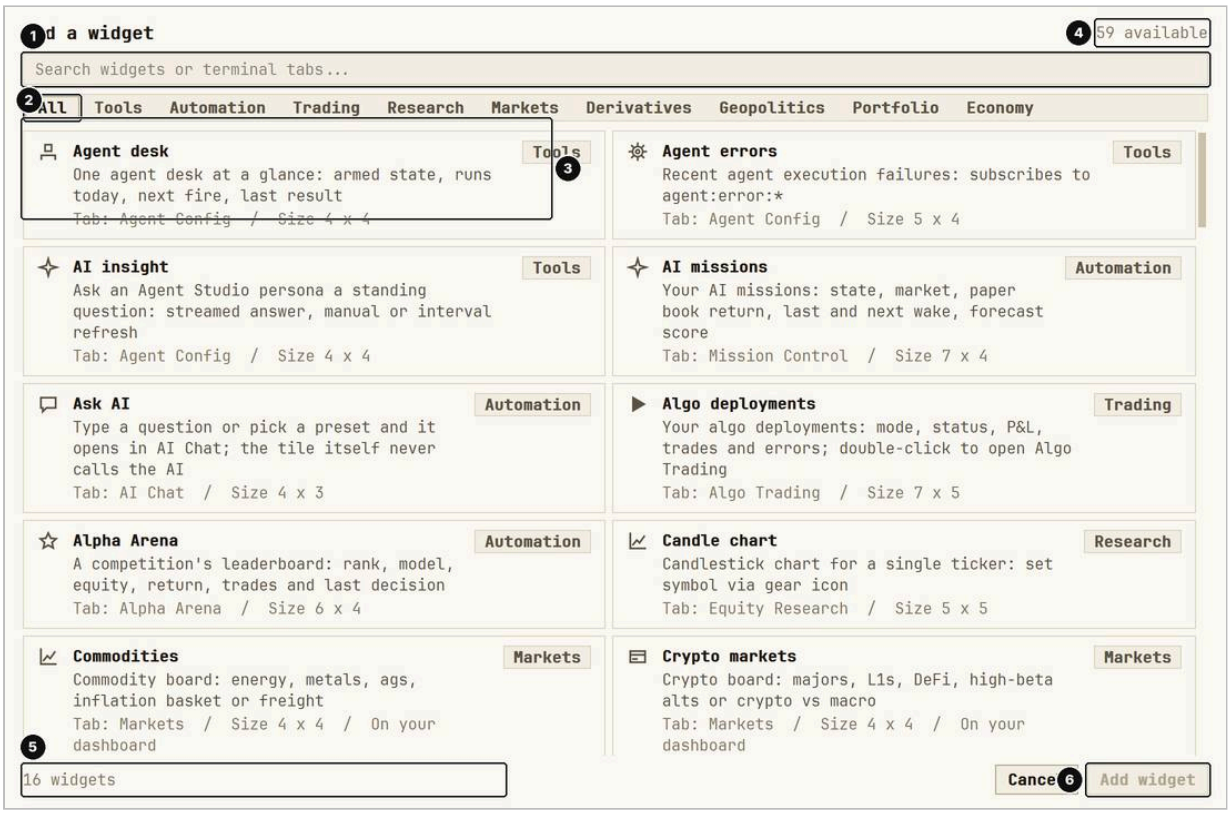


Figure 8.4 The Add widget window.

1. Search by name, description or screen.
2. **All**, or one category at a time.
3. A card: the widget's name, what it shows, its category, the screen it belongs to (**Tab:**) and its starting size.
4. How many widget types your plan can use.
5. How many tiles your board holds.
6. **Add widget** places the selected card's widget on the board.

3. Type `quote` in the search box, click the **Stock quote** card, then click **Add widget**. The new tile appears on the board.

4. Click the tile's gear button, type a symbol such as `MSFT` in **Symbol**, and click **OK**. The tile now shows Microsoft.

5. To move the tile, press on its header and drag it. Drop it where you want it; a tile that was there swaps places with it.

6. To resize it, drag its bottom-right corner.

Tip

You do not have to save. The board saves itself a moment after every change. **Save** is there when you want to be sure.

8.3 Add a widget

1. Click **Add** in the toolbar.

2. Find the widget. Either type in the search box (it searches names, descriptions and the screen a widget belongs to: `news`, `crypto`, `options`), or click a category button: **All**, then one of the categories.

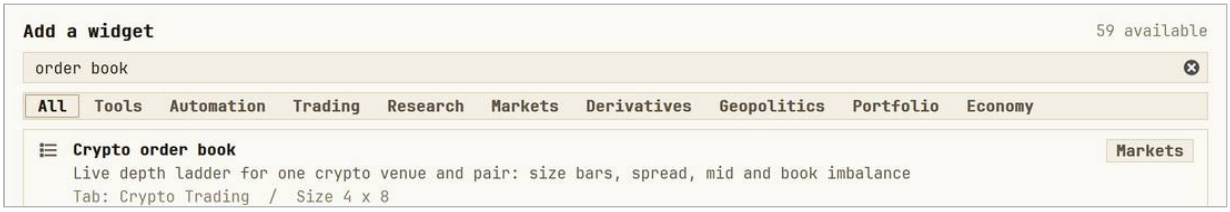


Figure 8.5 A search for "order book" leaves one card.

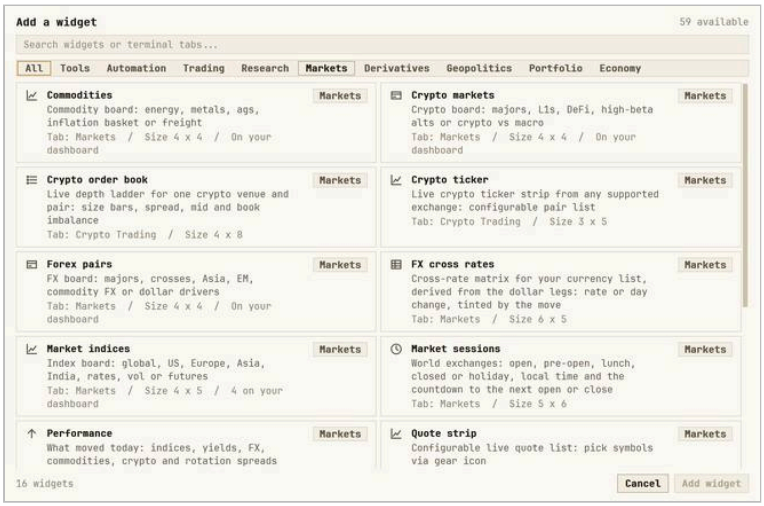


Figure 8.6 The Markets category. "On your dashboard" marks a widget already on the board.

3. Click a card to select it. Each card says what the widget shows, which screen it belongs to (**Tab:**), its starting size, and how many of it are already on your board.

4 Click **Add widget**. The tile is placed in the first free space on the board. (Double-clicking a card does both steps at once.)

The count at the bottom left of the window shows how many tiles your board holds ("16 widgets"). On a plan that limits the number of tiles it reads like "5 of 6 widgets", and at the limit **Add widget** explains the limit instead of adding. When this guide was written the limits were 6 tiles on Exclusive, 20 on Exclusive+ and no limit on Exclusive Pro. "59 available" at the top counts the widget types your plan can use.

8.4 Change a tile's settings

Most tiles can be pointed at something: an index board at a region, a chart at a symbol, a news feed at a topic. The **Widget catalogue** later in this chapter lists every tile's settings.

1 Click the tile's gear button (**Configure widget**), or choose **Settings...** in the tile menu.

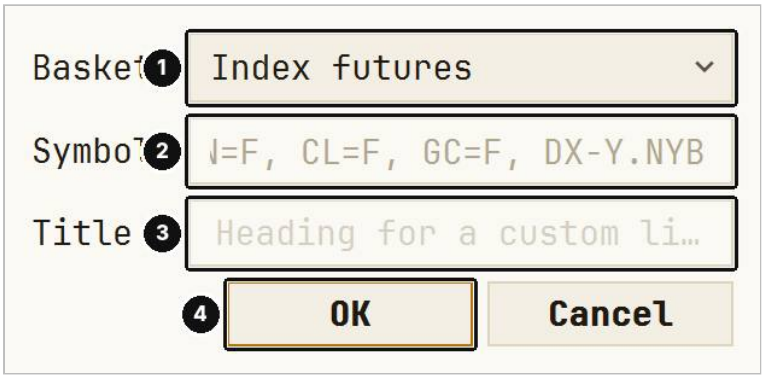


Figure 8.7 The settings of a quote board tile (Market indices set to Index futures).

1. **Basket**: a ready-made set, or **Custom symbols...**.
2. **Symbols**: the symbols of the set, or your own list.
3. **Title**: a heading for a custom list.
4. **OK** applies the settings.

2 Change the settings and click **OK**. The tile reloads at once.

8.5 Move, resize and arrange tiles

- **Move:** press on a tile's header and drag. The tile follows the pointer; other tiles move out of the way, and a tile in the target place swaps with it. Release to drop. The board scrolls when you drag near its top or bottom edge.
- **Resize:** drag the tile's bottom-right corner. Tiles below are pushed down to make room. A tile cannot be made smaller than its minimum size.
- **Fill gaps:** tiles float upward into empty space, so the board stays compact.

Row height, spacing and the layout lock

Click **Layout** in the toolbar.

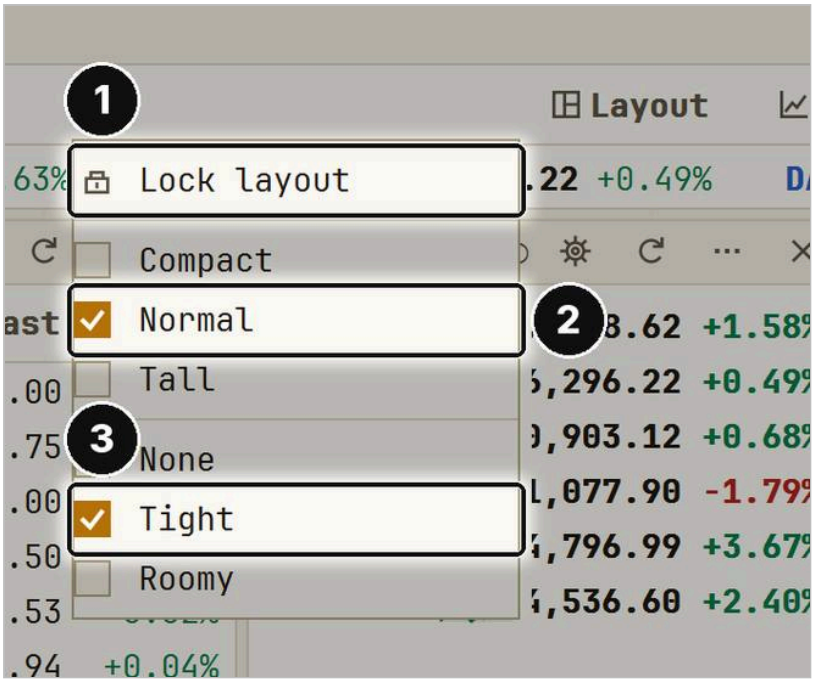


Figure 8.8 The Layout menu.

1. **Lock layout** stops tiles being moved, resized or closed by accident.
2. Row height: **Compact**, **Normal** or **Tall**.
3. Spacing between tiles: **None**, **Tight** or **Roomy**.

When the layout is locked, the button reads **Locked** with a padlock. Tiles keep working (refresh, settings, rename), but the close button and the resize corner disappear, dragging does nothing, and the tile menu says **Layout is locked** in place of **Duplicate** and **Remove from dashboard**. Click **Locked** and untick **Lock layout** to unlock.

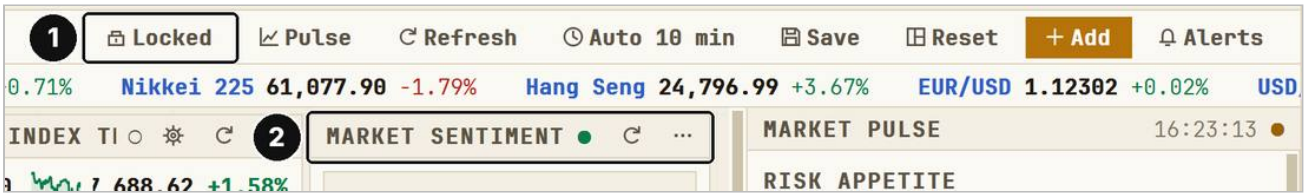


Figure 8.9 A locked board. The button reads Locked, and the tiles have no close button.

1. **Locked**: click it to unlock or to change row height and spacing.
2. Tile headers keep their refresh and menu buttons, but lose the close button.

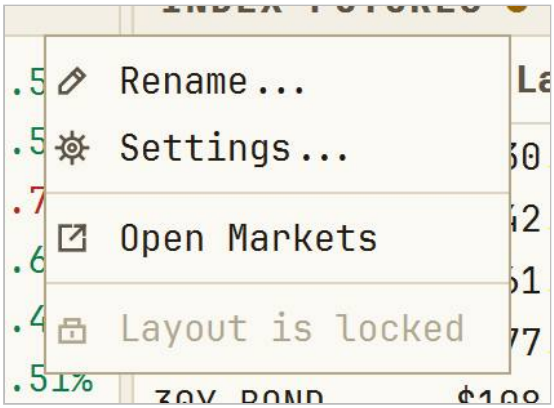


Figure 8.10 The tile menu on a locked board.

8.6 The tile menu

Click a tile's **...** button.

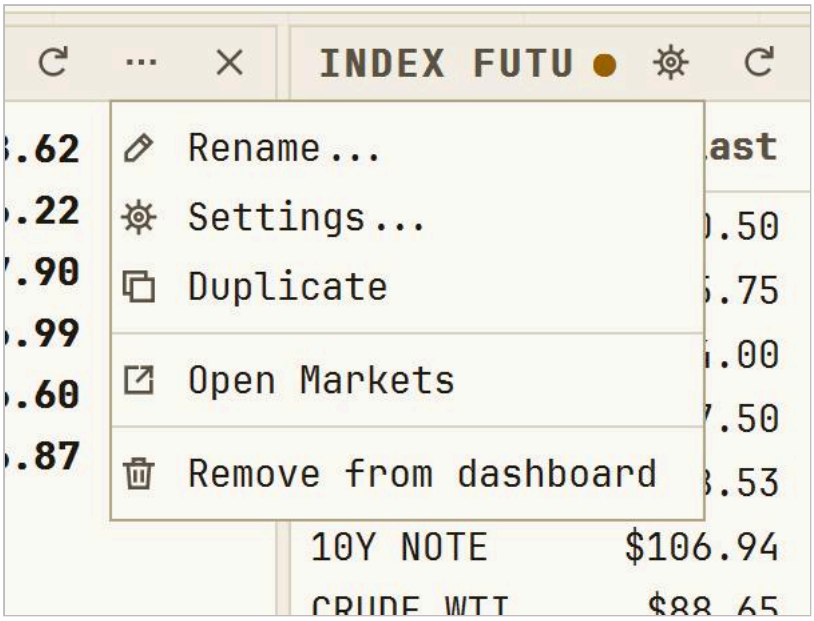


Figure 8.11 The tile menu.

Item	What it does
Rename...	Gives the tile your own name (up to 60 characters). Leave the name empty to go back to the tile's own name.
Use the original name (...)	Shown after a rename: goes back to the tile's own name.
Settings...	The same as the gear button (only on tiles that have settings).
Duplicate	Adds a copy of the tile, with the same settings, right below it.
Open ...	Opens the full screen this tile is a view of (for example **Open Markets** on an index board).
Remove from dashboard	Removes the tile and its settings.



Figure 8.12 Rename widget: the name to show on this tile. Leave it empty for the tile's own name.

8.7 Keep data fresh

Tiles refresh themselves. You can change how often, for the whole board or for one tile.

1. Click **Auto 10 min** in the toolbar and choose an interval. Every tile that has no interval of its own follows it.

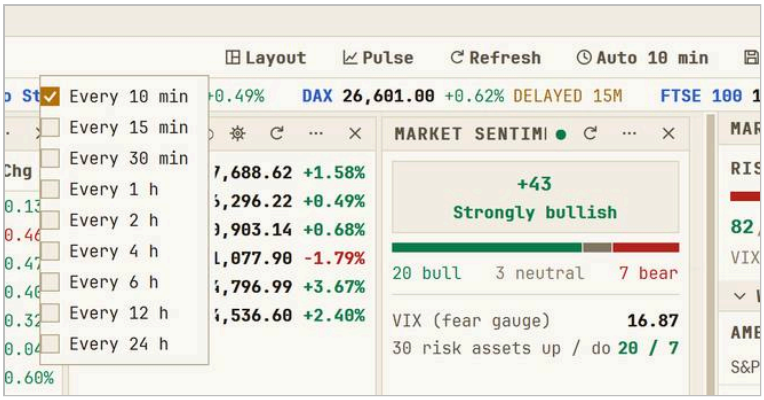


Figure 8.13 The board's auto-refresh interval.

2. To give one tile its own interval, click the clock label in its header (for example **10m**) and choose **Every …**. **Follow dashboard** puts it back on the board's interval.



Figure 8.14 A tile's own interval menu.

3. To refresh at once, click **Refresh** in the toolbar (every tile) or the round arrow on one tile.

The intervals go from **Every 10 min** to **Every 24 h**: 10 min, 15 min, 30 min, 1 h, 2 h, 4 h, 6 h, 12 h and 24 h. Live prices that stream (the ticker, the Market Pulse panel and many quote tiles) move on their own between refreshes.

> **Note**
>
> A tile that spends credits when it runs, such as **AI insight**, never refreshes from the toolbar's **Refresh** or from the board's interval: you decide when it runs.

8.8 Start from a template (Reset)

A **template** (also called a **desk**) is a complete board, with every tile already pointed at something sensible. Use one to start fresh or to switch to a different kind of work.

1 Click **Reset** in the toolbar. The **Choose a template** window opens. Desks for every field come first; scroll down to the built-in desks.



Figure 8.15 Template cards in the Choose a template window.

1. A template card: a preview of the layout, the name, what the desk is for and how many tiles it holds. Click it to apply it.
2. **Apply** does the same.
3. **Cancel** closes the window and keeps your board.

2 Click a template card, or its **Apply** button. Each card shows a small preview of the layout, what the desk is for, and how many tiles it has ("15 widget(s)").

3 The board is replaced by the template. Your old board is gone, so take a note of anything you want to keep first.

The built-in desks

Template	Tiles	What it is for
Portfolio Manager	15	Book value, holdings, live exposure, risk and the macro calendar
Hedge Fund	15	Factor rotation, screening and cross-asset risk with a live tape
Crypto Trader	15	Chart, tape and ticket over live positions, orders and P&L
Equity Trader	14	Chart and quote over the blotter, with screener and movers
Macro Economist	16	Curve first, then every asset class that reprices off it

Template	Tiles	What it is for
Geopolitics Analyst	14	Events and shipping flow against the energy, freight and FX reaction
Research Analyst	13	Name-level chart, quote and screening with sector news and notes
Global Market Monitor	16	Read-only world view: every asset class, news and live TV
AI & Automation	15	Agent output, activity and errors over live market context
Command Center	9	A start page: shortcuts to every tab, Ask AI, world sessions, your paper book, algos, alerts and approvals
Automation	9	Algo deployments, the paper book, workflows, AI missions, the arena and the approval queue
Macro & Rates	11	The yield curve, inflation, jobs and policy rates, credit spreads, FX crosses and the macro calendar

A desk for every field

The top of the template window, **A DESK FOR EVERY FIELD**, offers desks built for a profession in your country.

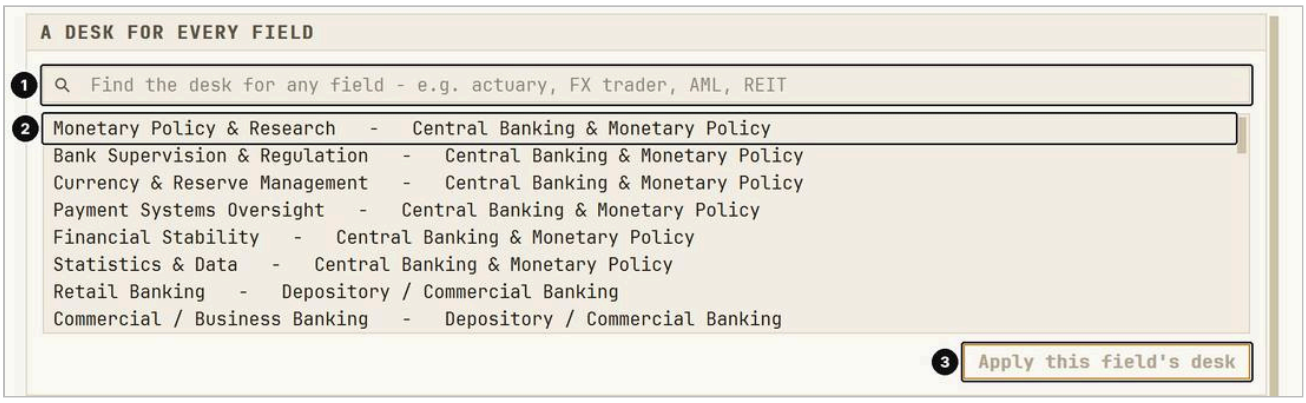


Figure 8.16 A desk for every field, at the top of the template window.

1. Search the fields: `actuary`, `FX trader`, `AML`, `REIT`...
2. Each line is a field and its industry. Click one to select it.
3. **Apply this field's desk** replaces your board with that field's desk.

Your profile - ... with **Apply my profile** is the desk for the job you gave when you signed up. To use another field's desk, type in **Find the desk for any field** (for example `actuary`, `FX trader`, `AML`, `REIT`), pick a field in the list and click **Apply this field's desk**, or double-click the field.

The first time you open the Dashboard, the same window opens as **Choose your dashboard** (see **Chapter 4, Your first ten minutes** p. 57). **Start with a blank dashboard** there leaves the board empty.

8.9 The ticker bar

The ticker bar under the toolbar scrolls prices across the screen: symbol, price and change. A symbol whose exchange feed is delayed is marked on the bar itself (for example **DELAYED 15M**).

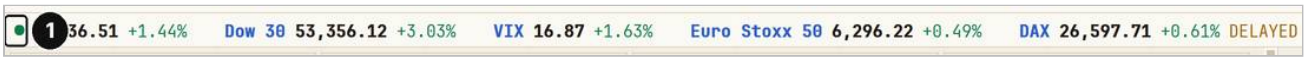


Figure 8.17 The ticker bar.

1. The bar's freshness dot: hover it to see how many of its symbols are live, delayed or stale.

1. Right-click the ticker bar and choose **Edit symbols...**. An edit line opens over the bar.
2. Type the symbols in **Symbols**, separated by commas or spaces, for example `AAPL, MSFT, ^GSPC, BTC-USD`.
3. Click **OK** or press Enter. To go back to the default list (which follows your home market), clear the line and click **OK**.

The bar shows up to 50 symbols; extra symbols are left out and the terminal tells you so.

8.10 The Market Pulse panel

The panel on the right is a one-column summary of the whole market. Click **Pulse** in the toolbar to show or hide it; drag its left edge to make it wider or narrower. Click a section's title to fold or unfold it. The time at the top is when most of its prices were received; hover it for details.

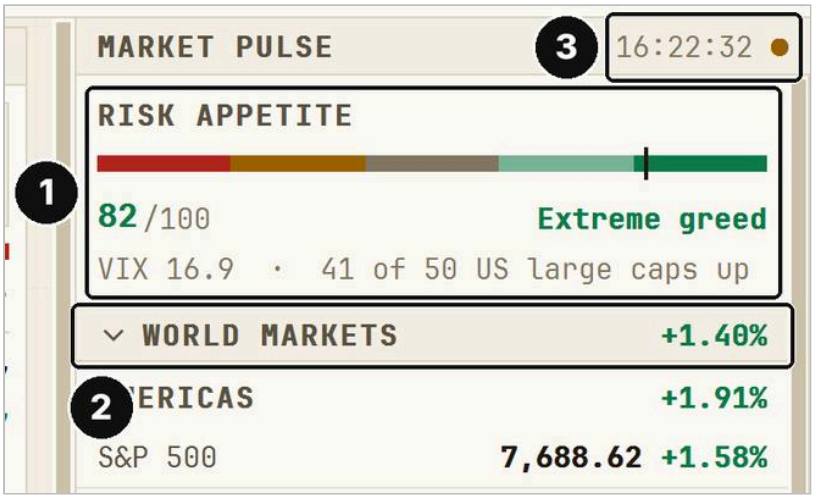


Figure 8.18 The top of the Market Pulse panel. The sections below it scroll.

1. Risk appetite: a 0-100 score, its band, the VIX and how many of 50 US large caps are up.
2. A section title: click it to fold or unfold the section.
3. When most prices on the panel arrived, and their freshness dot.

Section	What it shows
RISK APPETITE	A 0-100 gauge from **Extreme fear** to **Extreme greed**, with the VIX and how many of 50 US large caps are up.
WORLD MARKETS	Main indices of the **Americas**, **Europe** and **Asia-Pacific**, each region with its average move.
TOP MOVERS	The biggest **Gainers** and **Losers** among the tracked names, with volume.
MARKET BREADTH	How many sampled names are up and down, for S&P, Nasdaq and NYSE groups.
RATES & CURRENCIES	Bond yields and main currency pairs.
COMMODITIES & CRYPTO	Gold, oil and other commodities, and the large coins.
EXCHANGE SESSIONS	Which exchanges are **Open**, **Pre-open**, at **Lunch**, **Closed** or on **Holiday**, with a countdown.

How risk appetite is scored. The score starts at 50. It moves up or down by how many of the 50 large caps are up against down (all up adds 50, all down takes 50 away). Then the VIX adjusts it: above 30 takes 20 away, above 25 takes 10 away, below 15 adds 10. The result is kept between 0 and 100 and named: 0-20 **Extreme fear**, 21-40 **Fear**, 41-60 **Neutral**, 61-80 **Greed**, 81-100 **Extreme greed**.

8.11 Save your board

The board saves itself a moment after every change: adding, moving, resizing, renaming, settings. **Save** saves at once and shows **Saving...** while it works.

Your account has **one** board. It is stored with your account (while cloud sync is on, as it is unless you turn it off in Settings), so every computer you sign in to shows the same board, and an edit on one computer replaces the board on the others. The layout lock, the ticker symbols, the refresh interval, whether Market Pulse is shown and which of its sections are folded follow your account too.

> **Careful**
>
> **Reset** and **Remove from dashboard** cannot be undone. A tile's settings go with it.

8.12 Widget catalogue

The **Add widget** window groups the widgets in nine categories: **Tools**, **Automation**, **Trading**, **Research**, **Markets**, **Derivatives**, **Geopolitics**, **Portfolio** and **Economy**. This section lists all 59 widgets the window offers, category by category. Each entry says what the tile shows, what its settings change (the gear button, or **Settings...** in the tile menu), and what it needs. "Size" is the tile's starting size in grid columns x rows; you can resize any tile afterwards.

> **Note**
>
> Many tiles are small views of a full screen. The tile menu's **Open ...** item takes you to that screen, and the chapter for that screen explains the data in depth.

A board saved by an older version may also hold a **Polymarket** tile (prediction-market prices). New boards no longer offer it; where it remains, it says it is live only while that market is open in Prediction Markets (**Chapter 14, Prediction Markets** p. 233).

Markets

Market indices (size 4 x 5). A quote board of stock indices. The **Basket** setting picks the set: **Global indices**, **US indices**, **European indices**, **Asia-Pacific indices**, **India market**, **Rates & credit**, **Volatility complex** or **Index futures**. Pick **Custom symbols...** to type your own list in **Symbols**, and give it a heading in **Title**. Columns: **Symbol**, **Last**, **Chg**, **Chg %** and **Day** (a bar that shows where the last price sits in the day's range — hover it for the numbers). On a narrow tile the names shorten first, then **Day** and **Chg** step aside so **Last** and **Chg %** stay whole (as in the picture below).

INDEX FUTU

Symbol	Last	Chg %
S&P E-MI…	$7,730.00	+0.12%
NASDAQ E…	$28,434.75	-0.46%
DOW E-MI…	$53,754.00	+0.47%
RUSSELL …	$2,877.30	+0.40%
30Y BOND	$108.53	+0.32%
10Y NOTE	$106.94	+0.04%
CRUDE WTI	$88.66	+0.61%
GOLD	$4,137.10	+1.57%
DOLLAR I…	101.52	+0.03%

Figure 8.19 Market indices set to **Index futures**.

Forex pairs (4 x 4). The same quote board for currencies. Baskets: **Forex & dollar**, **FX majors**, **FX crosses**, **Asia FX**, **EM FX** (emerging markets), **Commodity FX** and **Dollar & drivers**, or your own symbols.

FOREX & DOLLAR

Symbol	Last	Chg	Chg %	Day
EUR/USD	1.12307	+0.00030	+0.03%	
GBP/USD	1.34600	-0.00050	-0.04%	
USD/JPY	158.315	-0.074	-0.05%	
USD/CHF	0.81760	+0.00071	+0.09%	
USD/CAD	1.39552	-0.00195	-0.14%	
AUD/USD	0.70096	+0.00081	+0.12%	
NZD/USD	0.56352	+0.00165	+0.29%	
EUR/GBP	0.83435	+0.00116	+0.14%	

Figure 8.20 Forex pairs.

Crypto markets (4 x 4). The quote board for crypto. Baskets: **Cryptocurrency**, **Crypto majors**, **LAYER 1s**, **DeFi**, **High-beta alts** (coins that swing harder than the market) and **Crypto vs macro** (crypto beside the dollar, gold and stock indices), or your own symbols.

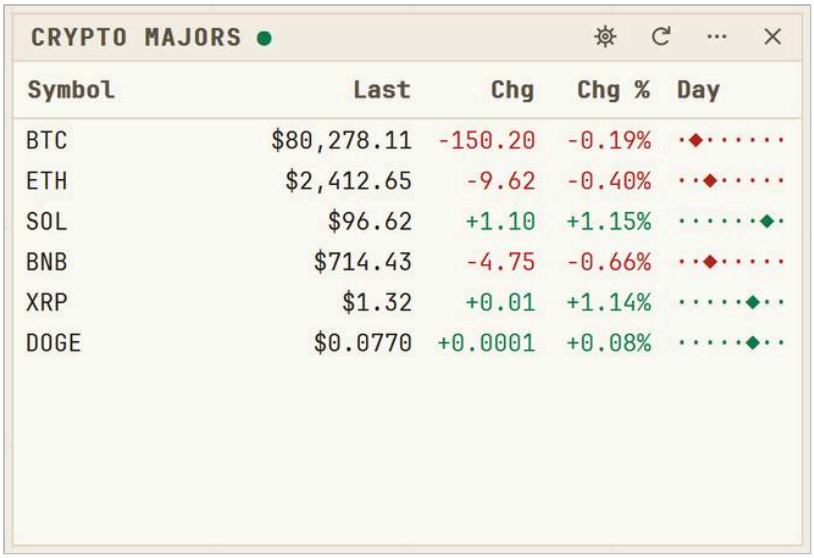


Figure 8.21 Crypto markets set to **Crypto majors**.

Commodities (4 x 4). The quote board for raw materials. Baskets: **Commodities**, **Energy complex**, **Metals**, **Agriculture**, **Inflation basket** and **Freight & energy**, or your own symbols.

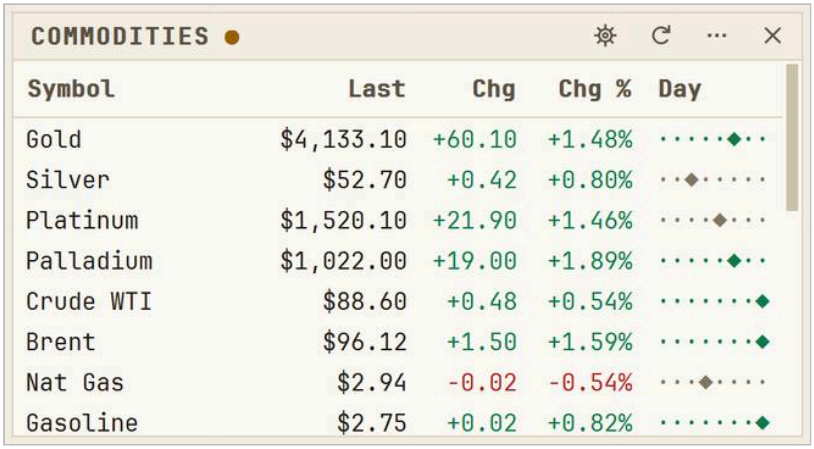


Figure 8.22 Commodities.

Sector heatmap (6 x 5). Coloured boxes, one per group, green when it is up today and red when it is down. **Universe**: **US Sectors**, **Global Regions**, **Factors & Styles** (for example growth against value) or **Themes**. **Order**: **Best to worst** or **Fixed order**. A line under the boxes names the leader and the laggard and counts how many groups are up.

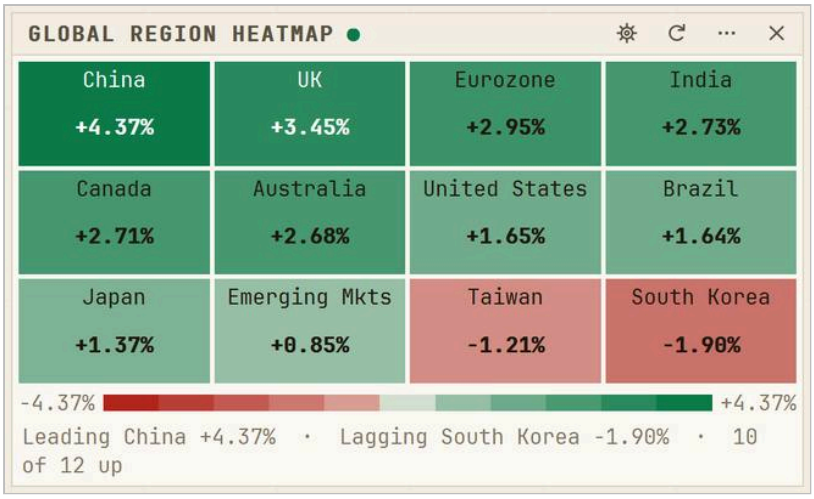


Figure 8.23 Sector heatmap set to **Global Regions**.

Top movers (6 x 5). The biggest gainers and losers of a group, on two tabs: **Gainers** and **Losers**. **Universe** picks the group (US large cap, mega cap, semiconductors, financials, energy, healthcare, crypto, currencies, commodities, India, or sector and theme ETFs). **Rows per side** sets how many rows each tab lists, and **Opens on** picks the tab shown first. Columns: **Symbol**, **Price**, **Chg %**.



Figure 8.24 Top movers over US large caps.

Market sentiment (4 x 4). A one-look reading of the mood: how many of 30 risk assets (US sectors, size and style, high yield, world regions and high-beta stocks) are up, flat and down today (counted as **bull**, **neutral** and **bear**), the VIX "fear gauge", a score and a verdict. An asset counts as up when it moved more than +0.5% today and down below -0.5%. The score is the share of assets up minus the share down, from -100 to +100; the VIX then adjusts it as on the Market Pulse panel (above 30 takes 20 away, above 25 takes 10 away, below 15 adds 10). Verdict: above +40 **Strongly bullish**, above +20 **Bullish**, above -20 **Neutral**, above -40 **Bearish**, otherwise **Strongly bearish**. Until more than half of the 30 have a price the tile says **Waiting for most of the basket**. No settings.

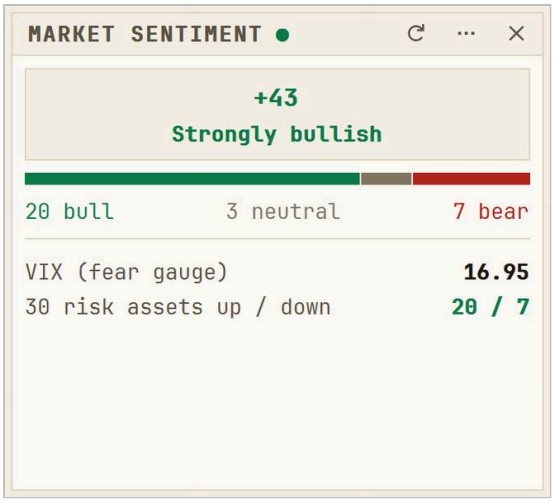


Figure 8.25 Market sentiment.

Performance (4 x 5; the tile's title reads **PERFORMANCE TRACKER**). What moved today across indices, yields and bond funds, currencies, commodities, crypto and "rotation" spreads (one market against another), with the average move of each group. No settings.



Figure 8.26 Performance.

Risk metrics (4 x 5). Market risk gauges in three blocks: the **VIX fear gauge** with its level in words (below 15 **Low volatility**, below 20 **Normal**, below 30 **Elevated**, below 40 **High stress**, 40 and over **Extreme fear**), **High-beta stocks** (fast movers and where they sit in today's range), and **Spread proxies** that compare two markets: **Growth vs market (QQQ-SPY)**, **Small vs large (IWM-SPY)**, **Equity vs duration (SPY-TLT)**, **Credit appetite (HYG-LQD)**, **Cyclical vs defensive (XLY-XLP)** and **Gold vs dollar (GLD-UUP)**. No settings.

Quote strip (3 x 5). A short live list of any symbols you type in **Symbols** (for example `AAPL, MSFT, ^GSPC`).

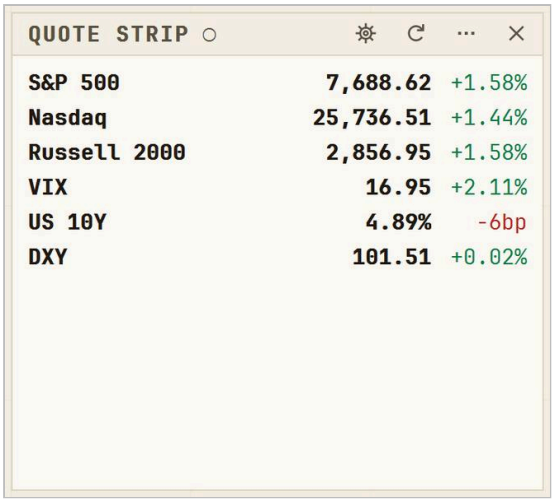


Figure 8.27 Quote strip.

Crypto ticker (3 x 5). Live prices for a list of crypto pairs on one exchange. Settings: **Exchange** and **Pairs**. If a venue does not list a pair, its row says **no feed** (hover it for why).



Figure 8.28 Crypto ticker.

Sparklines (4 x 5). A strip of small trend lines, one per symbol. **Preset**: **Mega cap trend**, **US index trend**, **World index trend**, **Rates & dollar**, **FX majors**, **Commodity trend**, **Crypto trend**, **Risk gauges**, or **Custom** with your own **Symbols** and **Title**.

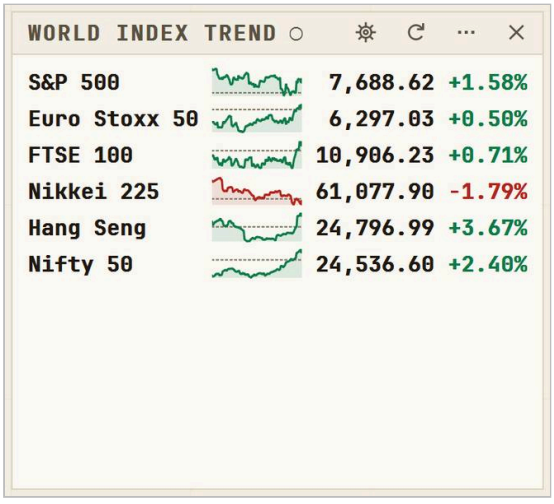


Figure 8.29 Sparklines set to **World index trend**.

Trade tape (4 x 5; the tile's title reads **TRADES**). Every trade printed on one crypto pair at one exchange, newest first. Columns: **Time**, **Price**, **Size**. Settings: **Exchange**, **Pair**, **Max rows**.

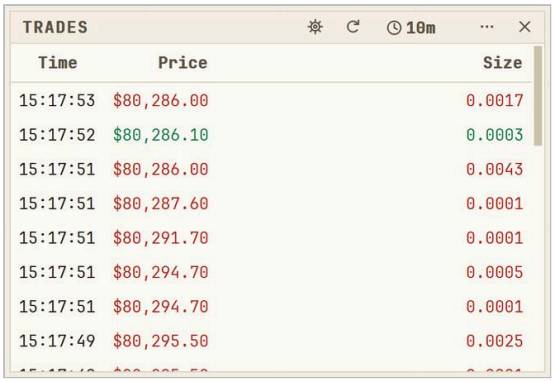


Figure 8.30 Trade tape (title **TRADES**) on BTC/USD.

Market sessions (5 x 6). Which of the world's exchanges are open now: **Exchange**, **Status** (**Open**, **Pre-open**, **Lunch**, **Holiday** or **Closed**), **Local time** and **Next** (the countdown to the next open or close). Settings: **Exchanges** (tick any of 17, from NYSE / Nasdaq, TSX and B3 in the Americas to ASX), **Order** (**By region, west to east** or **Open markets first**) and **Show seconds in the clocks and countdowns**. The line at the top shows your own time and time zone. Hover a row to see its hours, time zone and holiday rules; a note under the table names the exchanges whose public holidays are not modelled (on a holiday they read as trading days).

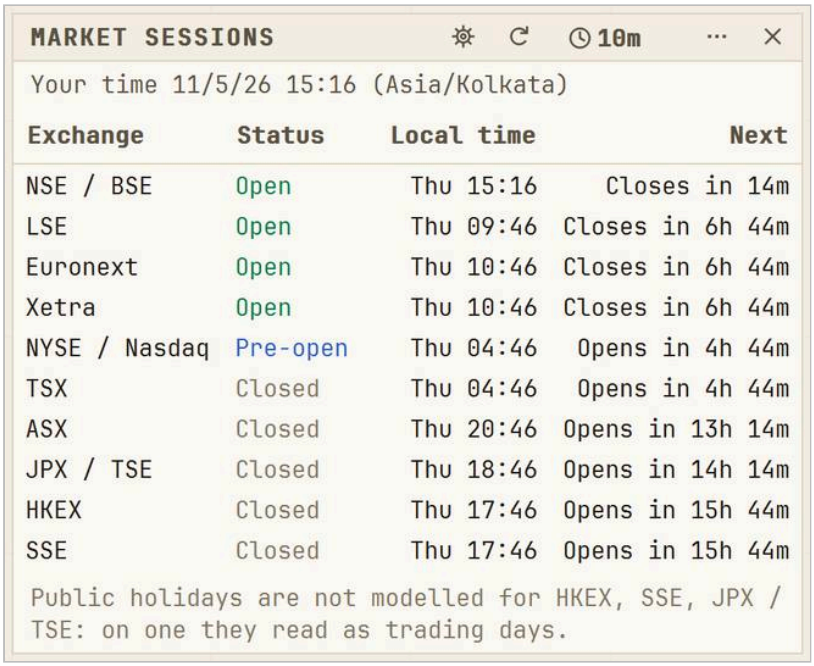


Figure 8.31 Market sessions, open markets first.

FX cross rates (6 x 5). A grid that prices every currency in your list against every other. Each cell is one unit of the row currency in the column currency. **Show**: **Rate** or **Day change**; cells are tinted by the day's move. Settings: **Currencies** (reorder with **Move up** / **Move down**), **Show**, **Rate decimals**.



1 unit of	USD	EUR	GBP	JPY	CHF	CAD	AUD
USD	–	0.89010	0.74259	158.32	0.81696	1.3957	1.4258
EUR	1.1235	–	0.83428	177.86	0.91783	1.5680	1.6018
GBP	1.3466	1.1986	–	213.19	1.1001	1.8795	1.9200
JPY	0.006316	0.005622	0.004691	–	0.005160	0.008816	0.009006
CHF	1.2241	1.0895	0.90897	193.79	–	1.7084	1.7453
CAD	0.71648	0.63774	0.53205	113.43	0.58533	–	1.0216
AUD	0.70136	0.62428	0.52082	111.04	0.57298	0.97890	–
CNY	0.14997	0.13348	0.11136	23.742	0.12252	0.20931	0.21382

Figure 8.32 FX cross rates.

Crypto order book (4 x 8; the title reads **ORDER BOOK:** with the pair and exchange). A live depth ladder for one pair on one exchange: buy orders (bids) and sell orders (asks) by price, size bars, the spread and the mid price, under a line with the bid and ask share of the shown depth (**Bids** %, **Asks** %) and the **Imbalance** between them. Settings: **Exchange**, **Pair**, **Levels per side**, **Price grouping** (**None: the venue's own levels**, **Fine**, **Medium**, **Coarse**, **Very coarse**) and **Bars show** (**Size of each level** or **Cumulative depth**).



Price ($)	Size (BTC)	Total
80,384.20	0.1457	2.5018
80,384.00	0.1098	2.3560
80,382.40	0.0002	2.2463
80,382.10	0.0001	2.2461
80,380.50	0.0001	2.2460
80,379.80	0.2946	2.2459
80,379.60	0.3082	1.9513
80,379.50	0.2128	1.6431
80,378.60	1.4303	1.4303
Mid $80,378.550	Spread 0.10 (0.01 bp)	
80,378.50	0.0004	0.0004
80,376.50	0.0001	0.0005
80,374.00	0.0025	0.0030
80,373.90	0.0249	0.0279
80,372.50	0.0001	0.0279
80,370.50	0.0031	0.0310
80,368.40	0.0001	0.0311
80,366.50	0.0031	0.0342
80,365.40	0.0100	0.0442

Figure 8.33 Crypto order book for BTC/USD.

Research

News feed (8 x 4; titled **MARKET NEWS** until you give it a **Title**). Headlines with an impact marker, sentiment and the tickers they mention. Settings: **Title**, **Max rows**, **Minimum impact** (**Everything**, **Medium and above**, **High only**), **Categories** (for example `ECONOMIC, MARKETS`), **Keywords** (whole words; end one with `*` to match words that start with it: `fed*` finds "Federal") and **Tickers** (for example `AAPL, NVDA`). Leave a filter blank to take everything.

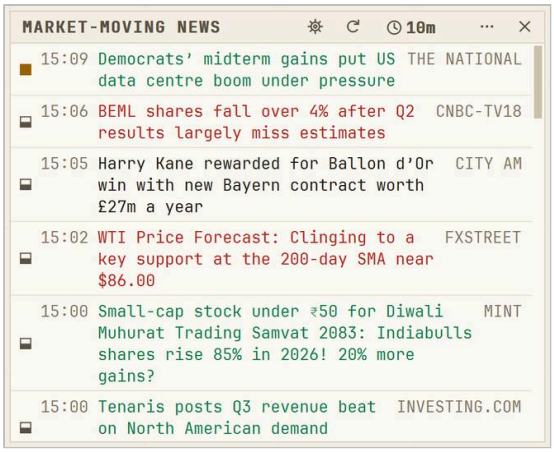


Figure 8.34 A news feed tile named **Market-moving news**.

News by category (5 x 5). Headlines from one news category only. Settings: **Category** and **Max rows**.



Figure 8.35 News by category set to GEOPOLITICS (top of the tile).

Stock quote (4 x 5). One instrument in detail: price and change, then **Open**, **Prev close**, **High**, **Low**, **Volume**. Setting: **Symbol** (any symbol: `AAPL`, `BTC-USD`, `RELIANCE.NS`, `^GSPC`).

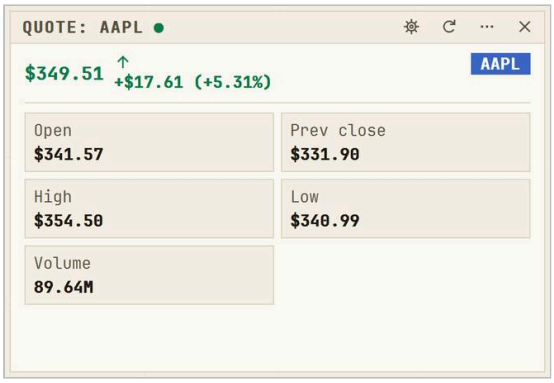


Figure 8.36 Stock quote on AAPL.

Candle chart (5 x 5). A candlestick price chart for one symbol. Setting: **Symbol**. On a tile that is too small the chart says **Too small to draw the chart**: make the tile bigger.



Figure 8.37 Candle chart on BTC-USD.

Stock screener (6 x 5). Ranks a basket of stocks. **Basket**: US large cap, mega cap, semiconductors, financials, energy, healthcare, crypto, sector and theme ETFs, India, income and defensives, or **Custom symbols...** (typed in **Symbols**; **Title** overrides the heading). **Sort**: **Top gainers**, **Top losers**, **Most active**, **Highest price**, **Lowest price**; **Rows** sets the length. Columns: **Symbol**, **Price**, **Chg %**, **Volume**. The **Sort by** list on the tile (**% change, highest first**, **% change, lowest first**, **Volume, highest first**, **Price, highest first**, **Price, lowest first**) re-sorts it on the spot.

SCREENER: SEMICONDUCTORS

Sort by % change, highest first — 22 symbols

Symbol	Price	Chg %	Volume
QCOM	$173.19	+5.33%	22.27M
AMD	$488.78	+1.01%	50.98M
NXPI	$265.01	+0.84%	5.27M
TXN	$311.49	-0.32%	10.16M
ON	$71.24	-1.87%	10.79M
AVGO	$325.48	-2.00%	23.88M
TSM	$395.75	-2.24%	14.52M
SWKS	$82.92	-2.90%	10.04M
NVDA	$200.13	-3.17%	149.03M

Figure 8.38 Stock screener over semiconductors.

Economic calendar (4 x 4). Upcoming and recent economic releases, ranked by importance. Columns: **Event**, **Cty** (country), **Date**, **Period**, **Actual**, **Fcst** (forecast), **Cons** (consensus), **Prev** (previous) and **Imp** (importance: **High**, **Med**, **Low**). Settings: **Title**, **Countries** (for example `US, EU, GB, JP, IN`; blank for all), **Minimum importance** (**Everything**, **Low and above**, **Medium and above**, **High only**), **Categories** (for example `inflation, employment, rate`) and **Max rows**. Hover a row for its category, period and any revision.

MACRO CALENDAR: HIGH IMPACT — 10m

Event	Cty	Date	Period	Actual	Fcst
Monetary Policy Summary	GB	Nov-05	–	–	–
MPC Official Bank Rate Votes	GB	Nov-05	–	–	7-0-2
Official Bank Rate	GB	Nov-05	–	–	4.00%
BOE Monetary Policy Report	GB	Nov-05 12:00	–	–	–
BOE Gov Bailey Speaks	GB	Nov-05 12:30	–	–	–
Non-Farm Employment Change	US	Nov-06	–	–	65K
Unemployment Rate	US	Nov-06	–	–	4.2%
Average Hourly Earnings m/m	US	Nov-06 13:30	–	–	0.3%
BOJ Gov Ueda Speaks	JP	Nov-06 16:00	–	–	–
Core CPI y/y	US	Nov-10	–	–	–

Figure 8.39 Economic calendar, high-impact releases only.

RSS feed (6 x 5). One feed you subscribed to in the RSS Feeds screen. Until you pick a feed (with the gear) the tile says **No feed selected** and offers **Add a feed**; if the feed it pointed at is gone, it says **Feed unavailable** and offers **Open RSS Feeds**.



Figure 8.40 RSS feed before a feed is chosen.

Recent Backtests (4 x 5). Your latest backtest runs from the Backtesting screen, each with its **Sharpe** ratio (return per unit of risk), its **DSR** (deflated Sharpe: the chance the Sharpe is real once the number of tries is counted) and whether it passed the engine's checks (**Validated** or **Not validated**). Click a run to open it. Setting: **Rows**.

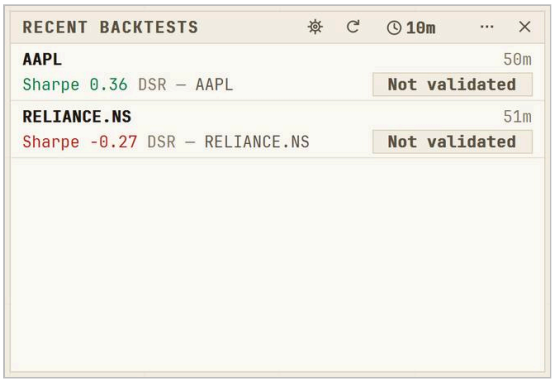


Figure 8.41 Recent Backtests.

Portfolio

Watchlist (6 x 4). Live prices for a short list of symbols that belongs to this tile alone (it is not one of the lists in the Watchlist screen). Type symbols in the box and press **Go**. Columns: **Symbol**, **Price**, **Chg**, **Chg %**.

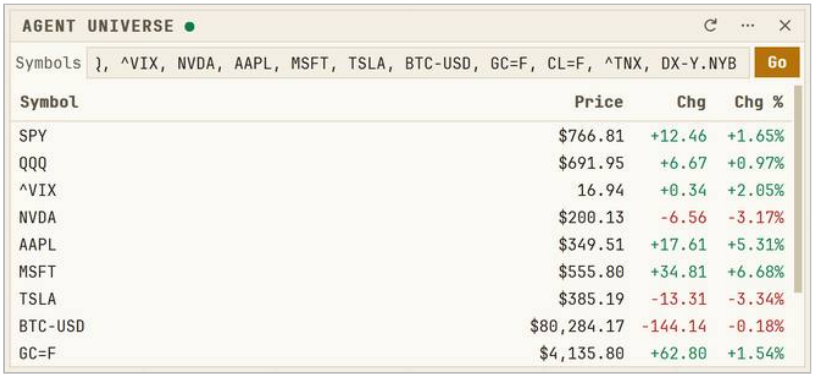


Figure 8.42 A Watchlist tile named **Agent universe**.

Portfolio summary (6 x 4). One of your portfolios at a glance: **NAV** (net asset value, what it is worth now), **Day P&L**, **Unrealised** and **Positions**, then a table of **Symbol**, **Weight**, **Value** and **P&L**. Setting: **Portfolio**. With no portfolio the tile says **No portfolio yet** and offers **Set up portfolio**; a portfolio with no positions says **No holdings yet** and offers **Add holdings**.



Figure 8.43 Portfolio summary.

Holdings (6 x 5). Long-term holdings of a broker account, or of your Fincept Paper practice account: **Symbol**, **Sellable**, **Avg** (average cost), **LTP** (last traded price), **P&L %**. Each row has an **Exit** button: the **Sell holding** window asks **Quantity to sell** and **Sell at market** sends a market sell order (delivery). **Square off all** sells every holding the same way, one order at a time. Both ask you to confirm first, and the confirmation says whether the order is a DEMO or a LIVE one: on a live account it is a real order at your broker. Settings: **Broker account** (see below).

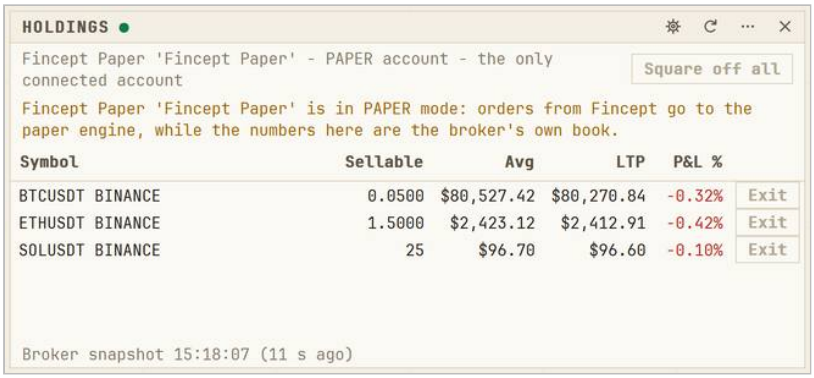


Figure 8.44 Holdings of the Fincept Paper account.

Price alerts (6 x 5). Your price alerts with the live price and how far each is from firing. Columns: **Symbol**, **Rule**, **Level**, **Price**, **To level**, **Last fired**, **Armed**. Settings: **Armed alerts only**, **Rows**, **Order by** (**Nearest to firing first**, **Symbol**, **Last fired first**). You create alerts in the Watchlist screen; double-click a row to go there.



Figure 8.45 Price alerts.

Trading

Quick trade (4 x 5). A small order form: **Symbol** with **Lookup**, **Buy** / **Sell**, **Market** / **Limit**, **Qty** and **Limit price**, with an estimated total. **Open in Equity Trading** opens the full order ticket filled in with these values; nothing is sent from the tile itself. The ticket takes stock listings only: for an index (`^GSPC`), a currency or crypto pair (`BTC-USD`, `EURUSD=X`) or a futures or options code the tile shows the price but explains, when you press the button, why it cannot hand the order on. Settings: **Default symbol**, **Default quantity**.



Figure 8.46 Quick trade, opened on BTC-USD.

Open positions, **Working orders**, **Margin usage**, **Today P&L** (sizes 6 x 5, 6 x 5, 3 x 4, 3 x 4). Live views of a connected account (a broker account, or your Fincept Paper account when it is the only one), re-read from the broker every 5 minutes, after any order you place from Fincept and when you press refresh:

- **Open positions**: **Symbol**, **Qty**, **Avg**, **LTP**, **P&L**.
- **Working orders**: **Symbol**, **Side**, **Qty**, **Price**, **Status** and a cancel button, which asks you to confirm (DEMO or LIVE). Fincept Paper orders are cancelled from the Equity Trading screen instead.
- **Margin usage**: **Available**, **Used**, **Limit (used + available)**, **Collateral**, **Total (broker's figure)** and **Usage** %.
- **Today P&L**: **Realised (booked today)**, **Unrealised (open lines at LTP)**, **Open lines**, **Closed today** and the total.

Each tile has a **Broker account** setting: **Automatic** shows your connected live account (with several, your primary account for the broker); choose an account to keep the tile on it. With nothing to show they say so, for example **No open positions** with **Open trading**; with no account at all they say **No broker connected** and offer **Connect broker**.

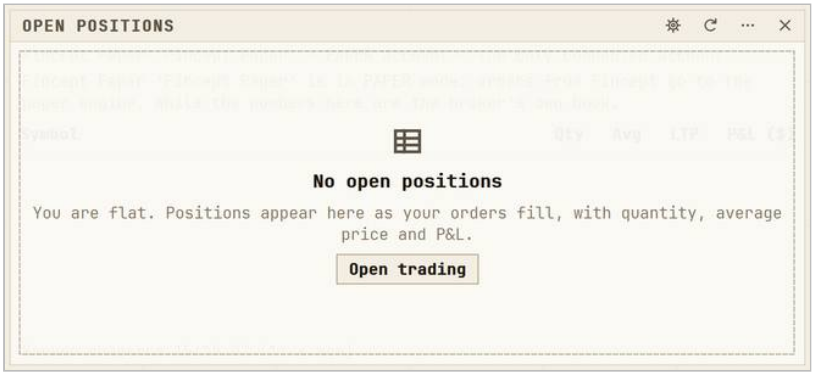


Figure 8.47 Open positions with nothing open.

Paper account (5 x 7). Your Fincept Paper practice account: **Equity**, **Cash**, **Day P&L**, **Unrealised P&L**, then open positions and open orders. Settings: **Book** (**Main book**, an **Algo sleeve**, the **Crypto sandbox** or an **Alpha Arena** book), **Rows per table**, **Show open positions**, **Show open orders**, **Order positions by** (**Largest P&L first**, **Best P&L first**, **Worst P&L first**, **Symbol**).

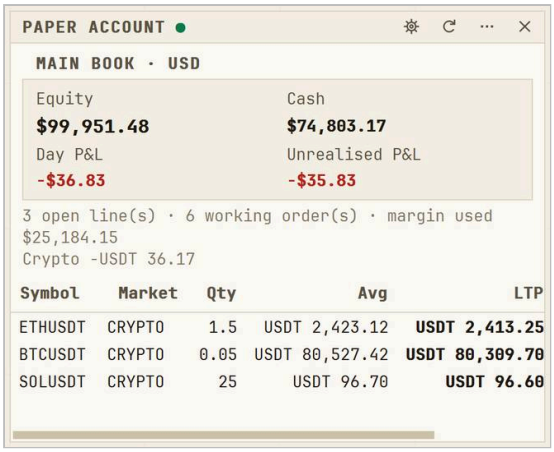


Figure 8.48 Paper account: the main practice book.

Algo deployments (7 x 5). Your running and past algo strategies: **Deployment**, **Symbol**, **Mode** (**Paper** or **Live**), **Status**, **P&L**, **Trades**, **Last error**. Settings: **Mode** (**Paper and live**, **Paper only**, **Live only**), **Active deployments only** (running, starting or paused, or still holding a position), **Rows**, **Order by** (**Best P&L first**, **Name**, **Status (failed first)**). Double-click a row to open Algo Trading.



Figure 8.49 Algo deployments.

Pending approvals (5 x 4). Orders waiting for you to approve: **Origin** (**Workflow**, **Algo**, **Algo unwind**, **Order ticket**, **Basket**, **Smart order**, **Split order**, **GTT order**), **Symbol**, **Side**, **Qty**, **Age**. **Review** (or a double-click) opens the pending orders panel, where you approve or reject; nothing is sent from the tile. Settings: **Rows**, **Order by** (**Longest waiting first**, **Newest first**).



Figure 8.50 Pending approvals.

Tools

Live TV / streams (4 x 5). Plays a channel from its **Financial TV** list, or any stream address you paste under **Custom stream** (a video page, an HLS `.m3u8` or MP4 address) and **Play**, inside the tile. **Stop** ends playback. The tile only plays when you ask it to: it never refreshes on a timer.

Recent files (4 x 4). The last eight files you saved in File Manager. With none yet it says **No files yet** and offers **Open File Manager**.

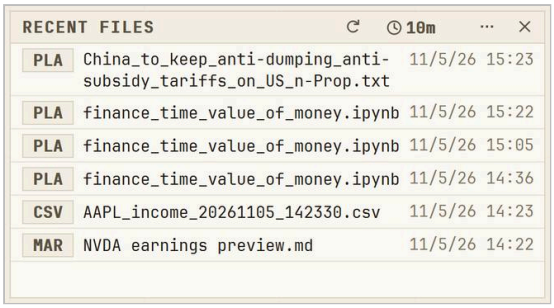


Figure 8.51 Recent files.

Notes (4 x 5). Your notes, newest first, or only your favourites. Settings: **Filter** (**Recent** or **Favorites only**) and **Max rows**. Click a note to open it in Notes.

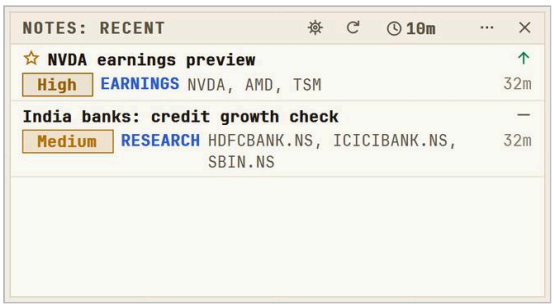


Figure 8.52 Notes.

Quick launch (4 x 3). One-click buttons for the screens you pick, in your order. Settings: tick the screens, reorder them with **Move up** / **Move down**, **Show the four-letter codes**, and **Columns** (**As many as fit**, or a fixed number).

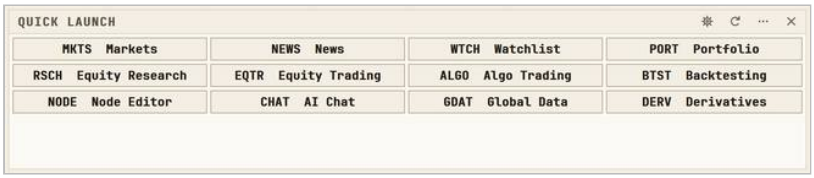


Figure 8.53 Quick launch with twelve screens.

AI insight (4 x 4). Asks one of your Agent Studio personas a standing question (for example "What moved crypto today?") and shows the answer. Press **Ask** to run it; the button shows the price of one ask (**Ask · 2 CR** at the time of writing). Settings: **Persona** (an agent or a team), **Prompt**, **Refresh every** (**Manual only** or a number of minutes). Because every automatic run is charged, switching **Refresh every** on asks you to confirm first (**Turn on auto-refresh**).



Figure 8.54 AI insight before a persona is picked.

Agent desk (4 x 4). One agent desk from Agent Studio: **Armed** or **Disarmed**, runs today, next run, last result. Setting: **Desk**. With no desk picked it says **No agent desk** and offers **Open Agent Config** (the screen's name in the command line; see **Chapter 38, Agent Studio** p. 739).



Figure 8.55 Agent desk before a desk is picked.

Agent errors (5 x 4). Recent failures of your agents: **Time**, **Context**, **Message**. Setting: **Max rows**.



Figure 8.56 Agent errors.

Web scraper (6 x 5). Reads a table from any web address (HTML tables, JSON, CSV or XML/RSS). Settings: **URL**, **Auto-refresh** (**manual only**, or every so many seconds), **User-Agent**, **Format** (**Auto-detect**, HTML, JSON, CSV, TSV, XML), **Encoding**, **JSON path** and **Extra headers** (one per line). Header values stay on this computer; another computer gets only the header names and asks you for the values. A page with several tables gets a list to pick one. The tile reads `http://` and `https://` addresses up to 10 MB, never an address on your own computer.



Figure 8.57 Web scraper before an address is set.

My data (4 x 4). A saved query from one of your own data sources (your database, your API or your files) as a table or a chart. Setting: **Saved query**; how it is drawn, which columns are plotted and how often it refreshes are stored with the query. Version 5.0.6 has no control that saves a new query, so the tile lists only queries saved with an earlier version.

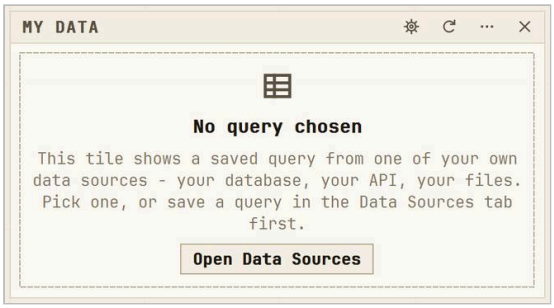


Figure 8.58 My data before a query is chosen.

Geopolitics

Geopolitics events (6 x 5). Live conflict and political events: **Category**, **Event**, **Location**, **Source**, **Age**. Setting: **Max rows**. Loading the events costs credits, so the tile waits for you: press its round arrow to load them (the tile shows the price, 1.5 credits at the time of writing).



Figure 8.59 Geopolitics events.

Maritime vessels (5 x 5). Positions of ships you follow by their seven-digit IMO number: **Vessel**, **Route**, **Kn** (speed in knots), **Progress**. Setting: **IMO numbers**, one per line, up to 25 per tile. Each vessel's position is a charged read, so the tile waits for you: press its round arrow to load the positions (the tile says the most a refresh can cost).



Figure 8.60 Maritime vessels before vessels are added.

Trade flows and **Trade treemap** (5 x 4 each). A country's top trading partners as a chord diagram or as boxes grouped by continent. Settings: **Country**, **Year** (**Latest available** or a year), **Rank by** (**Total trade**, **Imports**, **Exports** or **Trade balance**), **Partners drawn**. The first load costs credits (the tile shows the price, 0.5 credits at the time of writing) and waits for you to press the round arrow; asking the same question again is free.

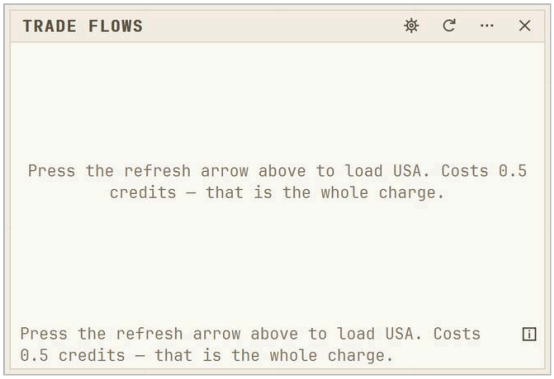


Figure 8.61 Trade flows waiting for the first (paid) load.

World map (6 x 4). One economic indicator coloured across every country. Settings: **Indicator** and **Colour** (**Continent hue** or **Single ramp**).



Figure 8.62 World map: GDP by country.

Infrastructure map (6 x 4). Pipelines, submarine cables, ports or chokepoints on a world map, one layer per tile. Settings: **Layer**, **Status** (**Every status**, **Operating**, **Under construction**, **Proposed**, **Cancelled or shelved**) and **Viewport** (an area of the map as four numbers, `minLon,minLat,maxLon,maxLat`, or empty for the whole world). The tile's title is the layer's name. It is free and refreshes like any other tile.

Derivatives

FII / DII flows (5 x 6). India's institutional money: net buying by foreign (FII) and domestic (DII) institutions in the NSE cash market, day by day, with window totals and daily bars. Settings: **Window** (days), **Table shows** (**Net flows only** or **Buying, selling and net**), **Show the daily bars**. The exchange publishes each day's figures in the evening (after 6 PM India time).

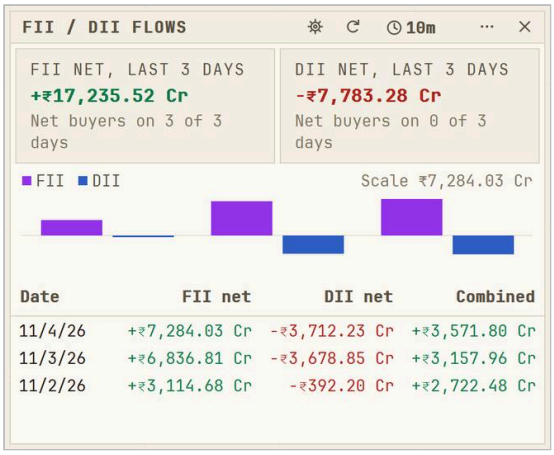


Figure 8.63 FII / DII flows.

Option chain snapshot (6 x 7). For one underlying: **Spot**, **PCR** (put-call ratio), **Max pain**, **ATM IV**, the call and put open-interest peaks, and a short chain around the money (**Call OI**, **Call LTP**, **Strike**, **Put LTP**, **Put OI**). It reads the chain through your broker, so it needs a broker account that serves option chains (it costs no credits). Settings: **Broker account** (**Automatic (first connected broker)** or one account), **Underlying**, **Expiry** (**Nearest expiry** or a date), **Strikes each side of ATM**. Hover **PCR**, **Max pain**, **ATM IV** and the peaks for what each means.

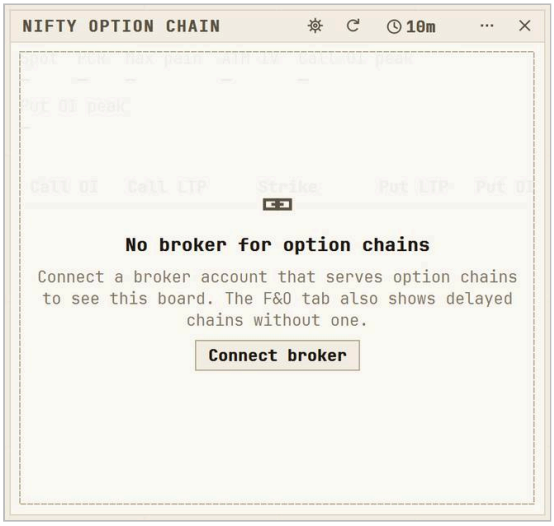


Figure 8.64 Option chain snapshot without a broker.

Automation

Workflows (7 x 4). Your deployed Node Editor workflows: **Workflow**, **Trigger**, **Runs on** (**This device**, another device's name, or **Not claimed yet**), **Last run**, **Result**, **Next run**. Settings: **Rows**, **Show** (**Every deployment** or **Only those this device runs**), **Only those whose last run failed or was skipped**, **Order**. Double-click to open the Node Editor.



Figure 8.65 Workflows.

AI missions (7 x 4). Your AI missions from Mission Control: **Mission**, **Status**, **Market**, **Return** (or **Equity**), **Last wake**, **Next wake** and **Brier** (forecast score; lower is better). Settings: **Show** (**Every mission** or **Only the missions picked below**), **Missions**, **Rows**, **Book column** (**Return since its first mark** or **Book equity**), **Include finished and abandoned missions**, **Show the forecast score (Brier)** and **Include plain scheduled harness tasks**.



Figure 8.66 AI missions.

Alpha Arena (6 x 4). A competition's leaderboard: **#** (rank), **Competitor**, **Lane**, **Equity**, **Return**, **Trades**, **Last decision**. Settings: **Competition** (**The current one (running, else the newest)** or a past one), **Rows**, **Rank by** (**Return**, **Equity**, **Trades**). Double-click to open Alpha Arena.



Figure 8.67 Alpha Arena leaderboard.

Ask AI (4 x 3). A question box and preset question buttons. Your question opens in AI Chat; the tile itself never calls the AI. By default the button reads **Open in chat** and puts the question in the chat box for you to send; with **Enter sends the question** ticked it reads **Ask** and sends it there at once, at the chat's usual price. Settings: **Preset prompts** (one per line; each becomes a button), **Restore the default prompts** and **Enter sends the question**.



Figure 8.68 Ask AI with its preset questions.

Economy

Economic indicator (4 x 5). One economic series as a chart with **Latest**, **Prior**, **Change** and **Period. Indicator** offers 20 ready series (CPI inflation, core CPI, core PCE, unemployment rate, nonfarm payrolls, jobless claims, the Fed funds rate, 2- and 10-year Treasury yields and spreads, breakeven inflation, the mortgage rate, the high-

yield spread, real GDP growth, M2 money supply, retail sales, industrial production, consumer sentiment) or a custom series by its id. **Read as: As published**, **Year-on-year change (%)** or **Change from the previous period**. **Range: 1 year**, **5 years**, **10 years**, **Whole history**. **Chart style: Line**, **Area**, **Steps**, **Bars**.



Figure 8.69 Economic indicator: core PCE inflation.

Yield curve (5 x 6). A country's government bond yields by maturity, against an older curve. Settings: **Country**, **Compare with** (**No comparison**, **1 month ago**, **6 months ago**, **12 months ago**) and **Show the spreads table**. The tile also shows the 10-year yield, the 2s10s spread (10-year yield minus 2-year yield, in basis points) and the curve's **Shape: Normal**, **Flat** or **Inverted**.

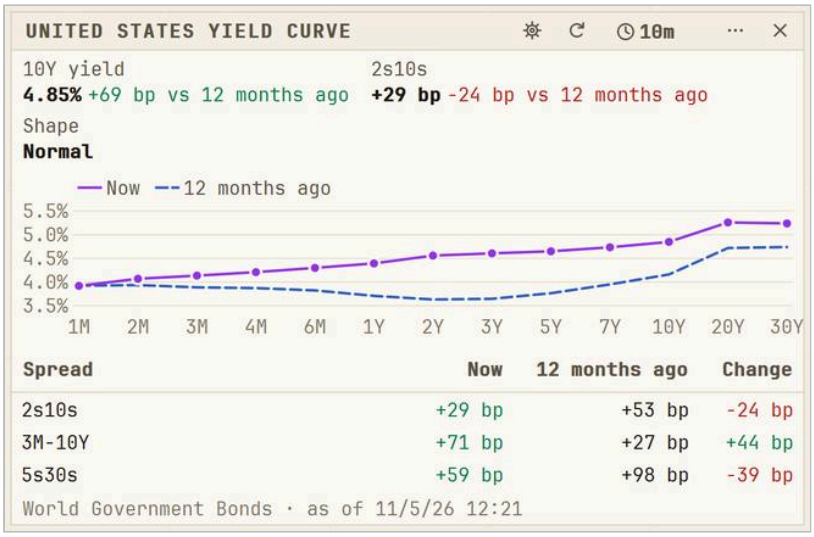


Figure 8.70 Yield curve for the United States against 12 months ago.

8.13 Reference

How do I...?

I want to...	Do this
Add a tile	**Add** → click a card → **Add widget**
Find a tile quickly	Type in the **Add widget** search box: it matches names, descriptions and screen names
Move a tile	Drag its header; other tiles make room

I want to...	Do this
Make a tile bigger	Drag its bottom-right corner; it snaps to the grid
Point a tile at something else	Its gear → change the settings → **OK**
Remove a tile	The **x** in its header (no confirmation, no undo), or **...** → **Remove from dashboard**
Reload one tile	Its round arrow
Reload everything	**Refresh** in the toolbar
Change how often the board updates	**Auto ...** → nine choices, 10 min to 24 h
Give one tile its own cadence	Its clock label (for example **10m**) → **Every ...**
Fit more on screen	**Layout** → **Compact**, and **Pulse** to hide the right-hand panel
Change the ticker's symbols	Right-click the ticker → **Edit symbols...**
Start from a ready-made desk	**Reset** → a card's **Apply**
Look at the templates without changing anything	**Reset** → look → **Cancel**
Stop accidental changes	**Layout** → **Lock layout**
Have the same board on another computer	Nothing: the board follows your account

Toolbar

Control	What it does
Widget count	"n widgets" on the board (hidden when the board is empty).
Layout / Locked	Menu: **Lock layout**; **Row height**: **Compact**, **Normal** (default), **Tall**; **Spacing between widgets**: **None**, **Tight** (default), **Roomy**.
Pulse	Shows or hides the Market Pulse panel.
Refresh	Fetches fresh data for every visible tile, the ticker and Market Pulse.
Auto ...	The board's auto-refresh interval: **Every 10 min** to **Every 24 h**. Default 10 min.
Save	Saves the board now.
Reset	Opens **Choose a template**; the picked desk replaces the board.
Add	Opens **Add widget**.
Pending orders badge	"n pending": orders waiting for your approval (hidden when there are none). Click it to review them. See **Chapter 21, Action Center** p. 381.
Alerts	Your recent alerts: price alerts, order fills, workflow notices. Reads **Alerts [n]** while n are unread.

The board buttons (**Add**, **Layout**, **Reset**, **Save**) wait until your saved board has loaded.

Tile header

Control	Tooltip	What it does
Title	—	The tile's name, or your own name for it (hover a renamed tile for the original).

Control	Tooltip	What it does
Gear	**Configure widget**	The tile's settings. Only on tiles that have settings.
Round arrow	**Refresh widget data**	Refreshes this tile now.
Clock + interval (for example 10m)	"Auto-refresh every ..."	**Follow dashboard (...)** or **Every 10 min** ... **Every 24 h** for this tile only. Not on price tiles, nor on tiles that only refresh when you ask (AI insight, Ask AI, Quick launch, Live TV, Geopolitics events, Maritime vessels, Trade flows, Trade treemap).
Freshness dot	(state words)	On price tiles, after the title: how current the prices are. Hover for details.
...	**Widget menu**	**Rename...**, **Settings...**, **Duplicate**, **Open ...**, **Remove from dashboard**.
x	**Close widget**	Removes the tile and its settings. Hidden when the layout is locked.

Tile states

What you see	Meaning
Loading... in the header, or a loading cover	The tile is fetching its data.
No data yet. Click refresh to retry.	The first fetch did not return data.
Refresh failed ... in the header	A refresh failed; the tile still shows the last data received. Hover for the reason.
Something went wrong with Retry	The tile could not load. **Retry** tries again.
A message with a button (for example Connect broker, Open Data Sources)	The tile needs something first; the button takes you there.
Clock tooltip Auto-refresh is temporarily switched off	Fincept has paused automatic dashboard refreshes for now. The interval you chose is kept; press the tile's round arrow to update it meanwhile.
Not available in this version	A tile from a newer or older version of the terminal that this one cannot show.

Add widget window

Control	What it does
"n available"	How many widget types your plan can use.
Search box	"Search widgets or terminal tabs..."
Category buttons	**All** and one per category.
Cards	Name, description, category, **Tab:** (the screen it belongs to), **Size** w x h, and "On your dashboard" (or "n on your dashboard") when already placed. Click to select; double-click to add at once.
Widget meter	How many tiles your board holds against your plan's limit.
Cancel / Add widget	Close, or add the selected widget.

Limits and defaults

Item	Value
Grid columns	12
Row height	Compact 40, Normal 60, Tall 80 (pixels at normal text size)
Spacing between tiles	None 0, Tight 4, Roomy 10
Auto-refresh	10 min (default) to 24 h
Ticker symbols	up to 50
Tile name	up to 60 characters
Tiles per board	set by your plan (shown in **Add widget**): 6 on Exclusive, 20 on Exclusive+, no limit on Exclusive Pro when this guide was written
Exchanges in Market sessions	17
Vessels per Maritime vessels tile	25

8.14 For advanced users

Let the AI build your board

The AI can read and change the board for you: list the widget types, add a widget with its settings at a grid position, move or resize a widget, change its settings and remove it. It uses the same rules as your own clicks: your plan's widget limit applies, and it cannot switch on a charged auto-refresh or set the address of a tile that sends your private headers — those stay your decision. Removing a tile asks for your approval first.

Do it with AI

Open AI Chat (**Chapter 37, AI Chat** p. 719) with the Dashboard open, and ask, for example:

- "Add a Yield curve tile for Germany next to the Economic calendar."
- "Change the stock quote tile to NVDA and make it 6 columns wide."
- "Add a news tile that only shows high-impact headlines about the Fed and inflation."
- "Which tiles on my dashboard show crypto? Remove the duplicates."

Tiles that spend credits

Prices, news and almost every tile are free. These are the exceptions; each one says its price where you would spend it:

Tile	What is charged
AI insight	Each **Ask** (and each automatic run, if you switch on **Refresh every**).
Trade flows, Trade treemap	A trade-data query, at most once per tile per session; the same query again is free.
Maritime vessels	Each vessel position read on a refresh.

Tile	What is charged
Geopolitics events	Each load of the events (you press the round arrow).
Price alerts	Nothing on the tile; the alerts themselves cost a small amount per day while any is armed (see **Chapter 10, Watchlist** p. 172).
Ask AI	Nothing on the tile; a question you send in AI Chat costs what a chat message costs.

Tiles that need something of yours

Tile	Needs
Holdings, Open positions, Working orders, Margin usage, Today P&L	A connected account: a broker account (**Chapter 15, Brokers & Accounts** p. 248) or your Fincept Paper account.
Option chain snapshot	A connected broker account that serves option chains.
Portfolio summary	A portfolio (**Chapter 23, Portfolio** p. 430).
RSS feed	A feed added in RSS Feeds (**Chapter 12, RSS Feeds** p. 203).
My data	A query saved with an earlier version (5.0.6 cannot save new ones; **Chapter 48, Data Sources** p. 891).
AI insight, Agent desk	A persona or desk from Agent Studio (**Chapter 38, Agent Studio** p. 739).
Notes	Notes in Notes (**Chapter 46, Notes** p. 872).

Several dashboards side by side

The Dashboard is a screen like any other: you can open it in a second panel or another window (**Chapter 5, The Terminal Window** p. 70). Every copy shows the same board, and an edit in one is saved for all.

8.15 Troubleshooting

The board is empty and says "No widgets on this dashboard"

You started with a blank board, or removed every tile. Click **Reset** and pick a desk, or click **Add** to place tiles one by one.

Add, Layout, Reset and Save are greyed out

The terminal is still loading your saved board from your account. Wait a few seconds.

"The dashboard is not saved yet: your account's settings have not loaded."

The terminal waits for your account's copy of the board before it writes, so it does not overwrite a board saved on another computer. It saves as soon as the settings arrive.

A tile says "No broker connected"

Trading tiles read a connected account. Connect a broker (**Chapter 15, Brokers & Accounts** p. 248), or use **Paper account**, which always shows your Fincept Paper practice account.

A tile shows "Refresh failed" in its header

The last refresh did not get an answer, so the tile kept its last data. Hover the message for the reason, then click the tile's round arrow.

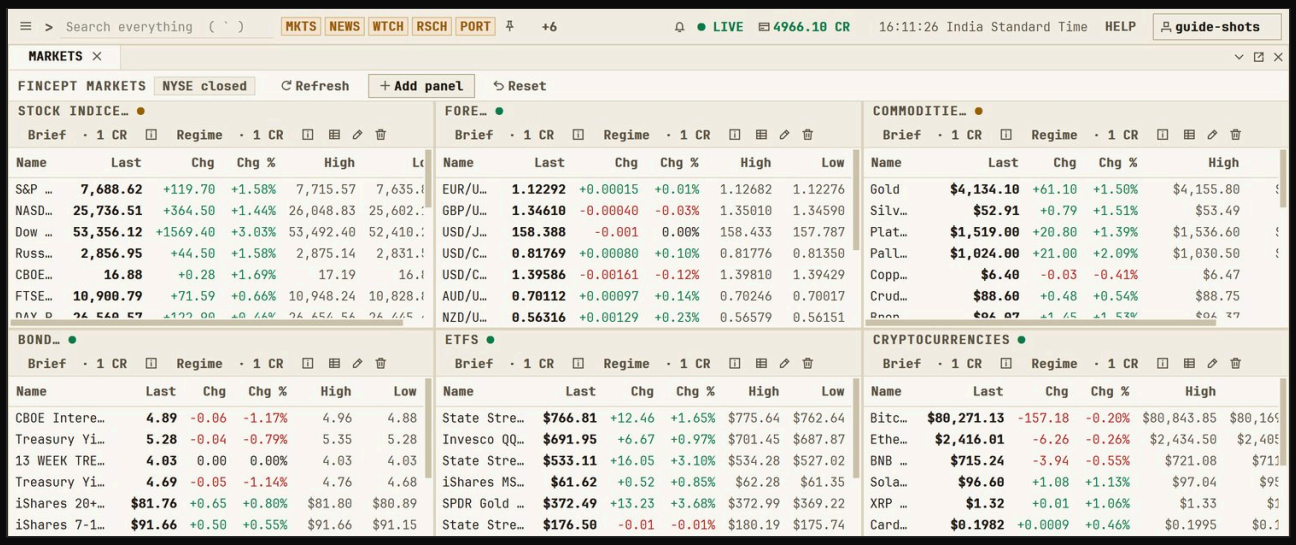
I cannot move or close tiles

The layout is locked. Click **Locked** in the toolbar and untick **Lock layout**.

CHAPTER 9

Markets MKTS

Live prices for stock indices, currencies, commodities, bonds, ETFs, crypto and three country boards — nine panels on one screen, each one yours to edit, with an optional written brief and a regime scan per panel.



At a glance

Open it	• Type `MKTS` in the command line and press **Enter** • Click **MKTS** in the top bar • Type `markets`, `market` or `live` in the command line
You need	• Signed in (prices load once you sign in) • Credits only for **Brief** and **Regime**
Best for	• A morning scan of every market • Your own boards of symbols, side by side • A quick written read of what moved
Time to learn	10 minutes
Related	**Chapter 10, Watchlist** p. 172, **Chapter 8, Dashboard** p. 123, **Chapter 22, Equity Research** p. 392, **Chapter 24, Backtesting** p. 464

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9.1 Screen tour

The Markets screen is a wall of price tables. Each table is a **panel**: one group of instruments, with its own title, tools and freshness badge. The panels sit in three columns. You start with nine panels; you can edit, add and remove them, and **Reset** brings the nine back.

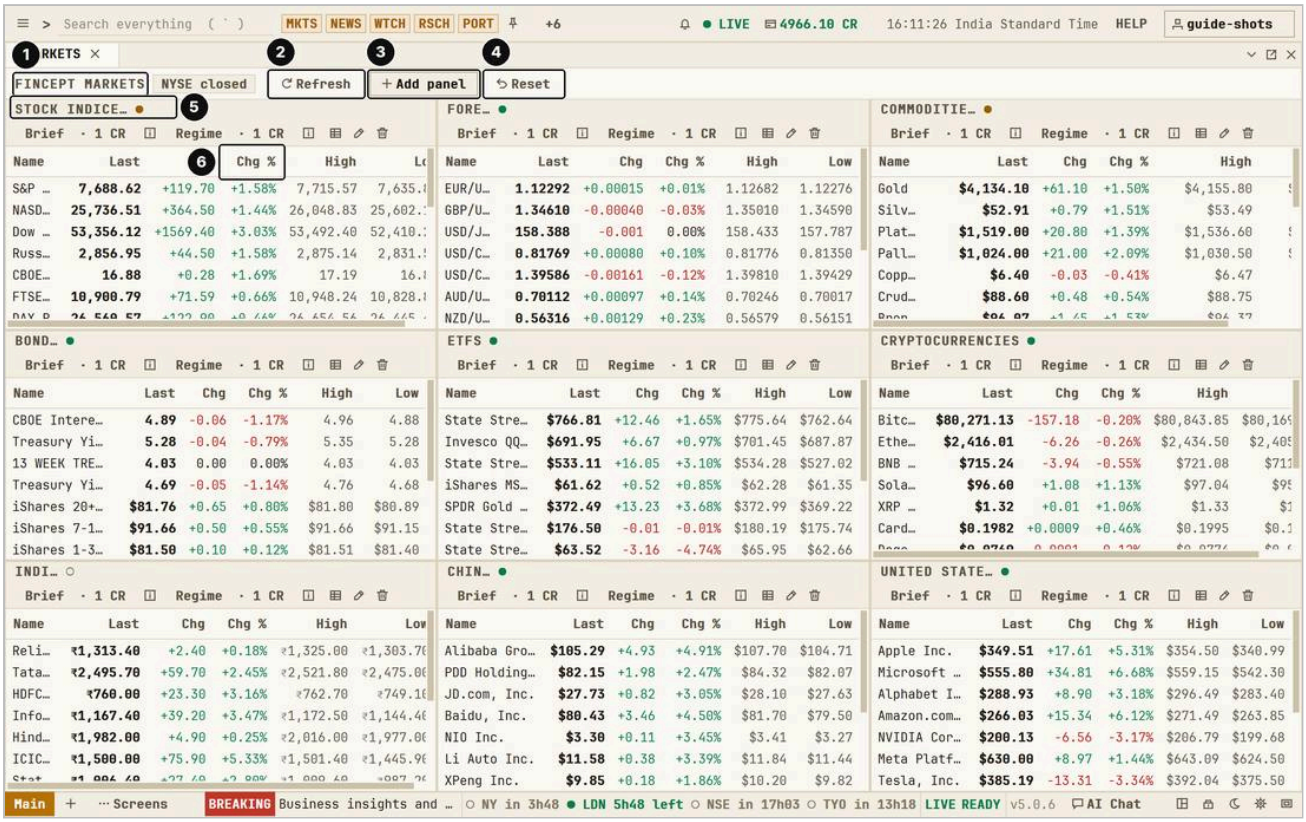


Figure 9.1 The Markets screen with its nine default panels in three columns.

1. The screen title, and whether your home market is open now.
2. **Refresh** asks every panel for fresh prices now.
3. **Add panel** adds a new panel to a column.
4. **Reset** replaces every panel with the default set.
5. A panel's title. Its tools sit on the line below.
6. Column headers. Click one to sort the panel by it.

Every panel has the same parts: a title with a freshness dot, a tool row, and the price table. The next picture shows one panel up close.



Figure 9.2 A panel's title line and tool row. The outlined dot after the title is the freshness dot: hover it to see how current the prices are.

1. **Brief** and its price; the (i) beside it explains the price.
2. **Regime** and its price.
3. **Columns**, **Edit panel** and **Remove panel**.

What the default panels hold

Panel	What is in it
STOCK INDICES	The world's main stock indices: S&P 500, Nasdaq Composite, Dow Jones, Russell 2000, VIX, FTSE 100, DAX, Nikkei 225, CAC 40, Hang Seng, ASX 200, Sensex and more
FOREX	Major currency pairs such as EUR/USD, GBP/USD, USD/JPY, USD/CHF, USD/CAD, AUD/USD
COMMODITIES	Gold, silver, platinum, palladium, copper, crude oil (WTI and Brent), natural gas, fuels and grains
BONDS	US Treasury yields (3-month, 5-year, 10-year, 30-year) and bond ETFs such as TLT, IEF, AGG, LQD, HYG
ETFS	Popular funds: SPY, QQQ, DIA, IWM, VTI, EEM, GLD and sector funds
CRYPTOCURRENCIES	Bitcoin, Ether, BNB, Solana, XRP, Cardano, Dogecoin and other large coins
INDIA	Large Indian companies: Reliance Industries, TCS, HDFC Bank, Infosys, ICICI Bank, State Bank of India and more
CHINA	Large Chinese companies
UNITED STATES	Large US companies

9.2 Quick start

1. Type `MKTS` in the command line at the top and press **Enter**. The Markets screen opens.
2. Wait a few seconds. Prices fill the panels. Green numbers went up today, red numbers went down.
3. Look at the small dot right after each panel title: the panel's freshness badge. A solid dot means the prices are coming in; a hollow dot means the market is closed (the prices are the last trades). Hover the dot to read the state in words, for example **LIVE** or **DELAYED**.



Figure 9.3 The freshness badge is the dot right after the panel's title.

4. Click a column header, for example **Chg %**, to sort the panel by the day's move. Click it again to reverse the order.
5. Right-click any row to copy its symbol or to send it to a quick backtest.

Tip

Prices on this screen are free. Only the two buttons that write a reading, **Brief** and **Regime**, spend credits, and each shows its cost on the button.

9.3 Change a panel's symbols

Use this when a panel holds the wrong things, or to build your own board ("My Tech Stocks").

1. Click **Edit panel** (the pencil) in the panel's tool row (under its title). The **Edit panel** window opens, titled with the panel's name (**Edit panel: Cryptocurrencies**).

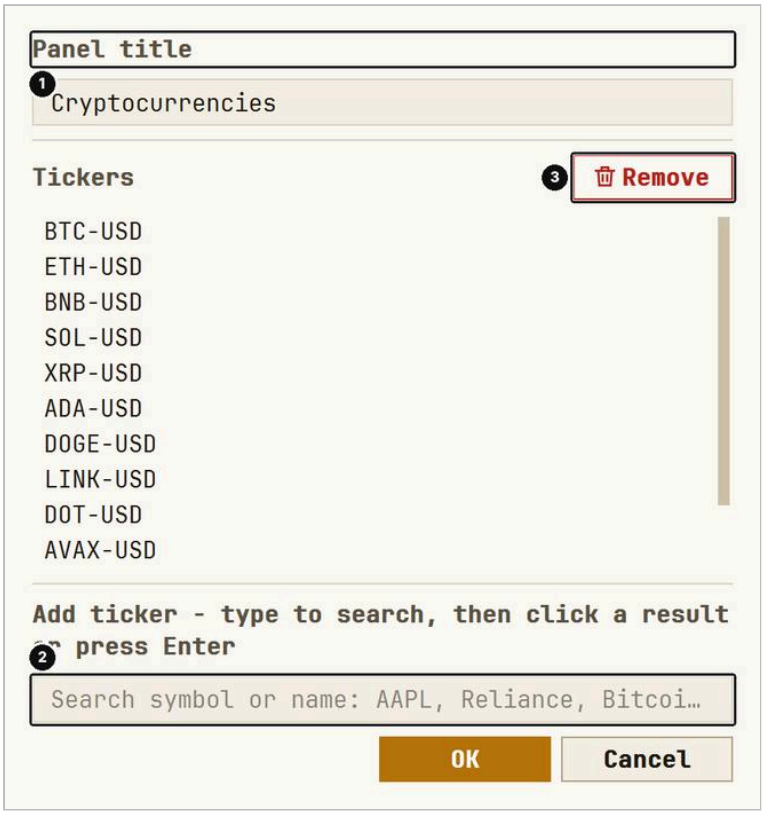


Figure 9.4 The Edit panel window.

1. **Panel title** — the name shown on the panel.
2. Type a symbol or a company name to search.
3. **Remove** deletes the selected ticker (or double-click it).

2. Change **Panel title** if you like, for example `My Tech Stocks`. A panel needs a title.

3. To add a ticker, type in the search box (`AAPL`, `Reliance`, `Bitcoin` ...). A list of matches opens under the box, each with its symbol, name and exchange. Click a result, or press `Enter`.

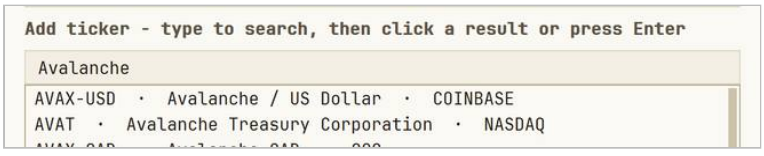


Figure 9.5 Searching for "Avalanche": the matches, with symbol, name and exchange.

4. To remove a ticker, select it in the **Tickers** list and click **Remove**, or double-click it.

5. Click **OK**. The panel reloads with its new list.

Note

You can also paste several tickers at once into the search box, separated by commas or spaces: `AAPL, MSFT NVDA`. Each one is added once; repeats are dropped.

9.4 Add a panel

1. Click **Add panel** in the header. A menu asks which column the panel goes in.

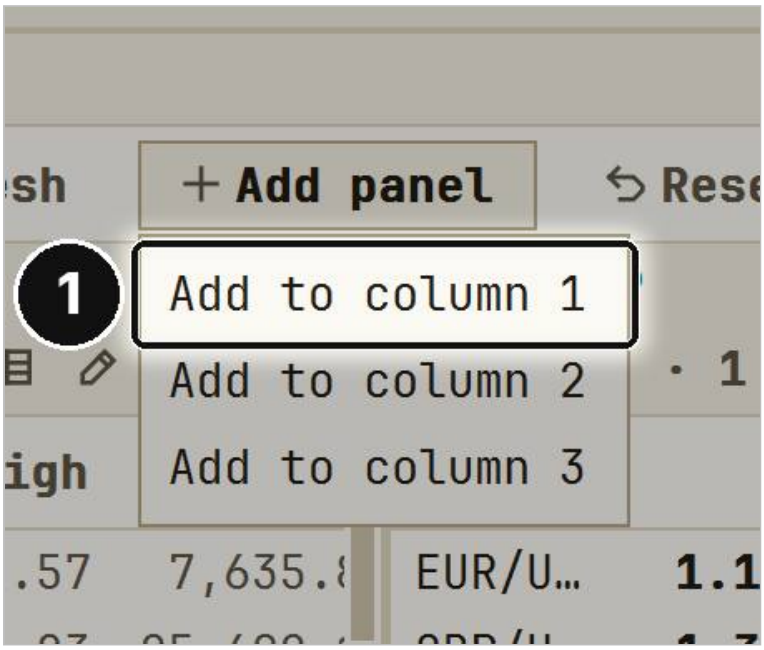


Figure 9.6 Pick the column for the new panel.

1. Columns are numbered from the left.

2. Click **Add to column 1**, **Add to column 2** or **Add to column 3**. The **New panel** window opens; it works like **Edit panel**, and starts empty.

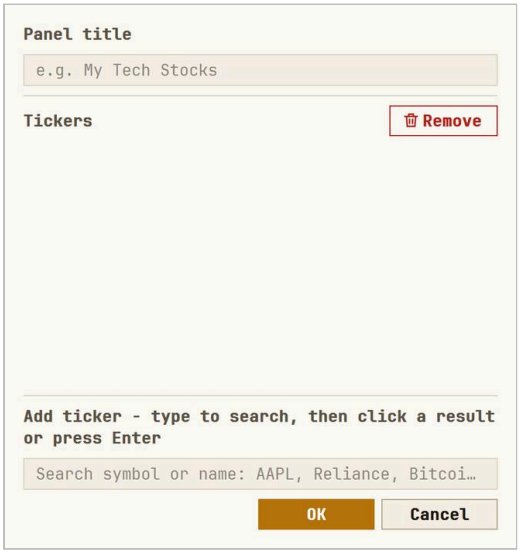


Figure 9.7 The New panel window.

3 Type a title, add tickers, and click **OK**. The panel appears at the bottom of that column.

9.5 Choose a panel's columns

1 Click **Columns** (the table icon) in the panel's tool row (under its title).

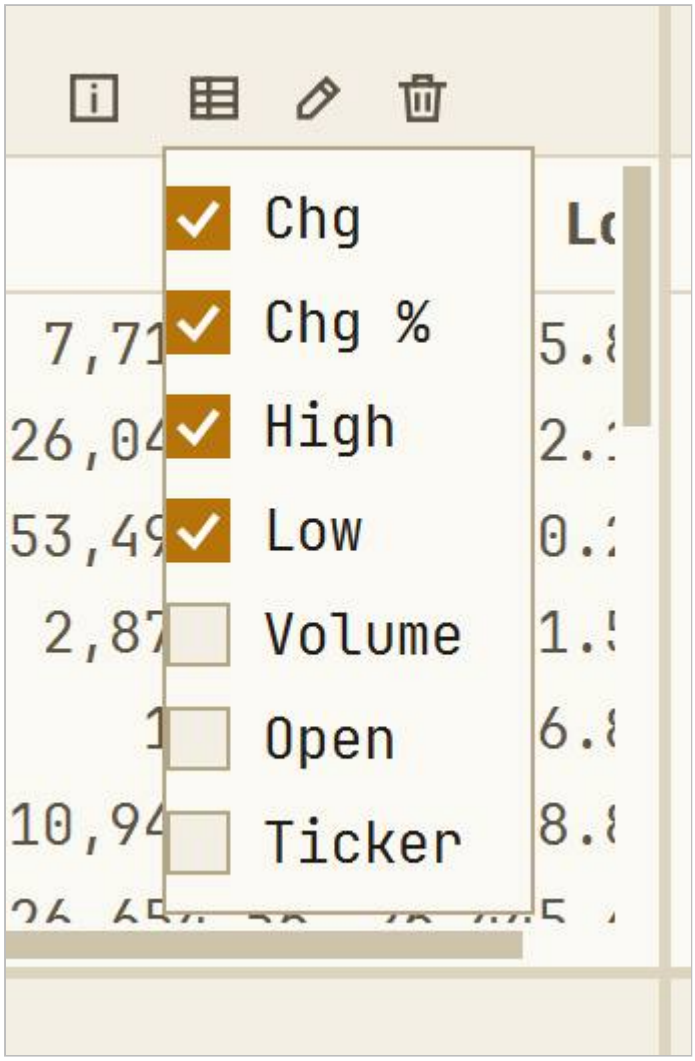


Figure 9.8 The Columns menu. Ticked columns are shown.

2 Tick a column to show it, untick it to hide it. The panel changes at once.

A panel shows at most seven columns. **Name** and **Last** are always there; when seven are shown, the other entries are greyed out until you untick one. New panels start with **Last**, **Chg**, **Chg %**, **High** and **Low** beside the name.

9.6 Read a written brief or a regime scan

Brief asks the AI to write a short read of one panel: a headline on breadth and spread, short sections on what gapped, trended or reversed, and a list of what to watch next. **Regime** measures the panel as a whole: how many names are above their moving average (breadth), how alike they move (correlation) and how much they swing

(volatility), and names the regime. Both cost credits; the price is printed on the button (**Brief · 1 CR** at the time of writing), and the small (i) beside the button explains it.

1. Make sure the panel has prices (a brief over an empty panel is refused, and nothing is charged).
2. Click **Brief** (or **Regime**) in the panel's tool row. The panel says **Writing a fresh brief...** (or **Scanning ... symbols...**) while it works.
3. The answer opens in a reading window named after the panel.

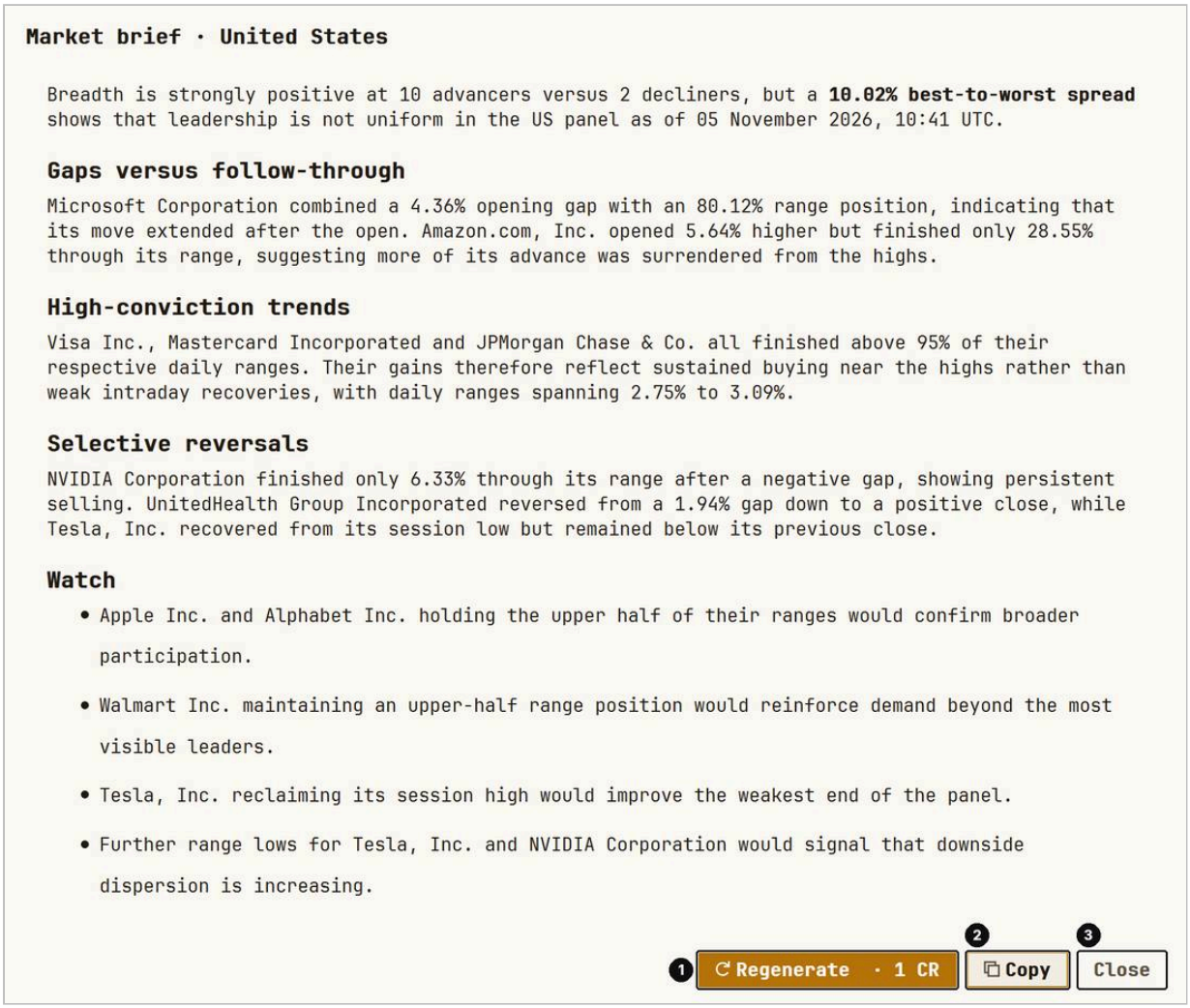


Figure 9.9 A market brief for the United States panel: the headline, then sections, then what to watch.

1. **Regenerate** writes a fresh brief. It is charged like a new one.
2. **Copy** puts the text on the clipboard.
3. **Close** closes the window.

4. Click **Brief** again later: if the panel has not changed, the last brief is shown again, free ("Unchanged since the last brief - showing it again, free."). Use **Regenerate** for a fresh one.

A regime scan opens the same kind of window: the regime's name in capitals, one line on what it means, then the numbers behind it.

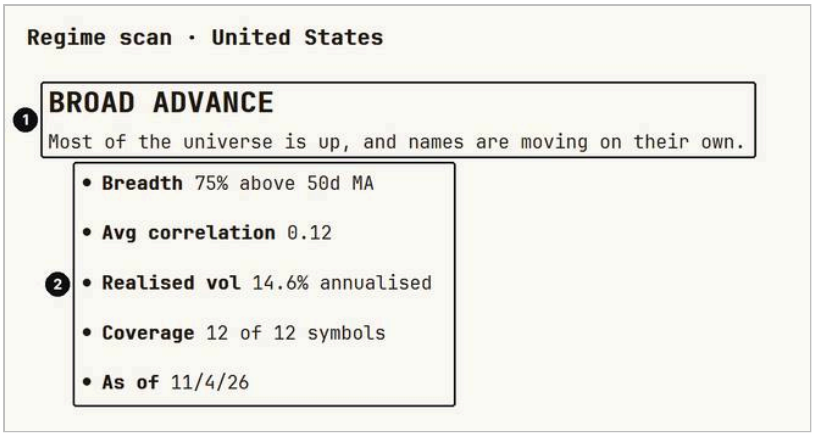


Figure 9.10 A regime scan of the United States panel: the regime, then the numbers behind it.

1. The named regime, with one line on what it means.
2. The numbers behind it: breadth, average correlation, realised volatility, coverage and the date of the last close used.

Plans & credits

Brief and **Regime** are the only paid controls on this screen; every price and column is free. Their price comes from your plan's price list and is shown on each button. A brief that fails, or a brief asked over a panel with no quotes, is not charged ("Nothing was charged."). **Regime** needs at least five symbols in the panel; with fewer, its tooltip says so and nothing is charged.

9.7 Remove a panel or reset the screen

- To remove one panel, click **Remove panel** (the bin) in its tool row, then **Yes** in **Remove this panel?**.
- To go back to the nine default panels, click **Reset** in the header, then **Yes** in **Reset all panels to defaults?**. Your own panels are replaced.



Figure 9.11 Reset asks before it replaces your panels.

9.8 Reference

Header

Control	What it does
FINCEPT MARKETS + session pill	The title, and whether your home market is open now (for example **NYSE open**, **NSE closed**). Your home market follows your profile's country.
Refresh	Asks every panel for fresh prices now.

Control	What it does
Add panel	Menu: **Add to column 1**, **Add to column 2**, **Add to column 3**. Opens **New panel**.
Reset	Replaces every panel with the default set, after **Reset all panels to defaults?**.
Status pill (right)	Shown only when something needs saying: **Loading**, **Sign in for quotes**, or **Timeout** (some panels did not answer in time; press **Refresh**).

There is no auto-refresh switch: the panels keep themselves current. Streaming prices move on their own, and the others are asked for again regularly.

Drag the dividers between the three columns, or between two panels of a column, to make one wider or taller. Column widths are kept on this computer.

Panel title and tool row

Control	What it does
Title	The panel's name, in capitals. Titles are often shortened (**FORE…** for FOREX); hover one to read it all.
Freshness badge	The dot after the title: how current the prices are. Hover it for the state and how many prices are in each state (see the next table).
Brief	A written read of the panel. Charged; shows its cost.
Regime	A breadth, correlation and volatility scan of the panel. Charged; needs 5 symbols or more.
Columns	Which columns to show (up to 7).
Edit panel	Title and tickers.
Remove panel	Deletes the panel after **Remove this panel?**.

Freshness badges

On a panel the badge is a dot: solid while prices come in, hollow (○) when the market is closed or the prices are snapshots. Hover it to read the state, and how many of the panel's prices are in each state.

State	Meaning
LIVE	A real-time feed. A broker price counts as LIVE only while it keeps updating.
DELAYED n MIN	The exchange's feed for this instrument runs n minutes behind. The price still moves, but it is not the current price. Connect a broker for real-time prices on what it covers.
LIVE FEED	Streaming, but the source does not publish its delay.
STALE	The last price received, not the current one: a stream that dropped, or a broker price that stopped updating. It can also read **LIVE STREAM DISCONNECTED** or **BROKER SESSION ENDED**.
CLOSED	The market is shut; the value is the last traded price.
SNAPSHOT	Not on the live stream; the price is re-read about once a minute and may itself be delayed.

Columns

Column	Shows
Name	The instrument's readable name (for example "S&P 500" for the index, "Apple Inc." for AAPL). Shortened on a narrow panel; hover for the raw symbol. Always shown.
Last	The latest price. Always shown.
Chg	Change since the previous close, in price units.
Chg %	Change since the previous close, in per cent.
High / Low	Today's highest and lowest price.
Volume	Units traded today.
Open	Today's opening price.
Ticker	The raw symbol (for example `^GSPC`).

Changes are green when they print above zero, red below zero, and plain when they round to zero. A panel saved with the older **Bid**, **Ask** or **Name** columns keeps them until you untick them; they cannot be added again.

Row menu (right-click a row)

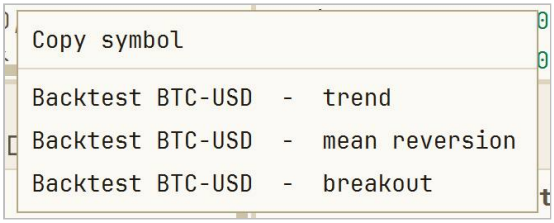


Figure 9.12 The row menu, here for BTC-USD.

Item	What it does
Copy symbol	Copies the row's symbol to the clipboard.
Backtest SYMBOL - trend	Opens Backtesting with a moving-average crossover strategy on that symbol, ready to run.
Backtest SYMBOL - mean reversion	The same with an RSI mean-reversion strategy (buy when oversold, sell into strength).
Backtest SYMBOL - breakout	The same with a channel breakout strategy (buy a new high, exit on the opposite channel).

Nothing runs until you press run in Backtesting. See **Chapter 24, Backtesting** p. 464.

Edit panel / New panel window

Field	Notes
Panel title	Required ("Enter a panel title." if empty). Example: `My Tech Stocks`.
Tickers	The panel's symbols, in order.
Remove	Removes the selected ticker; double-click does the same.
Search box	"Search symbol or name: AAPL, Reliance, Bitcoin ...". Click a result or press **Enter**. Commas, semicolons and spaces separate several tickers.

Field	Notes
OK / Cancel	Save the panel, or close without changes.

Limits

Item	Limit
Columns of panels	3
Columns shown per panel	7 (**Name** and **Last** included)
Symbols for a Regime scan	at least 5

9.9 For advanced users

Your panels follow you. Panel titles, symbols, columns and their column on screen are saved to your account (while cloud sync is on), so another computer signed in to the same account shows the same board.

Where symbols come from. Use the same symbols as the rest of the terminal: `AAPL` for US stocks, `RELIANCE.NS` for NSE, `^GSPC` for an index, `EURUSD=X` for a currency pair, `GC=F` for a future, `BTC-USD` for crypto. The search box finds them by name, so you rarely need to type them.

How the regime scan is calculated. The scan reads recent daily closes for the panel's symbols and reports: **Breadth** (the share of names above their moving average), **Avg correlation** (how alike the names move, from -1 to 1), **Realised vol** (how much the panel swings, annualised), **Coverage** (how many of the panel's symbols it could read) and **As of** (the last close it used). The named regime is written above these numbers so you can check it.

A brief is cached. A brief is written over the panel's current prices. If nothing changed since the last one, you get the last one back free; **Regenerate** always writes (and charges) a new one.

Do it with AI

Open AI Chat (**Chapter 37, AI Chat** p. 719) and ask, for example:

- "Open the Markets screen and add a panel called Semis with NVDA, AMD, AVGO, TSM and MU."
- "Which panel on the Markets screen has the biggest gainer today?"
- "Sort the crypto panel by Chg %."

9.10 Troubleshooting

Prices show a dash or the panel says "no response"

The panel did not get an answer in time. Click **Refresh**. If the header says **Sign in for quotes**, sign in first: prices load only when you are signed in.

A panel says "No tickers in this panel"

The panel is empty. Click **Edit panel** and add symbols, or click **Remove panel**.

A row says "no quote available"

That symbol cannot be priced (a typo, a delisted company, or a symbol in another market's format). Edit the panel and search for the instrument by name.

Regime does nothing useful on my panel

A regime scan needs at least five symbols. Hover **Regime**: the tip says when the panel is too small, and nothing is charged.

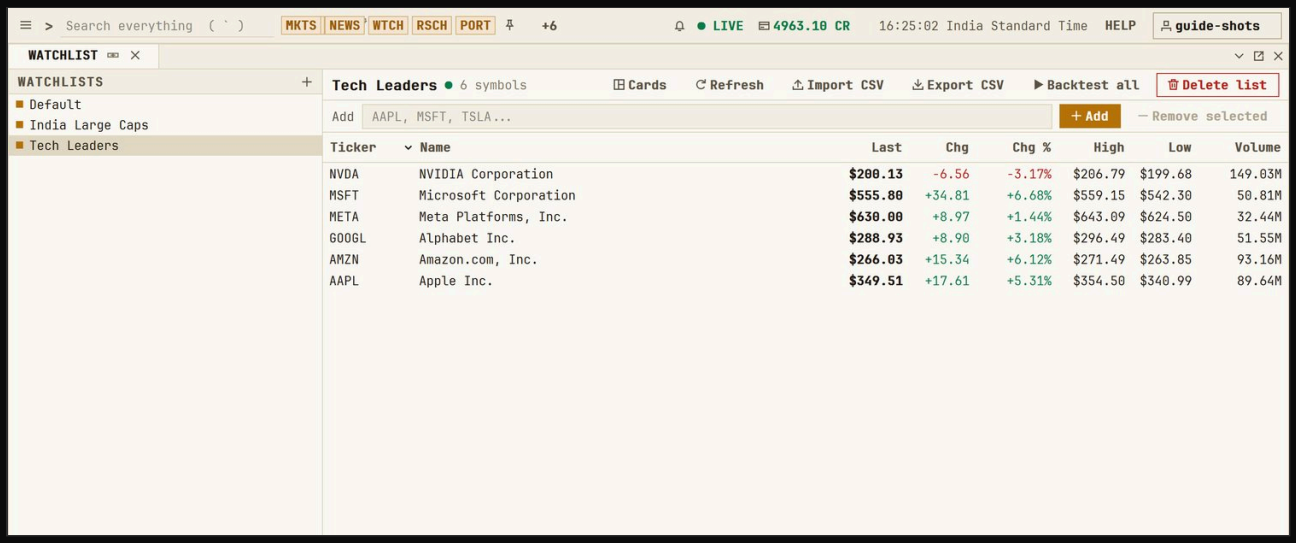
Hovering the badge says DELAYED

Some exchanges publish their prices with a delay (for example 15 minutes). The price is correct for its time but not the current one. Connecting a broker (**Chapter 15, Brokers & Accounts** p. 248) gives real-time prices for the instruments it covers.

CHAPTER 10

Watchlist WTCH

Your own lists of symbols with live prices, as a table or as cards, with price alerts that fire even while the terminal is closed.



At a glance

Open it	• Type `WTCH` in the command line and press **Enter** • Click **WTCH** in the top bar • Type `watch`, `watchlist` or `wl` in the command line
You need	• Signed in • Credits only for price alerts (a small daily charge while any alert is armed)
Best for	• Following the names you care about • Keeping theme lists (tech leaders, Indian large caps, crypto) • Price alerts that work while you are away
Time to learn	5 minutes
Related	**Chapter 9, Markets** p. 160, **Chapter 8, Dashboard** p. 123, **Chapter 22, Equity Research** p. 392, **Chapter 24, Backtesting** p. 464

In this chapter

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10.1 Screen tour

A **watchlist** is a named list of symbols that you choose. The terminal keeps its prices live. The screen has two parts: your lists on the left, and the selected list's prices on the right.

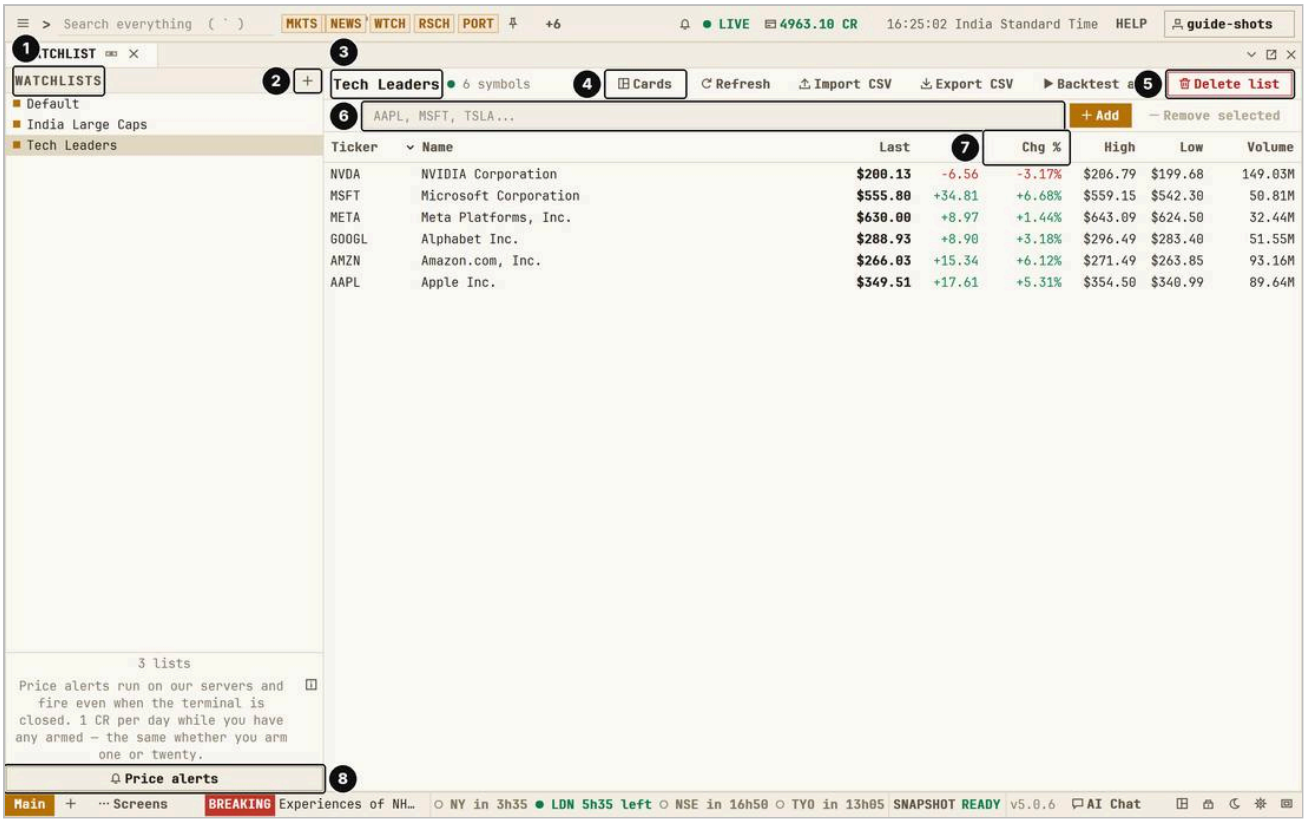


Figure 10.1 The Watchlist screen with the "Tech Leaders" list open.

1. Your lists. Click one to open it.
2. **+** makes a new list.
3. The open list's name, its freshness dot and how many symbols it holds.
4. **Cards** / **Table** switches the view.
5. **Delete list** deletes the open list (you are asked first).
6. Type symbols here and press `Enter` (or click **Add**).
7. Click a header to sort by it.
8. **Price alerts**: alerts checked on our servers, so they fire while the terminal is closed.

10.2 Quick start

Make a list of the big US tech companies and watch it live.

1. Type `WTCH` in the command line and press `Enter`.

2. Click **+** next to **WATCHLISTS**. A small window asks for a name.



Figure 10.2 Name the new list.

3. Type `Tech Leaders` and click **OK**. The new list opens. It is empty.

4. Click in the box next to **Add**, type `AAPL, MSFT, NVDA, GOOGL, AMZN, META` and press **Enter**.

5. Wait a moment. Each symbol gets a row with its name, last price, change and the day's range.

Ticker	Name	Last	Chg	Chg %	High	Low	Volume
NVDA	NVIDIA Corporation	**$200.13**	-6.56	-3.17%	$206.79	$199.68	149.03M
MSFT	Microsoft Corporation	**$555.80**	+34.81	+6.68%	$559.15	$542.30	50.81M
META	Meta Platforms, Inc.	**$630.00**	+8.97	+1.44%	$643.09	$624.50	32.44M
GOOGL	Alphabet Inc.	**$288.93**	+8.90	+3.18%	$296.49	$283.40	51.55M
AMZN	Amazon.com, Inc.	**$266.03**	+15.34	+6.12%	$271.49	$263.85	93.16M
AAPL	Apple Inc.	**$349.51**	+17.61	+5.31%	$354.50	$340.99	89.64M

Figure 10.3 The new list with live prices.

6. Click **Chg %** to sort the list by today's move. Click it again to reverse the order.

Tip

Double-click a row to open that company in Equity Research (**Chapter 22, Equity Research** p. 392).

10.3 Add and remove symbols

- **Add:** type one symbol, or several separated by commas, in the box next to **Add**, then press **Enter** or click **Add**. Use the terminal's symbol format: `AAPL`, `RELIANCE.NS`, `^GSPC`, `BTC-USD`, `EURUSD=X`. Symbols are stored in capitals; adding one that is already there does nothing.
- **Drag in:** drag a symbol from another screen that offers it (a row of the watchlist in Equity Trading or Crypto, or the symbol in Equity Research) and drop it on the watchlist. It is added to the open list.
- **From elsewhere:** the command line's `W` command (for example `AAPL W`) adds a symbol to your default list (**Chapter 6, The Command Line** p. 89). Your lists are also the lists of the watchlist column in Equity Trading (**Chapter 16, Equity Trading** p. 264): a symbol added there shows here too.
- **Remove:** in the table view, click the row, then **Remove selected**.

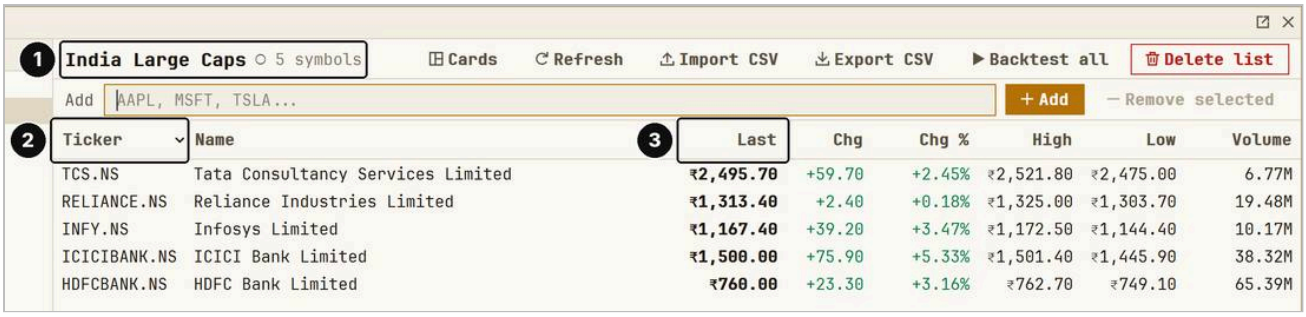


Figure 10.4 The India Large Caps list: NSE symbols end in .NS, and prices show in rupees.

1. The open list's name, its freshness dot (hollow: the exchange is closed) and its symbol count.
2. Symbols as you typed them (**TCS.NS**).
3. Prices in the instrument's own currency.

> **Note**
>
> Your plan sets how many symbols one list can hold: when this guide was written, 25 on Exclusive, 100 on Exclusive+ and no limit on Exclusive Pro. When you type more than the list can hold, the extra symbols are not added and the terminal tells you the limit.

A symbol held on two exchanges (for example one listing added from Equity Trading, another from the command line) gets one row per listing, each with its own price. **Remove selected** removes only the listing you selected.

10.4 Switch between table and cards

The button at the left of the list's tool row switches the view. **Table** shows one row per symbol. **Cards** shows one tile per symbol, with the edge coloured by the day's move.

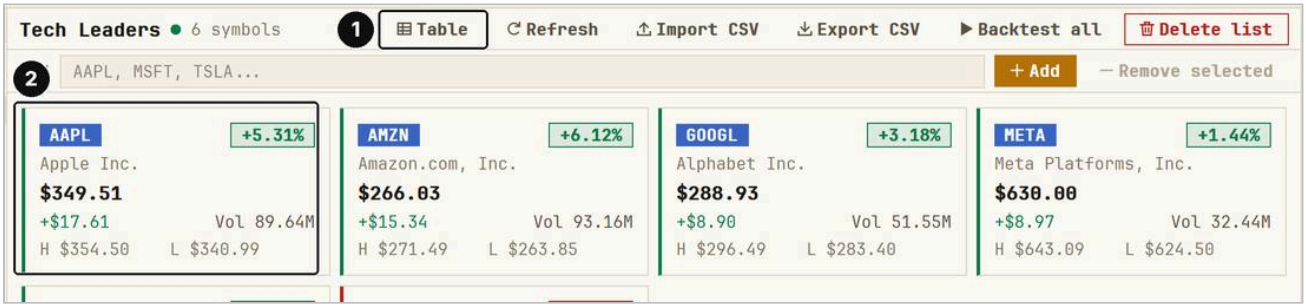


Figure 10.5 The same list as cards.

1. In the card view the button reads **Table**: click it to go back to rows.
2. One card per symbol: ticker, day's change, name, price, change, volume, high and low.

10.5 Import and export a CSV file

1. Open the list you want to fill or save.
2. To save it, click **Export CSV** and pick a file name (it suggests the list's name). The file has the columns `SYMBOL, NAME, PRICE, CHANGE, CHG %, HIGH, LOW, VOLUME`, with the prices of the moment.

3 To fill it, click **Import CSV** and pick a CSV file. The file needs a `SYMBOL` column; a `NAME` column, if there is one, gives each symbol its name, and other columns are ignored. Symbols already in the list are skipped, and **Import Complete** tells you how many were imported and skipped.

10.6 Set a price alert

A price alert watches one symbol and tells you when it crosses a level. The check runs on Fincept's servers, so the alert fires even when your terminal is closed.

1 Click the symbol's row (the alert window starts with it), then click **Price alerts** under the list of watchlists. The **Price alerts** window opens.

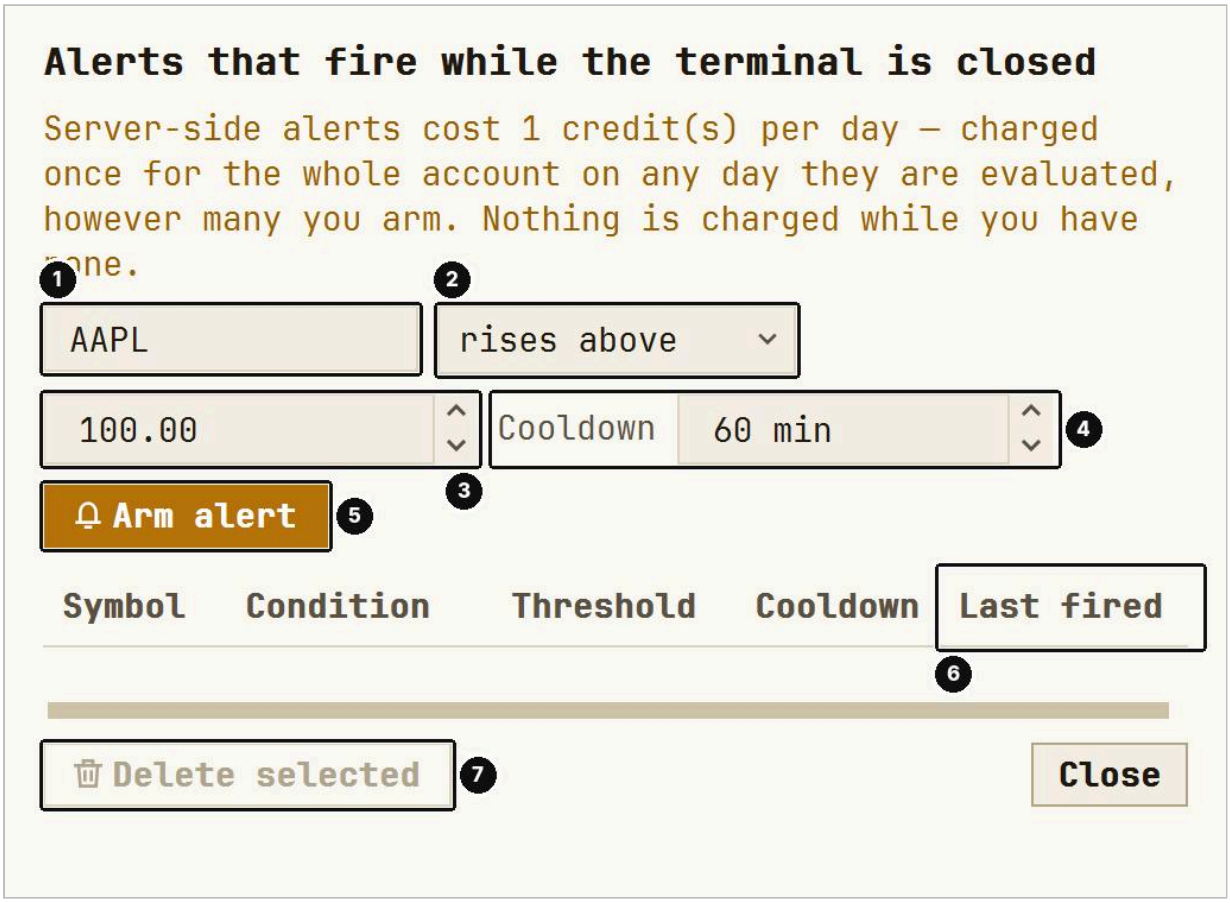


Figure 10.6 The Price alerts window, opened with AAPL selected.

1. The symbol to watch.
2. The condition: **rises above**, **falls below**, **gains %** or **loses %**.
3. The threshold: a price, or a per cent for gains and losses.
4. **Cooldown**: the shortest gap between two firings of the same alert.
5. **Arm alert** saves the alert and switches it on.
6. Your alerts, with when each last fired.
7. **Delete selected** deletes the alert you selected in the table.

2 Check the **Symbol**, then choose the condition: **rises above** or **falls below** a price, or **gains %** / **loses %**.

3 Type the threshold (the window starts at 100.00) and set the **Cooldown** in minutes (60 min to start with; 5 to 1440). A **gains %** or **loses %** alert is measured from the next price the server reads: the table then shows that price and the level it works out.

4. Click **Arm alert**. The alert appears in the table with its **Condition**, **Threshold**, **Cooldown** and **Last fired**.
5. To delete an alert, select it in the table and click **Delete selected**. **Close** closes the window.

Plans & credits

Server-side alerts cost credits per day: at the time of writing 1 credit, charged once per day for the whole account on any day alerts are checked, the same whether you arm one alert or twenty. The current price is written under the **Price alerts** button and in the alert window; the (i) beside it explains the charge. No alert armed, no charge.

10.7 Backtest a symbol or the whole list

Right-click a row for three one-click strategy ideas on that symbol, or test the whole list at once.

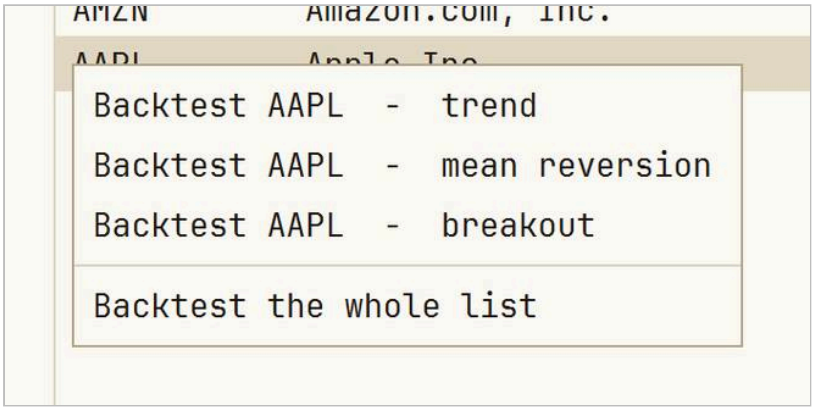


Figure 10.7 The row menu: three backtest ideas for the symbol, and one for the whole list.

- **Backtest SYMBOL - trend**: buy when the fast moving average crosses above the slow one.
- **Backtest SYMBOL - mean reversion**: buy when the stock is oversold and sell into strength.
- **Backtest SYMBOL - breakout**: buy a new high and exit on the opposite channel.
- **Backtest the whole list** (also the **Backtest all** button): one momentum strategy across the list — long the strongest names, rebalanced monthly.

Each opens Backtesting with the strategy filled in. Nothing runs until you press run there (see **Chapter 24, Backtesting** p. 464).

10.8 Delete a watchlist

1. Open the list.
2. Click **Delete list**.

3 Click **Delete** in **Are you sure you want to delete this watchlist and all its stocks?**.



Figure 10.8 The last question before a list is deleted. Cancel keeps it.

You cannot delete your only list: make another one first. A list cannot be renamed; to change a name, make a new list, import or retype the symbols, and delete the old one. (If your account has no list at all, the terminal makes an empty one called **Default**.)

10.9 Broker lists

If you connect a broker (**Chapter 15, Brokers & Accounts** p. 248), a **BROKER LISTS (read-only)** group appears under your own lists, with **Holdings - …** and **Positions - …** lists for each live broker account. They follow the broker: you cannot add, remove or import symbols in them, and closed positions are not shown.

10.10 Reference

Left side (your lists)

Item	What it does
WATCHLISTS	Your lists. Click one to open it.
+ (New watchlist)	Asks for a **Name:** and makes an empty list.
Count line	"n lists".
Quota line	"n of m watchlists" — shown when your plan limits the number of lists.
Alert price line	What server-side alerts cost per day.
Price alerts	Opens the alert window.
BROKER LISTS (read-only)	Lists built from a connected broker's holdings and positions.

Tool row

Control	What it does
List name, freshness badge, symbol count	What is open, how current its prices are (see **§9.8 Reference** p. 167), how many symbols.
Table / Cards	Switches between the table and card views.

Control	What it does
Refresh	Fetches fresh quotes for every symbol.
Import CSV	Adds the symbols in a CSV file (needs a `SYMBOL` column).
Export CSV	Saves the list as a CSV file.
Backtest all	Stages a momentum backtest of the whole list in Backtesting.
Delete list	Deletes the list after a confirmation. Off for your only list.
Add box + Add	Adds one or more symbols (comma-separated).
Remove selected	Removes the selected row (table view only).

Buttons that need a list or symbols are greyed out until there is one; their tooltip says why.

Columns

Column	Shows
Ticker	The symbol.
Name	The company or instrument name (shortened on a narrow screen).
Last	The latest price.
Chg / Chg %	Change since the previous close, in price and in per cent.
High / Low	Today's high and low.
Volume	Units traded today.

Every column sorts by its real value (not its text), so 1,200 sorts above 950.

Price alerts window

Field	Notes
Symbol	Starts with the selected row's symbol. Required ("Enter a symbol first.").
Condition list	**rises above** (default), **falls below**, **gains %**, **loses %**.
Threshold box	A positive number ("A positive threshold is required."). Starts at 100.00.
Cooldown	Minutes between two firings of the same alert while its condition holds: 5 to 1440. Starts at 60 min.
Arm alert	Saves and arms the alert.
Alerts table	**Symbol**, **Condition**, **Threshold**, **Cooldown**, **Last fired** for each alert.
Delete selected	Deletes the selected alert.
Close	Closes the window.

Limits

Item	Limit
Watchlists	Set by your plan (shown as "n of m watchlists" when limited): 3 on Exclusive, 25 on Exclusive+, no limit on Exclusive Pro when this guide was written.
Symbols per watchlist	Set by your plan: 25 on Exclusive, 100 on Exclusive+, no limit on Exclusive Pro when this guide was written.
Alert cooldown	5 to 1440 minutes
Symbols in Backtest all	The first 250 names.

10.11 For advanced users

Link groups. Selecting a row sends its symbol to the panel's link group, so a chart or research panel in the same group follows your selection. See **Chapter 5, The Terminal Window** p. 70.

Lists sync. Your watchlists are saved to your account (while cloud sync is on), so every computer you sign in to shows the same lists.

One set of lists. The lists here are also the watchlists of Equity Trading's watchlist column and the target of the command line's `W` command; the Crypto screen keeps its own pair lists.

The dashboard's Watchlist tile is separate. The **Watchlist** widget on the dashboard keeps its own short list per tile; it does not show these lists (see **Chapter 8, Dashboard** p. 123). The **Price alerts** widget does show the alerts you set here.

Do it with AI

In AI Chat (**Chapter 37, AI Chat** p. 719) you can ask, for example:

- "Make a watchlist called Semis with NVDA, AMD, AVGO, TSM and MU."
- "Which names in my Tech Leaders watchlist are down more than 2% today?"
- "Add RELIANCE.NS to my India Large Caps list."

When the AI works the screen for you, removing a symbol or deleting a list waits for your approval first, like every action that deletes something.

10.12 Troubleshooting

A symbol I added shows no price

Check the format: Indian NSE stocks end in `.NS` (`TCS.NS`), indices start with `^` (`^NSEI`), crypto ends in `-USD` (`BTC-USD`). Remove the wrong row and add the right symbol.

The Add box does nothing

A broker list is open: broker lists are read-only. Pick one of your own lists first.

Delete list is greyed out

It is your only list. Make another list first.

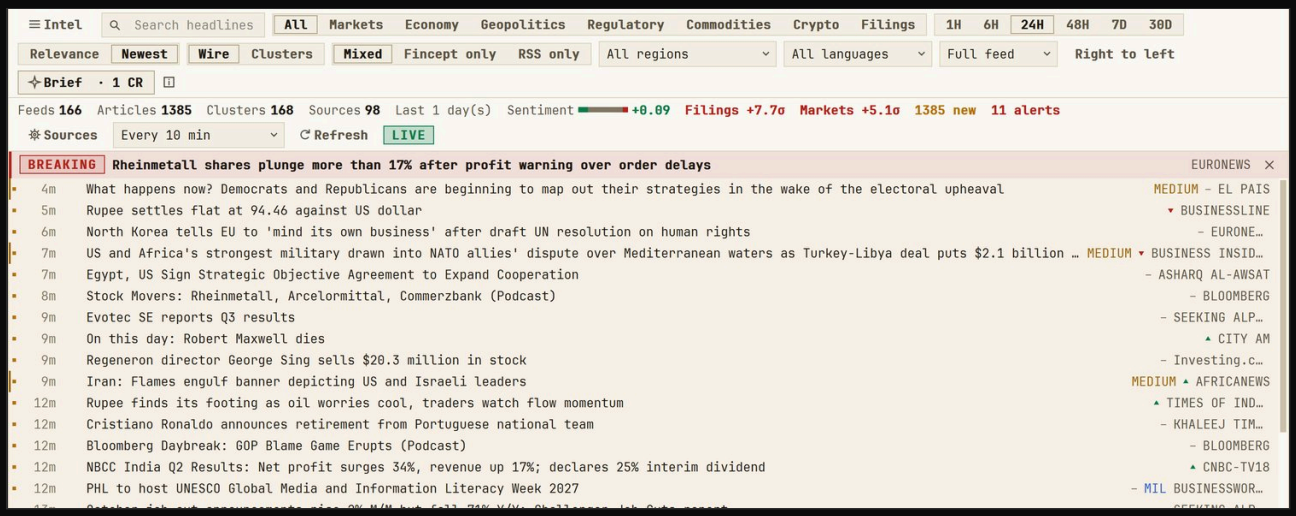
Import says "CSV missing SYMBOL column."

The first line of the file must name a column `SYMBOL`. Export a list once to see the format.

CHAPTER 11

News NEWS

A live wire of financial and world news from Fincept's catalogue of sources and your own feeds — filtered, grouped into stories, marked by priority and sentiment, with AI briefs, article analysis and keyword monitors that watch the news for you.



At a glance

Open it	• Type NEWS in the command line and press Enter • Click **NEWS** in the top bar • **Screens** › **Markets & Data** › **News** • Click the **BREAKING** headline in the bottom bar
You need	• Signed in on any paid plan • Credits only for the AI features and keyword monitors
Best for	• A morning read of what moved overnight • Catching breaking news as it happens • Watching a theme or company without staring at the feed
Time to learn	15 minutes
Related	**Chapter 12, RSS Feeds** p. 203, **Chapter 13, Economic Calendar** p. 218, **Chapter 37, AI Chat** p. 719

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11.1 Screen tour

The News screen is a **wire**: one line per headline, newest first, from Fincept's catalogue of news sources — wire services, central banks, regulators and exchanges, financial media, crypto and regional outlets — plus any feeds you add yourself. Each headline is marked with its priority, its sentiment and the symbols it mentions.

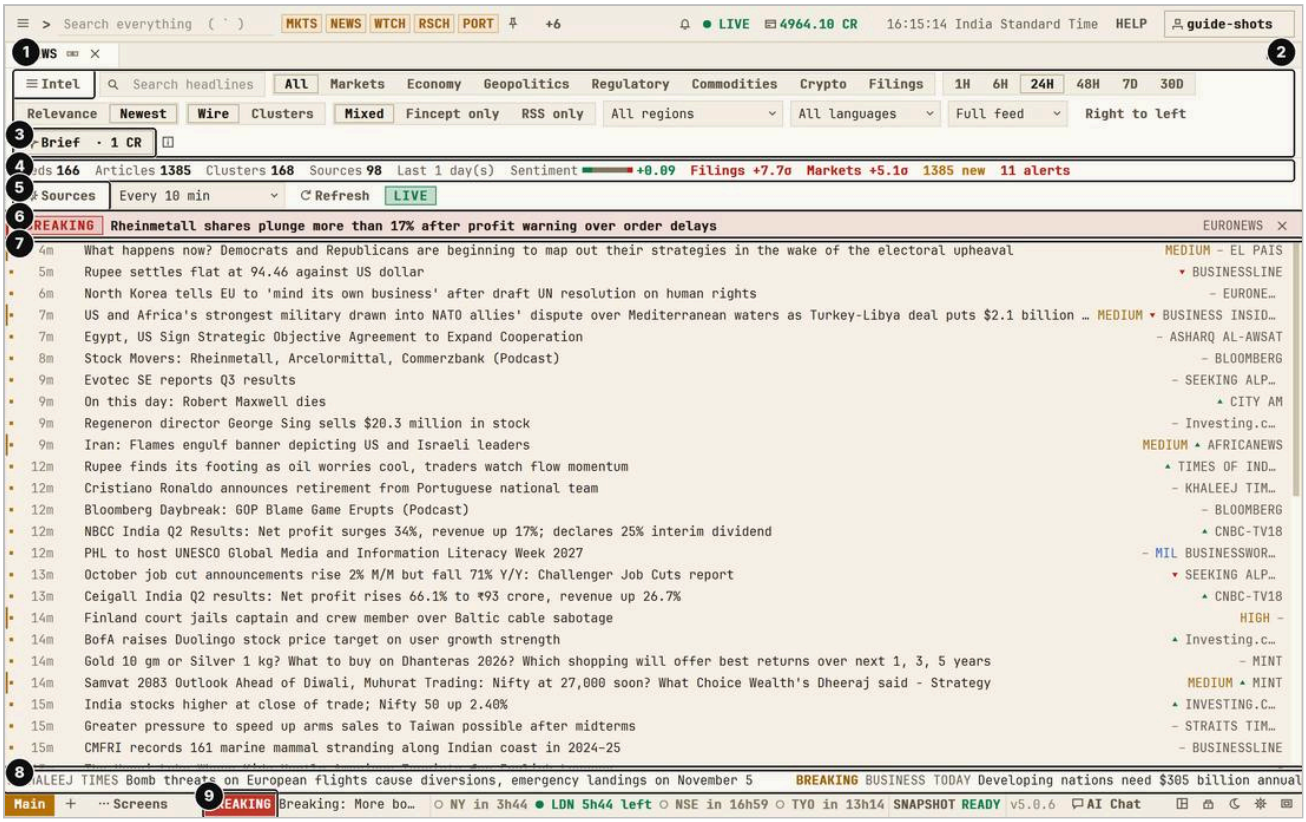


Figure 11.1 The News screen with its default settings (all categories, last 24 hours, newest first).

1. **Intel** opens the Intelligence drawer: top stories, categories, keyword monitors and more.
2. The toolbar: search and every filter.
3. **Brief**: an AI summary of the headlines on screen (charged).
4. The intel strip: counts, overall sentiment, unusual activity, new and breaking stories.
5. **Sources**, the auto-refresh interval, **Refresh** and the **Live** badge.
6. The breaking banner: the latest flash or urgent story, for a few seconds.
7. The wire: one line per headline. Click one to read it.
8. The ticker strip: the urgent headlines in view scroll past.
9. The bottom bar's **BREAKING** line follows the news on every screen.

From top to bottom the screen has:

- **The toolbar** — what to show: search, category, time range, sort, view, source, region, language, variant, right-to-left, and **Brief**.
- **The intel strip** — what is in view right now: counts, a sentiment gauge, unusual activity, new and breaking stories; then **Sources**, the auto-refresh interval, **Refresh** and the **Live** badge.
- **The breaking banner** — appears for a few seconds when a flash or urgent story lands.
- **The wire** — the headlines. Click one to open it in the **Article detail** panel on the right.
- **The ticker strip** — a scrolling line of the urgent headlines in view, along the bottom of the screen.



Figure 11.2 The intel strip and its controls.

1. How far back the archive is read for this view.
2. Sentiment: green bullish, grey neutral, red bearish, and the overall score.
3. Categories publishing far more than usual this hour.
4. Headlines you have not scrolled past yet.
5. Breaking stories in view.
6. How often the wire reloads by itself.
7. **Live**: new stories are pushed in as they appear. Click to switch off or on.

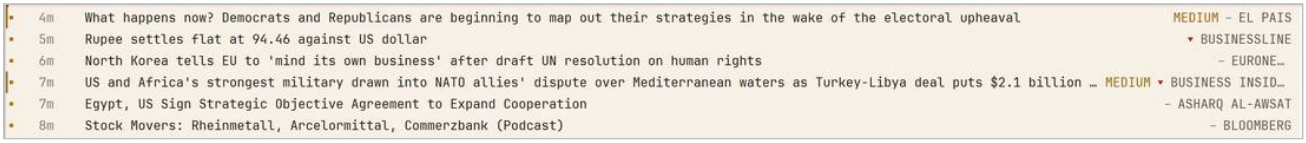


Figure 11.3 Wire rows. Left to right — the unseen mark, the age, the priority mark, the headline; then the threat level, the sentiment arrow, the symbols and the publisher. Every mark is listed under "A wire row" in the Reference.

11.2 Quick start

1. Type `NEWS` in the command line and press `Enter`. The wire shows the last 24 hours, newest first.
2. Click **Markets** in the category buttons. Only market news stays.
3. Click a headline. The **Article detail** panel opens on the right with the summary, the source and buttons.
4. Click **Open** to read the full article in your web browser.
5. Press `J` to move to the next headline and `K` to go back. Press `Esc` to close the panel.

11.3 Read an article

Click a headline (or press `J` / `K`) and the **Article detail** panel opens on the right. The headline is marked as seen.

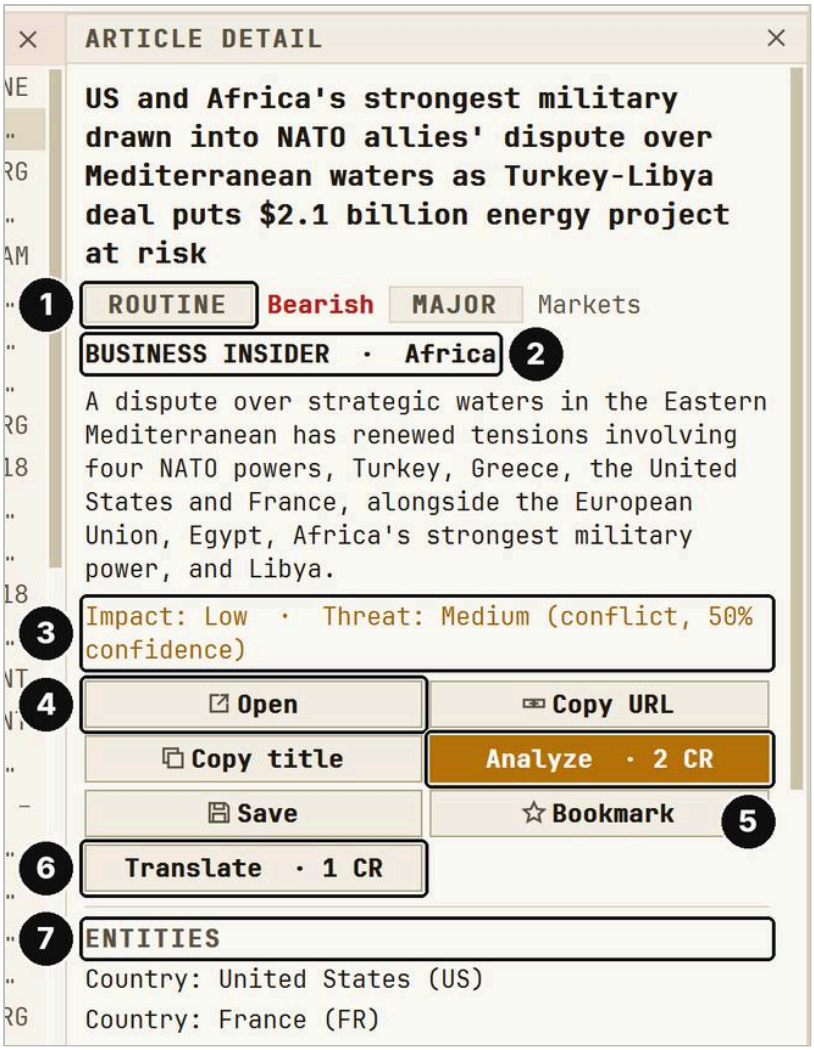


Figure 11.4 Article detail for a market headline.

1. Badges: priority, sentiment, the source's tier, the category.
2. Publisher and age.
3. Impact (and threat, when there is one).
4. **Open** shows the full article in your web browser.
5. **Analyze**, with its price.
6. **Translate**, with its price.
7. More sections when there is something to show, here **Entities**.

From top to bottom the panel shows:

- **The headline.**
- **Badges** — the priority (**FLASH**, **URGENT**, **BREAKING** or **ROUTINE**), the sentiment (**Bullish**, **Bearish** or **Neutral**), the source's tier (**WIRE**, **MAJOR**, **SPECIALTY**, **BLOG**, or **OTHER** when the feed has no tier) and the category.
- **The source line** — the publisher, its region and how long ago the story was published. A publisher on Fincept's watch list is marked "(State media)" or "(Caution)".
- **The summary**, or "No summary available."
- **Impact** — High, Medium or Low and, when the story is about a threat, its kind and level, for example "Threat: High (conflict, 80% confidence)".
- **Symbols** the story mentions, as chips.

- **The buttons:**

Button	What it does
Open	Opens the full article in your web browser. Same as `Enter`.
Copy URL	Copies the article's link.
Copy title	Copies the headline (the button reads "Copied" for a second).
Analyze	Runs an AI analysis of the full article (charged, see **§11.6 AI on the news** p. 190).
Save	Saves the headline, source, time, link and summary as a text file in File Manager. See **Chapter 47, File Manager** p. 882.
Bookmark	Keeps the article under **Bookmarks** in the Intelligence drawer. The button then reads **Bookmarked**.
Translate	Translates the headline and summary into English (charged).

Under the buttons, more sections appear when there is something to show:

- **Monitor matches** — your keyword monitors that this article matches.
- **Related** — other outlets' headlines about the same story. Click one to open it.
- **Entities** — countries, organisations and people named in the story.
- **Nearby infrastructure** — for a story with a place, the airports, military sites, power plants and ports within 50 km.

Shortcut

`J` next headline · `K` previous headline · `Enter` open in the browser · `Esc` close the panel (or the drawer). Change them in **Settings › Keybindings**.

11.4 Filter the wire

The toolbar decides which headlines you see. Every filter combines with the others, and the counts in the intel strip follow them.



Figure 11.5 The toolbar.

1. Search: headline, summary, source or symbol.
2. Category.
3. How far back.
4. Sort (the two buttons at the left of the second row): by relevance or newest first.
5. View: one line per headline, or one card per story.
6. Source: everything, Fincept's feed only, or only your own feeds.
7. Region, then language, then feed variant.
8. Right to left.

- **Search headlines** — type a word and the wire narrows as you type. It matches the headline, the summary, the source's name and the symbols. Clear it with the ⓧ button.
- **Category** — **All**, **Markets**, **Economy**, **Geopolitics**, **Regulatory** (regulators and exchanges), **Commodities** (energy, metals, agriculture and shipping), **Crypto**, **Filings** (company announcements to exchanges and regulators). **All** leaves filings out; click **Filings** to see them.

- **Time range** — **1H**, **6H**, **24H** (default), **48H**, **7D**, **30D**: how far back the headlines reach.
- **Sort** — **Newest** (default) lists strictly by time. **Relevance** puts flash stories first, then urgent, then breaking, then the rest, newest first within each.
- **View** — **Wire** (default) or **Clusters** (see below).
- **Source** — **Mixed** (default: Fincept's feed and your own feeds, one row per story), **Fincept only**, or **RSS only** (only the feeds you added under **Sources**).
- **Region** — where the story comes from (the region of the publication): **All regions**, then the regions in your feeds, such as **United States**, **Europe**, **India**, **Japan**.
- **Language** — **All languages**, **EN**, **AR**, **ZH**, **JA**, **KO**, **HI**, **RU**. The language is recognised from the script of the headline, so French, German or Spanish headlines count as EN.
- **Variant** — **Full feed**, or a ready-made group of categories: **Finance** (markets, earnings, economy, regulators, filings), **Crypto**, **Macro** (economy, regulators, geopolitics, commodities).
- **Right to left** — lays the whole terminal out right to left, for reading Arabic, Hebrew or Urdu headlines. It switches off again when you restart.

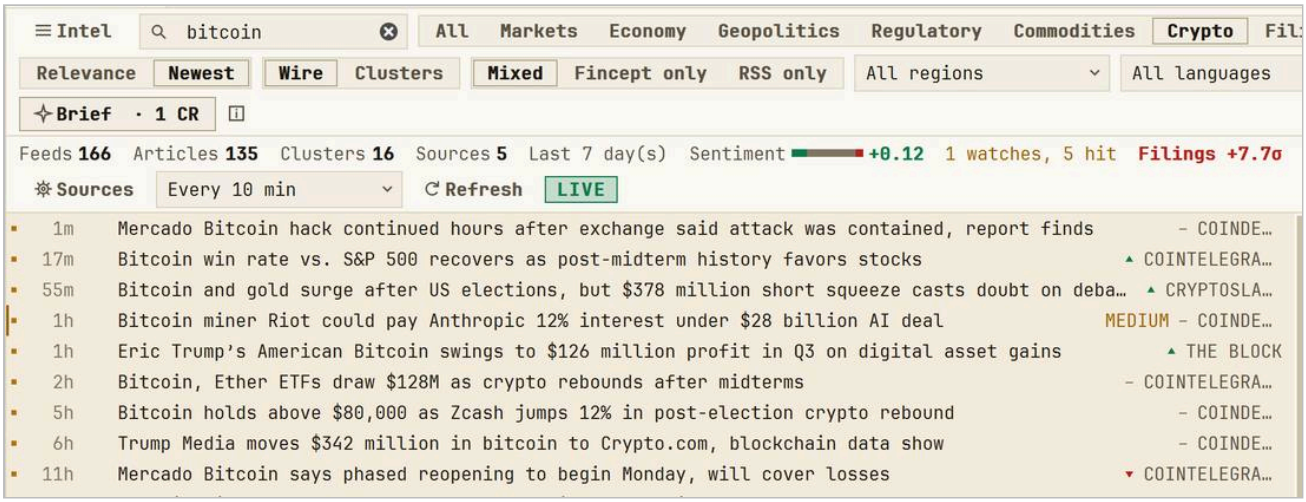


Figure 11.6 Crypto, the last 7 days, searching for bitcoin.



Figure 11.7 The region list shows the regions of the feeds in your catalogue.



Figure 11.8 Right to left turns the whole terminal around, including the top bar.

1 **Right to left** is on (click it again to switch back).

Note

Your choice of category, region, variant, time range, sort, view, source and auto-refresh is saved to your account, so the News screen opens the same way on every computer. The language is kept with the panel's layout instead. The search and **Right to left** are not saved.

Plan & credits

How far back the archive reaches depends on your plan: 7 days on **Exclusive**, 90 days on **Exclusive+**, no limit on **Exclusive Pro**. So on Exclusive, **30D** reads only the last week. When a range is cut by your plan, the intel strip shows "Last 7 of 30 days" in amber, and its tooltip names the plan that reads further back.

Clusters: one card per story

When a big story breaks, dozens of outlets publish it. Click **Clusters** to fold them into one card per story.



Figure 11.9 Clusters view.

Each card shows:

- a red **Breaking** badge when any of its headlines is a flash or urgent story;
- the lead headline (from the most reliable source, then the newest);
- **Rising** when more outlets have picked the story up in the last two hours than before;
- the source and age, the number of sources (for example "3 sources"), and the story's overall lean (**Bullish** or **Bearish**);
- "Also:" and up to three other outlets.

A star before the headline means a top-tier source carries the story. Cards with a **Breaking** badge come first, then the newest. Click a card to open the lead article; its **Related** section lists the other headlines of the story. Headlines join a cluster when they share at least a quarter of their words (a fifth when both are in the same category) and were published within 24 hours of each other.

11.5 Breaking news

The terminal gives each headline a **priority** from its words and its source:

Priority	When	Shown as
FLASH	The headline starts with "Breaking", "Breaking news", "Flash" or "Just in".	Red square, bold headline
URGENT	The headline has words such as urgent, emergency, earthquake, tsunami, coup, explosion, evacuation, martial law.	Amber square, bold headline
BREAKING	The headline starts with "Live" or says "developing" or "live updates"; or a top-tier source (a wire service or regulator) published it in the last two hours.	Amber square
ROUTINE	Everything else.	No mark

Breaking stories reach you in four places:

1. **The breaking banner** — a band above the wire with the latest flash or urgent story, its source and a × (**Dismiss**). It closes by itself after 60 seconds (flash) or 30 seconds, shows at most one new story every two

minutes, and never repeats the same story within 30 minutes. It plays your computer's alert sound at most once every five minutes.

2. **The ticker strip** — along the bottom of the News screen, every flash, urgent and breaking headline in view scrolls past, tagged **FLASH**, **URGENT** or **BREAKING**. Hover to pause it; click a headline to open it.
3. **The bottom bar** — on every screen, the bottom bar shows one headline at a time from the last six hours, tagged **BREAKING** (flash, urgent or breaking) or **LATEST** (a top-tier source). Up to eight headlines rotate every ten seconds. Click it to open the News screen.
4. **Notifications** — with **News alerts** switched on in `Settings › Notifications`, the terminal sends a desktop notification for breaking stories, flash stories and unusual activity. See **§11.9 Stay up to date** p. 197.



Figure 11.10 The breaking banner above the wire. Its right end holds the source and the × that dismisses it (outlined).

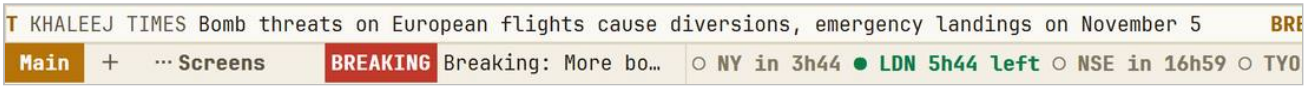


Figure 11.11 Bottom of the window. Top line, the News ticker strip (urgent headlines in view); bottom line, the bottom bar with its BREAKING headline.

Careful

Priority comes from the words of the headline and the type of source, not from an editor. A headline that starts with "Live:" is marked breaking even when it is a routine live blog. Use it as a hint and read the story.

11.6 AI on the news

Four features use AI and spend credits. The price is printed on each button and in its tooltip, for example **Brief · 1 CR**, **Analyze · 2 CR**, **Translate · 1 CR** and **Score last 7 days · 1 CR**; prices are set by Fincept and can change. Your balance is at the top right of the window. Reading the news, opening articles, the sentiment marks and the ticker are free.

Brief: a summary of what is on screen

Click **Brief** in the toolbar. The AI reads the first 40 headlines of your current view, in your current order, and writes a short summary in an **AI brief** card under the toolbar. **Dismiss** closes it. Clicking **Brief** again within ten minutes on the same headlines shows the same brief without charging again.



Figure 11.12 The Brief button shows its price. The ⓘ button beside it explains the charge.

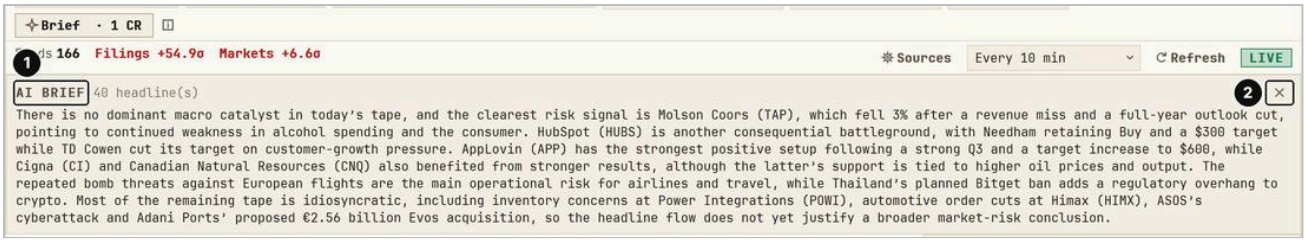


Figure 11.13 An AI brief of the 40 headlines in view, under the toolbar.

1. **AI brief** and how many headlines it read.
2. **Dismiss** closes the card.

> **Tip**
>
> Filter first, then brief. **Crypto** + **6H** + **Brief** gives you the last six hours of crypto news in a paragraph.

Analyze: an AI reading of one article

Open an article and click **Analyze.** The AI reads the full article (or only the headline, when the publisher blocks it) and adds an **AI analysis** section to the panel:

- a short summary;
- four figures — **Sentiment** (from -1, very negative, to +1, very positive), **Confidence** (how sure the AI is; under 40% usually means the article text could not be read), **Urgency** (how soon this is likely to matter) and **Outlook** (the likely direction of the price impact);
- keywords and **Key points**;
- **Risk signals** — regulatory, geopolitical, operational and market risks, each with a level;
- **Topics** and **Entities** (organisations with their sector and sentiment, people, places);
- a footer with how many words were read and what it cost.

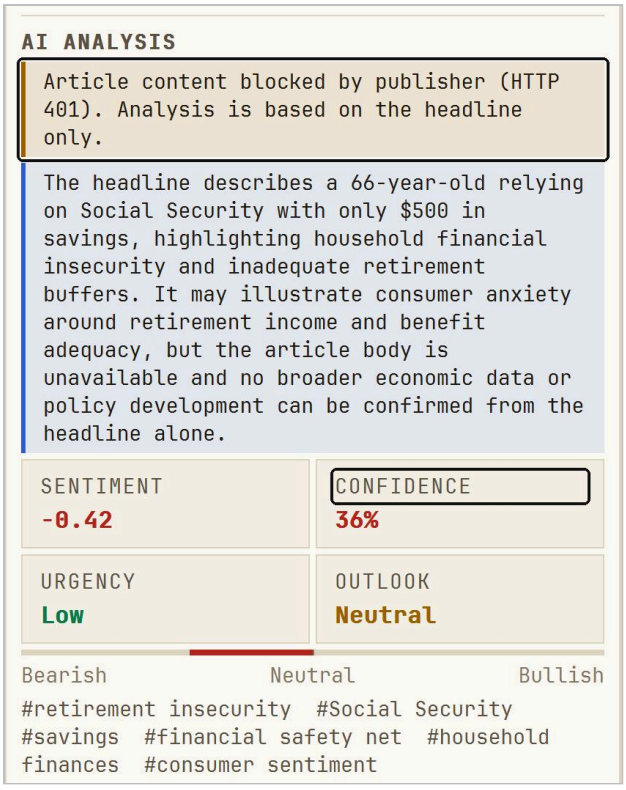


Figure 11.14 The top of an AI analysis. This publisher blocks its article text: the note at the top says the AI read the headline only, and Confidence is low (36%).

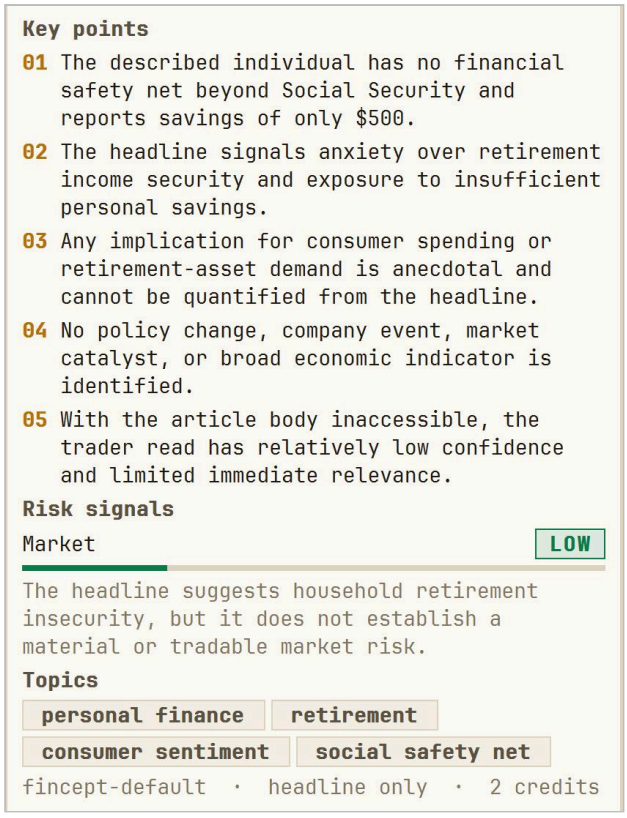


Figure 11.15 The rest of the same analysis: key points, risk signals, topics, and the footer with what was read and what it cost.

An analysis is kept on your computer: opening the same article again shows it for free ("cached, no credits spent"). If the same article was already analysed for someone else, you may also get it free.

Translate

Open a headline in another language and click **Translate** (it reads "Translating..." while it works). The summary is replaced with the English translation of the headline and summary, starting "[JA -> EN]" (or the detected language); the headline at the top stays as published. It costs the same as one AI chat message. When the button then reads "Already in English", there was nothing to translate. The headline is still sent to the AI, so the credit is spent: use **Translate** only on headlines in another language. "Translation unavailable" on the button means the translation failed.

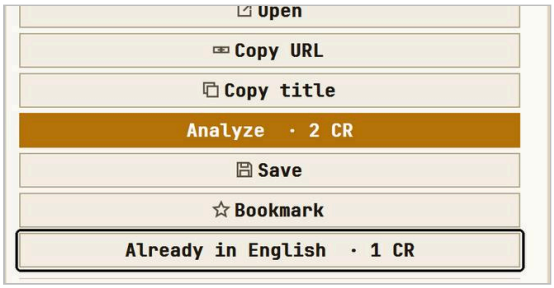


Figure 11.16 Translate pressed on an English headline. The button now reads Already in English.

Score last 7 days

In the Intelligence drawer, **Score last 7 days** scores the sentiment of the last week's coverage, by source and by day, and reports "N articles: N positive, N negative, N neutral". When there are no articles in the window, nothing is charged.

11.7 The Intelligence drawer

Click **Intel** at the left of the toolbar to open the drawer. It summarises what is in view.



Figure 11.17 The Intelligence drawer.

Section	Shows
Top stories	The first five headlines of your view, in your sort order. Click to open.
Categories	How many headlines each category has in view. Click one to filter the wire to it.
Keyword monitors	Your monitors, their matches, and the box to add one (next section).
Server matches	Matches Fincept's servers found for your monitors, newest first (up to eight).

Section	Shows
Score last 7 days	A button that scores the last week's coverage (charged, see above).
Deviations	Categories publishing far more than usual: the last hour against the 23 hours before, in standard deviations ("+3.4σ"). Shown from 3σ, and only with at least five headlines in the hour.
Entities	The countries, organisations and people named most often.
Locations	The places named most often.
Signals	Notable patterns, such as one story spreading fast.
Predictions	Prediction-market questions and their odds, for example "62% Will …".
Bookmarks	Up to ten bookmarked articles. Click to reopen.

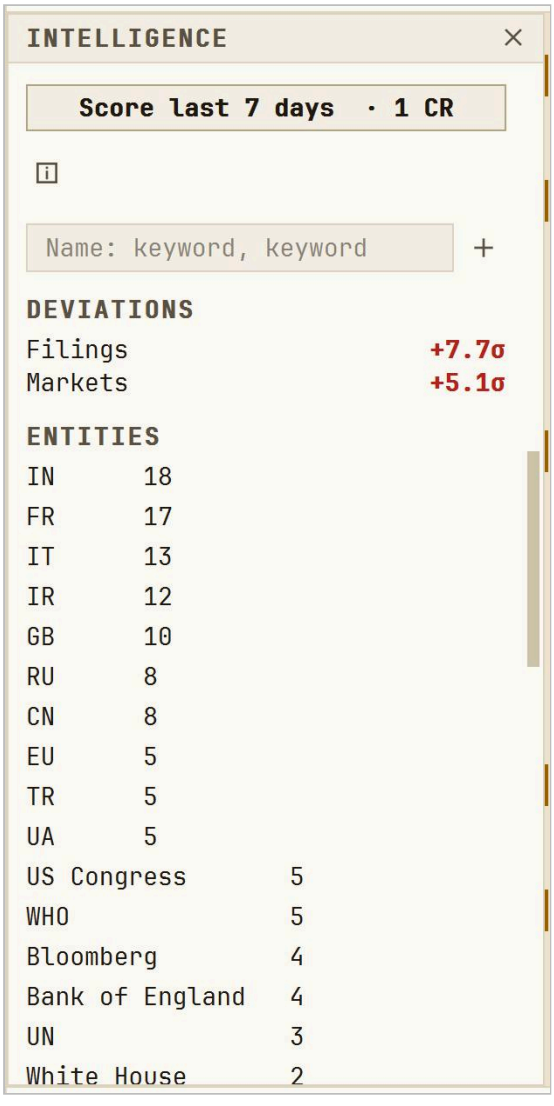


Figure 11.18 The lower sections of the drawer.

11.8 Keyword monitors

A **keyword monitor** watches the news for words you choose — a company, a person, a theme — and tells you when they appear.

1. Click **Intel** to open the drawer and scroll to **Keyword monitors**.

2. In the box **Name: keyword, keyword**, type a name, a colon, then the words to watch, separated by commas. For example: `Central banks: Fed, ECB, rate cut*`.

3. Press **Enter** (or click +). The monitor appears in the list with its own colour and the number of matching headlines in view.

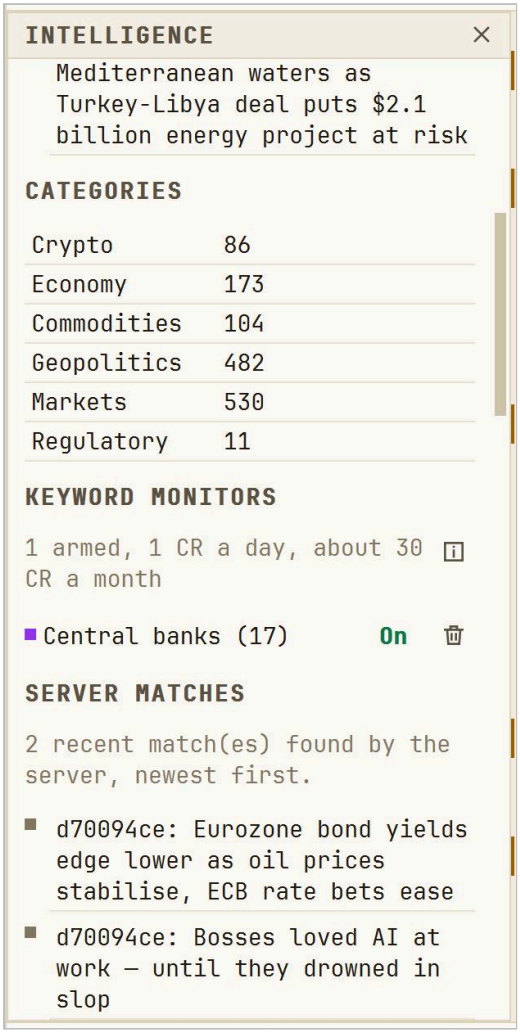


Figure 11.19 A new keyword monitor.

4 Close the drawer. Every matching headline has a stripe in the monitor's colour at its left edge, and the article panel lists the match under **Monitor matches**.

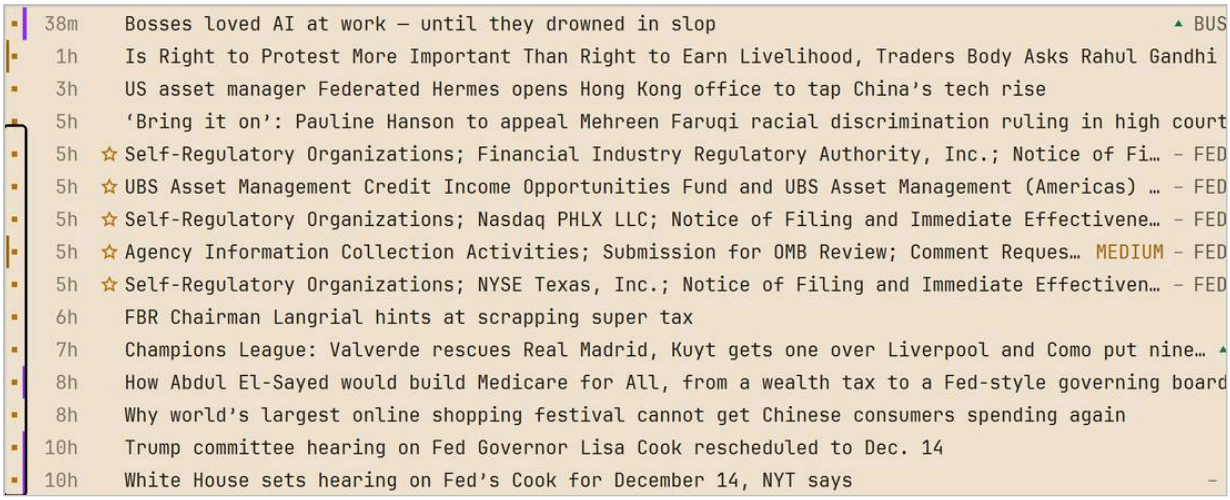


Figure 11.20 Searching for Fed. Headlines that match the monitor carry its colour stripe at the left edge.

How words match:

- Whole words only, in the headline and summary: "oil" finds "oil prices" but not "turmoil".
- Capital letters do not matter.
- A star at the end matches the start of a word: `rate cut*` finds "rate cuts"; `fed*` finds "Federal".
- Any one keyword is enough.
- A keyword needs at least two characters.
- Without a colon, the whole text is both the monitor's name and its one keyword.

Each monitor row has **On** / **Off** (pause or resume it) and a bin icon (**Delete monitor**, no confirmation). To change a monitor's words, delete it and add it again. The intel strip counts your monitors: "2 watches, 1 hit".

Plan & credits

Monitors run on Fincept's servers, so they keep watching while your terminal is closed. Each switched-on monitor is charged per day; the line above the list shows the price, for example "1 armed, 1 CR a day, about 30 CR a month". Switch a monitor **Off** to stop the charge. How many monitors Fincept's servers run for you depends on your plan: 2 on **Exclusive**, 10 on **Exclusive+**, no limit on **Exclusive Pro** (monitors and news automations count together). A monitor over the limit still marks headlines while the terminal is open, but the servers do not watch it.

Matches the servers found while you were away appear under **Server matches** in the drawer (up to eight, newest first) and in the alerts bell at the top of the window as "News monitor:" followed by the monitor's name. Each drawer row reads "monitor: headline"; hover it for the publisher and when it matched, click it to open the article. In 5.0.6 a row can show the monitor as a short code (such as "d70094ce") instead of its name, as in the picture above. Monitors are saved to your account and appear on all your computers.

For advanced users

You can also create **automations**: monitors that watch filings and articles about the instruments in a watchlist, an index or a list of symbols, and then act — add a symbol to a watchlist, notify you, add symbols to a scanner, or run a workflow. Create them by asking the AI assistant ("Watch my Holdings watchlist for high-importance filings and notify me"), which shows you a trial run before it switches one on, or with the **Server News Monitor** node in **Chapter 40, Node Editor** p. 776. Each switched-on automation is charged per day like a monitor and counts toward the same plan limit. They never place orders by themselves.

11.9 Stay up to date

- **Auto-refresh** — the list in the intel strip: **Auto-refresh off**, **Every 1 min**, **Every 5 min**, **Every 10 min** (default) or **Every 30 min**. It runs while the News screen is visible.
- **Refresh** — fetches the latest headlines now ("Refreshing..." while it works).
- **Live** — while the badge reads **Live**, new stories are pushed to the top of the wire as Fincept finds them, between refreshes. Click it to switch the live stream off (the badge reads **Offline**) or on again. New headlines glow briefly and count in "N new" until you scroll past them.
- **Notifications** — open `Settings › Notifications` and tick **News alerts**, then choose the kinds you want.

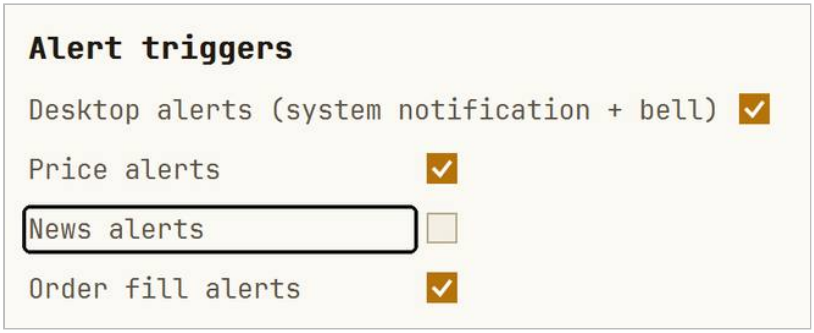


Figure 11.21 Alert triggers in Settings > Notifications. News alerts is off until you tick it; its four options then appear below it.

Setting	Sends a notification for	Default
News alerts	Master switch for the four below.	**Off**
Breaking news	Flash and urgent stories.	On
Monitor keyword matches	New matches of your keyword monitors.	On
Category volume spikes	A category publishing far more than usual (3 standard deviations or more).	On
Flash and high-impact articles	Flash stories with high market impact.	On

Breaking, spike and flash notifications are worked out while the News screen is open. Monitor matches found by the servers always reach the alerts bell, with one desktop notification that sums them up ("News monitor Central banks: 3 new match(es)"), even when **News alerts** is off.

Where headlines come from

Headlines come from Fincept's news archive, which collects stories from its catalogue of sources around the clock: about 165 feeds from more than 100 publishers — wire services, central banks, regulators, exchanges, financial media, crypto and regional outlets. Feeds you add yourself are fetched directly by your terminal.

Click **Sources** in the intel strip to see every source.

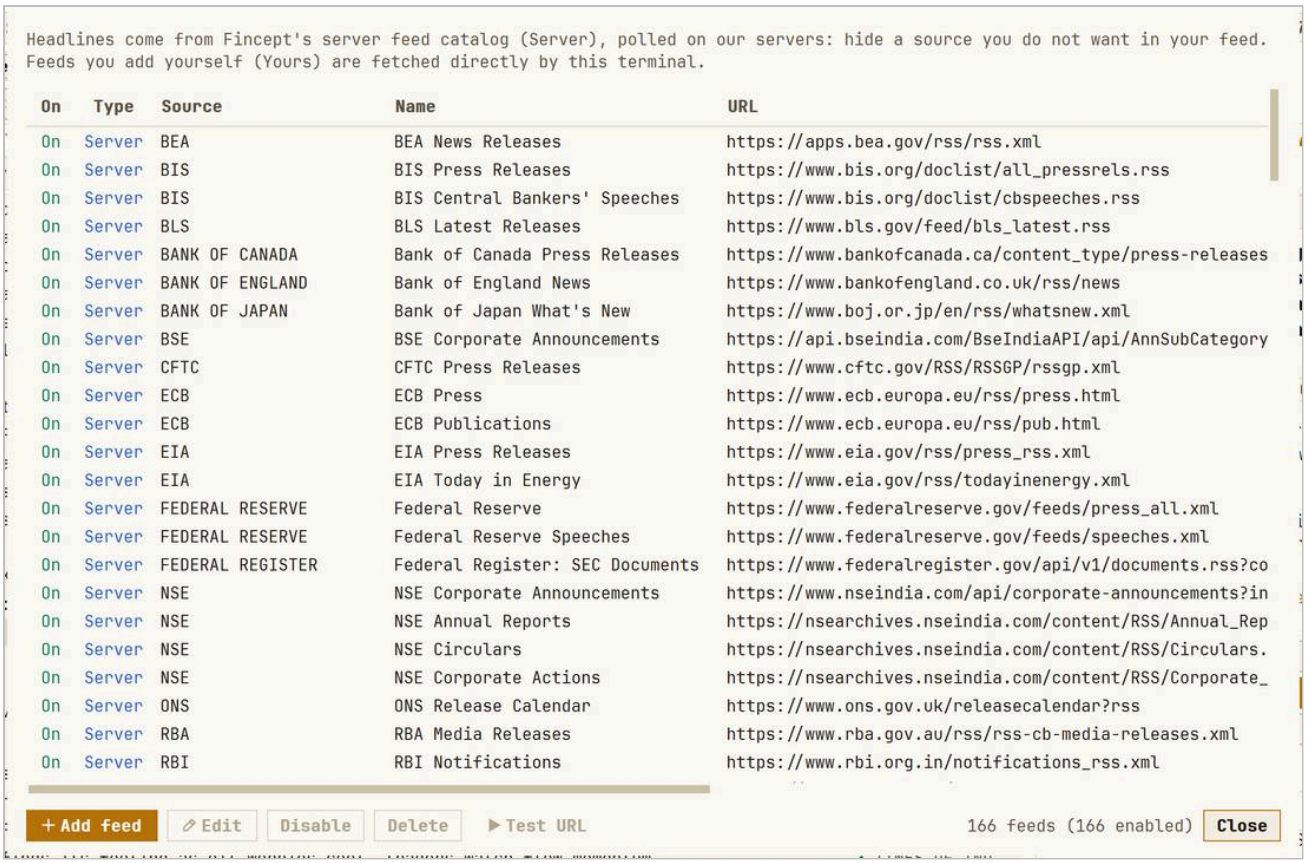


Figure 11.22 The RSS feed sources list.

- The columns are **On**, **Type**, **Source**, **Name**, **URL**, **Category**, **Region** and **Tier**.
- **Server** rows are Fincept's sources. You cannot edit or test them, but you can **Hide** one you do not want in your feed (and bring it back later with **Show** or **Show again**). Hiding follows your account.
- **Yours** rows are feeds you added. **Add feed**, **Edit**, **Disable** / **Enable**, **Delete** and **Test URL** manage them.
- The bottom line counts them, for example "166 feeds (166 enabled)": Fincept's feeds plus yours.

Adding your own feeds is explained step by step in **§12.6 Add a feed to the News wire** p. 211. When you close the list after a change, the wire reloads.

11.10 Reference

Toolbar

Control	Options	Default
Intel	Opens or closes the Intelligence drawer.	Closed
Search headlines	Free text; filters as you type.	Empty
Category	All, Markets, Economy, Geopolitics, Regulatory, Commodities, Crypto, Filings	All
Time range	1H, 6H, 24H, 48H, 7D, 30D	24H
Sort	Relevance, Newest	Newest

Control	Options	Default
View	Wire, Clusters	Wire
Source	Mixed, Fincept only, RSS only	Mixed
Region	All regions + the regions of your feeds	All regions
Language	All languages, EN, AR, ZH, JA, KO, HI, RU	All languages
Variant	Full feed, Finance, Crypto, Macro	Full feed
Right to left	Lays the terminal out right to left until you restart.	Off
Brief	AI summary of the first 40 headlines in view; shows its price. The ⓘ beside it explains the charge.	

Intel strip

Item	Meaning
Feeds N	Feeds in your catalogue: Fincept's and yours.
Articles N	Headlines matching your filters.
Clusters N	Stories carried by several outlets.
Sources N	Publishers with headlines in view.
Last N day(s)	How far back the archive is read. Amber "Last X of Y days" when your plan limits it.
Sentiment	A bar of bullish / neutral / bearish headlines and a score from -1.00 to +1.00 (bullish minus bearish, divided by all).
"Markets +5.6σ"	Up to three categories publishing far more than usual in the last hour.
"N watches, N hit"	Your keyword monitors and how many match in view.
"N new"	Headlines you have not scrolled past yet.
"N alerts"	Breaking stories in view: stories with a flash or urgent headline, counted once per story.
"Loading N of N"	Progress of a refresh.
Sources	The list of sources, Fincept's and yours.
Auto-refresh	Off, 1, 5, 10 or 30 minutes.
Refresh	Fetches the latest headlines now.
Live / Offline	Live stream on or off; click to switch.

A wire row

Mark	Meaning
Thin coloured line on the very left edge	A threat of MEDIUM or higher, in the threat's colour.
Small square at the far left	Not seen yet.
Coloured stripe	Matches a keyword monitor (the monitor's colour).

Mark	Meaning
Red or amber square before the headline	Flash, or urgent / breaking priority.
Star	A top-tier source (a wire service or regulator).
Time	Age: "45s", "12m", "3h", "2d".
MEDIUM / HIGH / CRITICAL	A threat level (conflict, cyber, natural disaster, market stress, regulation).
▲ / ▼ / –	Bullish / bearish / neutral.
Symbols	Up to two symbols named in the story.
Warning icon	A publisher on the watch list (state media, caution).
"AR", "JA" …	The headline's language (not shown for English).
Source	The publisher, at the right.

The wire shows 50 headlines and loads 50 more as you scroll near the bottom. A headline counts as seen once you open it, or once it is on screen while you scroll the wire; this computer remembers seen headlines for 30 days.

Messages

Message	Meaning
"No headlines match these filters"	Try a longer time range, another category, language or source, or clear the search.
"No headlines yet"	The news service returned nothing; click **Refresh**.
"Sign in to load news"	You are signed out. Your own feeds still load.
"Writing brief..." / "Analyzing..." / "Translating..."	The AI is working; the button is greyed out meanwhile.
"Analysis failed"	A window says "Could not analyze this article. Please try again."
"Translation unavailable" (on the button)	The translation failed.
"Already in English" (on the button)	Nothing to translate; the credit is still spent.

11.11 For advanced users

Sentiment and impact

Fincept's own headlines carry the sentiment Fincept's news service gave them. Headlines from your own feeds are scored on your computer from their words: positive words such as surge, rally, beat and upgrade, negative words such as plunge, miss, downgrade and recession, each with a weight. The overall gauge is (bullish − bearish) ÷ all headlines in view.

Impact is High for flash and urgent stories and for strongly worded ones, Medium for breaking or clearly worded ones, and Low otherwise.

Symbols in the news

A symbol is linked to a headline only when the text marks it as a symbol: a cashtag ($AAPL), an exchange prefix (NSE:RELIANCE) or a ticker in brackets after a company name. Common words such as US, CEO or GDP are ignored. A headline has at most five symbols.

- **Link groups.** When the News panel follows a symbol link group, picking a symbol in a linked screen filters the wire to that symbol, as a search would. The search box stays empty; type in it (or type and clear it) to replace that filter. See **Chapter 5, The Terminal Window** p. 70.
- **Drag and drop.** Drop a symbol onto the News screen to filter the wire to it (the search box stays empty here too).

From the command line

- `NEWS` opens the screen; panel words place it: `NEWS RIGHT`, `NEWS BR`, `MKTS ADD NEWS DOWN`. See **Chapter 6, The Command Line** p. 89.
- Type words in the command line: matching headlines appear under **News stories**; **More news** searches the archive of the last 30 days (three letters or more). Shift + Enter opens a headline in a window of its own.

Do it with AI

Do it with AI

The AI assistant can search the news archive and read the News screen. Try:

- "Show me the five latest news headlines about NVIDIA, each with its source."
- "Pull the latest headlines on crude oil and tell me whether the overall sentiment is positive or negative."
- "Open News, filter to Crypto for the last 6 hours and summarise what happened."
- "Create a news automation that watches my Holdings watchlist for high-importance filings and notifies me."

Each chat turn is charged as usual. See **Chapter 37, AI Chat** p. 719.

11.12 Troubleshooting

If something goes wrong

The wire is empty. Read the message. "No headlines match these filters": widen the time range, pick **All**, **All regions**, **All languages** and **Mixed**, and clear the search. Remember that **All** leaves **Filings** out.

I never get news notifications. News alerts is off by default. Tick it in **Settings** › **Notifications**. Breaking and spike notifications also need the News screen to be open.

The badge says Offline. The live stream is off or not connected. Click it to switch it on. Headlines still update on the auto-refresh interval.

My own feed shows no headlines. Pick **Mixed** or **RSS only**, then open **Sources**, select your feed and click **Test URL**. A feed that fails is skipped without a message on the wire.

A headline is marked breaking but it is not urgent. Priority comes from the headline's words and its source. See **§11.5 Breaking news** p. 189.

Analyze shows a low confidence. The publisher blocked the article text, so the AI read only the headline. Use **Open** to read the article yourself.

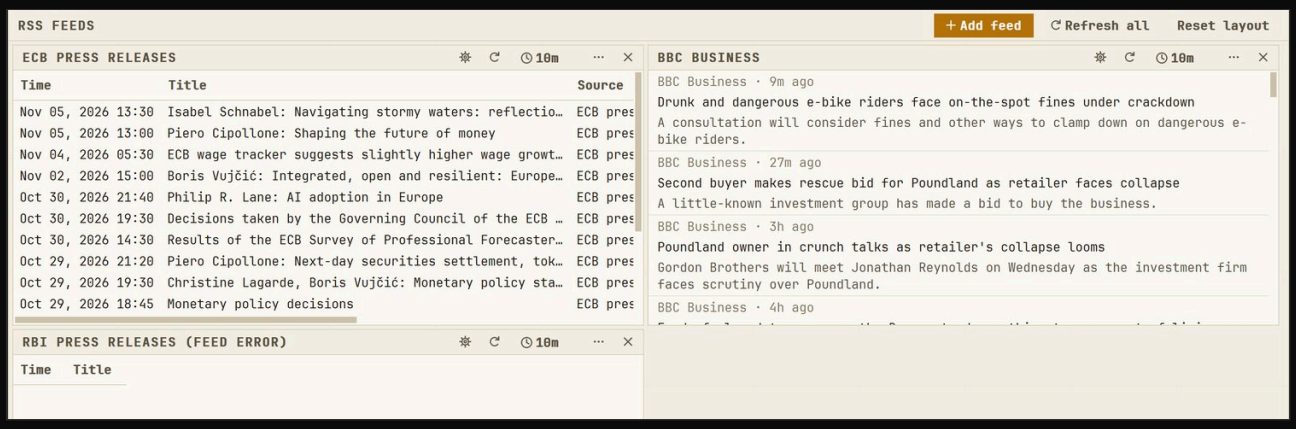
Brief did nothing. With no headlines in view there is nothing to summarise. If a brief fails, no message appears; try again.

The wire shows only one company's news, but the search box is empty. A linked screen or a dropped symbol filtered the wire. Type a word in the search box (or type one and clear it).

CHAPTER 12

RSS Feeds RSSF

Your own feeds. Put any RSS, Atom, XML, JSON or CSV feed on a board of boxes that refresh themselves, and add RSS feeds of your own to the News wire.



At a glance

Open it	• Type `RSSF` (or `rss`) in the command line and press **Enter** • **Screens** › **Markets & Data** › **RSS Feeds** • For feeds in the News wire: on the News screen, click **Sources**
You need	• Signed in on any paid plan • No credits
Best for	• Following a central bank, regulator or company that publishes a feed • Structured feeds, such as exchange announcements, in a table
Time to learn	10 minutes
Related	**Chapter 11, News** p. 182, **Chapter 8, Dashboard** p. 123, **Chapter 16, Equity Trading** p. 264

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12.1 Screen tour

An **RSS feed** is a web address that lists a site's newest items (headlines, press releases, filings) in a format programs can read. Most news sites, central banks, regulators and blogs publish one; look for "RSS" or the orange feed icon on their website. The RSS Feeds screen puts your own feeds on a board.



Figure 12.1 The RSS Feeds board. Each feed is a box; a box shows its feed as a table or as cards.

1. **Add feed** puts a new feed on the board.
2. **Refresh all** fetches every feed now.
3. **Reset layout** rebuilds the board with one box per feed.
4. A box in **Table** view.
5. A box in **Cards** view.
6. A box whose last fetch failed: its title says FEED ERROR.

The screen is a toolbar and a **board**. The board is a grid: every feed sits in a **box** you can move and resize. The board is saved by itself about a second after each change, in your account, so it looks the same on every computer you sign in on.

Two places for your own feeds

Fincept Terminal lets you add feeds in two places, and they do different jobs:

	The RSS Feeds board (`RSSF`)	The News screen's Sources
What you get	A box per feed on a board you arrange	The feed's headlines mixed into the News wire
Formats	RSS, Atom, XML, JSON, CSV	RSS and Atom
Shown as	Cards or a table	Wire rows with priority, sentiment and filters
Also used by	The dashboard's RSS feed tile, the Equity Trading feeds panel	Search, keyword monitors, News filters

	The RSS Feeds board (`RSSF`)	The News screen's Sources
Saved	In your account (follows you to other computers)	On this computer, copied to your account by cloud sync

The two lists are separate: a feed on the board does not appear in the News wire, and a feed added under News **Sources** does not appear on the board. Add the same address in both places if you want both.

12.2 Quick start

1. Type `RSSF` in the command line and press **Enter**.
2. Click **Add feed**.
3. In **URL**, paste a feed address, for example `https://www.bankofengland.co.uk/rss/news`. Give it a **Name**.
4. Click **Test / Preview**. A green line shows how many items the feed has, with the first few headlines.
5. Click **Save**. A new box appears on the board, already filled.
6. Click a card in the box to open that item in your web browser.

12.3 Add a feed to the board

You need the feed's web address (its URL). On most websites, look for "RSS", "Feeds" or the orange feed icon, often at the bottom of the page.

1. Click **Add feed** in the toolbar. The **Add Feed** window opens.

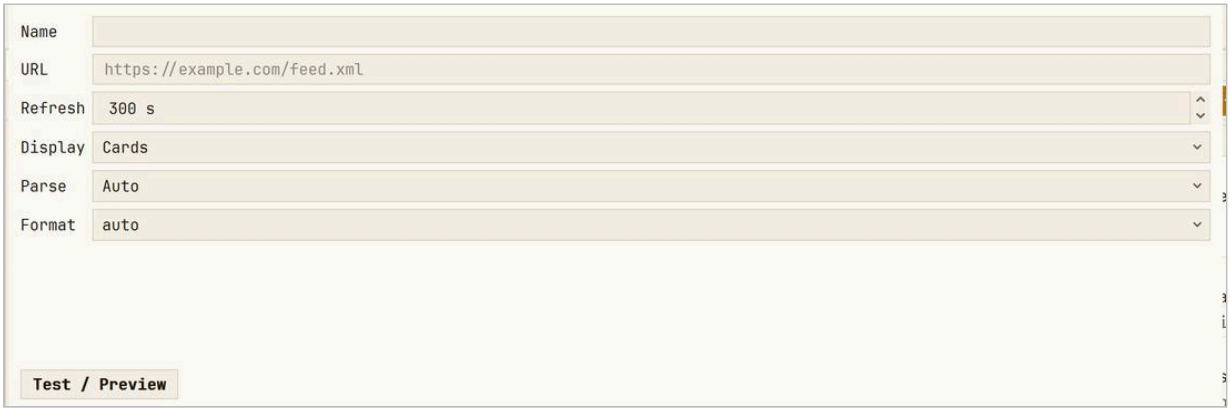


Figure 12.2 The Add Feed window (Save and Cancel are at its bottom right).

2. Type a **Name** for the box, for example `Bank of England news`. If you leave it empty, the URL is used as the name.
3. Paste the feed's address in **URL**.
4. Leave **Refresh**, **Display**, **Parse** and **Format** as they are for now (every 300 seconds, cards, automatic).

5 Click **Test / Preview**. The terminal fetches the feed once and shows the number of items and the first three headlines in green. A red line means the feed could not be read (see **§12.9 Troubleshooting** p. 216).



Figure 12.3 A successful test shows the number of items and the first three headlines (outlined).

6 Click **Save**. The new box appears on the board. When the test succeeded, the box fills at once with the tested items.

The fields of the window:

Field	What it means	Default
Name	The box's title.	The URL
URL	The feed's address.	
Refresh	How often the feed is fetched, in seconds (15 to 86,400).	300 (5 minutes)
Display	**Cards** (one card per item: easy to read) or **Table** (one row per item: dense).	Cards
Parse	**Auto** reads title, summary, link and date by itself. **Manual** lets you choose which part of the feed is which.	Auto
Format	**auto** (detects it), **rss**, **atom**, **xml**, **json** or **csv**.	auto

Tip

To change a feed from cards to a table (or back), open its settings with the gear icon on its box and change **Display**. It is a setting of the feed, not a button on the box.

12.4 Map an unusual feed by hand

Some feeds are not standard news feeds: an exchange's XML list of announcements, a JSON file from a data website, a CSV export. With **Parse** set to **Manual** you tell the terminal which part of each item is the title, the link, the date, and which extra parts become table columns. The **Discover** button does most of the work.

1. In the Add Feed window, set **Parse** to **Manual**. The mapping tools appear.



Figure 12.4 Parse set to Manual.

2 Click 🔍 **Discover fields from feed.** The terminal reads the feed, picks the repeating element that marks one item (**Records**), sets **Format**, and lists every tag it found as a row with a guessed role. The status reads "N tags found".

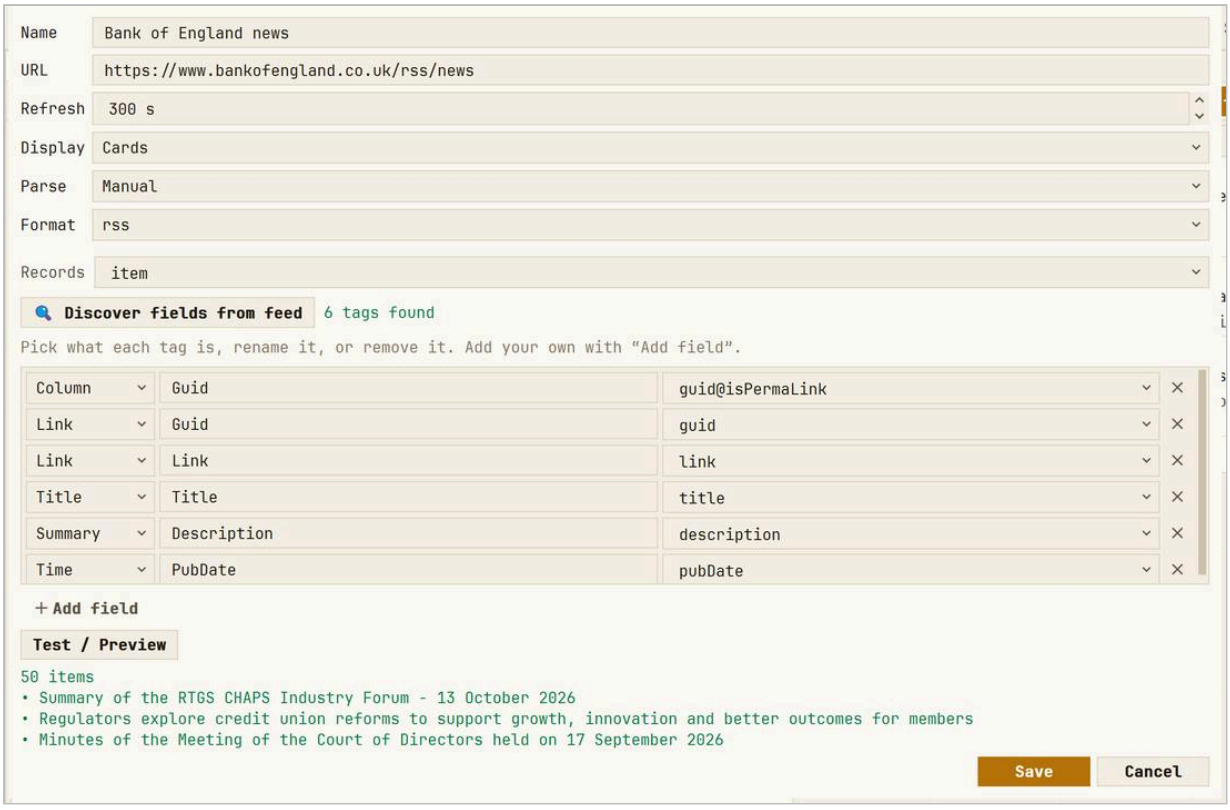


Figure 12.5 After Discover, every tag of the feed is a row you can keep, rename or remove.

3 Check each row: its role, its display name and the tag it reads. Remove the rows you do not want with ×, or add one with **Add field**.

4 Click **Test / Preview**, then **Save**.

Each mapping row has:

- **Role** — **Title** (the headline), **Summary** (the text under it), **Link** (opened when you click the item), **Time** (the date), or **Column** (an extra column, shown only in table view). Hover the role list: "Title/Summary/Link/Time feed the card view; Column shows only in the table."
- **Display name** — the column heading you want.
- **Source** — the tag to read: an XML element (or `tag@attribute`), a JSON path with dots (`data.title`), or a CSV column name (or `#2` for the third column). Hover it to see an example value.

Records is the repeating element that makes one item, for example `item` in RSS or `entry` in Atom. Change it if Discover picked the wrong one.

12.5 Arrange and manage boxes



Figure 12.6 A feed box and the five buttons of its title bar.

1. Gear: the feed's settings.
2. Fetch this feed now.
3. This box's own refresh interval.
4. The box menu.
5. Take the box off the board.



Figure 12.7 The box menu.

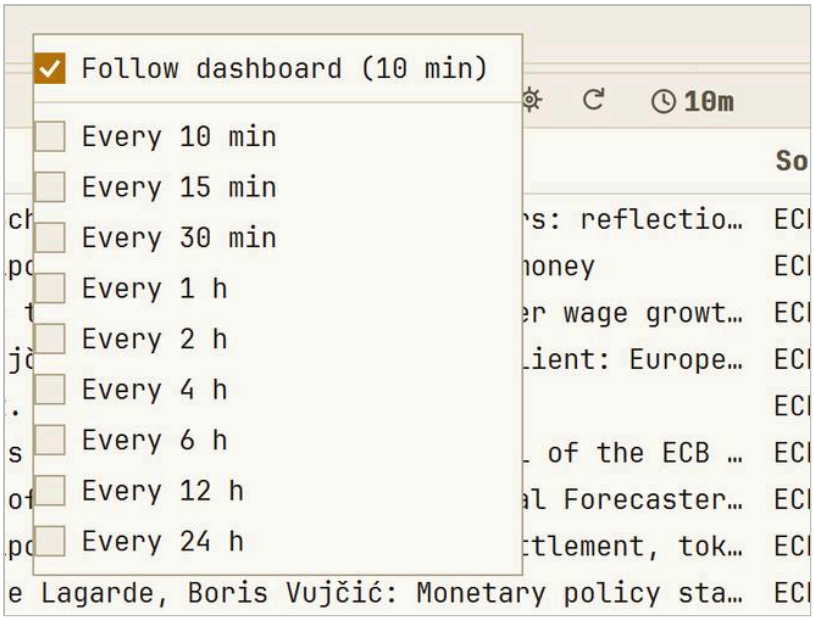


Figure 12.8 The box's refresh menu.

Every box has a title bar with the feed's name and five controls on the right:

Control	What it does
Gear (Configure widget)	Opens **Edit Feed**: the same window as Add Feed, with a **Delete** button.
Circular arrow (Refresh widget data)	Fetches this feed now.
Clock with an interval, for example "10m"	How often the box itself refreshes. **Follow dashboard (…)**, or **Every** 10 min, 15 min, 30 min, 1 h, 2 h, 4 h, 6 h, 12 h or 24 h.
Three dots (Widget menu)	**Rename...** (the box's title; after a rename, **Use the original name (…)** appears too), **Settings...** (same as the gear), **Duplicate** (a second box of the same feed), **Open RSS Feeds** (this screen), **Remove from dashboard** (same as ×).
× (Close widget)	Takes the box off the board. The feed itself is kept.

- **Move** a box by dragging its title bar. Other boxes move out of the way.
- **Resize** a box by dragging its bottom-right corner (or its right or bottom edge). Boxes snap to a 12-column grid; the smallest box is 3 × 3 cells, a new box is 6 × 5.
- **Read** an item: in card view, click a card; in table view, double-click a row. The item opens in your web browser.
- **Refresh all** in the toolbar fetches every feed now, including feeds that have no box. Each feed also refreshes on its own every **Refresh** seconds, even while you are on another screen.
- **Reset layout** rebuilds the board with one box for every feed you follow, in a tidy grid. It discards your arrangement without asking.

Careful

× on a box only takes the box off the board: the feed stays (and still feeds the dashboard tile and other places). To remove a feed everywhere, open its gear, click **Delete**, and confirm "Delete this feed and its stored history? This cannot be undone."



Figure 12.9 Edit Feed, opened from a box's gear. Delete appears only here.

1 **Delete** removes the feed everywhere, after a confirmation.

Note

Rename… and the box's own refresh interval are not kept after you restart the terminal. To rename a feed for good, change its **Name** in the gear window.

Card and table view

- **Cards:** each card shows the feed's name and the item's age ("5m ago"; hover for the exact time), the headline in bold, and the summary when there is one.
- **Table:** columns **Time** (for example "Nov 05, 2026 14:30"), **Title**, then **Summary**, **Source** and **Link** when the feed has them, then your own mapped columns. Hover any cell to read its full text; drag a column border to widen it.

12.6 Add a feed to the News wire

Feeds added here appear as headlines in the News wire, with the same filters, priority marks, sentiment and keyword monitors as Fincept's own sources.

1. Open the News screen (`NEWS`) and click **Sources** in the intel strip. The **RSS feed sources** list opens.

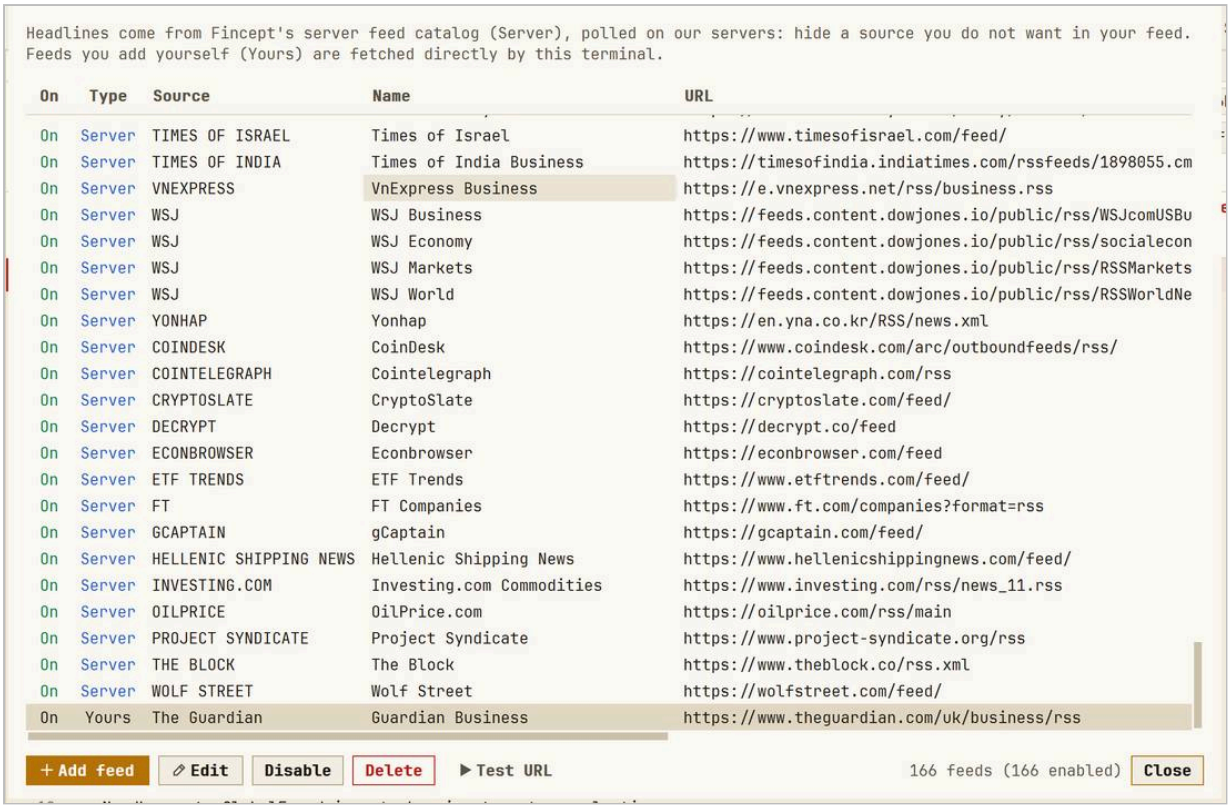


Figure 12.10 RSS feed sources. Server rows are Fincept's sources; Yours rows are feeds you added.

2. Click **Add feed**. The **Add RSS feed** window opens.

3. Fill in **Source** (the publisher's name), **Name** (the feed's name) and **URL**.

4. Pick a **Category** (Markets, Economy, Geopolitics, Regulatory, Commodities, Crypto or Filings) and a **Region**. They decide which News filters show the feed.

5. Set the **Tier**: 1 = wire service, 2 = major outlet, 3 = specialty (default), 4 = blog. Tier 1 headlines from the last two hours are marked breaking.

6. Click **Test URL**. "Looks like a valid RSS/Atom feed (N bytes)." means it works.

7. Click **Save**, then **Close**. If you skipped **Test URL**, Save tests the address first. When the address (or your last test) did not return a feed, "URL didn't validate" asks whether to save it anyway. The News wire reloads with your feed when you close the list.

8 To see only your feeds, click **RSS only** in the News toolbar.



Figure 12.11 RSS only shows just the feeds you added.

Field	Meaning	Default
ID	An identifier for the feed, filled in for you ("usr-" and eight characters).	Generated
Source	The publisher's name, shown on each headline.	
Name	The feed's name in the list.	
URL	Must start with http:// or https:// ("Invalid URL" otherwise).	
Category	Which category button shows the feed. **Filings** feeds are left out of **All**.	Markets
Region	Which region the feed belongs to: Global, United States, Canada, Latin America, United Kingdom, Europe, Middle East, Africa, India, China & Hong Kong, Japan, Korea, Asia (other), Australia & NZ.	Global
Tier	1 wire, 2 major, 3 specialty, 4 blog.	3

ID, Source, Name and URL must be filled in; otherwise **Save** answers "Missing fields". The buttons are **Test URL**, **Save** and **Cancel**; the window is called **Edit RSS feed** when you edit a feed.

In the list, select one of your feeds to **Edit** it (or double-click it), **Disable** / **Enable** it, **Delete** it (after "Delete user feed ...?") or **Test URL**. For Fincept's own sources (**Server**) you can only **Hide** them from your wire, and bring them back with **Show** or **Show again**.

> **Note**
>
> News feeds are read as RSS or Atom only. For JSON, CSV or other XML, use the RSS Feeds board instead.

12.7 Reference

Toolbar

Control	What it does
Add feed	Opens the Add Feed window.
Refresh all	Fetches every feed now ("Refreshing..." until all have answered).
Reset layout	One box per feed, in a fresh arrangement. No confirmation.

Add Feed / Edit Feed

Control	What it does
Name, URL, Refresh, Display, Parse, Format	See **§12.3 Add a feed to the board** p. 205.
Records	(Manual) the repeating element that marks one item.
🔍 **Discover fields from feed**	(Manual) reads the feed and lists its tags as rows.
Role / Display name / Source / ×	(Manual) one mapping row.
Add field	(Manual) adds an empty mapping row.
Test / Preview	Fetches once: "N items" and three headlines, or the error.
Save / Cancel	Saves the feed, or closes without changes.
Delete	(Edit only) deletes the feed everywhere, after a confirmation.

Messages

Message	Meaning
"N items"	The test worked.
"No items parsed"	The address answered, but no items were found. Try **Manual** and **Discover**.
"Access denied / not a feed"	The address returned a web page (a block, a login or captcha page) instead of a feed.
"N tags found" / "Couldn't read the feed structure"	Discover worked / failed.
"NAME (FEED ERROR)" on a box	The last fetch failed; hover the box for the reason. Items already shown stay.
"No feeds on this board"	The board is empty. **Add feed** or **Reset layout**.

Limits

Item	Limit
Items kept per feed	200, newest first (older ones drop off)
Refresh	15 seconds to 24 hours
Headline length	200 characters (300 with manual mapping)
Summary length	300 characters, without formatting
Feeds on the board	No limit
Feeds in the News wire	Copied to your account up to your plan's limit (10 on **Exclusive**, 50 on **Exclusive+**, no limit on **Exclusive Pro**); more stay on this computer

12.8 For advanced users

Supported formats

Format	How it is read
RSS 2.0, RSS 1.0 (RDF), Atom	Items or entries: title, summary, link, date.
XML	Any repeating element, with manual mapping.
JSON	A list of records at the top, or under `items`, `data`, `results`, `articles` or `entries`.
CSV / TSV	The first row is the header; each column is a field. Commas inside quoted values are not supported.

Dates are read in most common forms (RFC dates, ISO dates, Unix times). Items without a date get the time they were fetched. The terminal sends the request the way a normal web browser does; a site that answers with a captcha or login page cannot be read.

Where feeds are kept

- **Board feeds** and the board's layout are saved in your account and follow you to every computer. Feed items are not stored: they are fetched again in each session.
- **News feeds** are saved on this computer and copied to your account by cloud sync (**Settings** › **Cloud Sync** , row **RSS feeds**).

The same feeds elsewhere

Board feeds are also offered by the dashboard's **RSS feed** tile (see **Chapter 8, Dashboard** p. 123) and the Equity Trading screen's feeds panel (see **Chapter 16, Equity Trading** p. 264). Deleting a feed removes it from their lists too; a dashboard tile that showed it then reads **Feed unavailable**.

Do it with AI

Do it with AI

There are no special feed tools: the AI assistant works this screen the way you do. Try:

- "Open RSS Feeds and add https://www.ecb.europa.eu/rss/press.html as a Table that refreshes every 600 seconds."
- "Read me the latest headlines on my RSS Feeds board."
- "Refresh all my RSS feeds."

The assistant asks for your approval before it saves a new feed, uses **Reset layout** or deletes a feed.

12.9 Troubleshooting

If something goes wrong

Test / Preview says "Access denied / not a feed". The address is a web page, not a feed, or the site blocks programs. Look for the site's real feed address (it often ends in `.xml`, `.rss` or `/feed`).

Test / Preview says "No items parsed". The address answered but the terminal found no items. Set **Parse** to **Manual** and click **Discover**, or pick the **Format** yourself.

I clicked Save and no box appeared. The **URL** was empty: the window closes without saving anything. Click **Add feed** again and paste an address first.

A box shows "(FEED ERROR)". Hover the box to read the reason. Items already loaded stay visible. Check the address with the gear and **Test / Preview**.

My board feed does not appear in the News wire. That is expected: board feeds and News feeds are separate lists. Add the address under News **Sources** too.

My News feed shows nothing. Select **RSS only** in the News toolbar, check the time range, then open **Sources** and **Test URL**. A feed that fails is skipped without a message on the wire. News feeds must be RSS or Atom.

I removed a box and the feed still refreshes. × only removes the box. Delete the feed from its gear window to stop it.

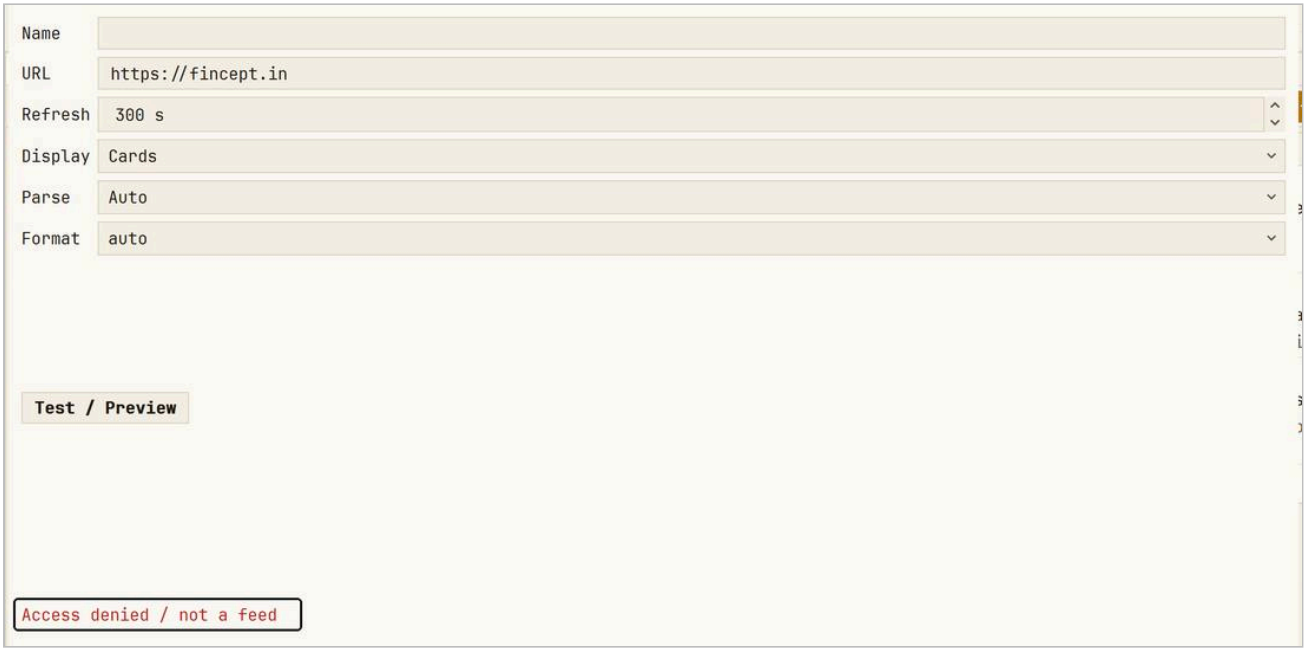


Figure 12.12 Test / Preview on a web page that is not a feed. The red line (outlined) gives the reason.

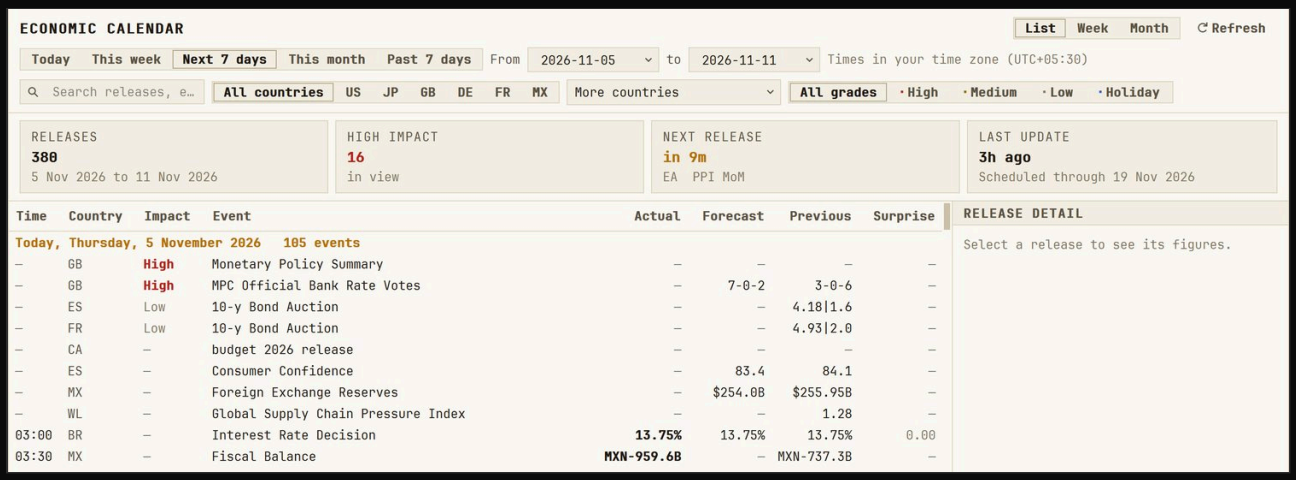


Figure 12.13 A box whose feed could not be read. Hover it to see why.

CHAPTER 13

Economic Calendar ECAL

Every scheduled economic release and central-bank decision in one place — what is published, when it comes out in your computer's time zone, what economists expected, and how far the actual figure surprised.



At a glance

Open it	• Type ECAL in the command line and press Enter • Click **Economic calendar** in the Global Data toolbar • Pick a release under **Economic calendar** in the command line
You need	• Signed in on any paid plan • No credits: the calendar is free
Best for	• Knowing which numbers can move markets this week • Checking an actual figure against its forecast
Time to learn	10 minutes
Related	**Chapter 32, Global Data** p. 648, **Chapter 11, News** p. 182, **Chapter 8, Dashboard** p. 123

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13.1 Screen tour

An **economic release** is a figure that a statistics office, government agency or central bank publishes on a set day: inflation (CPI, the consumer price index), jobs, growth (GDP, gross domestic product), retail sales, an interest-rate decision. Prices often jump in the minutes after a release, most of all when the figure is far from what economists expected. The Economic Calendar lists these releases for every economy that publishes them, with the expected figure beside the actual one.

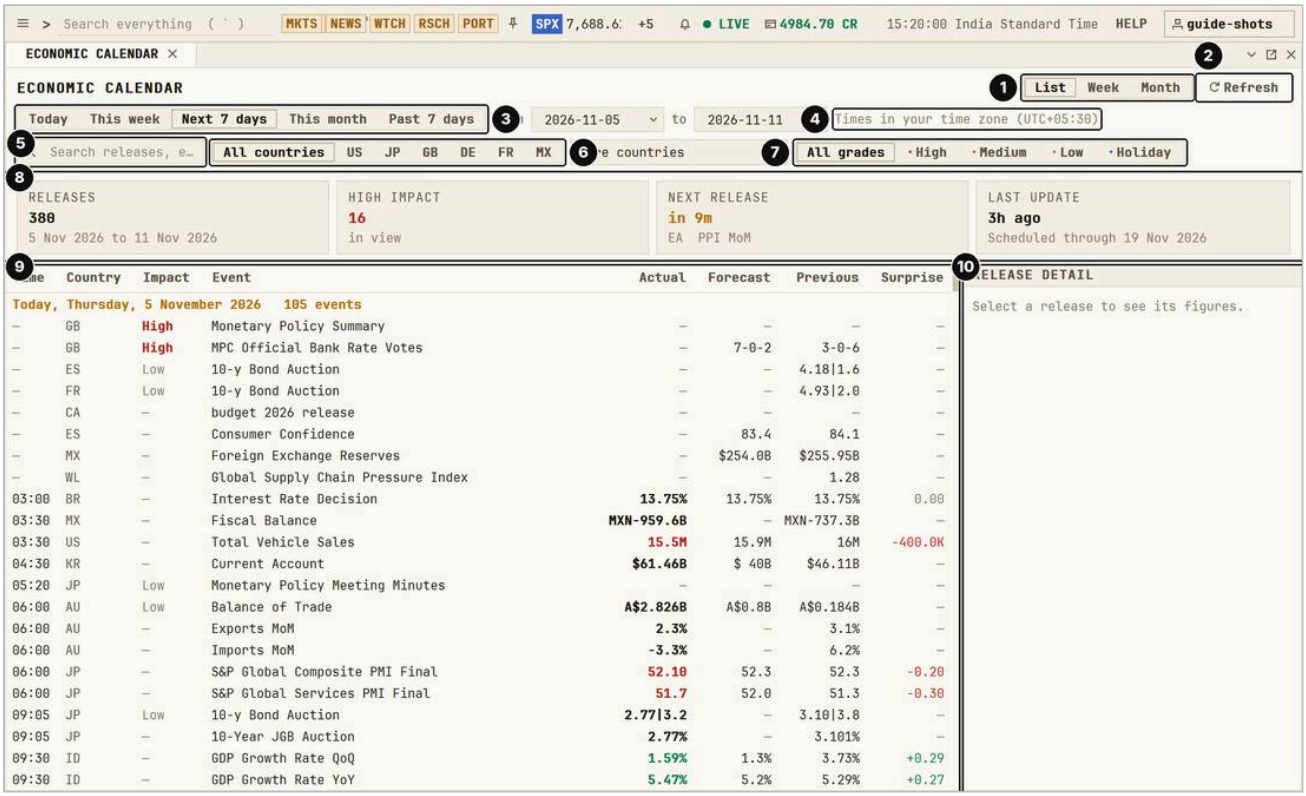


Figure 13.1 The Economic Calendar in List view, showing the next seven days.

1. **List**, **Week** and **Month** switch between a time-ordered list and a calendar grid.
2. **Refresh** loads the releases again and re-checks when the data was last updated.
3. The period buttons choose the dates. You can also type any **From** and **to** dates.
4. All times are shown in your computer's time zone (not the one picked in Settings). The offset from UTC is printed here.
5. Search for a release by name, for example CPI, payrolls or rate decision.
6. Country chips: the economies with the most releases in view. **More countries** lists every other one.
7. Impact grades: show only **High**, **Medium**, **Low** or **Holiday** entries.
8. Four summary tiles for what is in view right now.
9. The release table, grouped by day.
10. **Release detail** shows the figures of the release you select.

The screen has four parts, from top to bottom:

- **The toolbar** — the view switch and **Refresh**, the dates, then the filters (search, countries, grades).
- **The summary tiles** — four counters for the releases in view.
- **The release table** — one row per release. In Week and Month view a calendar grid sits above it.
- **Release detail** on the right — the figures of the one release you select.



Figure 13.2 The date controls (List view).

1. **Today**, **This week**, **Next 7 days**, **This month**, **Past 7 days**: one click sets both dates.
2. **From**: the first day. Type a date or open the small calendar.
3. **to**: the last day, up to 92 days after the first.



Figure 13.3 The filters (search, countries and impact grades).

1. Search by release name.
2. **All countries**, then the six economies with the most releases in view.
3. **More countries**: every other economy in view, with its count.
4. **All grades**, then **High**, **Medium**, **Low** and **Holiday**. Each chip has a dot in the grade's colour.



Figure 13.4 The four summary tiles follow your filters.

1. **Releases** — how many releases are in view, and the dates they cover.
2. **High impact** — how many of them are graded High.
3. **Next release** — a countdown to the next timed release still to come, and its name.
4. **Last update** — when the calendar data last changed, and the last day with scheduled releases.

13.2 Quick start

1. Type `ECAL` in the command line at the top of the window and press `Enter`. The calendar opens on the next seven days.
2. Look at the **High impact** tile. It counts the releases most likely to move markets in the dates shown.
3. Click **Past 7 days.** The table now lists last week's releases, newest first.
4. Click **US** in the country chips, then **High** in the grade chips. Only the big US releases stay.

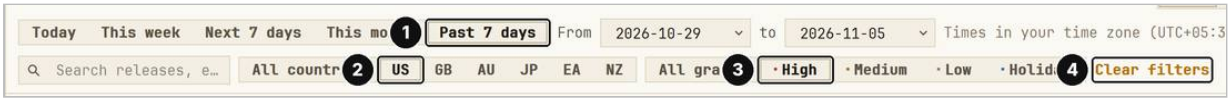


Figure 13.5 Past 7 days, US, High. A gold Clear filters link appears while any filter is on.

1. The period you picked.
2. The country chip you turned on.
3. The grade chip you turned on.
4. **Clear filters** turns every filter off again.

5. Click a release that has a figure in the **Actual** column.

6 Read **Release detail** on the right: the **Actual**, **Forecast** and **Previous** figures, and one line saying whether the actual came in above or below the forecast.

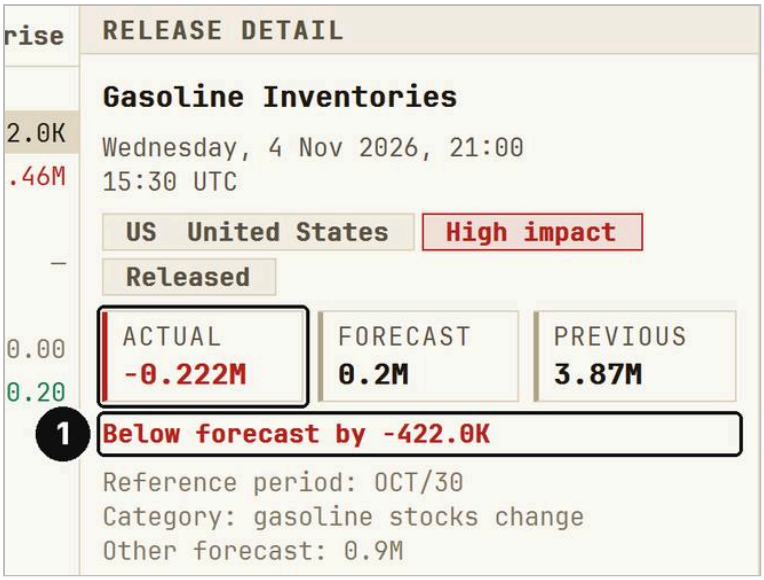


Figure 13.6 A released figure, below its forecast.

1 The verdict line and the size of the miss. The actual figure (outlined) turns green when above the forecast, red when below.

Tip

Run the quick start every Monday with **Next 7 days** and **High**. In thirty seconds you know which days of the week may be busy.

13.3 Pick the dates

You choose the dates in List view with the period buttons or with the two date fields.

1 Click **List** if another view is showing.

2 Click a period button: **Today**, **This week**, **Next 7 days**, **This month** or **Past 7 days**.

3 For any other dates, type them in **From** and **to** (the format is year-month-day, for example 2026-11-05), or click the arrow beside a date to pick it on a small calendar.

4 Wait a moment: the table reloads 0.4 seconds after you stop typing.

Note

A range can cover at most **92 days**. If you pick dates further apart, the calendar shortens the range and says so: "A range covers at most 92 days, so this one ends on ...". If you type the dates the wrong way round, the calendar swaps them.

Past 7 days is the only period that lists the newest releases first. Every other period lists the oldest first, so the table reads like a diary.

13.4 Filter by country, impact and name

Filters narrow the table without changing the dates. You can combine them: several countries, several grades and a search all at once.

- **Countries. All countries** shows every economy. The chips beside it are the six economies with the most releases in the dates you picked (so they change when the dates change). Click a chip to show only that economy; click more chips to add more economies. Hover a chip to read the full name and the number of releases, for example "United States: 42 events".
- **More countries.** Open the list to add any other economy. Each line shows the code, the name and the number of releases, for example "AU Australia (14)".



Figure 13.7 More countries lists every other economy with releases in view.

- **Grades.** A release's **impact** grade says how much it usually moves markets: **High**, **Medium** or **Low**. **Holiday** marks market holidays. Click one or more grade chips; **All grades** turns the grade filter off. While a grade is picked, releases that nobody graded are hidden.
- **Search.** Type a word in the search box, for example `CPI`, `payrolls` or `rate decision`, and press **Enter** (or just wait half a second). The search looks through every release in the dates you picked.



Figure 13.8 Searching for CPI over the next seven days.

1. The search word. The ⓧ button empties the box.
2. The tiles count only the releases that match.

- **Clear filters.** This gold link appears while any country, grade or search is on. One click turns them all off.

> **Note**
>
> Countries and grades filter at once, on your computer. A search asks Fincept's servers again, so it takes a moment longer.

13.5 Read a release

Click any release in the table (or move up and down with the arrow keys) and its figures fill **Release detail**.

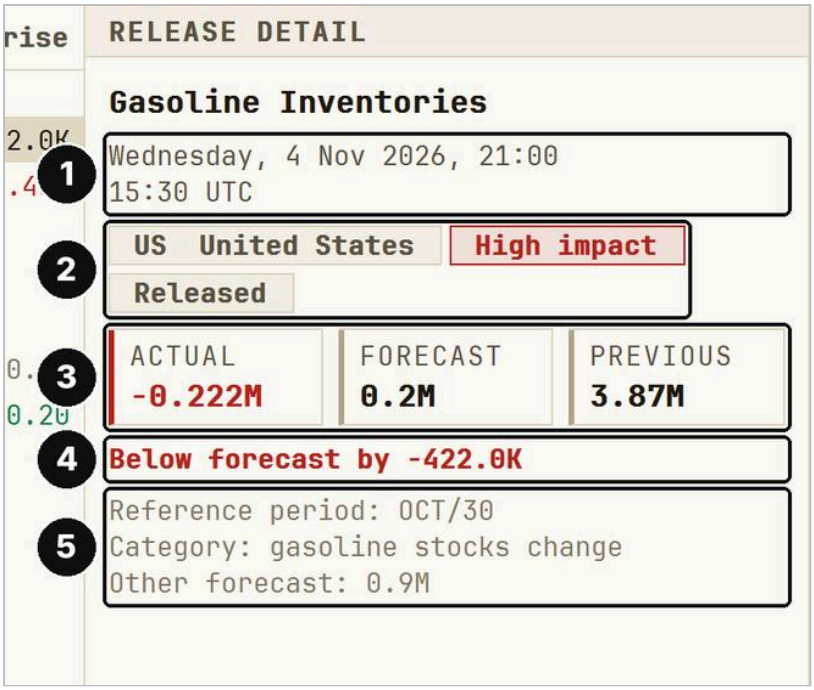


Figure 13.9 Release detail for a released US figure.

1. The date and time in your computer's time zone, and the same moment in UTC.
2. Pills: the economy, the impact grade and the status.
3. **Actual**, **Forecast** and **Previous**.
4. Above forecast, Below forecast, or In line with forecast.
5. Extra lines when the data has them.

Here is what each figure means:

- **Actual** — the figure that was published. Empty until the release comes out.
- **Forecast** — what economists expected. When a consensus forecast (the average of many economists' forecasts) exists, the calendar shows it; otherwise it shows the published forecast. If both exist and differ, the other one is listed below as **Other forecast**.
- **Previous** — the figure from the last release. If it was revised since, the line **Revised from** shows the old value (and the **Previous** cell in the table has a tooltip "Revised from ...").
- **Surprise** (table only) — **Actual** minus **Forecast**. A positive surprise is green, a negative one red.

Figures are shown exactly as they were published, with their own units: "3.2%", "216K", "-1.9M", "A$2.826B".

A release with no published time (an "all day" or tentative entry) shows a dash in the **Time** column and "No time published" in the detail pane. Within a day, these releases come first.

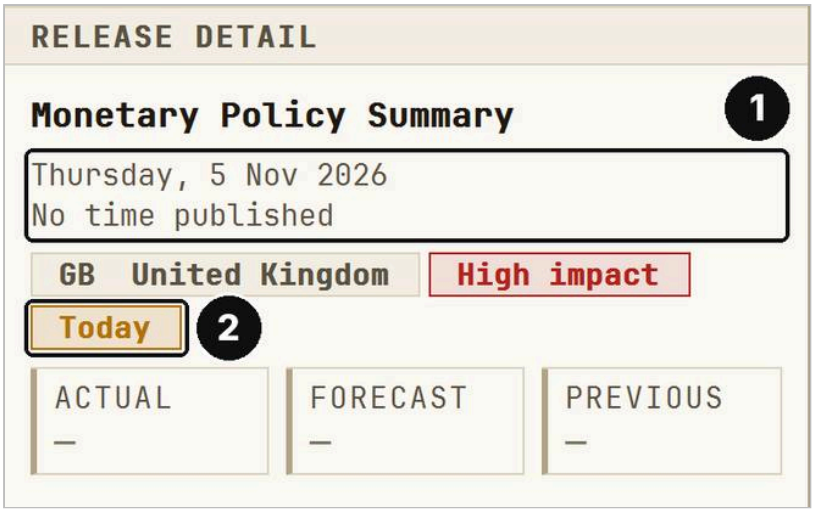


Figure 13.10 A release with no published time. Its status reads Today until the figures come in.

1. **No time published** instead of a time.
2. The status pill.

The status pill

Status	When
Released	The actual figure is in.
Due in 2h 5m (a countdown) or Due now	A timed release that is still to come. The countdown refreshes every minute.
Upcoming	A release with no time, on a future day.
Today	A release with no time, today.
Awaiting the actual	The time has passed, a forecast or previous figure exists, but the actual is not in yet.

13.6 Use the Week and Month calendar

The grid views show a whole week or month at a glance, with the busiest days easy to spot.

1. Click **Week** (or **Month**) at the top right.
2. Use ‹ and › beside the period name to move one week (or month) back or forward. **Today** jumps back to today.
3. Click a day. The table under the grid lists that day's releases.

4 Click a release in the table, or click a release line inside the day's cell. Its figures fill **Release detail**.

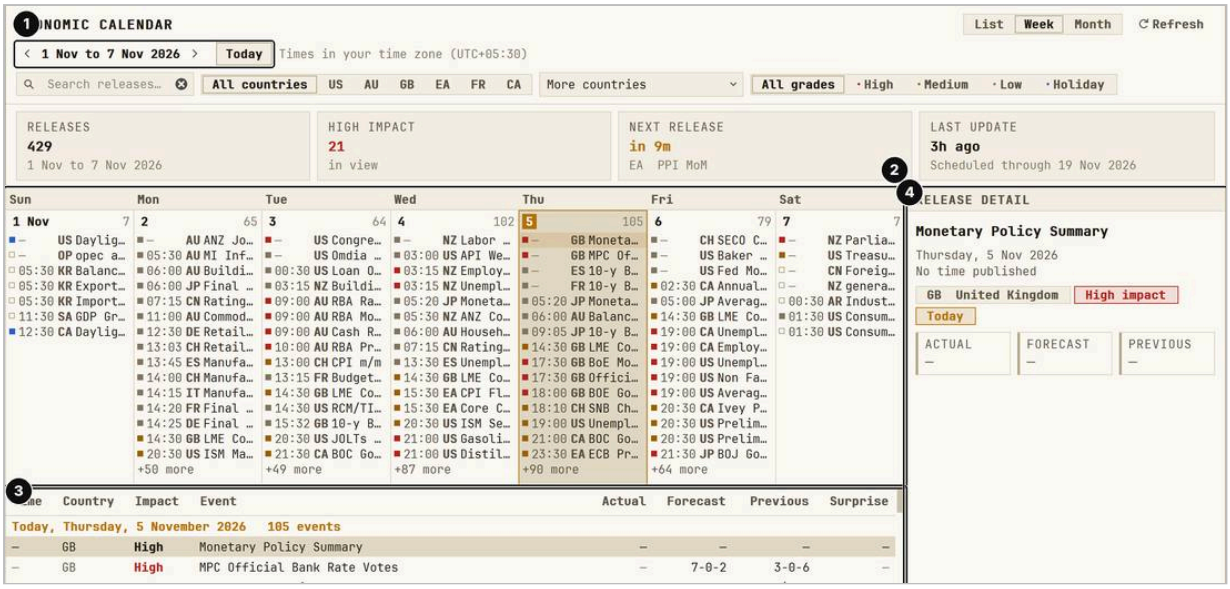


Figure 13.11 Week view. Today's cell is outlined; the table under the grid lists the picked day.

1. ‹ previous week, the week shown, › next week; **Today** jumps back to the current week and picks today.
2. The grid: one cell per day.
3. The picked day's releases.
4. The selected release's figures.

Each day cell shows:

- the day number (today's number sits in a filled box);
- the number of releases at the top right;
- one line per release: a small square in the grade colour (red High, amber Medium, grey Low, blue Holiday, an empty square for ungraded), the time, the country code and the name;
- "+N more" when the cell is full. The cell keeps the highest grades and the earliest times.

Hover a day to read its full list (up to 20 releases) in a tooltip. When the window is narrow, names are shortened first and times are dropped next; at the narrowest a cell shows only the coloured squares.

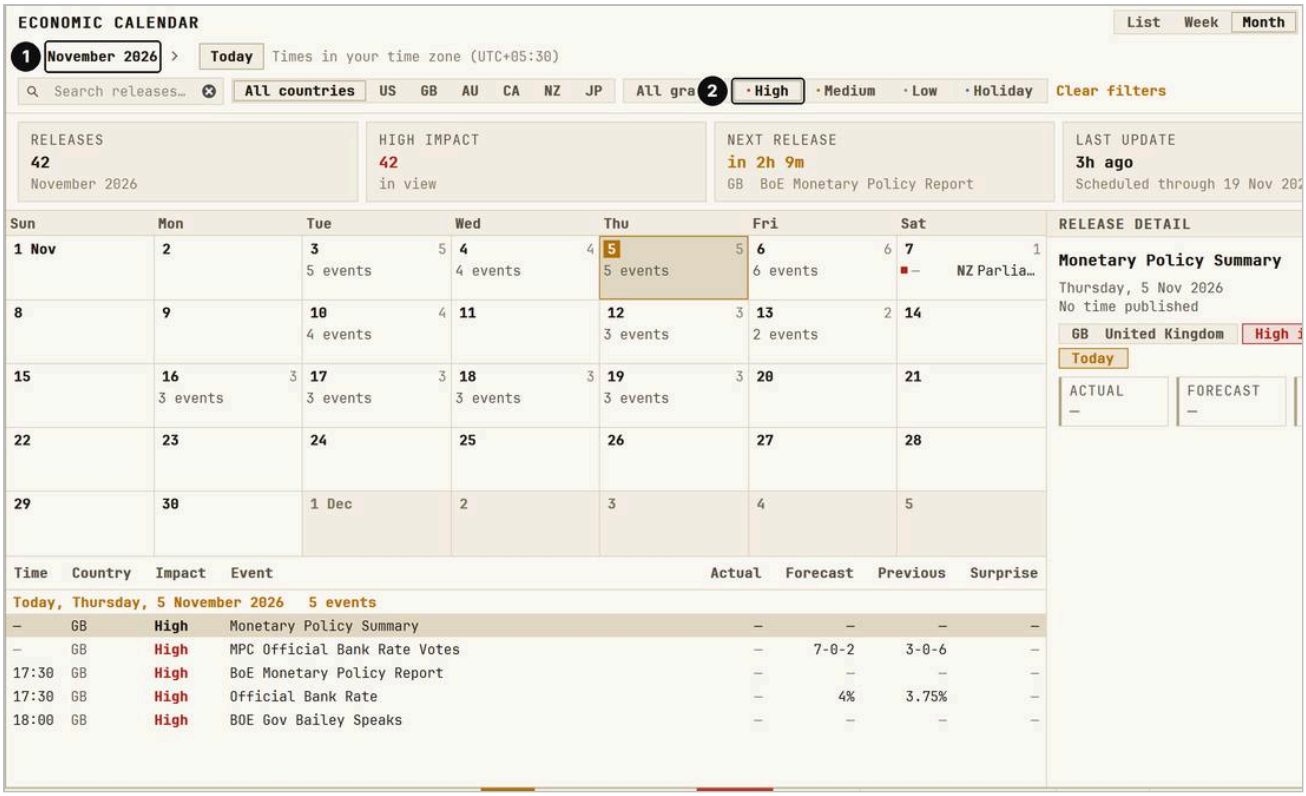


Figure 13.12 Month view with only High-impact releases. Days of the next month are drawn paler.

1. The month shown.
2. Filters work in the grid too.

Shortcut

When the grid has the keyboard focus: ← and → move one day, ↑ and ↓ move one week, Enter picks the day again. In the table, ↑ and ↓ move the selection and the detail follows it.

13.7 Open the calendar from elsewhere

The Economic Calendar is not in the **Screens** menu. You reach it in these ways:

- **The command line.** Type `ECAL` or `calendar` and press Enter. Typing `calendar` also lists the next High-impact releases under **Economic calendar** in the command line's results.
- **A release name.** Type the name of a release, for example `cpi` or `payrolls` (or `/economic payrolls` to search only economic data). Releases appear under **Economic calendar**, each with its date, region, name, time and impact grade. Upcoming releases come first; past ones fill the rest. Pick one and the calendar opens on that day with that release selected.

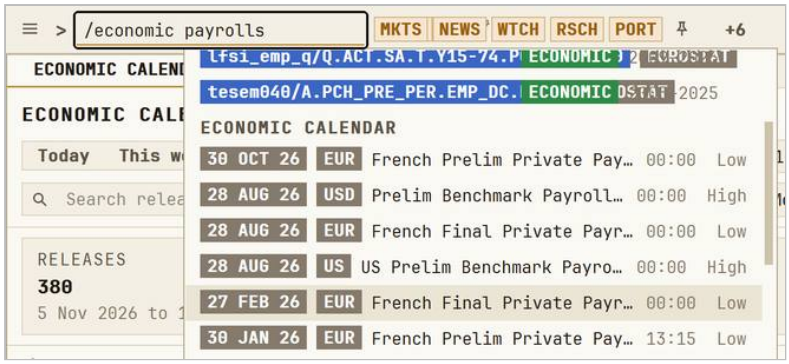


Figure 13.13 Typing /economic payrolls in the command line (outlined). Matching releases are listed under ECONOMIC CALENDAR.

Careful

Picking a release from the command line clears all your filters (countries, grades and search), and in List view sets the dates to that single day.

- **Global Data.** Click **Economic calendar** in the Global Data toolbar (tooltip: "Release calendar: what prints, when, and what was expected"). See **Chapter 32, Global Data** p. 648.

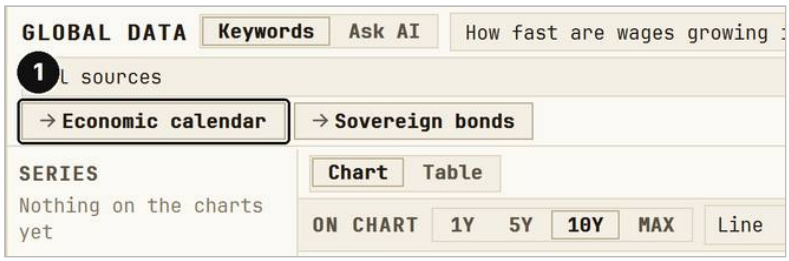


Figure 13.14 The Economic calendar button in the Global Data toolbar.

1 Opens the Economic Calendar.

- **The dashboard.** An **Economic calendar** tile shows the upcoming releases on your dashboard. Its tile menu has **Open Economic Calendar.** See **Chapter 8, Dashboard** p. 123.

13.8 Reference

Toolbar

Control	What it does	Default
List	Every release in the dates you pick, in time order.	On
Week	One week as a grid of days, with that day's list below.	
Month	One month as a grid of days, with that day's list below.	
Refresh	Loads the releases again and re-checks the last data update.	
Today / This week / Next 7 days / This month / Past 7 days	Sets the dates (List view). This week starts on your computer's first day of the week.	**Next 7 days**
From … to	Any dates, up to 92 days apart (tooltip "Pick any dates up to 92 days apart.").	Today to today + 6

Control	What it does	Default
‹ / ›	Previous / next week or month (Week and Month view).	
Today button	Jumps to today and picks it (Week and Month view).	
Time-zone caption	"Times in your time zone (UTC±hh:mm)".	
Search box	Searches release names in the dates shown (placeholder "Search releases, e.g. CPI, payrolls, rate decision").	Empty
All countries + six country chips	Filter by economy; several can be on.	All countries
More countries	Adds any other economy in view. Lines read "CODE Name (count)".	
All grades, High, Medium, Low, Holiday	Filter by impact grade; several can be on.	All grades
Clear filters	Turns off countries, grades and search. Shown only while a filter is on.	

Summary tiles

Tile	Big figure	Line below
Releases	Releases in view (after filters)	The dates or period shown
High impact	High-graded releases in view (red when above 0)	"in view"
Next release	Countdown: "now", "in 26m", "in 3h 25m", "in 3d 16h"	Country code and name. "Nothing still to come in view" when there is none
Last update	"26m ago", "5h ago", "2d ago"	"Scheduled through …" — the last day with scheduled releases

Table columns

Column	Shows
Time	Local time (HH:mm). A dash = no time published.
Country	Economy code (hover for the full name).
Impact	High (bold red), Medium, Low or Holiday; a dash when ungraded.
Event	The release name (hover for its category, when known).
Actual	Published figure, bold. Green above the forecast, red below.
Forecast	The consensus forecast, or the published forecast when there is no consensus.
Previous	Last release's figure. Tooltip "Revised from …" when revised.
Surprise	Actual minus forecast; green when positive, red when negative. Only when both read as numbers.

A bold row starts each day: "Thursday, 5 November 2026 105 events". Today's day row starts with "Today, " and is drawn in the accent colour. Columns do not sort when you click a header; the order is fixed (day, then untimed releases, then time, then grade, then country, then name). There is no right-click menu.

Release detail

Part	Shows
Title	Release name
When	Local date and time, then the UTC time; or "No time published"
Pills	Country, "High impact" (or Medium / Low / Holiday), status
Actual / Forecast / Previous	The three figures
Verdict	"Above forecast by …", "Below forecast by …" or "In line with forecast"
Extra lines	"Reference period: …", "Revised from: …", "Category: …", "Other forecast: …"

Release detail has no chart and no history of past releases. For a long history of an indicator, open it in **Chapter 32, Global Data** p. 648.

Messages

Message	Meaning
"Loading calendar…"	Releases are being fetched (shown after 0.15 s).
"Select a release to see its figures."	List view, nothing selected yet.
"Pick a day on the calendar, then a release, to see its figures."	Week / Month view, nothing selected yet.
"No release to select yet."	Release detail while the list is empty.
"Sign in to see a release's actual, forecast and previous figures."	Release detail while you are signed out.
"No releases match these filters." / "No releases in these dates."	Empty list.
"No releases on … match these filters."	Empty day in Week / Month view.
"Sign in to load the economic calendar. It loads as soon as your session is ready."	You are signed out.
"A range covers at most 92 days, so this one ends on …"	Your dates were more than 92 days apart.
"Part of the calendar could not be loaded (…). Showing what arrived."	One of the calendar's data sources did not answer.
"Too many releases to list at once: complete through …. Narrow the dates or search to see the rest."	The range holds more releases than one load can show.



Figure 13.15 A search that matches nothing.

What the calendar remembers

The calendar remembers on this computer: the view (List, Week, Month), the period button or your own dates, the week or month shown, the countries and grades you picked, and the search. A period button is worked out again from today, so **Next 7 days** always means the next seven days. It does not remember the selected day or release.

13.9 For advanced users

How the figures are worked out

- **Surprise** = Actual − Forecast. Large values are shortened: "+16.0K", "-3.46M", "+1.20B". A surprise on a percentage has no % sign: 3.2% against 3.0% shows "+0.20" (0.20 percentage points).
- When the forecast is a word ("Tentative") or a date, there is no surprise and no colour.
- The **Actual** colour compares the actual with the same forecast the **Surprise** column uses.

Where the releases come from

The calendar combines two release schedules into one list. The same release often appears in both, sometimes under slightly different names ("Non Farm Payrolls" and "Nonfarm employment", "Crude Oil Inventories" and "Crude Oil Stocks Change"). Two entries count as one release when all of these hold:

- the same economy (the euro area and the European Union count as one);
- times within five minutes of each other, or the same day when one has no time;
- names that share most of their words, after common spellings are folded together. Words that change the meaning must agree: "Core", "m/m", "y/y", "q/q", "flash", "prelim", "final", any number. So "Core CPI m/m" never merges with "CPI m/m".

The merged release keeps the most complete figures of the two, and the higher grade. That is why one calendar row can carry a consensus forecast, a category and a reference period at the same time.

Time zones

Times follow your computer's clock and time zone, not the time zone you choose in **Settings › General**: changing **Time zone** there does not move the calendar. The days the releases fall on follow the same clock, so a release just after midnight UTC can sit on the previous day in the Americas. To read a release in another time zone, use the UTC time in **Release detail**. Dates have a fixed style, such as "5 Nov 2026" with month names in your language; the **Date format** you pick in Settings does not apply here.

Do it with AI

Do it with AI

The AI assistant can read the calendar for you, and it can also work this screen like you do. Try:

- "What high-impact US and euro-area releases are due this week?"
- "What did US CPI print last month against the forecast?"
- "When is the next ECB rate decision?"
- "Open the Economic Calendar in Month view and show only High-impact releases for Japan."
- "Switch the calendar to Past 7 days and tell me which releases surprised the most."

Reading the calendar costs no credits; the AI chat turn itself is charged as usual. See **Chapter 37, AI Chat** p. 719.

Workflows

A workflow's **Open Tab** action can open the Economic Calendar, for example at the start of a morning routine. See **Chapter 40, Node Editor** p. 776.

13.10 Troubleshooting

If something goes wrong

The table says "Sign in to load the economic calendar". You are signed out, or your session is still starting. The calendar loads by itself as soon as you are signed in.

A release I expect is missing. Check the filters first: a grade chip hides every ungraded release, and the country chips hide other economies. Click **Clear filters**. Then check the dates: **Last update** shows how far ahead releases are scheduled ("Scheduled through ..."); releases further out are not listed yet.

The times look wrong by a few hours. The calendar uses your computer's time zone, shown in the caption "Times in your time zone (UTC...)", even when you picked another **Time zone** in `Settings › General`. If your computer's time zone is wrong, fix it in your operating system. Release detail also shows the UTC time.

A release shows no actual figure although its time has passed. The status reads **Awaiting the actual**. The figure appears after the next update; click **Refresh** a few minutes later.

The Surprise column is empty for a released figure. There was no forecast, or the forecast is a word or date rather than a number.

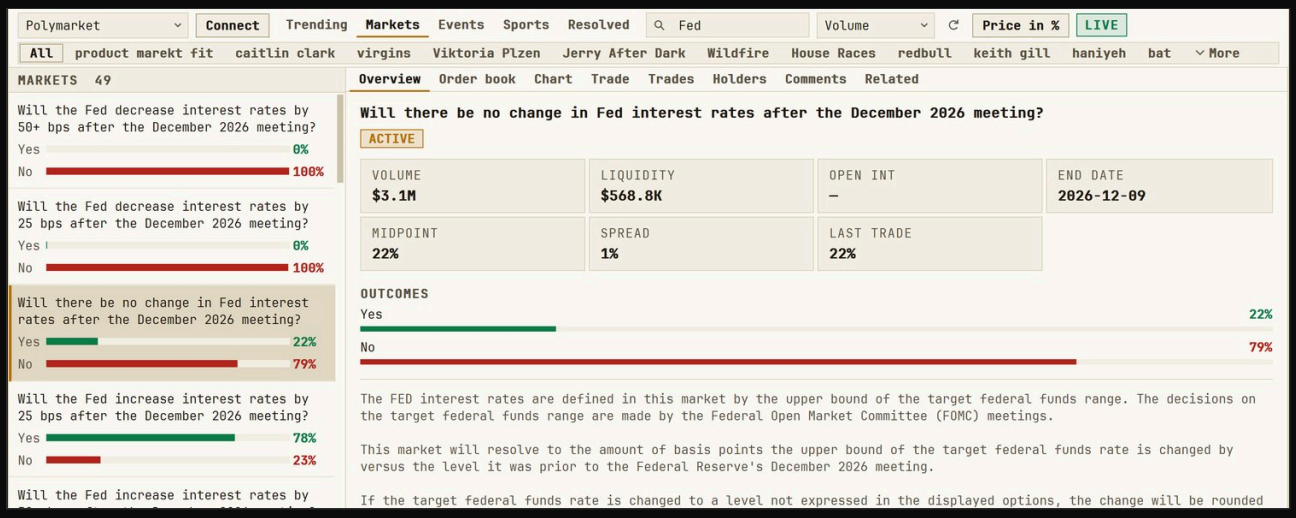
Clicking a column header does nothing. That is expected: the order is fixed by day and time. Use the filters and search to narrow the list.

I picked dates three months apart and the end date changed. A range covers at most 92 days. Pick a shorter range, or use **Month** view and the › arrow.

CHAPTER 14

Prediction Markets PRED

Browse the world's prediction markets — prices that read as the crowd's odds on elections, central banks, sport, crypto and more — with the order book, price history, trades and holders of every market.



At a glance

Open it	• Type `PRED` (or `kalshi`) in the command line and press **Enter** • **Screens** › **Trading** › **Prediction Markets** • Pick a market under **Prediction markets** in the command line
You need	• Signed in on any paid plan • No credits: browsing is free
Best for	• Reading the market's odds on an event • Seeing how those odds moved over time • Checking how deep and active a market is
Time to learn	10 minutes
Related	**Chapter 11, News** p. 182, **Chapter 13, Economic Calendar** p. 218, **Chapter 37, AI Chat** p. 719

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14.1 Screen tour

A **prediction market** is a market where people trade on the outcome of a future event: "Will the Fed cut rates in December?", "Who will win the election?". Each outcome trades at a price between 0 and 1 dollar. A share pays 1 dollar if the outcome happens and nothing if it does not, so the price reads as the crowd's **probability**: a "Yes" share at 0.62 dollars means the market gives the event about a 62% chance.

The Prediction Markets screen shows the markets of two exchanges, **Polymarket** and **Kalshi**. You can browse, search and study every market without an account of your own.

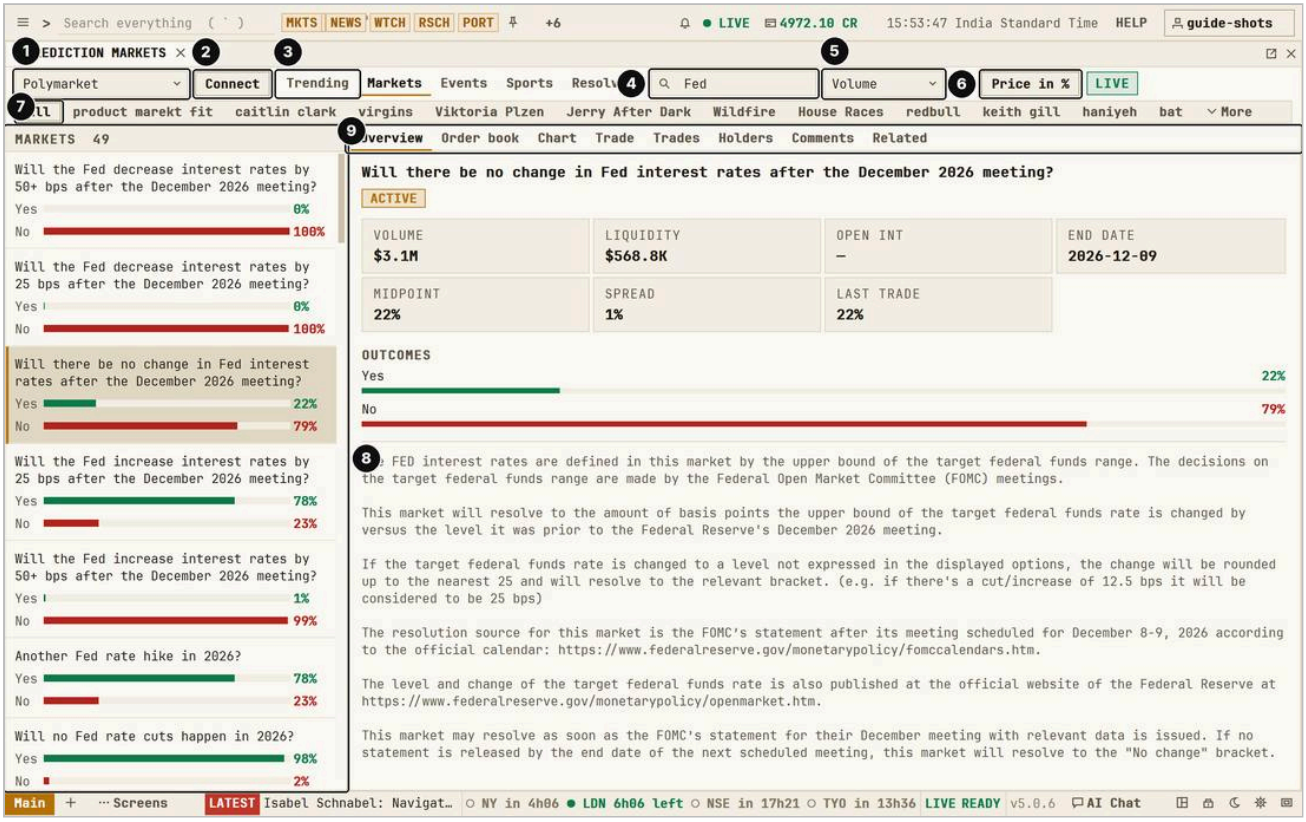


Figure 14.1 Prediction Markets on Polymarket, after a search for "Fed".

1. The exchange: **Polymarket** or **Kalshi**.
2. **Connect** links your own exchange account. Optional: only needed to trade.
3. The views: **Trending**, **Markets**, **Events**, **Sports**, **Resolved**.
4. Search the exchange's markets.
5. Sort by **Volume**, **Liquidity** or **Date**.
6. Show prices as a percentage, in cents or in dollars.
7. Category chips. **More** holds the chips that do not fit.
8. The market list: one card per market.
9. The selected market, on eight tabs.

The screen has three parts:

- **The command bar** across the top: the exchange, your account, the views, search, sort, refresh, the price unit, the **Live** indicator, and a row of categories.
- **The market list** on the left: one card per market (or per event). The heading counts the cards, for example "MARKETS 50".
- **The detail panel** on the right: everything about the market you picked, on eight tabs.



Figure 14.2 The command bar.

1. Refresh: loads the list again.
2. **Live**: prices stream from the exchange as they change. **Snapshot**: prices are from the last refresh.

14.2 Quick start

1. Type `PRED` in the command line and press `Enter`. The screen opens on Polymarket's most traded markets, and the first market is already selected.

2. Click **Search markets...**, type `Fed` and press `Enter`. The list shows markets about the US Federal Reserve.

3. Click a card. The detail panel shows the question, its status, its figures and its outcomes.



Figure 14.3 A market's Overview tab.

4. Read **Outcomes**: the percentage beside **Yes** is the market's probability that the event happens.

5. Click the **Chart** tab to see how that probability moved over the last day.



Figure 14.4 The Chart tab shows the probability of the first outcome over one day.

Note

Prices here are the exchanges' own prices. Fincept does not trade, bet or give odds of its own.

14.3 Browse and search markets

Use the views, the categories, search and sort to find a market.

The views

View	Polymarket lists
Trending	The markets with the most money traded overall (the category is ignored).
Markets	Single markets, in the order picked in **Sort markets by**. Default view.
Events	Events: a group of related markets, for example every candidate of one election.
Sports	Sports markets.
Resolved	Despite its name, events that are still open, ordered by end date (latest first).

Each view loads 50 cards. The list refreshes by itself every 60 seconds while the screen is open.

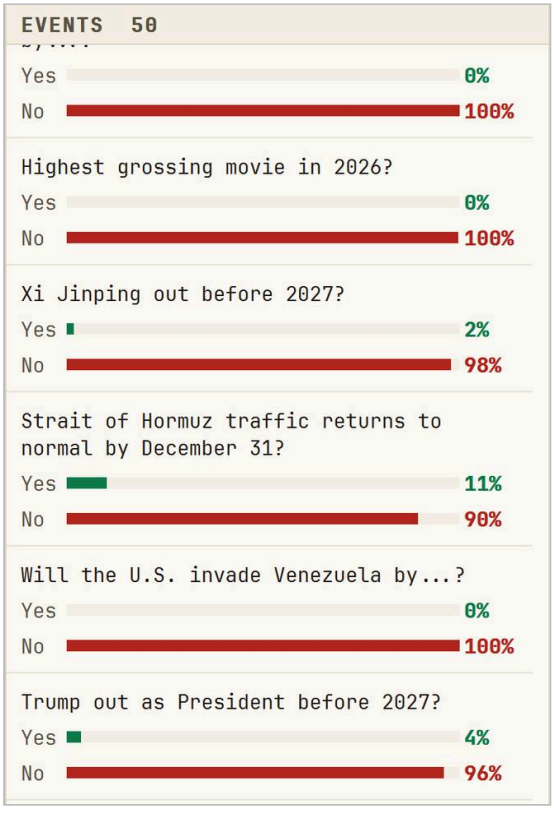


Figure 14.5 Events view. An event card shows its first market's outcomes.

Categories

The second line of the command bar holds category chips: **All**, then up to twelve of the exchange's own topic tags. Chips that do not fit the width move under **More**. Click a chip to show only that topic; click **All** to show everything again.

Search

Type words in **Search markets...** and press Enter. The search returns up to 50 open markets whose question matches. Press Enter in an empty box to go back to the current view.

Sort

Sort markets by has three choices:

- **Volume** — the most money traded first (default).
- **Liquidity** — the most money waiting in the order book first.
- **Date** — the newest markets first.

Sort applies to the **Markets**, **Events** and **Sports** views.

Read a market card

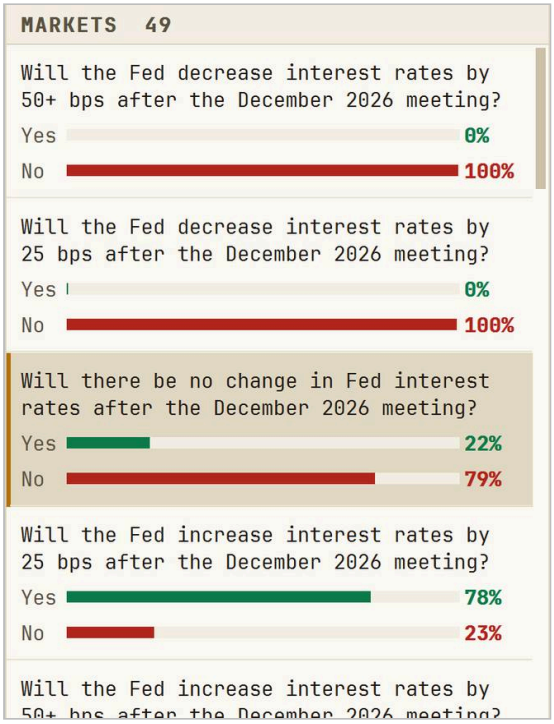


Figure 14.6 Market cards. The selected card has a coloured bar on its left.

Each card shows the question and up to two outcomes. For a Yes/No market these are always **Yes** (green bar) and **No** (red bar), each with its price. A market with several outcomes (for example several candidates) shows its two leading outcomes in other colours. A card with no outcome prices shows its volume instead, and an event card also how many markets it holds ("12 mkts"). A closed market is drawn in grey. Hover a card to read its state: "Open for trading", "Not currently trading" or "Closed: no further trading".

Why it works this way

Why don't Yes and No always add up to 100%? The two prices are the last prices of two separate shares. The difference (for example 22% + 79% = 101%) is the market's spread and rounding.

Price unit

Click **Price in** % to cycle the unit for every price on the screen: percent (**52%**), cents (**52¢**) or dollars (**$0.52**). The three mean the same thing. Your choice is saved to your account.



Figure 14.7 Prices in cents. The button (outlined) now reads Price in ¢, and every price on the screen follows it.

14.4 Read a market

Click a card and the detail panel opens on **Overview**.



Figure 14.8 Overview of the selected market.

Tile	Meaning
Status (ACTIVE, INACTIVE, RESOLVED)	Taking orders, not trading now, or the answer is known.
Volume	Money traded in this market so far.
Liquidity	Money resting in the order book, ready to trade.
Open int	Open interest: the number of shares still held. It shows a dash.
End date	When the market is due to close.
Midpoint	Halfway between the best buy and the best sell price.
Spread	The gap between the best buy and the best sell price.
Last trade	The price of the latest trade.

Below the figures, **Outcomes** lists every outcome with its price and a bar. Hover a price to read it both ways, for example "Implied probability: 52% ($0.52 per share)". At the bottom is the market's description: the exact rules that decide how it resolves. Read them before you rely on a price: two similar-looking markets can have different rules.

14.5 Order book, chart, trades and holders

The other tabs show how the market trades. Selecting another market always returns to **Overview**.

Order book

The **order book** lists the prices at which people are waiting to sell (asks, red, at the top) and to buy (bids, green, at the bottom). **PRICE** is the price, **SIZE** the number of shares at that price, **TOTAL** the shares added up from the middle outwards. The line in the middle shows the **SPREAD** between the best ask and the best bid. The depth bars show where most shares wait. The book updates live while **Live** is lit.

Chart

The **Chart** tab draws the price of one outcome over time, as a probability from 0 to 100.

- **INTERVAL**: **1H**, **6H**, **1D** (default), **1W**, **1M** or **ALL**.
- **OUTCOME**: which outcome to draw.



Figure 14.9 The same market over one week.

Tip

Changing **OUTCOME** redraws the chart over one day. Pick the outcome first, then the interval.

Trades

The latest trades in this market, newest first: **Time** (UTC), **Type**, **Side** (**BUY** green, **SELL** red), **Price** (as a decimal, for example 0.1300) and **Size** (shares). On Polymarket the list is taken when you select the market; select it again to refresh it.



Figure 14.10 The Trades tab.

Holders

The largest holders of each outcome (up to 20 per outcome): **Rank**, **Trader** (a display name or a shortened wallet address), **Size** (shares) and **Avg price**. Click a header to sort.

Comments and Related

Comments shows the market's discussion: up to 50 comments, each with its author, date (UTC) and likes. **Related** lists the other markets of the same event; click one to open it. Both are Polymarket only.

14.6 Kalshi

Pick **Kalshi** in the exchange list to switch. The screen keeps the same layout, with a few differences.

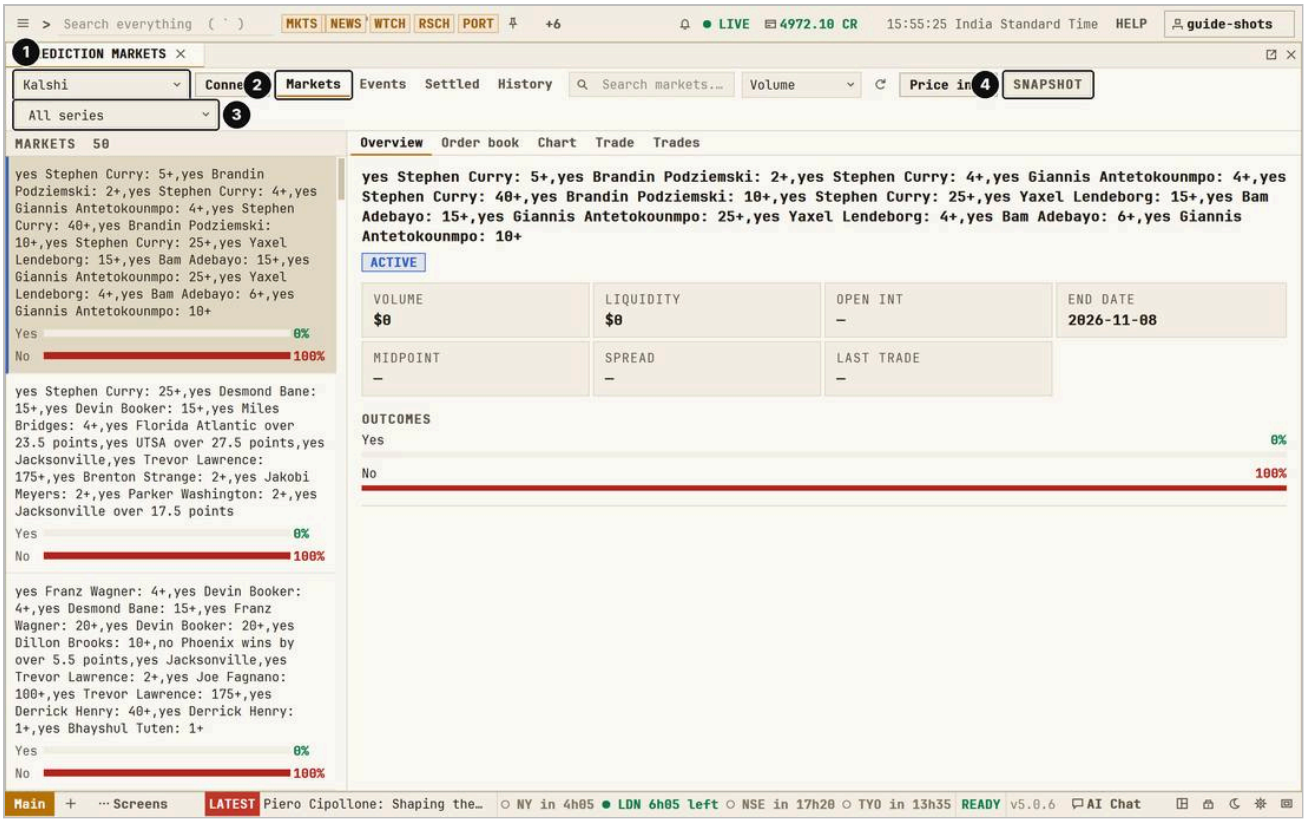


Figure 14.11 Kalshi. The categories become a series list. Kalshi's markets here have no live prices until you connect your own Kalshi account (the indicator reads SNAPSHOT).

1. The exchange list.
2. Kalshi's views: **Markets**, **Events**, **Settled**, **History**.
3. **All series**: pick one series (a family of markets) by its code.
4. SNAPSHOT: prices from the last refresh.

	Polymarket	Kalshi
Views	Trending, Markets, Events, Sports, Resolved	Markets, Events, Settled, History
Categories	Chips + **More**	**All series** list
Sort	Applies	Has no effect
Search	The exchange's own search	Searches the open markets' titles and codes
Live prices	After you select a market	Only with your own Kalshi account connected
Midpoint, Spread, Last trade	Shown	Dashes
Holders, Comments, Related tabs	Shown	Not shown
Chart title	PROBABILITY	PRICE
Chart ALL	The whole history	The last seven days
Status strip (bottom left, when the exchange reports it)	—	OPEN / PAUSED / MAINT / CLOSED, and the next session

On Kalshi the Yes and No prices are the best bids of each side, so they rarely add up to exactly 100%. Kalshi's **History** view lists its archived markets; **Settled**, like Polymarket's **Resolved**, lists events by end date.

The status strip at the bottom of the screen appears only when it has something to say: Kalshi's exchange status and next session on the left, and, on the right, **Connecting**, **Reconnecting** or **Feed error** while the live price feed is not working (hover it for the reason).

The list also offers **Fincept Internal**, a demonstration exchange with three sample markets. It has no price history, no trades and no trading.

14.7 Connect an exchange account (optional)

You only need an account to place orders and see your balance and positions. Everything else works without one.

> **Careful**
>
> Connecting an exchange account lets this screen place **real-money orders** on that exchange. Orders, cancels and **CANCEL ALL** go straight to the exchange with **no confirmation step**. Prediction markets are not available in every country: check that you may use the exchange where you live. Fincept Paper does not cover prediction markets.

Click **Connect** to open **Prediction Markets — Connect Account**. It has one tab per exchange.



Figure 14.12 The Connect Account dialog, Polymarket tab.

Polymarket asks for:

- **Private Key:** your wallet's private key (64 hexadecimal characters). Orders are signed on your computer; the key is stored encrypted on this computer only and is never uploaded. Use a separate funding wallet, never your main one.
- **Funder Address:** optional; worked out from the key for Polymarket wallets.

- **Signature Type:** the kind of Polymarket wallet: **Polymarket Deposit Wallet (accounts since May 2026)** (default), **Polymarket Proxy Wallet (email login)**, **Externally Owned Account (EOA)** or **Polymarket Gnosis Safe (browser wallet)**.

Kalshi asks for an **API Key ID** and its **Private Key (PEM)** (paste it, or use **Load from file...**), both created in your Kalshi account. The box **Use demo (paper trading) environment** points everything (markets and orders) at Kalshi's own demo exchange, where you trade play money. Only you can tick it: the AI assistant is not allowed to change it.

Each tab has **Save**, **Test Connection** (it reports "Connected as ..." or why not) and **Clear** (removes the stored key from this computer after a confirmation). Keys never leave this computer and are locked with your PIN.

Once you save a key, the account button shows a green tick and the exchange's name (**Polymarket**, **Kalshi** or **Polymarket + Kalshi**). When the terminal has checked the key with the exchange, the button shows your account's name. If the exchange refuses the key, the button goes back to **Connect** and a notification says why.

While the exchange you are looking at has a saved key, two more things appear: the **Trade** tab shows an order ticket, and an **OPEN ORDERS** list opens under the detail panel. Both need your own exchange account, so this guide describes them from the terminal's design and has no picture of them.

The Trade tab

Without a saved key for the exchange, the **Trade** tab says "Connect an account to place orders". With one, the ticket shows **Available** (your balance on the exchange) and **Position** (your shares in this market, or "No position"), then:

Field	What to enter
Buy / Sell	The side. The chosen side is filled in green (Buy) or red (Sell).
Outcome	Which outcome to trade.
Price (0-1)	Your limit price in dollars, above 0 and below 1 (0.50 = 50%).
Size	The number of shares.
Order type	**GTC** (good till cancelled: waits in the book), **FOK** (fill or kill: all at once or nothing), **FAK** (fill and kill: fill what you can now, cancel the rest).
Place order	Sends the order to the exchange at once, with no confirmation.

The line under the button reports what happened:

Message	Meaning
"Invalid price: enter a value between 0 and 1"	Nothing was sent.
"Invalid size: it must be above 0"	Nothing was sent.
"Submitting…"	The order is on its way.
"Order placed. ID: …" (green)	The exchange accepted the order; the fields are emptied.
The exchange's own reason (red)	The exchange refused the order, for example below its minimum size.

Open orders

OPEN ORDERS lists your waiting orders on the exchange you are looking at: **TIME** (when the order expires), **MARKET**, **SIDE** (BUY green, SELL red), **OUTCOME**, **TYPE**, **PRICE**, **SIZE**, **FILLED**, **STATUS** and **ACTIONS** — a circular arrow (**Refresh order state**) and an × (**Cancel order**). On Kalshi, double-click a price to change it: **Amend price** asks for a "New limit price (0.01 – 0.99)". **CANCEL ALL** cancels every listed order at once (it reads "CANCELLING..." meanwhile). Cancels are not confirmed.

14.8 Reference

Command bar

Control	What it does	Default
Exchange list	**Polymarket**, **Kalshi**, **Fincept Internal** (demo). Switching clears the search and reloads.	Polymarket (every time the screen opens)
Connect	Opens the Connect Account dialog. Shows the account name once connected.	
View tabs	Polymarket: Trending, Markets, Events, Sports, Resolved. Kalshi: Markets, Events, Settled, History.	Markets
Search markets...	Searches on Enter; up to 50 results.	Empty
Sort markets by	**Volume**, **Liquidity**, **Date** (newest first).	Volume
Refresh (circular arrow)	Loads the list again.	Automatic every 60 s
Price in %	Cycles %, ¢, $.	%
Live / Snapshot	Whether prices are streaming.	
Category chips / More	Polymarket topics (All + up to 12).	All
All series	Kalshi series codes.	All series
OPEN ORDERS / CANCEL ALL	Under the detail panel, only while the exchange has a saved key.	

Detail tabs

Tab	Shows
Overview	Status, Volume, Liquidity, Open int, End date, Midpoint, Spread, Last trade, Outcomes, description
Order book	PRICE, SIZE, TOTAL; SPREAD line
Chart	INTERVAL (1H, 6H, 1D, 1W, 1M, ALL), OUTCOME; probability line
Trade	Order ticket (needs a saved exchange key, see "Connect an exchange account" above)
Trades	Time (UTC), Type, Side, Price, Size; up to 200 rows
Holders	Rank, Trader, Size, Avg price (Polymarket)
Comments	Author, text, date (UTC), likes (Polymarket)

Tab	Shows
Related	Other markets of the same event (Polymarket)

Status words

Status	Exchange	Meaning
ACTIVE	Polymarket	Taking orders.
INACTIVE	Polymarket	Not trading now.
RESOLVED	Polymarket	The outcome is decided; no more trading.
OPEN	Kalshi	Open for trading.
PENDING	Kalshi	Not open yet.
PAUSED	Kalshi	Halted by the exchange for a while.
CLOSED	Kalshi	Trading has stopped; waiting for the result.
SETTLED	Kalshi	Result decided and paid out.

Messages

Message	Meaning
"Loading markets…"	The list is loading.
"No markets to show." / "No events to show."	The view or search returned nothing.
"No order book data"	The exchange sent no book for this outcome.
"No price history available"	No history for this market and interval.
"No comments yet" / "No related markets"	Nothing to show on that tab.
"Connect an account to place orders"	The Trade tab without a connected account.

Errors (for example the exchange not answering) arrive as desktop notifications that start with the exchange's name. The same background error is repeated at most once every ten minutes.

14.9 For advanced users

Reading prices as probabilities

A price of 0.62 dollars for **Yes** means: buying one share costs 62 cents and pays 1 dollar if the event happens. If you think the true chance is higher than 62%, the market looks cheap to you; if lower, expensive. Thin markets (low **Liquidity**, a wide **Spread**) can move a lot on a single trade, so read their prices with care.

From the command line

Type any question words in the command line (three letters or more), for example `fed rate cut`. Up to six Polymarket markets appear under **Prediction markets**, each with its leading outcome's price and volume. Pick one to open this screen on Polymarket with the search filled in.

Do it with AI

Do it with AI

The AI assistant works this screen the way you do: it can switch exchange, search, open tabs and read what is shown. It can never place, cancel or change an order without your approval — even opening the **Trade** tab asks you first — and it can never switch Kalshi between demo and real money. Try:

- "Open Prediction Markets, switch to Kalshi and read me the top markets."
- "Search Polymarket for 'Fed' and tell me the leading outcome of the first market."
- "Open the selected market's order book and describe the spread."

What is remembered

The screen remembers the view, category, sort and search text on this computer, and the price unit in your account. It always opens on Polymarket. Exchange keys stay on this computer, encrypted and locked with your PIN.

14.10 Troubleshooting

If something goes wrong

The indicator says Snapshot instead of Live. Live prices stream only after you select a market. On Kalshi they stream only with your own Kalshi account connected. Prices still refresh with the list every 60 seconds.

Nothing loads, and a notification mentions a name that could not be resolved. Some internet providers block prediction-market websites. Try another network, or change your computer's DNS server, and click Refresh.

Sort does nothing. On Kalshi, and in the Trending and Resolved views, the order is fixed.

My order was refused. The exchange's reason is shown in red under the ticket, for example a price outside 0–1, a price step the market does not allow, or a size below the exchange's minimum.

PART III

Trading

Connect brokers, practise on Fincept Paper, trade equities, F&O and crypto, automate strategies and let AI models compete.

15	Brokers & Accounts	
16	Equity Trading	EQTR
17	F&O	
18	Crypto Trading	CRYP
19	Algo Trading	ALGO
20	Alpha Arena	ARNA
21	Action Center	

CHAPTER 15

Brokers & Accounts

Where your orders go. Every trading screen sends orders to an account — your always-ready Fincept Paper account for practice, or a broker account you connect yourself. This chapter covers all 31 supported brokers, how to connect one, and how paper, demo and live accounts differ.

At a glance

Open it	• Type `EQTR` in the command line, press **Enter**, then click **Accounts** in the screen's top bar • In Equity Trading, click **Log in again** on a red session banner
You need	• Fincept Paper: any paid plan • Linking a broker account: a plan that includes broker accounts • Live orders through a broker: a plan that includes live order routing
Best for	• Practising with paper money before you risk real money • Connecting your own broker to trade from the terminal • Checking which account an order will go to
Time to learn	15 minutes
Related	**Chapter 16, Equity Trading** p. 264, **Chapter 17, F&O** p. 284, **Chapter 21, Action Center** p. 381, **Chapter 18, Crypto Trading** p. 298, **Chapter 19, Algo Trading** p. 331

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15.1 Screen tour

An **account** is the place an order goes. Fincept Terminal has two kinds:

- **Fincept Paper** — your paper trading account. It is ready the moment you sign in, it trades every market with simulated money, and it cannot be removed. Nothing you do on it reaches a real broker.
- **Broker accounts** — accounts at your own broker (Zerodha, Interactive Brokers, Alpaca and 28 more). You add them yourself, with your own login. Orders on them are real orders at that broker (or demo orders, if you log in to the broker's demo).

You manage both in one window, **Manage Broker Accounts**. You open it from the Equity Trading screen (**Chapter 16, Equity Trading** p. 264): its top bar holds everything about accounts. At the right end of that bar, a status pill (for example **1/1 connected**) counts how many of your accounts are connected; Fincept Paper counts as one, and it is always connected.



Figure 15.1 The account controls at the left of the Equity Trading top bar.

1. The account this screen trades. Click to switch.
2. **Accounts** opens Manage Broker Accounts.
3. What the account's orders move: **Paper**, **Demo** or **Live**.

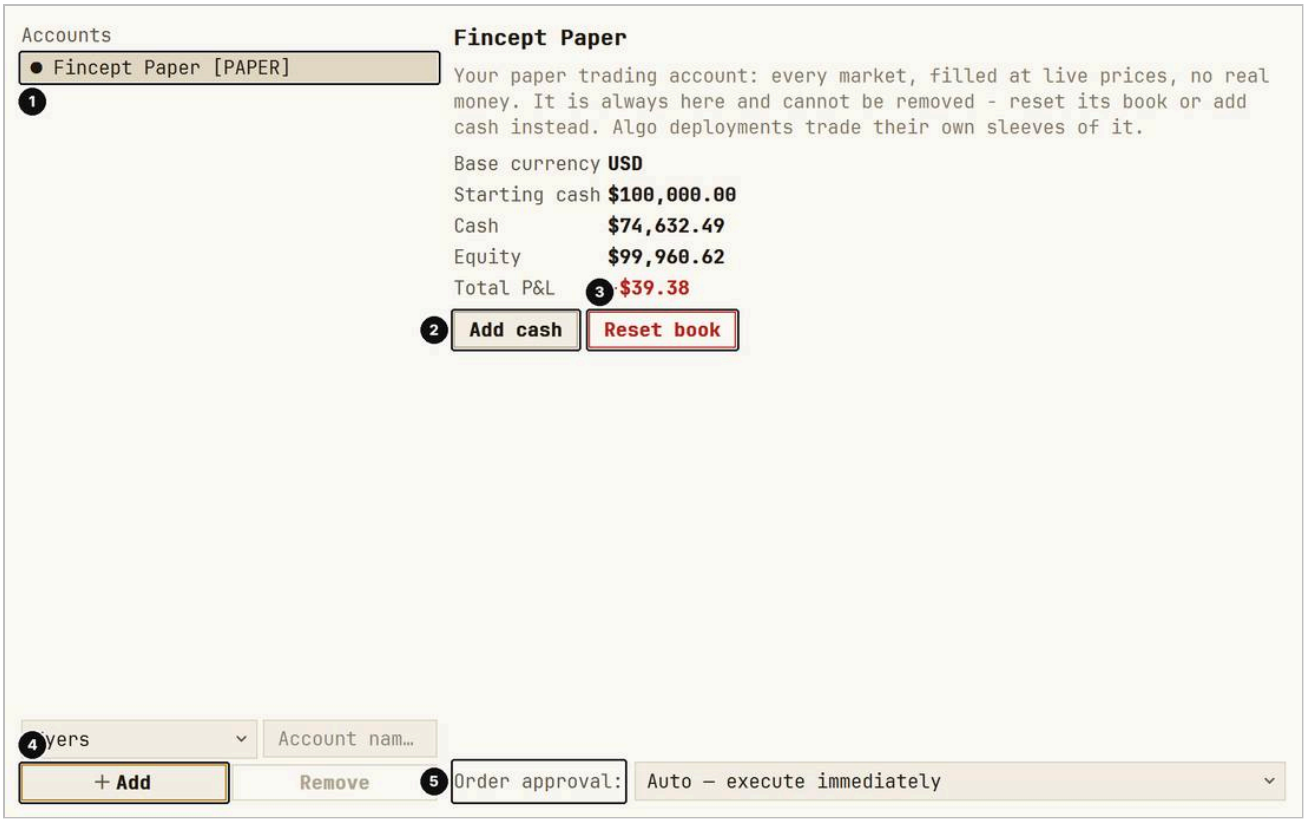


Figure 15.2 Manage Broker Accounts with the Fincept Paper account selected.

1. Your accounts. Fincept Paper is always first.
2. **Add cash** deposits simulated money.
3. **Reset book** starts the paper book again.
4. Pick a broker, then **Add** a broker account.
5. **Order approval**: send at once, or wait for your approval.

15.2 Quick start

Look at your paper account. This takes one minute and needs no broker.

1. Type `EQTR` in the command line and press `Enter`. The account button at the left of the top bar says **Fincept Paper**, and a green **Paper** badge shows that orders here are simulated.

2. Click **Accounts**. The **Manage Broker Accounts** window opens.

3 Click **Fincept Paper** in the **Accounts** list. The right side shows your paper account: its base currency, starting cash, cash, equity and total profit or loss.

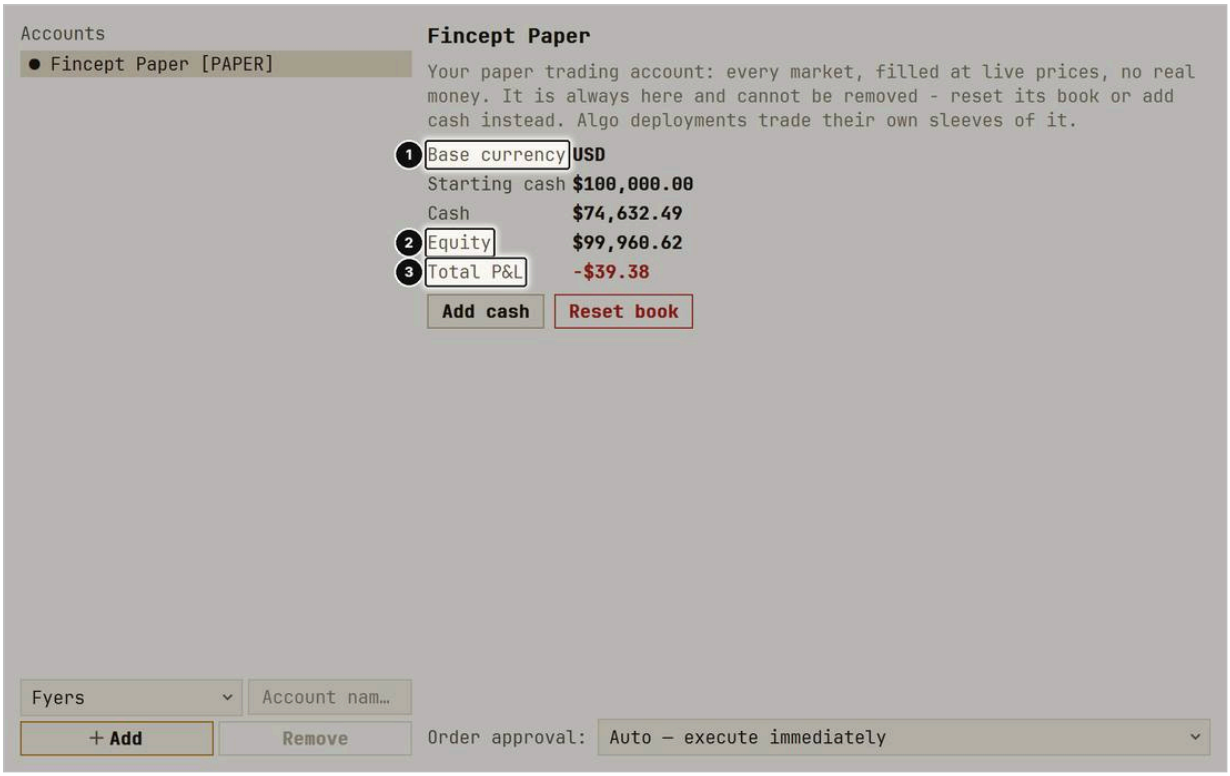


Figure 15.3 The Fincept Paper account's figures.

1. The currency the book counts in.
2. Cash plus the value of what you hold.
3. Profit or loss since the start.

4 Press Esc or close the window. You are ready to place paper orders (**§16.2 Quick start** p. 266).

15.3 Paper, demo and live

Every account has a **mode**. The mode decides what an order moves.

Mode	Which accounts	What an order does	Shown as
PAPER	Only Fincept Paper	A simulated fill on Fincept's servers, at live market prices. No broker, no real money.	**Paper** badge (green)
DEMO	A broker account whose login points at that broker's own demo or practice environment	A real order in the broker's demo account. No real money moves.	**Demo** badge (amber)
LIVE	Every other broker account	A real order with real money at your broker.	**Live** badge (red)

A broker account has no paper switch. Its mode comes from the login you give it: demo keys make a DEMO account, live keys make a LIVE account. To practise, use Fincept Paper.

Why one paper account?

Paper trading used to be a switch on each broker account. Now there is one Fincept Paper account for every market, so your practice book is in one place, in one currency, and a click can never send a "practice" order to a real broker by mistake.

What Fincept Paper does

- It trades every market the terminal shows prices for: Indian stocks and F&O, US, Canadian, European and Asian stocks, futures, crypto and currencies.
- Orders fill at live market prices. The ticket shows the fee rule: **Simulated fills, 0.1% fee per trade**.
- Money is kept in one **base currency** (shown on the Fincept Paper page). A position in another currency keeps its prices in that currency; cash, profit and loss are counted in the base currency at the live exchange rate.
- It starts with ₹10,00,000 (ten lakh) if your base currency is the rupee, ¥10,000,000 for the yen, and 100,000 of every other currency. You can add cash or start again (see **§15.10 Manage your Fincept Paper account** p. 259).
- Market closed? A paper order waits and fills at the next open. The ticket says so.

Credits

Placing a paper order is free. Each paper **fill** costs a small number of credits; the order ticket shows the price above the Buy button (**Paper trading:**). An order that never fills costs nothing.

15.4 Supported brokers

The terminal connects to 31 brokers. The tables list each one by region with the markets it trades and how you log in. A broker that has a **demo** environment can be connected as a DEMO account.

India

All Indian brokers trade in rupees and have no demo environment, so every Indian broker account is LIVE. Their login token ends once a day (the time in the table, Indian time). Brokers marked **Auto** in the last column can log in again by themselves with the details you saved; the others need you to log in again each day.

Broker	Exchanges	How you log in	Token ends	Re-login
Zerodha	NSE BSE NFO BFO CDS BCD MCX	API key and secret, then automatic login (user ID, password, TOTP secret) or a browser login	06:00	Auto (with **Auto-login (TOTP)**)
Angel One	NSE BSE NFO BFO MCX CDS NCDEX	Client code, API key, MPIN, TOTP secret	00:00	Auto
Upstox	NSE BSE NFO CDS BFO BCD MCX	One of four: access token, PIN + TOTP, browser login, read-only analytics token	03:30	Auto (PIN + TOTP)
Dhan	NSE BSE NFO BFO CDS BCD MCX	Client ID with an access token, or PIN + TOTP secret	every 24 h	Auto (PIN + TOTP)
Kotak Neo	NSE BSE NFO BFO MCX	Access token, mobile number, UCC, MPIN, TOTP secret	06:00	Auto

Broker	Exchanges	How you log in	Token ends	Re-login
Groww	NSE BSE NFO BFO	API key and secret	06:00	Auto
IIFL	NSE BSE NFO BFO MCX CDS BCD	Interactive and market-data key pairs	every 24 h	Auto
Samco	NSE BSE NFO BFO MCX CDS	API key and secret	08:00	Auto
Fyers	NSE BSE NFO BFO MCX CDS	Client ID and secret key, then a browser login	08:15	Daily login
AliceBlue	NSE BSE NFO BFO CDS BCD MCX	User ID, API secret, auth code from its login page	06:00	Daily login
5Paisa	NSE BSE NFO BFO MCX CDS	App keys, client code, PIN, current TOTP code	23:59	Daily login
Motilal Oswal	NSE BSE NFO CDS BFO BCD MCX	User ID, API key and secret, password, date of birth or PAN, TOTP	06:00	Daily login
Shoonya	NSE NFO BSE BFO MCX CDS BCD	User ID, OAuth client ID and secret, auth code	06:00	Daily login
Flattrade	NSE BSE NFO BFO MCX CDS	Client ID, API key and secret, request code	05:00	Daily login
Paytm Money	NSE BSE NFO BFO	API key and secret, request token from its login page	00:00	Daily login
Tradejini	NSE BSE NFO BFO MCX CDS	API key, password, current TOTP code	every 24 h	Daily login
ICICI Direct	NSE NFO	API key and secret, API session from its login page	00:00	Daily login

What each Indian broker gives the terminal (**Stream** = live prices pushed as they change; **Depth** = the order book; **Chain** = the option chain; **Bracket** = bracket or cover orders; **GTT** = good-till-triggered orders):

Broker	Stream	Depth	Chain	Bracket	GTT
Zerodha	Yes	Yes	—	Yes	Yes
Angel One	Yes	Yes	—	—	—
Upstox	Yes	Yes	Yes	—	—
Dhan	Yes	Yes	Yes	Yes	Yes
Kotak Neo	Yes	Yes	—	—	—
Groww	—	Yes	Yes	—	Yes
IIFL	Yes	Yes	—	—	—
Samco	Yes	Yes	Yes	Yes	—
Fyers	Yes	Yes	Yes	Yes	Yes
AliceBlue	Yes	—	Yes	Yes	—
5Paisa	Yes	Yes	—	—	—
Motilal Oswal	Polled	—	—	—	—

Broker	Stream	Depth	Chain	Bracket	GTT
Shoonya	Yes	Yes	Yes	—	—
Flattrade	Yes	Yes	—	—	—
Paytm Money	—	Yes	—	—	—
Tradejini	—	—	—	—	—
ICICI Direct	Yes	—	Yes	—	—

United States

Broker	Exchanges	How you log in	Demo
Alpaca	NYSE NASDAQ AMEX ARCA BATS OTC	API key ID and secret key	Yes — paper keys make a DEMO account
IBKR (Interactive Brokers)	SMART NYSE NASDAQ AMEX ARCA BATS CBOE LSE TSX	Gateway URL of Trader Workstation or IB Gateway running on your computer (see **§15.13 For advanced users** p. 262)	Yes — a paper login (account ID starting DU or DF)
Tradier	NYSE NASDAQ AMEX ARCA BATS	Access token	Yes — a sandbox token
Charles Schwab	NYSE NASDAQ AMEX ARCA BATS CBOE	App key and secret, then paste the redirect URL	No
Webull	NYSE NASDAQ AMEX	App key and secret	Yes — type `paper` in **ENVIRONMENT (OPTIONAL)** (blank finds it by itself)
TradeStation	NYSE NASDAQ AMEX ARCA BATS	API key and secret, then an auth code	Yes — put `sim:::` before the code
tastytrade	NYSE NASDAQ AMEX ARCA BATS CBOE CME CFE	OAuth client ID and secret, refresh token	Yes — a sandbox login (the terminal tries live first, then sandbox)

Europe and global

Broker	Trades	How you log in	Demo
Saxo Bank	NYSE NASDAQ LSE XETRA EURONEXT	App key and secret, then an auth code	Yes — SIM; put `sim:::` or `live:::` before the code (with no prefix the terminal tries both)
IG	CFDs on currencies, indices, commodities, shares, rates, sectors	API key, password, username	Yes — a plain username (or `demo:::username`) is DEMO; `live:::username` is live
Trading 212	Invest and Stocks ISA accounts	API key and secret key	Yes — a demo key
MetaTrader 4	Forex and CFDs at your MT4 broker	MetaAPI token, MT4 login, password, server name	Yes — **Account type** Demo
MetaTrader 5	Forex and CFDs at your MT5 broker	Same as MetaTrader 4	Yes — **Account type** Demo
cTrader	Forex and CFDs (margin)	Client ID and secret, then an auth code	Yes — put `demo:::` (or `live:::`) before the code

Broker	Trades	How you log in	Demo
OANDA	Forex	Personal API token	Yes — a practice token

Note

Every US and global broker streams live prices except Webull and Trading 212, and most support bracket orders. Trading 212 places and lists orders only: no charts from the broker, no order changes.

15.5 Connect a broker account

You connect a broker in two moves: **add** an account (a name for it), then **log in** with your broker's details. You need an account at the broker and, for most brokers, an API app or key that you create on the broker's own website first.

1. Open Equity Trading (`EQTR`) and click **Accounts**.
2. At the bottom left of **Manage Broker Accounts**, pick your broker in the list.



Figure 15.4 Pick the broker, then click Add.

1. The broker.
2. An optional name for the account.
3. Creates the account.

3. Type a name in **Account name...** if you like (for example "Zerodha Main"), then click **Add**. The new account appears in the list, selected, and its login form opens on the right.
4. Fill in the boxes with the details from your broker (see the table below). Secret boxes hide what you type.
5. Click **Connect** (or the broker's browser-login button). The status changes to **Connecting**, then **Connected as ...**. If it fails, the message says why.
6. Close the window. Pick the new account in the account button's menu when you want this screen to trade it.

Your login stays on this computer

API keys, secrets, passwords and TOTP secrets are stored encrypted on this device only. They are never uploaded to Fincept. That is also why you log in again on each computer you use.

Brokers with their own login page

Zerodha, Fyers and MetaTrader have a dedicated page with a **First-time setup** guide (click it to open the steps).

- **Zerodha** — enter **API key** and **API secret** from your Kite Connect app. Choose **Auto-login (TOTP)** to save your **Kite user ID**, **Password** and **TOTP secret**: the terminal then logs in by itself every morning. Or choose **Browser login**: **Open Kite login in browser** opens Kite's page; log in there and the browser tab says **Login captured**. The Kite app's redirect URL must be `http://127.0.0.1:5010/`. If the browser does not come back, click **Redirect didn't work? Paste request_token manually**, paste the token (or the whole address you landed on) and click **Connect with pasted token**.
- **Fyers** — enter **Client ID** and **Secret key**, then **Open Fyers login in browser**. The Fyers app's redirect URL must be `http://127.0.0.1:5011/`; the manual fallback is **Redirect didn't work? Paste auth_code manually**. Fyers needs a fresh login every day after **08:15** Indian time; a login before that expires the same morning, and the status says so.
- **MetaTrader 4 / 5** — enter a **MetaAPI token**, your **MT4 login**, **MT4 password** (the trading password, not the investor password), the **Server name**, the **Region** (**New York** or **London**) and the **Account type** (**Demo** or **Live**), then click **Connect MT4 account**. A MetaTrader 5 account uses the same page and the same labels.

Brokers with a standard form

Every other broker shows a simple form: one box per detail, then **Connect**. Secret boxes hide what you type.

What each login form asks for

The boxes are labelled exactly as below. "TOTP secret" is the key your authenticator app was set up with (a long code of letters and digits); "TOTP" alone means today's six-digit code.

Broker	Boxes
Angel One	**CLIENT CODE**, **API KEY**, **MPIN**, **TOTP SECRET**
Upstox	**Login method**, then only that method's boxes: **Access token** → **Access token**; **PIN + TOTP (renews every day)** → **API key**, **PIN (6 digits)**, **TOTP secret (Base32), or the current 6-digit code**; **Browser login (auth code)** → **API key**, **API secret**, **Redirect URL (exactly as registered on your Upstox app)**, **Auth code, or the whole URL Upstox sent you to**, and an **Open Upstox login** button; **Analytics token (read-only, 1 year)** → **Analytics token**
Dhan	**CLIENT ID**, **ACCESS TOKEN OR PIN**, **TOTP SECRET (OPTIONAL)**
Kotak Neo	**Access token (from Kotak Neo portal)**, **Mobile number (10-digit or +91...)**, **UCC (Client ID)**, **MPIN**, **TOTP secret (Base32)**
Groww	**API KEY**, **API SECRET**
IIFL	**Interactive app key**, **Interactive secret key**, **Market-data app key**, **Market-data secret key**, **OAuth accessToken or return URL (blank = direct login)**
Samco	**API KEY**, **API SECRET**, **LEGACY SECRET API KEY** (usually left empty)
AliceBlue	**USER ID**, **API SECRET**, **AUTH CODE**, and an **Open AliceBlue login (get auth code)** button (it asks for your API app's **App Code** first)
5Paisa	**App key**, **User ID**, **Client ID**, **App secret (EncryKey)**, **Client code (TOTP login)**, **PIN**, **TOTP (current 6-digit code)**
Motilal Oswal	**User ID (client code, e.g. AA017)**, **API key**, **API secret key**, **Password**, **Date of birth (DD/MM/YYYY) or PAN**, **TOTP (current 6-digit code, if enabled)**
Shoonya	**User ID**, **OAuth client ID**, **OAuth secret key**, **Auth code (or the full redirect URL)**
Flattrade	**Client ID (UID)**, **API key**, **API secret**, **Request code (from web login)**
Paytm Money	**API KEY**, **API SECRET**, **REQUEST TOKEN**, and an **Open Paytm Money login (get request token)** button

Broker	Boxes
Tradejini	**API KEY**, **PASSWORD**, **TOTP**
ICICI Direct	**API KEY**, **SECRET KEY**, **API SESSION**, and an **Open Breeze login (get API Session)** button
Alpaca	**API KEY ID**, **API SECRET KEY**
IBKR	**ACCOUNT ID** (optional), **GATEWAY URL**
Tradier	**ACCESS TOKEN**
Charles Schwab	**APP KEY**, **APP SECRET**, **REDIRECT URL / CODE**
Webull	**APP KEY**, **APP SECRET**, **ENVIRONMENT (OPTIONAL)**
TradeStation	**API KEY**, **API SECRET**, **AUTH CODE**
tastytrade	**OAUTH CLIENT ID**, **OAUTH CLIENT SECRET**, **REFRESH TOKEN**
Saxo Bank	**APP KEY**, **APP SECRET**, **AUTH CODE**
IG	**API KEY**, **PASSWORD**, **USERNAME**
Trading 212	**API KEY**, **API SECRET KEY**
cTrader	**CLIENT ID**, **CLIENT SECRET**, **AUTH CODE**
OANDA	**API TOKEN**, **ACCOUNT ID (optional)**

Browser logins

Brokers that log in through the browser listen for the broker's answer on your own computer: Zerodha on `http://127.0.0.1:5010/` and Fyers on `http://127.0.0.1:5011/` for two minutes, Upstox on the port of the **Redirect URL** you typed (for example `http://127.0.0.1:5012/`) for three minutes. Register that address in your broker app exactly as written. Brokers that hand you a code on their own login page (Shoonya, Flattrade, Saxo Bank, TradeStation, cTrader, Charles Schwab and others) do not listen: log in on the broker's site and paste the code into the form. AliceBlue, Paytm Money and ICICI Direct have a button that opens that page for you.

15.6 Confirm an account for live trading

A LIVE account must be confirmed once before it sends real orders. Until then nothing live leaves it: a live algo deployment on it stops, a workflow's live order refuses, and a waiting approval stays pending.

1. In Equity Trading click **Accounts** and select the broker account. While it is unconfirmed, its row ends with **, needs confirmation** and a line under the form reads **Needs confirmation: nothing live is sent to "name" until it is confirmed once for live trading.**
2. Click **Confirm for live trading**.
3. Read the question — **Confirm "name" for LIVE trading? From now on, orders sent to this account from Fincept (the trading tabs, algo deployments, workflows, the AI) are REAL orders with real money at the broker.** — and click **Yes**. **No** is the default, so Enter never confirms by accident.

A DEMO account is confirmed the same way, once. Its question reads **Confirm "name" for live trading?** and says its orders go to the broker's DEMO environment, so no real money moves. Confirming does not change the account's **Order approval** setting.

You can also confirm on the account's first live order: the order confirmation window says **First live order on this account since paper trading moved to the Fincept Paper account: sending it confirms the account for live orders.** Sending that order confirms the account.

This is your decision

The AI assistant can open screens and fill forms, but it can never press **Confirm for live trading**, **Connect**, or a live **Send** button for you. Those are always your own clicks.

15.7 Choose how orders are approved

Each account has an **Order approval** setting at the bottom of the window:

- **Auto — execute immediately** (the default): an order you send goes straight out.
- **Semi-Auto — require approval**: an order from the Equity Trading ticket first shows a **Confirm LIVE order** window and goes out when you confirm. An order sent to several accounts at once, a basket, or an order from a workflow waits in the Pending Orders panel until you approve it there (**Chapter 21, Action Center** p. 381). Closing positions, cancelling and modifying orders always go straight out.



Figure 15.5 The Order approval setting at the bottom of the window: Auto — execute immediately, or Semi-Auto — require approval.

The choice is saved the moment you change it.

15.8 Switch the account a screen trades

The account button at the left of the Equity Trading top bar shows the account that screen trades. Click it to pick another.

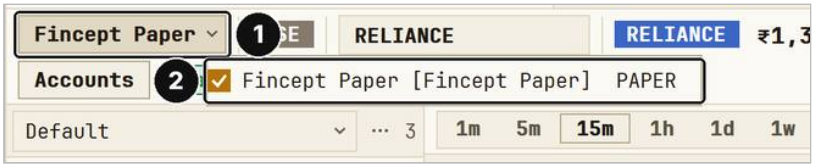


Figure 15.6 The account menu. With broker accounts connected, each one is listed under Fincept Paper.

1. Click the account button.
2. Each account: name, [broker], mode. The tick marks the one in use.

- Fincept Paper is always first. Each row reads **name [broker] MODE**, and a check mark shows the one in use.
- The screen remembers your choice. With no choice made it opens on Fincept Paper.
- A broker account you have just added is never chosen for you: pick it here when you want it.

15.9 Keep your session alive

A broker login (a **session**) does not last forever. Indian brokers end every session once a day; other brokers end it after some idle time or at a nightly reset. The terminal checks every session about every five minutes and again at each broker's daily cut-off time.

When a session ends:

- Brokers marked **Auto** in the tables log in again by themselves with the details you saved.
- For the others, the account turns red and says **Token Expired**. The Equity Trading status pill counts one connected account fewer (for example **1/2 connected**, in amber), and a red banner over the positions says the session has ended: the figures shown are the last ones the broker sent, and nothing can be placed, cancelled or changed.
- Click **Log in again** on the banner (or **Accounts**), select the account and connect again.

> **Locking the terminal does not log you out of your broker**
>
> When the terminal locks after inactivity (your PIN screen), running broker sessions keep working: prices, algo orders and checks carry on. Unlocking checks every session at once.

15.10 Manage your Fincept Paper account

Select **Fincept Paper** in the account list to see its figures and its two buttons.

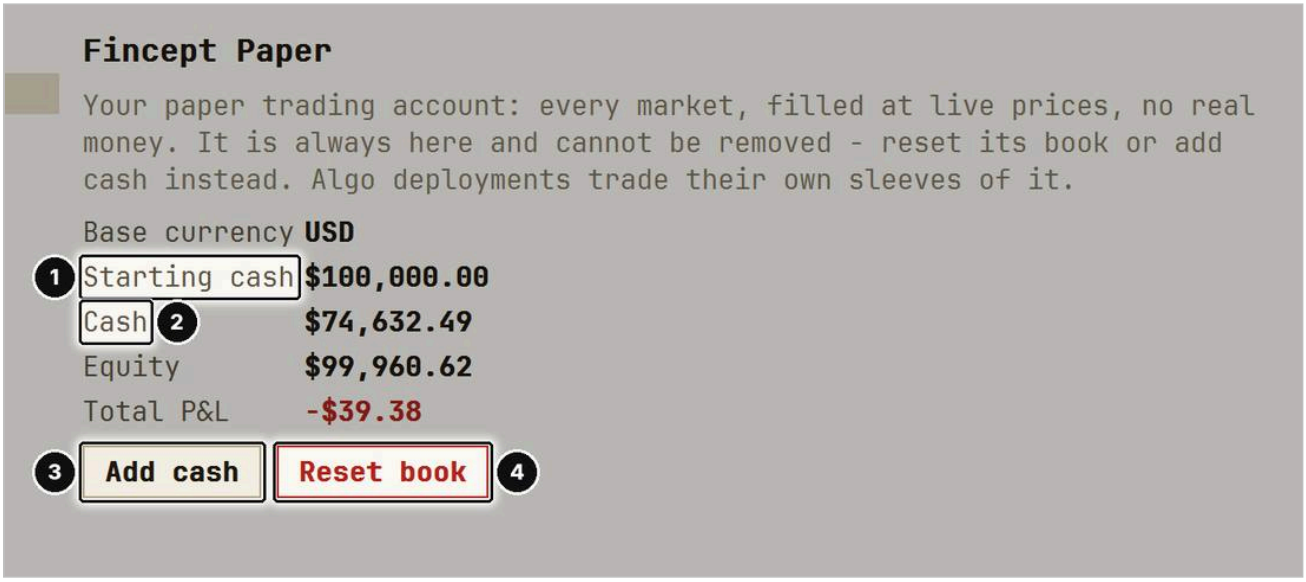


Figure 15.7 The Fincept Paper page.

1. What the book started with, plus every deposit.
2. Cash free to use now.
3. Deposit simulated cash.
4. Start again from the starting cash.

- **Add cash** deposits simulated money into the main book. A small window asks **Amount to add to the Fincept Paper main book (USD):** (your base currency), filled in with your starting amount. Cash and starting cash rise by the same amount, so your total profit or loss does not change. **Cancel** closes it without adding anything.



Figure 15.8 Add cash asks how much to deposit, in the book's base currency.

- **Reset book** deletes every position, working order and trade of the main book, clears its equity history and returns its cash to the starting cash. The question **Reset the Fincept Paper main book?** comes first, with **No** as the default. Algo deployments keep their own separate books ("sleeves"). This cannot be undone.

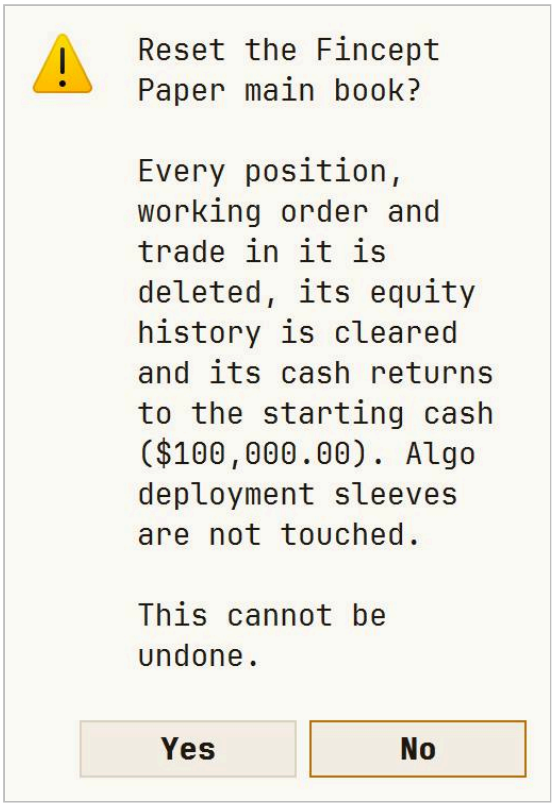


Figure 15.9 The question before a reset. No is the default; Yes clears the main book.

15.11 Rename or remove an account

- **Rename** — select the account, click **Rename**, type a new name.
- **Remove** — select the account and click **Remove**. The terminal asks first; removing deletes the account and the login saved for it on this computer. Fincept Paper cannot be removed.

15.12 Reference

Equity Trading top bar (account controls)

Control	What it does
Account button (shows the account's name, or No account)	Opens the account menu: pick the account this screen trades.
Accounts	Opens **Manage Broker Accounts**.
Mode badge Paper / Demo / Live	Read-only. What the selected account's orders move. Hover for details.
Status pill	How many accounts are connected, Fincept Paper included: **n/m connected**, green when all are connected and amber when some are not (for example **1/2 connected** after a broker session ends). The pill also has the messages **n/m connected - no live quotes**, **Token expired - click Accounts** and **Broker error - hover for details**, but with Fincept Paper always connected they do not appear in 5.0.6.

Manage Broker Accounts window

Control	What it does
Accounts list	Every account: Fincept Paper first ([**PAPER**]), then broker accounts as **name** [**Broker - LIVE**] or [**Broker - DEMO**], with **, needs confirmation** while unconfirmed. A filled dot means connected (green) or failing (red).
Broker list	The broker for a new account.
Account name...	Optional name for the new account. Left empty, the broker's name is used (with **#2**, **#3** … for more accounts at one broker).
Add	Creates the account. It has no login yet.
Remove	Deletes the selected account and its saved login (asks first). Not available for Fincept Paper.
Header	The account name, the broker's region and currency, and **Status**: Disconnected, Connecting, Connected, Token Expired or Error.
Login form	The broker's own boxes (see **§15.5 Connect a broker account** p. 255).
Rename	Renames the selected account.
Connect	Logs in to the broker with the details in the form.
Confirm for live trading	Shown while a broker account is unconfirmed. Confirms it once for live orders.
Order approval:	**Auto — execute immediately** or **Semi-Auto — require approval**.

Fincept Paper page

Item	Meaning
Base currency	The currency the book keeps its money in.
Starting cash	The cash the book started with, plus every **Add cash**.
Cash	Cash available now.
Equity	Cash plus the value of everything held.

Item	Meaning
Total P&L	Profit or loss since the start (or the last reset).
Add cash	Deposit simulated cash.
Reset book	Start the main book again from its starting cash.

Status words

Status	Meaning
Connected	Logged in; orders and prices work.
Connecting	A login or session check is running.
Disconnected	No login saved on this computer, or not logged in yet.
Token Expired	The broker ended the session. Log in again.
Error	The last login or check failed. The message says why.

15.13 For advanced users

Plans

- Fincept Paper works on every paid plan.
- **Connect** on a broker account needs a plan that includes broker accounts (**Exclusive+** or **Exclusive Pro** when this guide was written). On a plan without it the button tells you which plan you need.
- Sending a **live** order through a broker needs a plan that includes live order routing (**Exclusive Pro** when this guide was written). Closing positions, cancelling and modifying orders are never blocked by your plan, so you can always get out.
- DEMO accounts skip both the plan check and Fincept's pre-trade check, because no real money moves.

The pre-trade check

Every live order is checked by Fincept's servers before it goes to the broker (up to 5 seconds). A clear refusal stops the order: **Order blocked by the pre-trade risk check: ...**. If the check does not answer, the order is sent anyway and a notice says **Risk check unavailable: sent without the server's pre-trade check** — your login never leaves your computer, so an outage at Fincept must not trap you in a position.

Interactive Brokers

The terminal talks to Interactive Brokers through **Trader Workstation** (TWS) or **IB Gateway** running on your own computer.

1. Start TWS and log in (your paper account, or **Try the demo**). Keep it running.
2. In TWS open **File > Global Configuration > API > Settings**. Tick **Enable ActiveX and Socket Clients**. Untick **Read-Only API** if you want to place orders. Add `127.0.0.1` to **Trusted IPs**.
3. Note the **Socket port**: 7497 for a paper session, 7496 for live (IB Gateway: 4002 paper, 4001 live).

4. In the terminal add an **IBKR** account and set **GATEWAY URL** to `tws://127.0.0.1:7497` (your port). Leave **ACCOUNT ID** empty: it is found when you connect.

5. Click **Connect**.

Without a market-data subscription, IBKR sends prices about 15 minutes late. A funded IBKR Pro account can also use the Client Portal Gateway: set the gateway URL to its address, such as `https://localhost:5000`.

Several accounts at once

- You can add several accounts at one broker (for example a family member's account).
- The order ticket's **Brokers** picker and the **All** button send one order to several accounts at once (**Chapter 16, Equity Trading** p. 264).
- **Unified** in Equity Trading shows the positions and holdings of every connected Indian broker in one table (**§21.6 Portfolio monitor** p. 387).

15.14 Troubleshooting

Connect says I need another plan. Linking a broker account needs a plan that includes broker accounts. Fincept Paper works on every plan.

The browser login never finishes. The browser must come back to the address registered in your broker app (for example `http://127.0.0.1:5010/`). If another program uses that port, the window says **Port … busy**: use the manual paste option under the browser button instead.

Fyers works in the morning and stops the same day. You logged in before **08:15** Indian time. Fyers resets every token then. Log in again after 08:15.

The broker connects but its prices never move. Your broker accepted the login but refuses live market data on your plan with them (for example a Kite Connect app without a market-data subscription). Orders, positions and funds still work.

My order says "not confirmed for live trading". Select the account in **Accounts** and click **Confirm for live trading**, or send the order from the Equity Trading ticket and confirm it there.

An IBKR connection times out. TWS is waiting for you to accept the connection. Accept it, or add `127.0.0.1` to **Trusted IPs** in the TWS API settings.

I added an account on another computer and it shows Disconnected here. Your login is saved only on the computer where you entered it. Log in again on this one.

CHAPTER 16

Equity Trading `EQTR`

Trade stocks from one screen — a watchlist, a live chart, market depth and an order ticket, with your positions, holdings, orders and funds underneath. It opens on your Fincept Paper account, so you can practise every step before you connect a broker.

At a glance

Open it	• Type `EQTR` in the command line and press **Enter** • **Menu** › **Navigate** › **Trading** › **Equity Trading** • Type a symbol and `TRADE` (or `BUY`, `SELL`) in the command line — for example `AAPL TRADE` — for a quick order ticket over any screen
You need	• Signed in on any paid plan • Fincept Paper is ready on every plan • Live orders: a connected broker account and a plan with live order routing • Full market depth: a plan with Level 2 depth
Best for	• Your first paper trades • Watching and trading a list of stocks from one place • Sending one order to several accounts
Time to learn	30 minutes
Related	**Chapter 15, Brokers & Accounts** p. 248, **Chapter 17, F&O** p. 284, **Chapter 21, Action Center** p. 381, **Chapter 10, Watchlist** p. 172, **Chapter 23, Portfolio** p. 430, **Chapter 24, Backtesting** p. 464

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16.1 Screen tour

The Equity Trading screen has five areas. Everything works the same on Fincept Paper and on a broker account; only what an order moves is different.

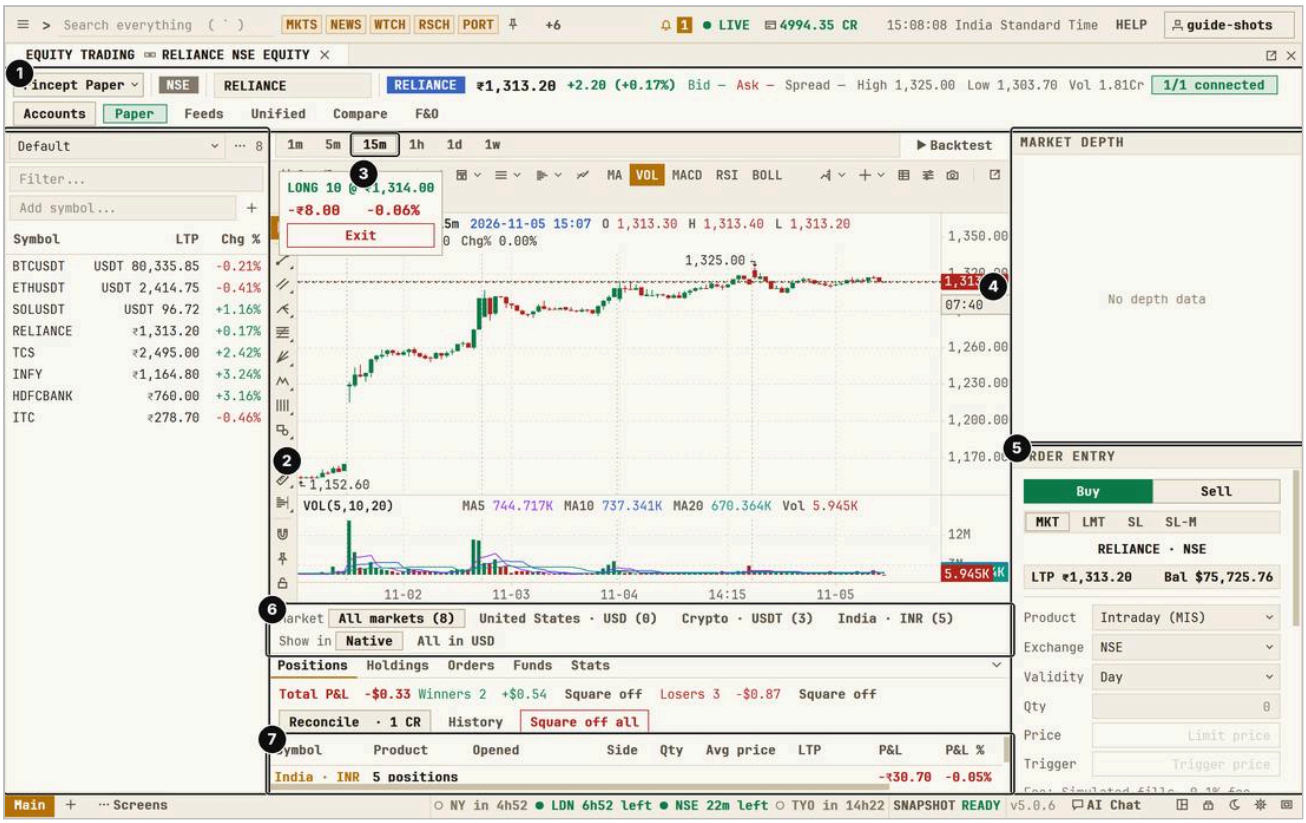


Figure 16.1 Equity Trading on the Fincept Paper account, with Indian, US and crypto lines in the book.

1. **Top bar**: the account, the symbol, live prices and the screen's buttons.
2. **Watchlist**: click a symbol to load it everywhere.
3. **Chart** of the selected symbol, with timeframes and a **Backtest** menu.
4. **MARKET DEPTH**: the order book, when the account provides one.
5. **ORDER ENTRY**: the ticket that builds and sends one order.
6. **Market bar**: view the paper book by market and currency.
7. **Bottom panel**: positions, holdings, orders, funds and stats.

You can drag the thin lines between areas to resize them. The bottom panel's arrow button folds it away to give the chart more room.

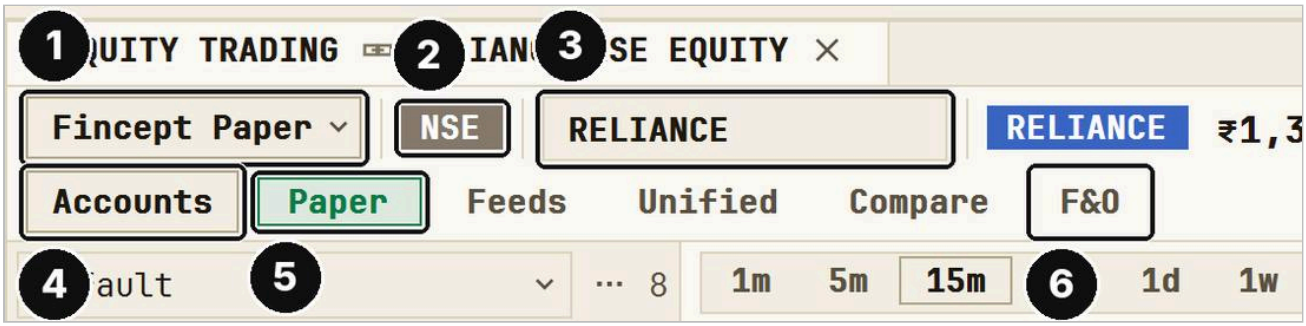


Figure 16.2 The left part of the top bar. The price ribbon and the status pill follow on the right (**Figure 16.11** p. 273).

1. The account this screen trades. Click to switch.
2. The exchange of the selected listing.
3. The symbol box: type to search.
4. Manage accounts and brokers.
5. Paper, Demo or Live: what an order here moves.
6. **Feeds**, **Unified**, **Compare**, **F&O**: extra columns and screens.

16.2 Quick start

Place your first paper order. Nothing here touches real money.

1. Type `EQTR` in the command line and press `Enter`. Check the top bar: the account button says **Fincept Paper** and the green badge says **Paper**. Orders here are simulated.

2. Click the symbol box at the left of the top bar and type a few letters, for example `HDFC`. Pick the listing you want from the list (the coloured chip shows its exchange).

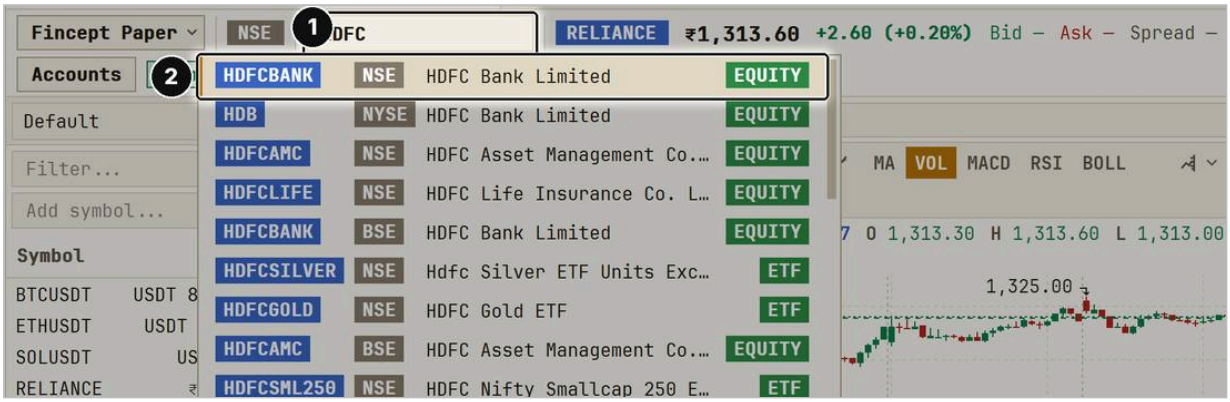


Figure 16.3 Matching listings appear as you type.

1. Type part of a name or ticker.
2. Each row: ticker, exchange, name and type. Click one.

3. In the ticket on the right, keep **Buy** and **MKT**, choose **Delivery (CNC)** in **Product** (to own the shares) and type a quantity in **Qty**, for example `2`. **Est** shows roughly what it costs.

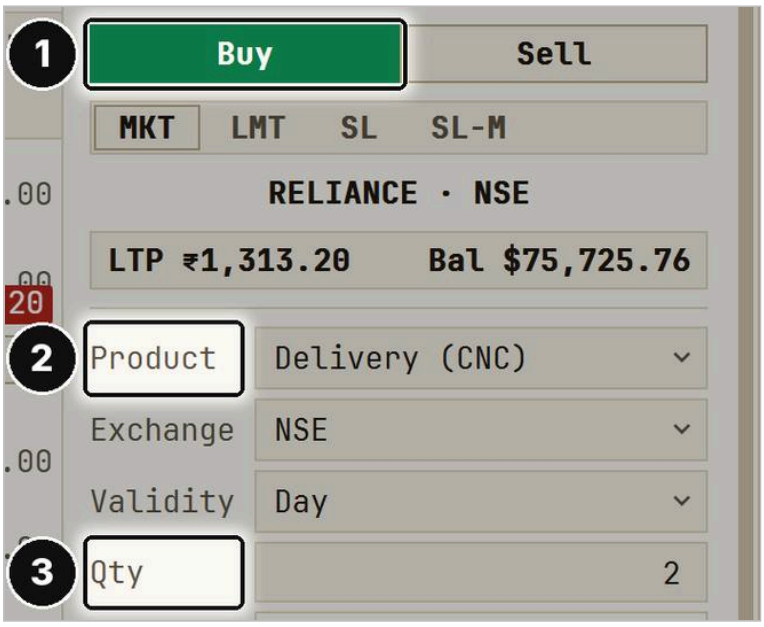


Figure 16.4 The top of a paper ticket, filled in.

1. Buy or Sell.
2. **Delivery (CNC)**: shares you keep.
3. How many shares.

4. Click the green Buy button at the bottom of the ticket. It names your symbol, for example **Buy RELIANCE**. The line under it confirms: **PAPER order on Fincept Paper: placed**. Outside market hours it says the order is queued for the next open.

5. Click **Holdings** in the bottom panel. Your new shares are listed with their value and profit or loss.

16.3 Pick a symbol

- Type in the symbol box at the left of the top bar. A list of matching listings drops down as you pause (**Figure 16.3** p. 266); click one, or press `Enter`. Each row shows the ticker, the exchange (NSE, BSE, NYSE ...), the name and the kind (EQUITY, ETF ...).
- Fincept Paper trades every market, so the same ticker can exist on several exchanges. Pick the right row, or type the exchange first: `NSE:RELIANCE`, `NASDAQ:AAPL`. The exchange chip beside the box shows where you are trading.
- Click any row in the watchlist, the positions or the holdings to load that symbol.

16.4 The order ticket

The ticket on the right builds one order (**Figure 16.5** p. 268). Fill it from the top down.

Order types

Button	Name	You enter	It fills
MKT	Market	Quantity	Now, at the best available price
LMT	Limit	Quantity, **Price**	Only at your price or better
SL	Stop-limit	Quantity, **Trigger**, **Price**	When the price reaches the trigger, a limit order at your price is placed
SL-M	Stop-market	Quantity, **Trigger**	When the price reaches the trigger, a market order is placed

A **stop** order protects you: a sell stop below the price limits a loss; a buy stop above the price catches a breakout.

Product, exchange and validity

- **Product** — how the position is held. On Fincept Paper and Indian brokers: **Intraday (MIS)** (closed the same day, uses margin), **Delivery (CNC)** (you own the shares; they appear under **Holdings**) and **Margin (NRML)** (a margin position that can be held overnight). Other brokers show their own list.
- **Exchange** — where the order goes. Fincept Paper lists every market it trades.
- **Validity** — **Day** (good for today's session) or **IOC** (immediate or cancel: fill now or drop it).

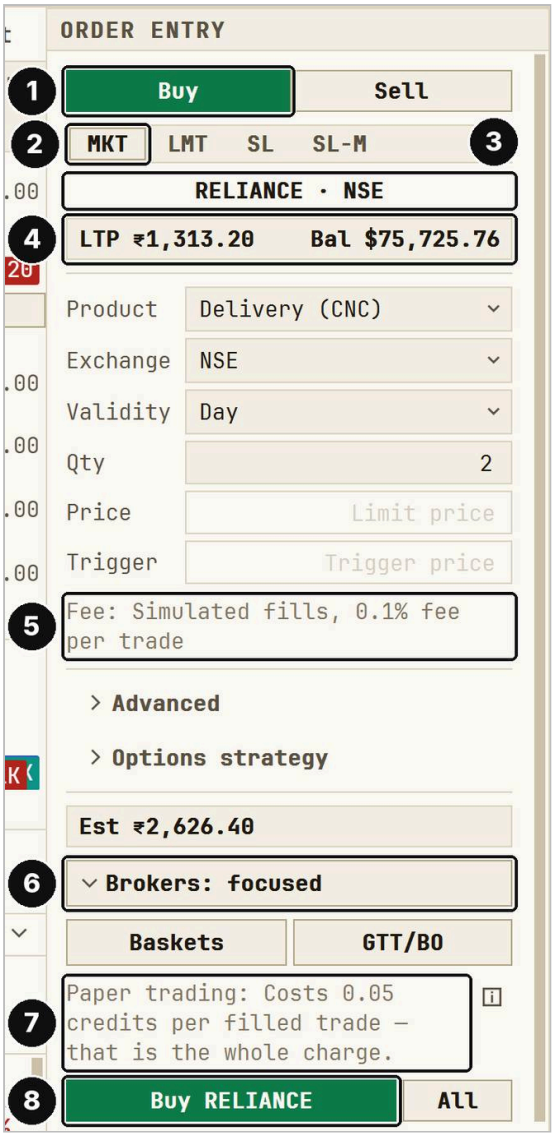


Figure 16.5 The order ticket on Fincept Paper.

1. Side: **Buy** or **Sell**.
2. Order type: **MKT**, **LMT**, **SL**, **SL-M**.
3. Symbol and exchange the order is for.
4. Last price and the account's balance.
5. The account's fee rule.
6. Send to several accounts at once.
7. What one paper fill costs in credits.
8. Send the order.

The figures on the ticket

- The line under the order type shows the symbol and exchange (**RELIANCE · NSE**).
- **LTP** is the last price; **Bal** is the account's available balance.
- **Fee:** shows the account's fee rule (Fincept Paper: **Simulated fills, 0.1% fee per trade**).
- **Est** is quantity × price. On a broker account the ticket also asks the broker for **Margin** and **Charges** (hover for brokerage, taxes and fees).
- **Paper trading:** shows what one paper fill costs in credits. It is hidden on broker accounts.

Advanced

Click **Advanced** to open more fields:

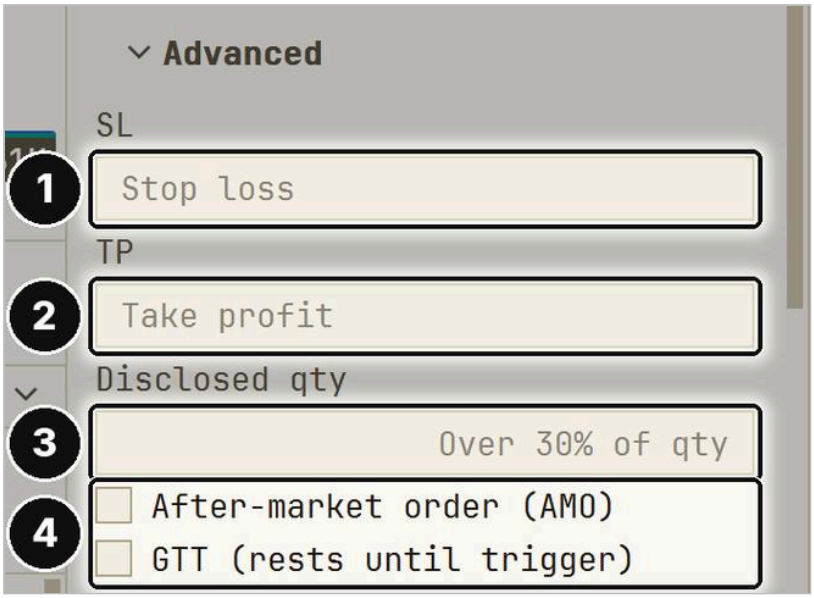


Figure 16.6 The Advanced section of the ticket.

1. **SL**: a protective stop.
2. **TP**: a profit target.
3. **Disclosed qty**: show only part of a large order.
4. **After-market order (AMO)** and **GTT (rests until trigger)**: tick boxes (see the table).

Field	What it does
SL	A stop-loss price attached to the order.
TP	A take-profit price attached to the order. Together with SL this makes a **bracket**: when one fills, the other is cancelled.
Disclosed qty	An **iceberg** order: only this many shares show in the market at once. Must be more than 30% of the quantity.
After-market order (AMO)	Queue the order with your broker outside market hours for the next session.
GTT (rests until trigger)	A good-till-triggered order that rests for up to about a year: **Trigger** is the fire price, **Price** the limit (blank = market). Live brokers only, delivery (CNC/MTF) only.

Options strategy

Options strategy places a ready-made options structure in one go. Choose **Strategy** (**Long straddle**, **Short straddle**, **Long strangle**, **Iron condor**, **Bull call spread**, **Bear put spread**; **None** turns it off), enter the **ATM strike**, **Expiry (YYYY-MM-DD)**, **Lot size** and, for strangles, condors and spreads, **Width (strangle / condor / spreads)**. **Legs** previews every leg with max profit, max loss and breakevens; **Place strategy** sends it. For a full builder with payoff charts, use **Chapter 17, F&O** p. 284.

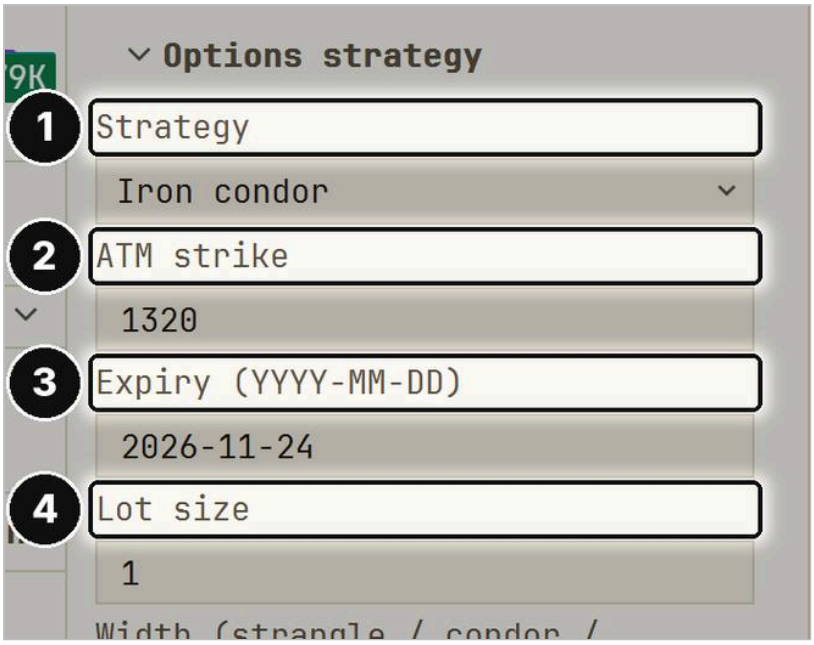


Figure 16.7 An iron condor on RELIANCE options, ready to fill in.

1. The structure.
2. The at-the-money strike the legs are built around.
3. The expiry date.
4. How many lots per leg.

The buttons at the bottom

Control	What it does
Brokers: focused	Click to tick several accounts. While any is ticked it reads **Brokers: n selected** (amber) and the Buy/Sell button sends the order to every ticked account.
Baskets	Saved groups of orders you can execute together (see **§16.9 Order baskets** p. 278).
GTT/BO	Lists and cancels the account's resting GTT and bracket orders (live brokers).
Buy SYMBOL / Sell SYMBOL	Sends the order. Green for buy, red for sell.
All	Opens **Broadcast Order** to send this order to several accounts with a review step.

The status line under the button reports the result for five seconds: for example **PAPER order on Fincept Paper: placed: ...**, or **RELIANCE queued on Fincept Paper (PAPER) - market closed, executes at the next open.**

16.5 How an order is sent

What happens after you press Buy depends on the account (see **§15.3 Paper, demo and live** p. 251):

- **Fincept Paper** — sent at once. A market order fills at the last price you saw; with no price yet the ticket says **Price not available yet - wait for quotes to load.** Outside market hours the order waits for the next open.
- **A LIVE broker account** on **Auto** approval — sent at once, after your plan and Fincept's pre-trade check. The ticket header shows a red **LIVE** chip.

- **Semi-Auto** approval — a **Confirm LIVE order** window first names the account and the mode. **Enter** never sends a live order: you must click **Send LIVE order**. The order then goes out at once; it does not wait in Pending Orders (only multi-account sends and baskets do).
- **The first live order** on a newly connected account also confirms the account for live trading.

The confirmation window is titled **Confirm LIVE order - account (broker)** (or **Confirm DEMO order** / **Confirm PAPER order**). It repeats, in words, whose money it is — **LIVE ORDER - this sends a real order to ... with real money** — then lists **Mode**, **Account**, **Action**, **Symbol**, **Exchange**, **Quantity**, **Type**, **Product**, the price or trigger and **Est. value**. **Cancel** sends nothing.

A ticket opened from another screen (Equity Research, Portfolio, the command line) always asks you to pick and confirm the account before a live order goes out.

16.6 Watch the market

Watchlist

The left column is a watchlist, shared with the Watchlist screen (**Chapter 10, Watchlist** p. 172).

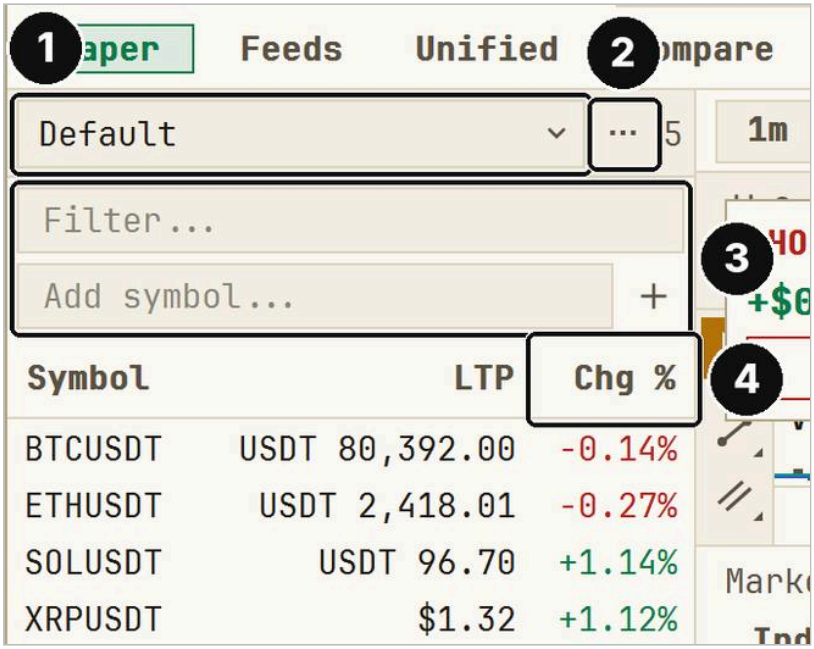


Figure 16.8 The watchlist column.

1. The active list.
2. New, rename or delete a list.
3. **Filter...** narrows the rows; **Add symbol...** (or **+**) adds one.
4. Last price and change today.

- Pick a list in the drop-down; the menu beside it has **New watchlist...**, **Rename...** and **Delete**. The number after the menu button counts the list's symbols.
- **Filter...** narrows the rows; **Add symbol...** (or the + button) adds one, with the same search as the top bar.
- Columns: **Symbol**, **LTP**, **Chg %**. Right-click a row for **Remove SYMBOL**. Your open positions also show here; right-clicking one of those says it is an open position, not part of the list.

Chart

The chart follows the selected symbol, live.



Figure 16.9 The chart with its timeframes and the Backtest menu open.

1. Timeframes: **1m** to **1w**.
2. **Backtest** opens this menu.
3. Backtest this chart's symbol at its timeframe.
4. House strategy ideas.

- Timeframes: **1m**, **5m**, **15m** (default), **1h**, **1d**, **1w**.
- **Backtest** opens a menu: **This chart (15m) - sma_crossover**, house strategy ideas, and the full template catalogue by category (until you have opened Backtesting once, a line says **Open the Backtesting tab once to load the full template catalogue**). It opens Backtesting with the symbol filled in; nothing runs until you press Run there (**Chapter 24, Backtesting** p. 464).
- **Trades** appears after a backtest of this symbol: it draws that run's simulated entries and exits on the chart.
- Right-click the chart at a price for **Buy @ price**, **Sell @ price** and **Add to watchlist**, plus the chart's own items (**Alert at ...**, **Horizontal line at ...**, **Copy price ...**, **Insert study...**). Buy or Sell opens a small ticket (**Type** Market or Limit, **Qty**, **Limit price**) at that price.
- While you hold the symbol, a card on the chart shows the position (**LONG**/**SHORT**, quantity, P&L) with an **Exit** button that closes it at market (after a question).

Compare

Compare splits the chart in two, both live. Type a second symbol in **Compare symbol...**. Click a chart's header to make it the one a symbol pick changes; **Trade** swaps the second symbol into the main chart and the ticket.

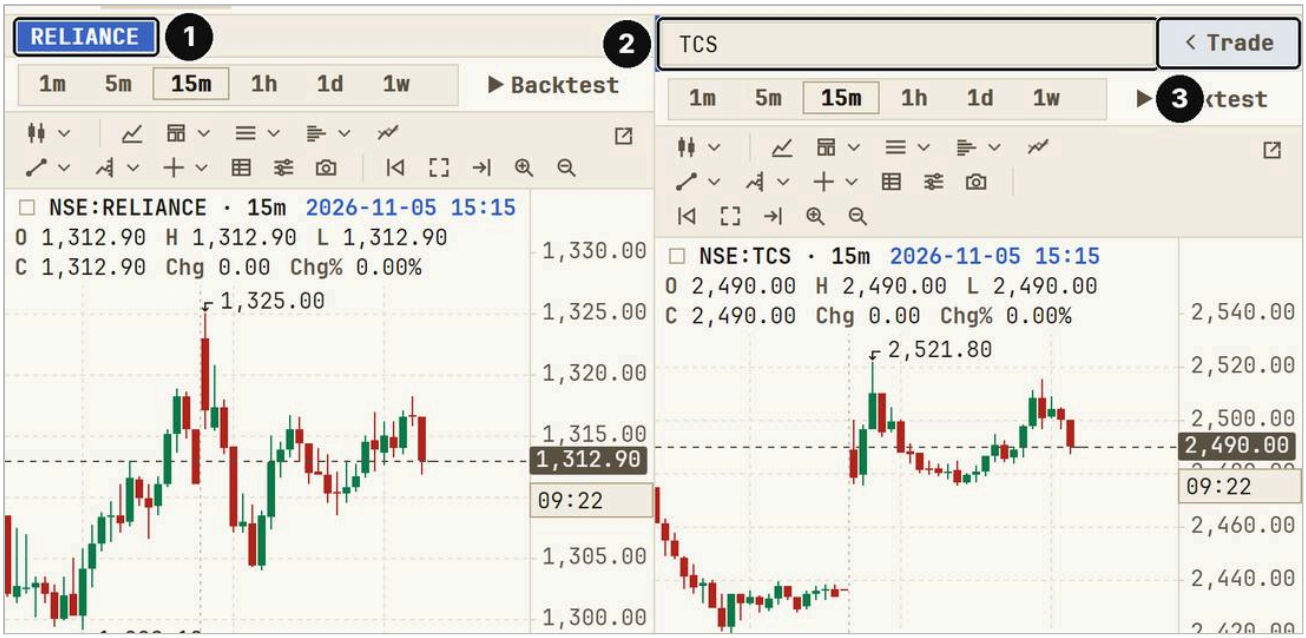


Figure 16.10 Compare mode: RELIANCE and TCS side by side, both live.

1. The main chart's symbol. Click a header to make that chart the one a pick changes.
2. Type the second symbol.
3. **Trade** swaps the second symbol into the main chart and the ticket.

Market depth

MARKET DEPTH shows the order book of a broker account that sends one: bids (buyers) and asks (sellers) at each price with their **Size** and running **Total**, the **Spread**, and which side dominates. Click a price to put it in the ticket as a limit order. The title line says how deep the book is (**L2 · 5×5**, or **L1 · synthetic** when only the best bid and ask are known).

Fincept Paper has no order book of its own, so on the paper account the panel reads **No depth data** and the top bar shows **Bid —** and **Ask —**. Drag the line under the panel upwards to give the ticket that room.

Full depth needs a plan with Level 2 depth; on other plans the panel is locked and names the plan that fills it.

The price ribbon

The top bar shows the symbol, its last price and change, then **Bid**, **Ask**, **Spread**, **High**, **Low** and **Vol** for the selected symbol. The status pill at its right end counts your connected accounts (**§15.12 Reference** p. 261).

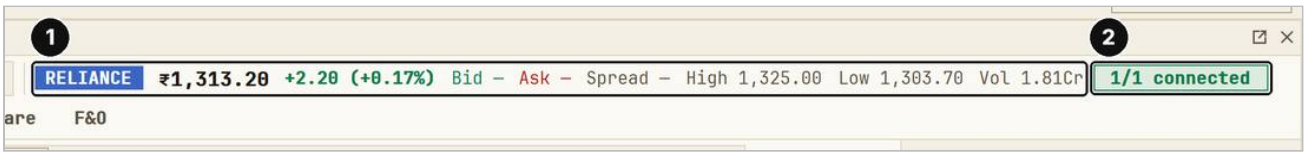


Figure 16.11 The price ribbon and the status pill, at the right of the top bar.

1. Last price, change, bid, ask, spread, high, low and volume. Bid and ask show a dash on Fincept Paper.
2. How many of your accounts are connected (Fincept Paper included).

Feeds

Feeds in the top bar adds a news column at the far right of the screen, so you can read the news beside your trading. Click **Feeds** again to hide it.

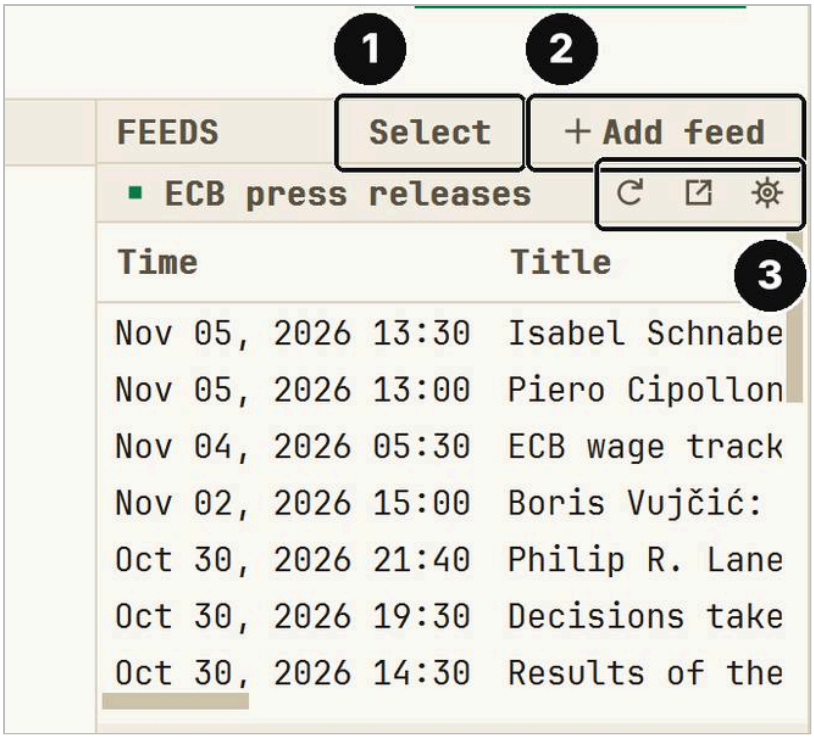


Figure 16.12 The Feeds column with its first feed.

1. **Select** the feeds shown here (up to three).
2. **Add feed** adds a news source of your own.
3. Each feed: **Refresh now**, **Pop out** into its own window, **Configure**.

The feeds and sources are the same ones the RSS Feeds screen uses (**Chapter 12, RSS Feeds** p. 203).

16.7 Positions, holdings and orders

The bottom panel is your blotter. Each tab shows one part of the selected account.



Figure 16.13 Two open paper positions in crypto, one long and one short.

1. Total profit or loss of the open positions.
2. Close every winning (or losing) position.
3. **Reconcile** (broker accounts) and its **History**.
4. Close every open position.
5. When the paper position was opened.
6. **Sell** opens a ticket filled with the held quantity.

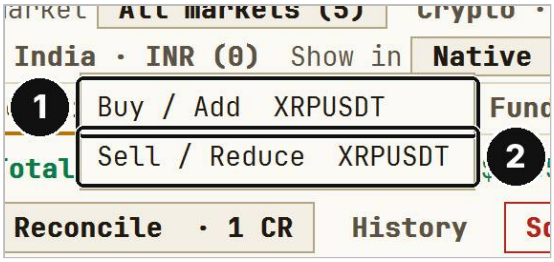


Figure 16.14 Right-click a position (or a holding) to add to it or reduce it.

1. A buy ticket for this symbol.
2. A sell ticket with the held quantity.

Positions

Open positions (intraday and margin). Columns: **Symbol**, **Product**, **Opened** (Fincept Paper; brokers show **Exchange**), **Side**, **Qty**, **Avg price**, **LTP**, **P&L**, **P&L %**, **Action**.

- The bar above the table totals **Total P&L**, **Winners** and **Losers**, each with its own **Square off** button (close all winning or all losing positions), and **Square off all** for everything.
- **Action** has **Sell** (a ticket filled with the held quantity) and, for intraday lines, **To CNC** (convert to delivery).
- Right-click a row for **Buy / Add** and **Sell / Reduce** (the Holdings tab has the same menu).

Holdings

Shares you own (delivery). The strip on top shows **Holdings** (count), **Invested**, **Current**, **Total P&L**, **Today's P&L** and **Return %**. Columns: **Symbol**, **Qty**, **Avg price**, **LTP**, **Invested**, **Current**, **P&L**, **P&L %**, **Day P&L**, **Action** (**Sell** the whole holding at market).



Figure 16.15 Paper holdings (crypto bought as Delivery).

1. The strip totals the holdings: count, invested, current value, P&L, today's P&L, return.
2. Copy a broker account's holdings into a portfolio.
3. Copy a broker account's book into Fincept Paper.
4. Sell every holding at market.

- **Sync to portfolio...** copies a broker account's holdings into a portfolio on the Portfolio screen (**Chapter 23, Portfolio** p. 430).
- **Replicate to paper** copies a broker account's holdings and positions into Fincept Paper as paper orders, so you can test changes on a copy.
- **Square off all** sells every holding at market (after a question).

Orders

Orders of one day. Pick the day in **Date** (today by default). Columns: **Order ID**, **Symbol**, **Product**, **Side**, **Type**, **Qty**, **Price**, **Status**, **Time**, **Action**.

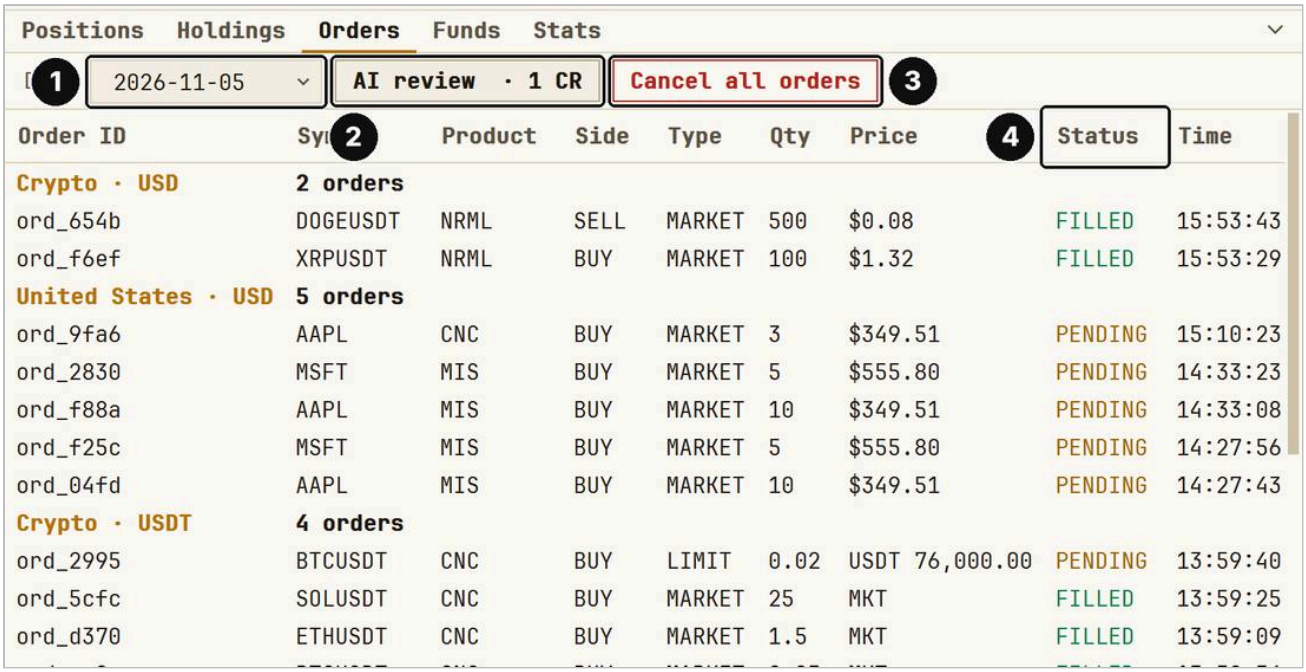


Figure 16.16 The day's orders, grouped by market. US orders wait for the US open.

1. The day shown.
2. **AI review** of the day's fills (credits).
3. Cancel every open order.
4. FILLED, PENDING, CANCELLED, REJECTED …

- Open orders have **Cancel** (paper) or **Edit** in **Action**. On a broker account, **Edit** opens **Modify Order** with **Qty** and **Limit price**; **Modify** sends the change, **Cancel** keeps the order as it is.
- **Cancel all orders** cancels every open order (after a question).
- Right-click a broker order for **Order details / fills** (its state history and each fill).
- **AI review** reviews the day's fills — what worked, what did not, and the costs paid. It costs credits and shows its price on the button.

Funds

Tiles for **AVAILABLE BALANCE**, **USED MARGIN**, **TOTAL EQUITY**, **REALIZED P&L**, **UNREALIZED P&L**, **HOLDINGS VALUE**, **OPENING BALANCE**, **MARGIN USED** % and **COLLATERAL**. On Fincept Paper a **By market** table below splits the money per market: **Market**, **Lines**, **Invested**, **Value** and **Unrealized P&L** in the market's own currency, then **Value** and **Unrealized P&L** again in your home currency, with an **All markets** total. Cash and margin in the tiles are the whole book's.

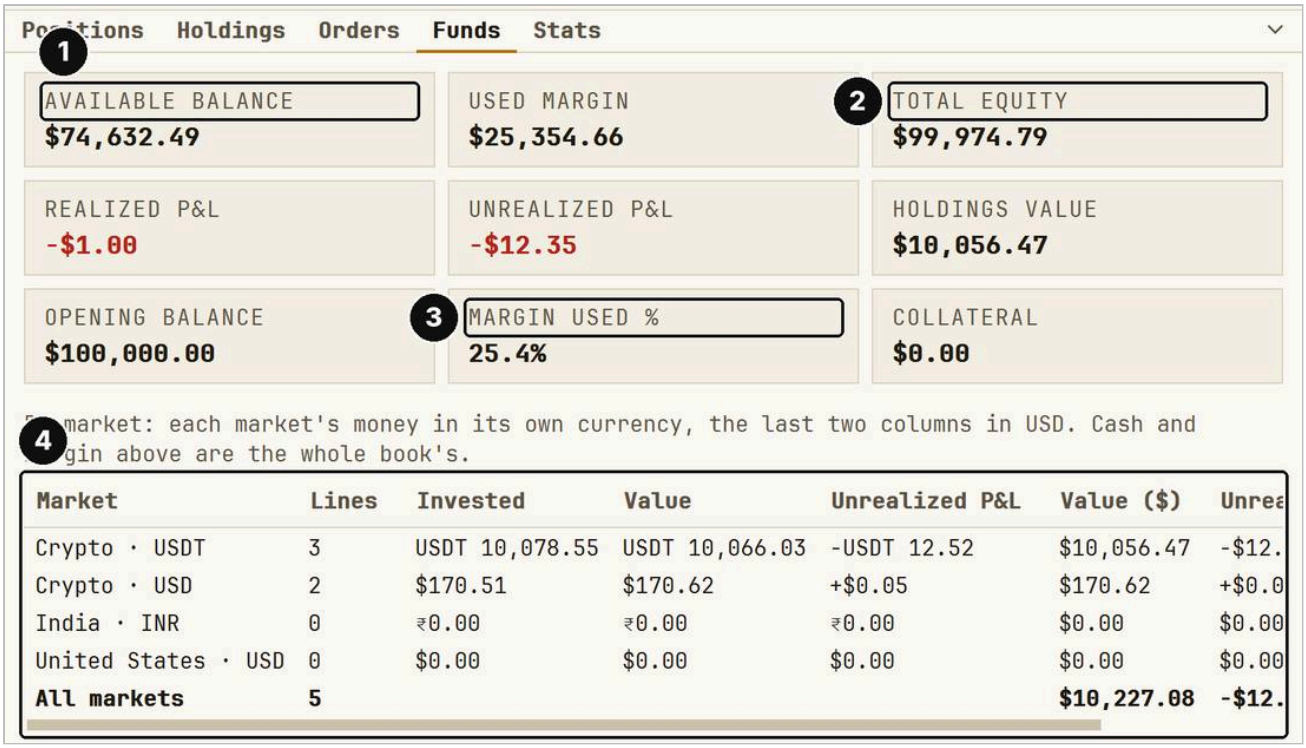


Figure 16.17 Funds on Fincept Paper, with the By market table.

1. Cash free for new orders.
2. Cash plus the value of everything held.
3. Used margin out of used plus available.
4. Each market's money in its own currency, then in your home currency (here USD).

Stats

Trading statistics: **NET P&L**, **TODAY'S P&L**, **RETURN %**, **WIN RATE**, **PROFIT FACTOR**, **TOTAL TRADES**, **AVG WIN**, **AVG LOSS**, **TURNOVER**, **LARGEST WIN**, **LARGEST LOSS**, **TOTAL CHARGES**. On Fincept Paper a **By market** table below shows each market's **Trades today**, **Realized today** (in your home currency), **Unrealized P&L** and **Return %**.



Figure 16.18 The Stats tab.

US broker tabs

With a US broker account selected, three more tabs appear:

- **Time & sales** — every trade printed: **Time**, **Price**, **Size**, **Exchange**, **Conditions**, **Tape**.
- **Auctions** — opening and closing auctions: **Date**, **Type** (**Open** or **Close**), **Time**, **Price**, **Size**, **Exchange**.
- **Calendar** — market days: **Date**, **Open (ET)**, **Close (ET)**, **Pre-Market**, **After-Hours**, with a **Market open** / **Market closed** line and the next open or close.

16.8 View by market

When your Fincept Paper book holds more than one market (for example Indian and US shares), a **Market** bar appears above the tabs.



Figure 16.19 The Market bar on a paper book that holds several markets, set to All markets in USD.

1. **All markets (n)**: every row, grouped by market.
2. One market only, in its own currency.
3. **Native**: each row in its own currency.
4. **All in USD**: converted to your home currency (USD here).

- **All markets (n)** groups every row under a header row per market. Click a header row to open that market.
- A market button (for example **India · INR (3)**) shows only that market, with every amount in its own currency, and the currency in the column headers.
- On **All markets**, **Show in** chooses **Native** (each row in its own currency) or **All in** followed by your home currency, for example **All in USD** (every amount converted to the home currency set in **Settings > Currency**, for display only).

The choice is remembered for the account.

> **Note**
>
> **Square off all** in a market view still closes positions in every market; the question says so.

16.9 Order baskets

A **basket** is a saved group of orders (legs) that you execute together, on one or several accounts.

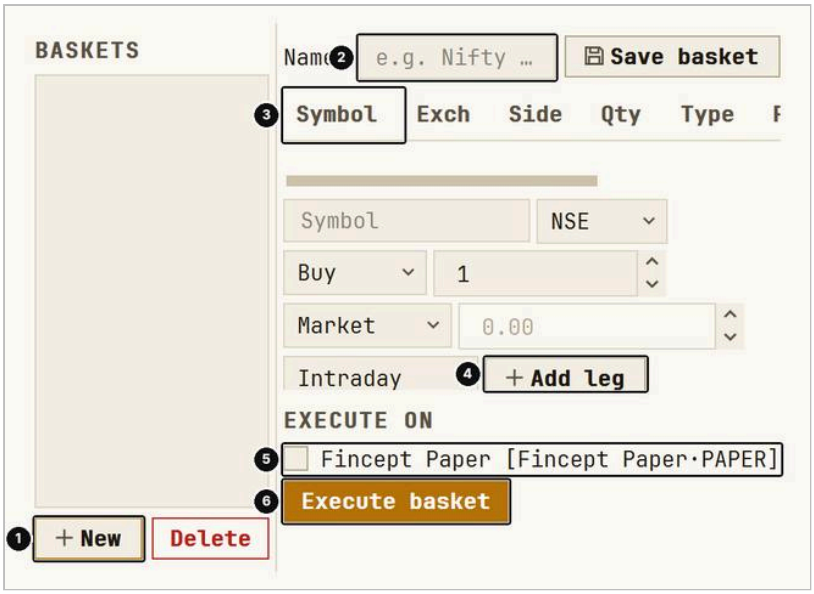


Figure 16.20 The Order Baskets window, before any basket is saved.

1. **New** creates a basket; **Delete** removes the selected one.
2. The basket's name; **Save basket** keeps it.
3. The legs: symbol, exchange, side, quantity, type, price, product.
4. Fill the row of boxes and click **Add leg** (or press Enter in **Symbol**).
5. **Execute on**: tick the accounts, each with its mode.
6. Sends every leg to every ticked account, after one question.

1. In the ticket click **Baskets**. The **Order Baskets** window opens; your saved baskets are listed on the left.
2. Click **New**, then type a name in **Name:** (for example "India Core 3").
3. For each leg, type the symbol in **Symbol**, set the exchange, **Buy** or **Sell**, the quantity, **Market** or **Limit** (and the price), and **Intraday**, **Delivery** or **Margin**, then click **Add leg**. Click the × at the end of a leg to remove it.
4. Click **Save basket**. Baskets are saved to your account, so they appear on your other computers too.
5. To trade it, tick one or more accounts under **Execute on** and click **Execute basket**. The question names the basket, the number of legs and the accounts, and warns in capitals if any account is LIVE.

16.10 Send one order to several accounts

Two ways, both with a review step:

- **Brokers** picker on the ticket: tick the accounts, then press Buy/Sell. A window lists every account and warns in capitals when any is LIVE.
- **All** opens **Broadcast Order**: tick accounts (or **Select all**), check each one's mode tag (**[PAPER]**, **[DEMO]**, **[LIVE]**), then **Place buy** / **Place sell**.

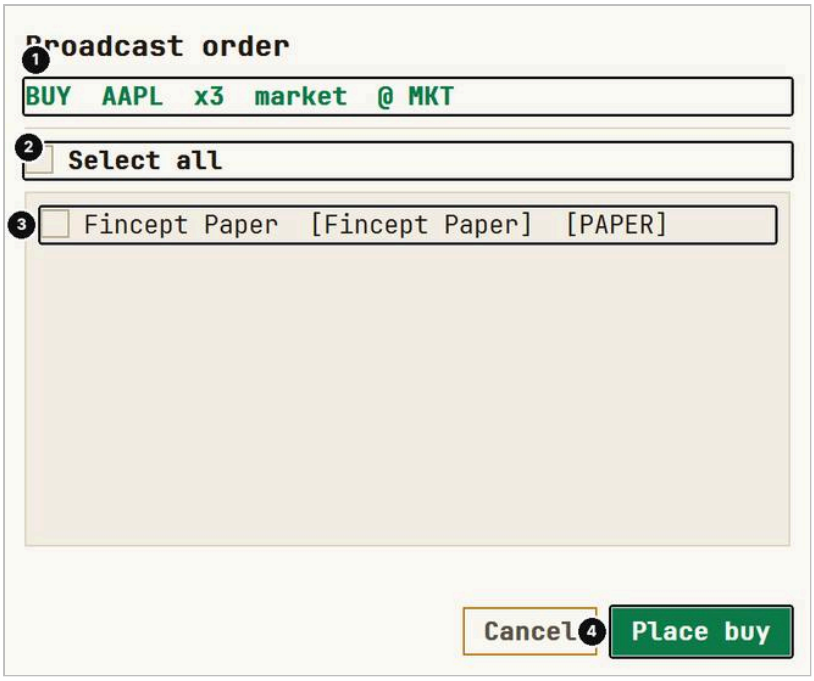


Figure 16.21 Broadcast Order sends the ticket's order to the accounts you tick.

1. The order being sent.
2. Tick every account at once.
3. Each account with its mode tag.
4. Sends after a final check.

Semi-Auto accounts get the order in their approval queue instead (**Chapter 21, Action Center** p. 381). Accounts whose live session has ended are skipped and named.

16.11 Orders from other screens

Other screens hand orders to this one. Nothing is sent until you submit it.

- **Staged tickets** — Backtesting's results and the workflow **Stage Order** node fill this screen's ticket. They always land on **Fincept Paper** unless they ask for live, and a notice names the account: **Order ticket staged for RELIANCE on Fincept Paper (PAPER). Nothing is sent until you submit it.**
- **Quick tickets** — **Buy**/**Sell** in Equity Research, **Order ticket** in Portfolio, the Quick Trade tile and `SYMBOL TRADE` in the command line open a small ticket over the screen you are on. Choose the account in **Account**; the line under it says exactly what will happen (**PAPER - simulated on Fincept Paper; nothing reaches a broker.**).

16.12 Reference

Top bar

Control	What it does
Account button	Shows and switches the account this screen trades (**§15.8 Switch the account a screen trades** p. 258).
Exchange chip	The exchange of the selected symbol.

Control	What it does
Symbol box	Type a symbol; picks from a search list.
Bid … Vol	Price ribbon for the selected symbol.
Status pill	How many of your accounts are connected, Fincept Paper included (for example **1/1 connected**).
Accounts	Opens **Manage Broker Accounts**.
Paper / Demo / Live	Read-only badge: what the account's orders move.
Feeds	Shows a news feed column on the far right (up to 3 feeds; **Select** picks them; see **§16.6 Watch the market** p. 271).
Unified	Shows the all-accounts portfolio monitor (**§21.6 Portfolio monitor** p. 387).
Compare	Two live charts side by side.
F&O	Opens the F&O screen (**Chapter 17, F&O** p. 284).

Order ticket

Control	Values / default
Buy / Sell	Side. Default Buy.
MKT / LMT / SL / SL-M	Order type. Default MKT.
Product	The account's products. Default the first (Intraday (MIS) on Fincept Paper).
Exchange	The account's exchanges. Default its home market (NSE for a rupee paper book, NASDAQ otherwise).
Validity	**Day** (default) or **IOC**.
Qty	Shares. US stocks, crypto and currencies on Fincept Paper accept fractions.
Price	Limit price (LMT, SL).
Trigger	Stop price (SL, SL-M, GTT).
Advanced	**SL**, **TP**, **Disclosed qty**, **After-market order (AMO)**, **GTT (rests until trigger)**.
Options strategy	Strategy, ATM strike, expiry, lot size, width, **Place strategy**.
Brokers: focused	Multi-account sending.
Baskets, GTT/BO	Dialogs.
Buy SYMBOL / Sell SYMBOL, All	Send / broadcast.

The ticket remembers what you typed when you switch screens or restart.

Bottom panel tabs

Tab	Shown
Positions, Holdings, Orders, Funds, Stats	Always
Time & sales, Auctions, Calendar	US broker accounts only

Questions the screen asks

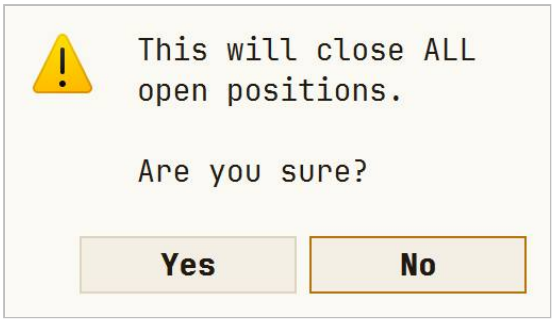


Figure 16.22 Every square-off and cancel-all asks first; No is the default.

Action	Question
Square off all (positions)	**This will close ALL open positions.**
Square off winners / losers	**This will close ALL positions currently in profit** (or loss).
Square off all (holdings)	**This will place MARKET SELL orders to exit ALL n holding(s).**
Cancel all orders	**This will cancel ALL pending orders.**
To CNC (broker accounts)	**Convert SYMBOL (qty × exchange) from MIS to CNC (delivery)?** It carries the position overnight instead of the 15:30 square-off.
Chart Exit	**Exit LONG n SYMBOL at market?**

16.13 For advanced users

- **One ticket, every venue.** On Fincept Paper the **Exchange** list of the ticket offers: India — NSE, BSE, NFO, BFO, CDS, BCD, MCX; the US — NASDAQ, NYSE, AMEX, NYSEARCA, ARCA, BATS, CBOE, OTC; Canada — TSX, TSXV; the UK — LSE; Germany — XETR, XETRA, FWB; EURONEXT; Switzerland — SIX; Spain — BME; Italy — MIL; Japan — TSE; Hong Kong — HKEX; China — SSE, SZSE; Korea — KRX; Australia — ASX; Singapore — SGX; South Africa — JSE; Brazil — BMFBOVESPA; Mexico — BMV; futures — CME, CBOT, NYMEX, COMEX, CFE, EUREX; crypto — CRYPTO; currencies — FX_IDC. The list is a shortlist, not a limit: a listing the symbol search finds on another exchange (a crypto exchange such as BINANCE, for example) trades too.
- **Indian prices on paper.** With a connected Indian broker, Fincept Paper fills Indian stock orders at that broker's live price.
- **Reconcile** (broker accounts, credits) compares what this terminal executed on the account (its live algo positions) with the broker's own record and keeps the result; **History** lists past comparisons.
- **AI.** The AI assistant can read this screen, fill the ticket and press Buy on Fincept Paper with your approval. It never confirms an account for live trading.

Do it with AI

- "Open Equity Trading and buy 5 RELIANCE on paper at market."
- "What are my paper positions and their P&L?"
- "Cancel my open paper orders."

16.14 Troubleshooting

"Price not available yet - wait for quotes to load". A paper market order needs a live price. Wait a second after picking the symbol, or use a limit order.

My paper order says "queued ... market closed". The market is shut; the order fills at the next open.

"... is listed on several markets - pick one from the suggestions". Choose the listing in the search list, or type `EXCHANGE:SYMBOL`.

The depth panel is locked. Full depth needs a plan with Level 2 depth. Bid and ask still show in the top bar.

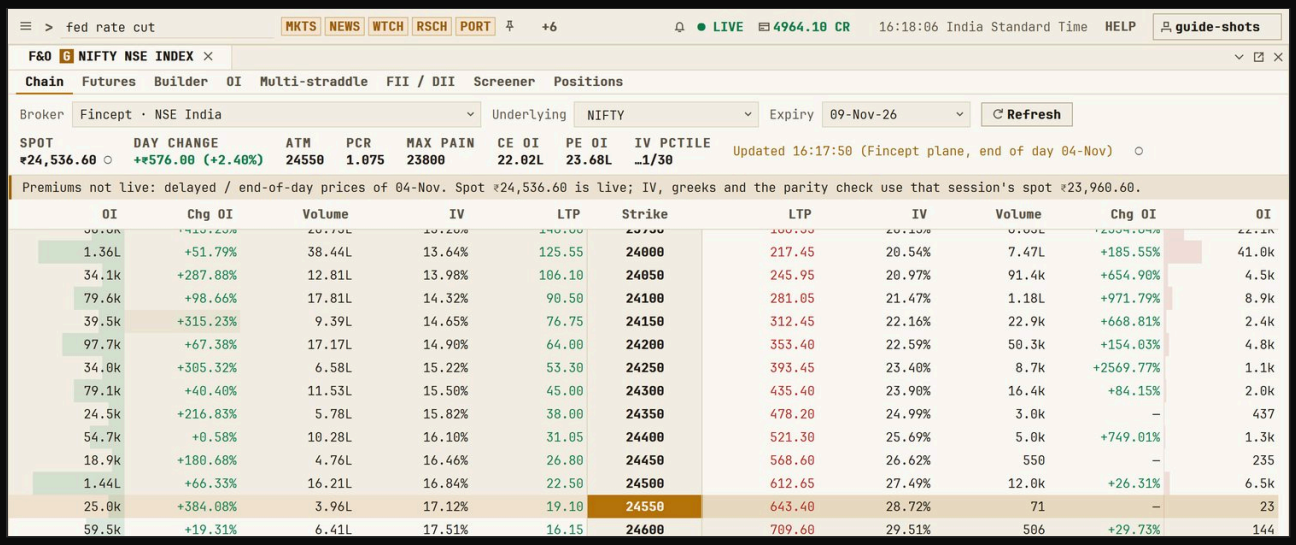
A red banner says the session has ended. Your broker logged you out. Click **Log in again** (**§15.9 Keep your session alive** p. 259). Until then the figures are the last ones the broker sent.

I pressed Buy and a "Confirm LIVE order" window appeared. The account is a live broker account on Semi-Auto approval, or the ticket came from another screen. Check the account name and mode before you click **Send LIVE order**.

CHAPTER 17

F&O

The futures and options desk — an option chain with open interest, a strategy builder with payoff and Greeks, OI and straddle studies, a strike screener, FII/DII flows and your F&O positions. It works without a broker on delayed data, and live through a connected broker.



At a glance

Open it	• Click **F&O** in the Equity Trading top bar • Type a symbol, then `FNO`, in the command line — for example `NIFTY FNO` — and press **Enter** • Pick a future or an option in the command line's search results (or type `/futures` or `/option`) • Open the **Options & F&O Desk** workspace template (its **F&O Chain** panel)
You need	• Signed in on any paid plan • Live prices and F&O orders: a connected Indian broker account (Fincept Paper orders need it too) • Risk profile: a few credits per run
Best for	• Reading an index's option chain before the open • Building and checking an options strategy • Tracking open interest and FII/DII flows
Time to learn	20 minutes
Related	**Chapter 16, Equity Trading** p. 264, **Chapter 25, Derivatives** p. 493, **Chapter 15, Brokers & Accounts** p. 248, **Chapter 19, Algo Trading** p. 331, **Chapter 26, Surface Analytics** p. 543

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17.1 Screen tour

F&O stands for futures and options. An **option** gives the right to buy (a **call**, written **CE**) or sell (a **put**, **PE**) an underlying — an index such as NIFTY or a stock — at a fixed **strike** price until its **expiry** date. A **future** is an agreement to buy or sell at a set price on a later date. Indian exchanges trade both in fixed **lots**: each contract states how many units one lot holds.

The F&O screen has a header that picks the chain, a strip of tabs, and the tab's content.

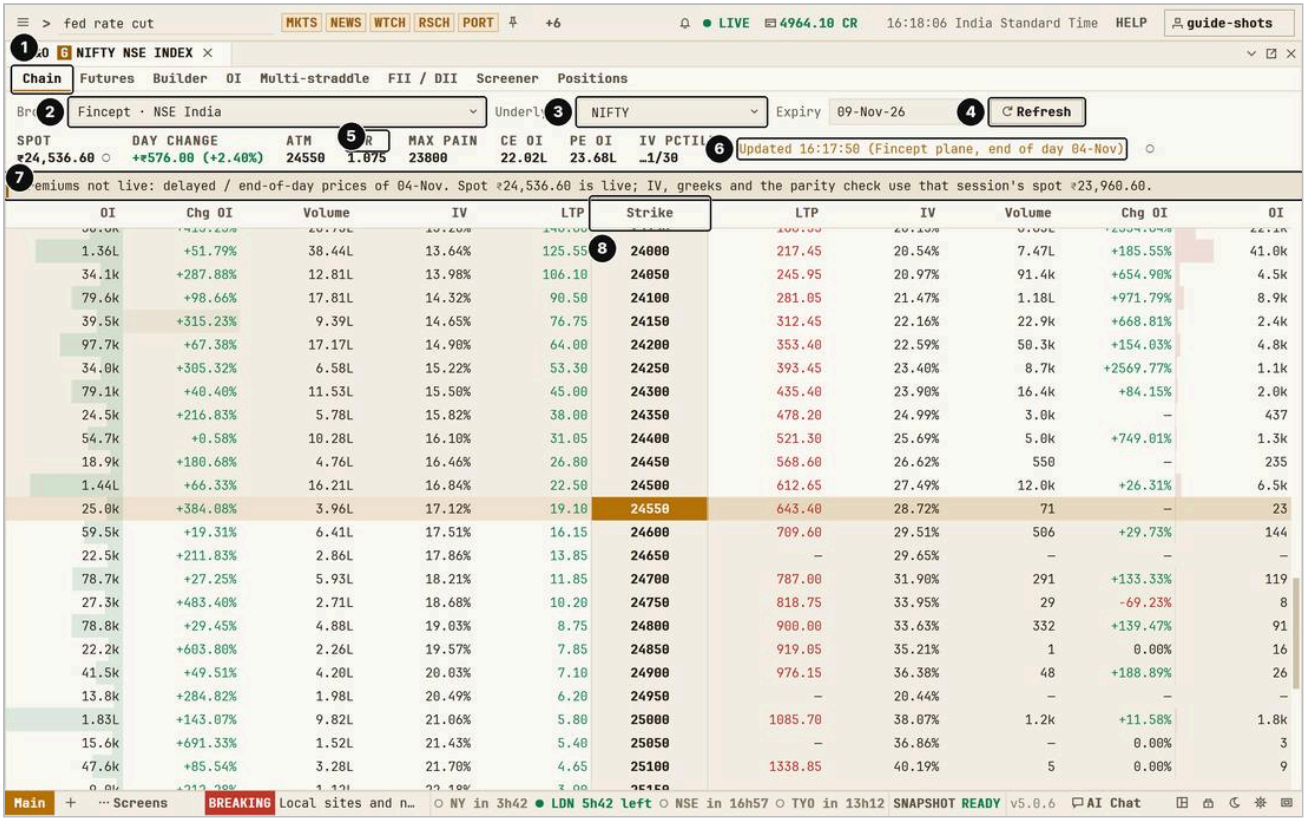


Figure 17.1 The F&O screen on the NIFTY option chain.

1. The tabs: **Chain**, **Futures**, **Builder**, **OI**, **Multi-straddle**, **FII / DII**, **Screener**, **Positions**.
2. **Broker**: where the chain comes from.
3. **Underlying** and, beside it, **Expiry**.
4. **Refresh** reloads now.
5. The ribbon: spot, change, ATM, PCR, max pain, total OI, IV percentile.
6. When the board was read, and from what.
7. An amber line when the premiums are not live.
8. Calls on the left, strikes in the middle, puts on the right.

17.2 Quick start

Read today's NIFTY option chain.

1. Open Equity Trading (`EQTR`) and click **F&O** in its top bar. Or type `NIFTY FNO` in the command line and press `Enter`.
2. In **Broker**, choose **Fincept · NSE India**. The underlying becomes **NIFTY** and the nearest expiry is picked.

3 Wait a few seconds for the chain to fill. The coloured row in the middle is the at-the-money strike.

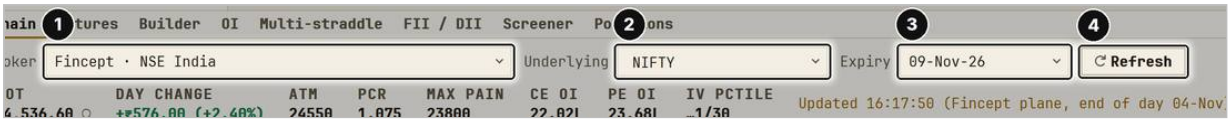


Figure 17.2 The NIFTY option chain from the NSE India data source.

1. Where the chain comes from.
2. The underlying: type to search.
3. The expiry date.
4. Reload now.

4 Read the ribbon: **SPOT**, **ATM**, **PCR** and **MAX PAIN** sum up the board, and the amber line says how fresh the prices are.

5 Pick another date in **Expiry** to see a later contract.

17.3 Read the option chain

The **Chain** tab lists every strike of the chosen expiry: calls on the left, puts on the right, strikes in the middle. The row nearest the current price (**ATM**, at the money) is coloured, and in-the-money cells are shaded.

OI	Chg OI	Vol	IV	LTP	Strike	LTP	IV	Volume	Chg OI	OI
1.36L	+51.79%	38.44L	13.64%	125.55	24000	217.45	20.54%	7.47L	+185.55%	41.0k
34.1k	+287.88%	12.81L	13.98%	106.10	24050	245.95	20.97%	91.4k	+654.90%	4.5k
79.6k	+98.66%	17.81L	14.32%	90.50	24100	281.05	21.47%	1.18L	+971.79%	8.9k
39.5k	+315.23%	9.39L	14.65%	76.75	24150	312.45	22.16%	22.9k	+668.81%	2.4k
97.7k	+67.38%	17.17L	14.90%	64.00	24200	353.40	22.59%	50.3k	+154.03%	4.8k
34.0k	+305.32%	6.58L	15.22%	53.30	24250	393.45	23.40%	8.7k	+2569.77%	1.1k
79.1k	+40.40%	11.53L	15.50%	45.00	24300	435.40	23.90%	16.4k	+84.15%	2.0k
24.5k	+216.83%	5.78L	15.82%	38.00	24350	478.20	24.99%	3.0k	–	437
54.7k	+0.58%	10.28L	16.10%	31.05	24400	521.30	25.69%	5.0k	+749.01%	1.3k
18.9k	+180.68%	4.76L	16.46%	26.80	24450	568.60	26.62%	550	–	235
1.44L	+66.33%	16.21L	16.84%	22.50	24500	612.65	27.49%	12.0k	+26.31%	6.5k
25.0k	+384.08%	3.96L	17.12%	19.10	24550	643.40	28.72%	71	–	23
59.5k	+19.31%	6.41L	17.51%	16.15	24600	709.60	29.51%	506	+29.73%	144

Figure 17.3 Strikes around the money. The coloured row is the at-the-money strike; in-the-money cells are shaded.

1. Call open interest, with a bar for its size.
2. Implied volatility.
3. Call last price.
4. Strike.
5. Put last price.

Column	Meaning
OI	Open interest: how many contracts are open now. A bar behind the number shows its size.
Chg OI	Change in open interest since the previous close. Hover for the figures.
Volume	Contracts traded this session.
IV	Implied volatility — the market's forecast of how much the price will move, worked out from the option's price.
LTP	Last traded price. A faint LTP means no trade yet this session: it is the previous session's price.
Strike	The strike price.

The ribbon above the chain sums up the board:

Tile	Meaning
SPOT	The underlying's price, with its own freshness dot. **implied**, **previous close** or **delayed** after the figure says where it comes from.
DAY CHANGE	The underlying's change today.
ATM	The strike nearest the spot.
PCR	Put-call ratio: total put OI divided by total call OI. Above 1 means more puts are open.
MAX PAIN	The expiry price (a strike) at which option buyers as a whole would collect the least: open interest × how far each call and put would be in the money, added up, is lowest there.
CE OI / PE OI	Total call and put open interest.
IV PCTILE	Where today's ATM implied volatility sits in its last 90 days (0 = lowest, 100 = highest). It needs 30 days of history first and shows **…N/30** until then.

Actions on a strike

Right-click a call or put to act on it:

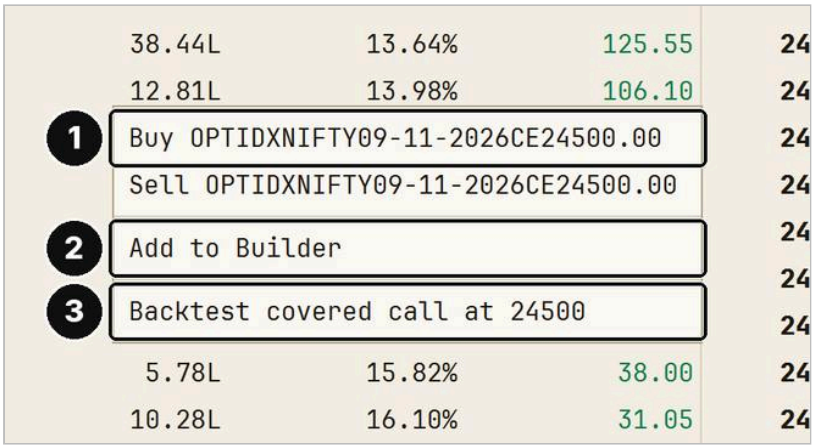


Figure 17.4 Right-click a call price for its menu.

1. Open a one-leg ticket (broker source only).
2. Add the contract to your strategy.
3. Backtest a covered call at this strike.

- **Buy …** / **Sell …** open a one-leg order ticket (needs a broker source, see **§17.8 Place orders** p. 294).
- **Add to Builder** adds the contract as a leg of your strategy.
- **Backtest covered call at K** (calls) or **Backtest protective put at K** (puts) open that strategy in Backtesting (**Chapter 24, Backtesting** p. 464).

Once you have opened the **Builder** tab, a left-click on an LTP also adds that leg to the builder.

17.4 Know how fresh the prices are

Option prices can be live, delayed or from the last close. The screen always tells you which.

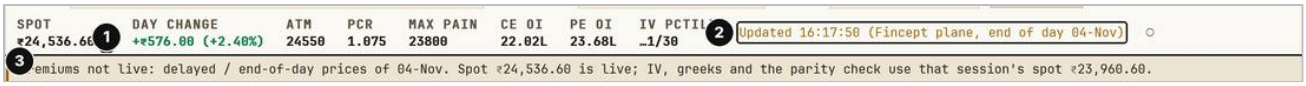


Figure 17.5 The header says how fresh the board is.

1. The spot's own freshness dot.
2. **Updated** time and the source's state.
3. Premiums are delayed or from the last close.

- The status text after the ribbon reads **Updated hh:mm:ss (…): live broker feed**, **broker feed quiet since …**, **broker snapshot**, or, on a Fincept data source, **Fincept plane, end of day dd-MMM** (or **Fincept plane, delayed / end of day**). **, premiums lag spot** is added when the premiums are older than the spot.
- The badge beside it says **LIVE**, **DELAYED**, **STALE**, **SNAPSHOT** or **CLOSED**.
- An amber line over the chain warns when premiums are not live, for example **Premiums not live: delayed / end-of-day prices of 05-Nov. Spot … is live; IV, greeks and the parity check use that session's spot …**
- When a connected Indian broker could serve the board live, the amber line offers **Use *broker* (live)**.
- **Premiums lag spot by N%** means the option prices are older than the spot: do not trade on them.

Where the data comes from

Source (in Broker)	Markets	Freshness
Fincept · NSE India	NSE indices and F&O stocks	Delayed or end of day
Fincept · Cboe US	Several thousand US stocks, ETFs and indices	Delayed or end of day
Fincept · Montréal, Fincept · Osaka JPX, Fincept · TAIFEX	Canada, Japan, Taiwan	Delayed or end of day
A connected Indian broker	NSE / BSE F&O	Live
IBKR, Tradier, Charles Schwab, tastytrade, TradeStation	US options	Live (with your market-data subscription)

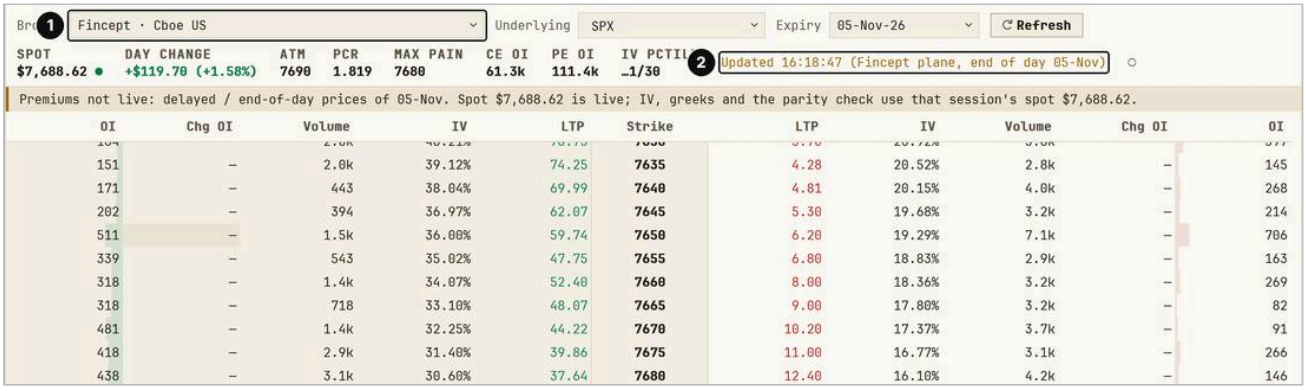


Figure 17.6 The SPX chain from the Cboe US data source, priced in dollars.

1. **Fincept · Cboe US**.
2. End-of-day board.

The screen opens on your last broker if it is connected, otherwise on a connected broker, otherwise on **Fincept · Cboe US**. A symbol picked from the command line with no market opens on NSE.

17.5 Build an options strategy

The **Builder** tab turns legs into a strategy and shows what it can make or lose.

1. Load a chain on the **Chain** tab first (the builder prices legs from it).
2. Click the **Builder** tab.
3. Choose a strategy in **Template** — for example **NEUTRAL: Iron Condor** — and click **Use**. The legs appear in the table, and the ribbon and payoff chart fill in.
4. Change **Lots** or **Entry** on a leg, or untick **On** to leave it out; every figure updates.
5. Click **Save** to keep the strategy under a name. The **Save strategy** window asks for a **Name** (it suggests **My strategy**). Type one and click **OK**; **Cancel** saves nothing.



Figure 17.7 Save strategy asks for a name.

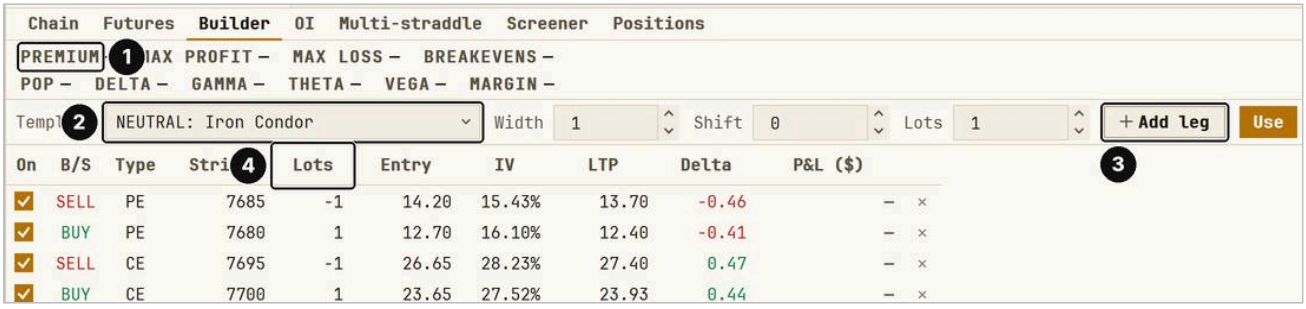


Figure 17.8 The top of the Builder: an SPX iron condor from the template, on a Fincept data source.

1. The ribbon: premium, max profit and loss, breakevens, POP, Greeks, margin.
2. **Template**, then **Width**, **Shift**, **Lots** and **Use**.
3. **Add leg** adds a blank call leg.
4. Edit **Lots** (negative = sell) and **Entry** on each leg.

The payoff chart fills the middle of the tab. Here it is empty: on a Fincept data source the lot size is unknown, so nothing is drawn (see the note below).



Figure 17.9 The bottom of the Builder. The amber line says why no payoff is drawn: without a broker's contract list the lot size is unknown.

1. **Save** and **Load** ▾ keep and reopen strategies.
2. **Risk profile**: a scenario grid (credits).
3. **Paper trade** and **Place live...** need a broker source.

The builder ribbon

Figure	Meaning
PREMIUM	Net premium: **Dr** (debit) you pay, **Cr** (credit) you receive.
MAX PROFIT / MAX LOSS	The most the strategy can make or lose at expiry.
BREAKEVENS	Underlying prices where the strategy neither makes nor loses money at expiry.
POP	Probability of profit, from the options' implied volatility.
DELTA, GAMMA, THETA, VEGA	The Greeks: how the strategy's value changes with the price, the speed of that change, one day passing, and volatility.
MARGIN	The broker's margin for the basket. It shows — until the order window has checked it with your broker.

Templates

Pick a template in **Template**, set **Width** (strikes between legs), **Shift** (strikes away from ATM) and **Lots**, then click **Use**.

Group	Templates
BULLISH	Long Call, Short Put, Bull Call Spread, Bull Put Spread, Call Ratio Back Spread, Synthetic Long
BEARISH	Long Put, Short Call, Bear Put Spread, Bear Call Spread, Put Ratio Back Spread, Synthetic Short
NEUTRAL	Iron Condor, Iron Butterfly, Short Straddle, Short Strangle
VOLATILE	Long Straddle, Long Strangle
OTHERS	Call Butterfly, Put Butterfly

The legs table

Column	Meaning
On	Untick to leave a leg out of every figure without deleting it.
B/S	Buy or sell.
Type	CE or PE.
Strike	The strike.
Lots	Number of lots; negative means sell. Editable.
Entry	The price you assume you trade at. Editable.
IV, LTP, Delta	From the chain.
P&L	The leg's profit or loss now against **Entry**, in the chain's currency (for example **P&L ($)**).
×	Deletes the leg.

The payoff chart under the table draws the strategy's profit or loss at expiry across the underlying's price (30% either side of the spot), with markers for the spot and the breakevens.

Payoff needs the contract size

The payoff, premium and Greeks need each contract's lot size. A broker's contract list always carries it; the delayed Fincept data sources may not. When it is missing, an amber line says **The contract size of … is not known (the chain carries no lot for it), so no payoff, premium or order is computed** and the ribbon stays empty — nothing is guessed. Read the chain through a connected broker to see the full analysis.

Save, load and model

- **Save** stores the strategy under a name (synced to your account). Once a strategy is saved or loaded, **Save** updates it in place without asking for a name again (a template applied with **Use** starts a new one). **Load ▾** lists saved strategies (click one to load it) and a **Delete: name** item for each, which asks first.
- **Risk profile** runs a scenario grid across price and volatility, with Greeks and a margin estimate. It costs a few credits per run; the payoff and Greeks beside it stay free. The result opens in a **Strategy risk profile** window: a **Margin estimate**, the net premium, the worst scenario, the strategy's Delta, Gamma, Vega and Theta, and the breakevens. The margin figure is an estimate taken from the worst cell of the grid, not your broker's number.

17.6 Study open interest

The **OI** tab shows where traders are positioned.

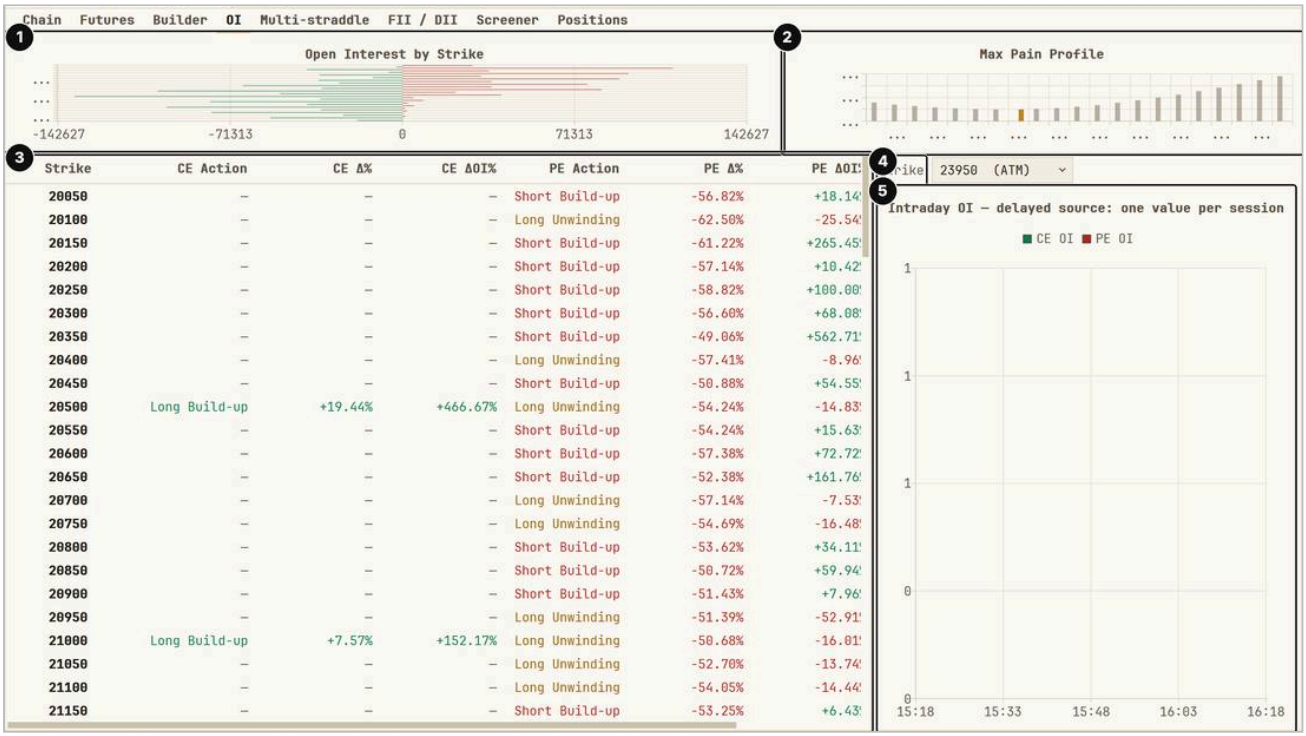


Figure 17.10 The OI tab for NIFTY.

1. **Open Interest by Strike**: calls and puts around the money.
2. **Max Pain Profile**: the lowest bar is max pain.
3. Build-up: what each strike's price and OI did, in words.
4. Pick the strike for the intraday chart.
5. **Intraday OI** of that strike (one value per session on a delayed source).

- **Open Interest by Strike** — call and put OI around the ATM strike (ATM ±10 strikes).

- **Max Pain Profile** — what option buyers as a whole would collect if the expiry price were each strike; the lowest bar is max pain.
- The build-up table has **Strike**, then **CE Action**, **CE Δ%** (price change) and **CE ΔOI%** (OI change) for the call and the same three for the put. The action labels each move: **Long Build-up** (price up, OI up), **Short Build-up** (price down, OI up), **Short Covering** (price up, OI down), **Long Unwinding** (price down, OI down). A dash means the price or the OI did not change.
- **Intraday OI** — OI of one **Strike** through the day. The terminal records it while the chain is open and keeps it for 7 days. On a delayed source it holds one value per session.

17.7 Other tabs

Futures

The **Futures** tab draws the futures curve of a root (every contract month), labels it **CONTANGO** (later months dearer), **BACKWARDATION** (later months cheaper) or **MIXED**, and lists each month: **Month**, **Code**, **Last**, **Chg%**, **Sprd-1** (spread to the previous month), **vs front**, **Volume**, **DTE** (days to expiry) and **Symbol**. Labels above the table give the **slope** (the last priced month against the front, in %), the **front** month and how many listed months have a price (**n of m priced**: a month that has never traded has none). Open it by picking a future in the command line (`/futures`). Double-click a row to open that contract in Asset Research.

Multi-straddle

Compare the combined premium of several straddles or strangles through the day. Choose **Type** (**Straddle (ATM)**, **Strangle ±1**, **±2**, **±3**) and an **Anchor** strike, then click **Add**. Double-click an entry to remove it. The chart is **Synthetic Premium (intraday)**: call plus put premium of each entry over time.

The chart is drawn from the prices the terminal records while the chain is open (the same record as the OI tab's **Intraday OI**). On a delayed data source that is one value per session, so a new entry's line can stay empty at first, as in the picture.

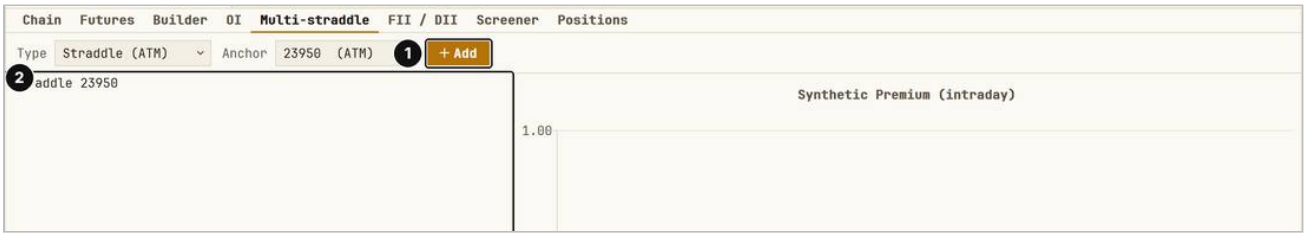


Figure 17.11 Multi-straddle with the at-the-money straddle added, on a delayed source (no line yet).

1. **Type** and **Anchor**, then **Add**.
2. Your straddles and strangles.

Screener

Filter the chain's strikes by **IV Min** (default 0%), **IV Max** (default 200%), **± Strikes** around ATM (default 20) and minimum call or put OI (**CE OI ≥**, **PE OI ≥**; in lakh, **L**, on NSE and in contracts elsewhere). The columns are **Strike**, **CE IV**, **CE OI**, **CE Δ%**, **PE Δ%**, **PE OI**, **PE IV** (Δ% is the price change). A line under the table counts the matches (**n of m strikes match**) and says how old the chain is. Your filters are remembered.

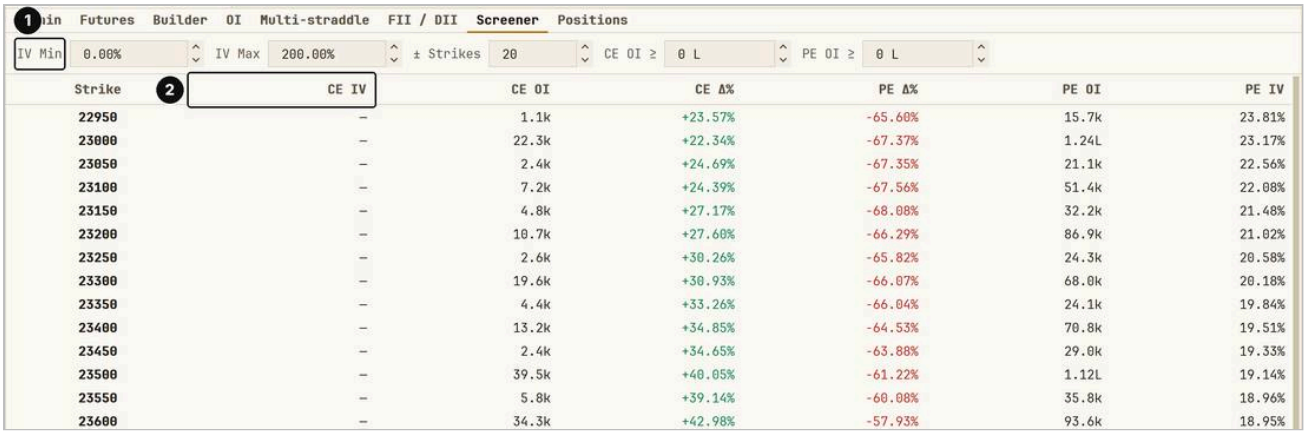


Figure 17.12 The strike screener (the first rows).

1. IV range, strikes around ATM and minimum OI.
2. Each matching strike's call and put figures.

FII / DII

Daily cash-market buying and selling by foreign (FII) and domestic (DII) institutions, in ₹ crore: **Date**, **FII Buy**, **FII Sell**, **FII Net**, **DII Buy**, **DII Sell**, **DII Net**, with a **Daily Net Flows (₹ Cr)** chart. These are Indian figures, so the tab is shown only while the chain is an Indian (NSE) one; on the other sources it is hidden. New figures arrive in the evening (with none yet, the line says **Try refreshing after 6 PM IST**); **Refresh** fetches them. The line above the table names the last update and how many days are kept.

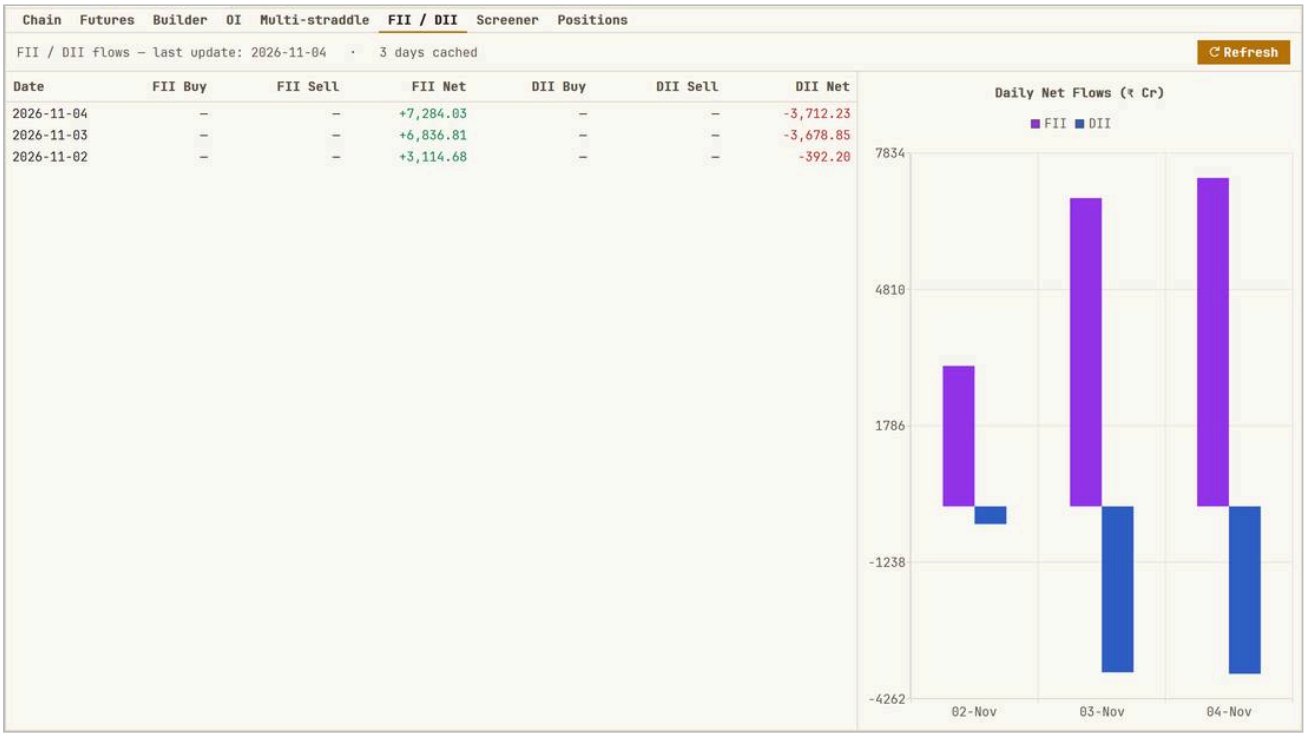


Figure 17.13 FII / DII flows.

Positions

The top table, **Broker F&O positions (live accounts)**, lists the F&O positions of your live broker accounts: **Account**, **Contract**, **Underlying**, **Expiry**, **Strike**, **Right**, **Net lots**, **Qty**, **Lot**, **Mult**, **Avg**, **LTP**, **Unrealised**, **Realised**. Below it, the paper blotter shows your Fincept Paper book:

- The book picker (**Main book**, or another book of the account, such as an algo deployment's) and a summary line (**n open, unrealized ...**). The picker turns on once the account has a second book.
- **SQUARE OFF ALL** closes every open position of the main book at market, after a question.
- Tabs **Positions**, **Orders** and **Trades**. Each main-book position has an **Exit** button that closes it at market. Other books are shown only: close their positions in the algo deployment or tab they belong to.

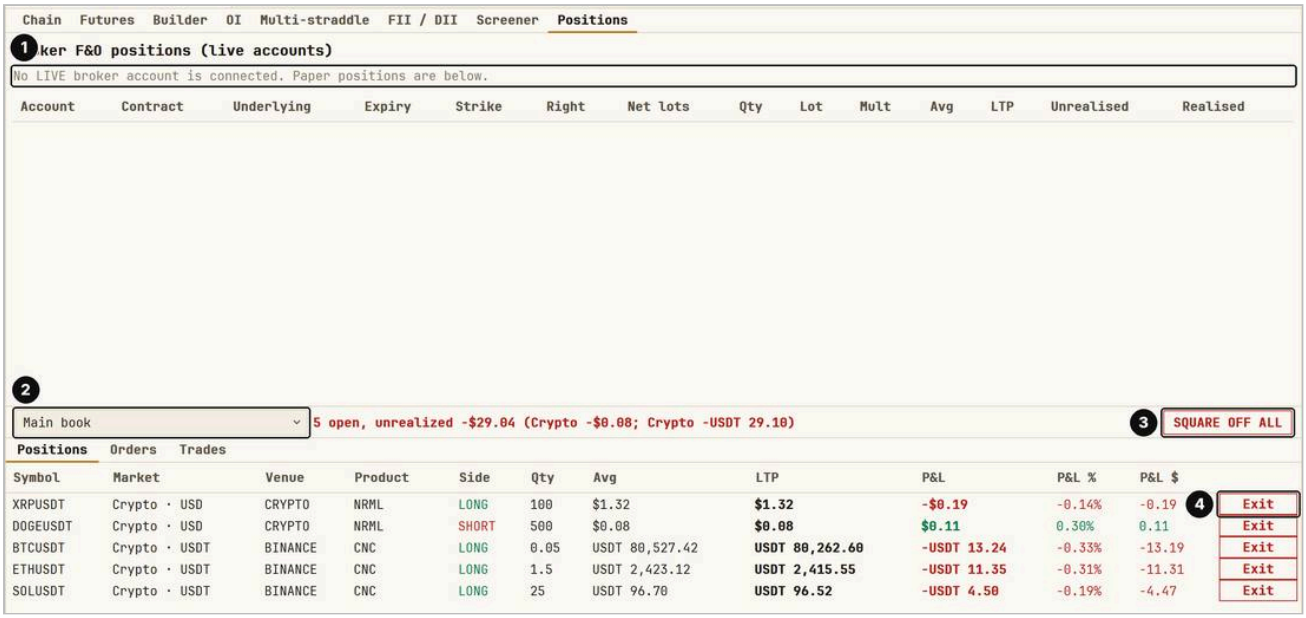


Figure 17.14 The Positions tab: live broker F&O positions on top, the Fincept Paper book below.

1. Live broker F&O positions (none without a broker).
2. The book shown, and its summary.
3. Close every main-book position.
4. **Exit** closes one position.

17.8 Place orders

F&O orders need an Indian broker account as the chain source — even paper orders, because the broker supplies the exact contract (its lot size and symbol). On a Fincept data source the order buttons are greyed out and say **... is a market-data source, not a broker: switch the chain to a connected broker to trade.**

With a broker chosen in **Broker** and an account in **Account**:

- **One leg** — right-click a strike and choose **Buy** or **Sell**. The ticket has **Mode** (**Paper (Fincept Paper)** by default, or **LIVE (real money)**; on a demo account **LIVE (broker DEMO environment)**), **Type** (**Market** or **Limit**), **Qty (lots)** with the units it means, **Limit price**, **Product** (**NRML (positional)** or **MIS (intraday)**) and a margin check (**Margin: checking...**). A live order needs the box **I understand this is a REAL order on ...** ticked. **Place Buy** / **Place Sell** sends it.
- **A strategy** — in the Builder, click **Paper trade** (every active leg as paper orders in your Fincept Paper account) or **Place live...** (real orders, after a confirmation naming the account).

The confirmation window lists every leg with its quantity (**1 lot x 75 = 75**), the net premium, max profit and loss, and the broker's basket margin. If the strategy sells options it does not hedge, you must tick **This strategy SELLS options it does not hedge: the loss is not limited to the premium. I accept that.**

How a live basket is sent

Every BUY goes before any SELL, so hedges are in place first. Each leg is a limit order capped by **Limit slippage cap (%)** (default 2). A leg not filled within 20 seconds is cancelled and the basket **stops** there: nothing after it is sent. The run window shows each leg's state; **Flatten filled legs…** closes what did fill.

Credits

Paper F&O fills cost credits per leg that fills; the confirmation shows the price (**Each leg that fills:**). Live orders need a plan that includes live order routing.

17.9 Reference

Header

Control	What it does
Broker	The chain source: a connected broker or a Fincept data source.
Underlying	Search box (**Search ticker…**). Rows read **TICKER — Company name**.
Expiry	The expiry date (DD-MMM-YY). Opens on the nearest.
Account	For a broker source: the account that supplies contracts (**Name [LIVE]**).
Refresh	Reloads the chain now.

Tabs

Tab	Shows
Chain	The option chain (default).
Futures	The futures curve of a root.
Builder	Strategy legs, payoff, Greeks.
OI	OI by strike, max pain, build-up, intraday OI.
Multi-straddle	Straddle and strangle premiums through the day.
FII / DII	Indian institutional flows. Shown only on an Indian (NSE) chain.
Screener	Strike filters.
Positions	Live broker F&O positions and the paper blotter.

Builder controls

Control	What it does
Template, Width, Shift, Lots, Use	Build a strategy from a template.
Add leg	Adds a blank call leg.
Save / Load ▾	Store and reopen strategies.

Control	What it does
Risk profile	Scenario grid and margin estimate (credits).
Target +	Days ahead for a target-day curve (0–365).
PCR, CE OI, PE OI	The chain's readings.
Paper trade / Place live...	Send the strategy (broker source needed).

Defaults

Setting	Default
Underlying	NIFTY on NSE, SPX on Cboe US
Expiry	Nearest
Strikes shown	All; live updates stream for ATM ±15 strikes
Refresh	At most once a minute per chain; a broker board older than 15 s is re-read when opened
Greeks	The broker's own when it sends them; otherwise Black-Scholes with a 6.7% risk-free rate (Indian boards)

17.10 For advanced users

- **Command line.** `NIFTY FNO` opens the chain for NIFTY; `/option` walks name → expiry → strike and opens the chain scrolled to that contract; `/futures` walks root → month and opens the Futures tab.
- **Link groups.** The screen follows the symbol of its link group and sends its own underlying to the group (**Chapter 5, The Terminal Window** p. 70).
- **Workspaces.** The **Options & F&O Desk** template puts the F&O chain next to pricing, volatility and execution panels (**Chapter 7, Workspaces** p. 112).
- **Parity check.** The terminal compares call and put prices against the spot (put-call parity). When they disagree by more than 1%, the status warns that the premiums are older than the spot.
- **Lot sizes are never guessed.** If the contract size is unknown, the builder shows no payoff and refuses to send, and asks you to load the broker's instrument list.
- **No freeze-quantity split.** Very large orders are sent as one order per leg; your broker may refuse quantities above the exchange's freeze limit.
- **Deeper analytics.** For volatility surfaces, a full Greeks workbench and GEX, use **Chapter 25, Derivatives** p. 493 and **Chapter 26, Surface Analytics** p. 543.

17.11 Troubleshooting

The chain says "Connect a broker to load F&O data." Pick a Fincept source in **Broker** (for example **Fincept · NSE India**) to see delayed data, or connect an Indian broker for live prices.

Paper trade is greyed out. F&O orders need a broker source, even on paper. Hover over the button for the exact reason.

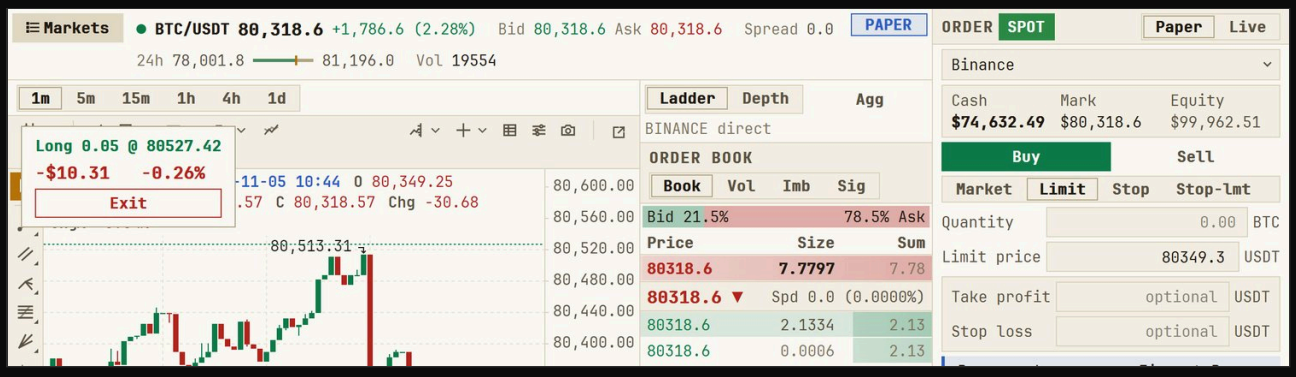
IV PCTILE shows "...12/30". The percentile needs 30 days of history recorded on this computer. Keep using the screen; it fills in.

Premiums look wrong next to the spot. Read the amber line: outside market hours or on a delayed source the premiums are from the last session while the spot may be live. Use a broker source for live premiums.

CHAPTER 18

Crypto Trading CRYP

A full crypto desk on one screen — live prices, chart, order book and trade tape from fifteen exchange venues, a paper ticket that needs no exchange key, and pages for algorithms, derivatives, bots, portfolio, risk, research, custody and compliance.



At a glance

Open it	• Type CRYP (or `crypto`) in the command line and press Enter • **Screens** › **Trading** › **Crypto Trading** • Pick a coin's crypto row in the command line search
You need	• Exclusive+ or Exclusive Pro plan • No key for prices and paper trading; an exchange API key for LIVE orders
Best for	• Practising crypto trading with paper money at real prices • Comparing funding and basis across exchanges
Time to learn	20 minutes for the Trade page; an afternoon for every page
Related	**Chapter 16, Equity Trading** p. 264, **Chapter 19, Algo Trading** p. 331, **Chapter 20, Alpha Arena** p. 371, **Chapter 23, Portfolio** p. 430

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18.1 Screen tour

The Crypto screen is a trading desk for digital assets. It shows one **pair** at a time — two assets priced against each other, such as **BTC/USDT** (bitcoin priced in the USDT stablecoin) — on one **venue**, the exchange the prices come from (Binance, OKX, Coinbase and twelve more).

You can watch any venue and trade on paper without an exchange account. **Paper trading** means practice orders that fill at the venue's real live price but move no real money. Real orders, called **LIVE** orders here, need an API key from your own exchange account.

The screen opens on the **Trade** page. It has six parts: the header, the page strip, the markets list, the market view (chart, order book and trade tape), the blotter and the order ticket.

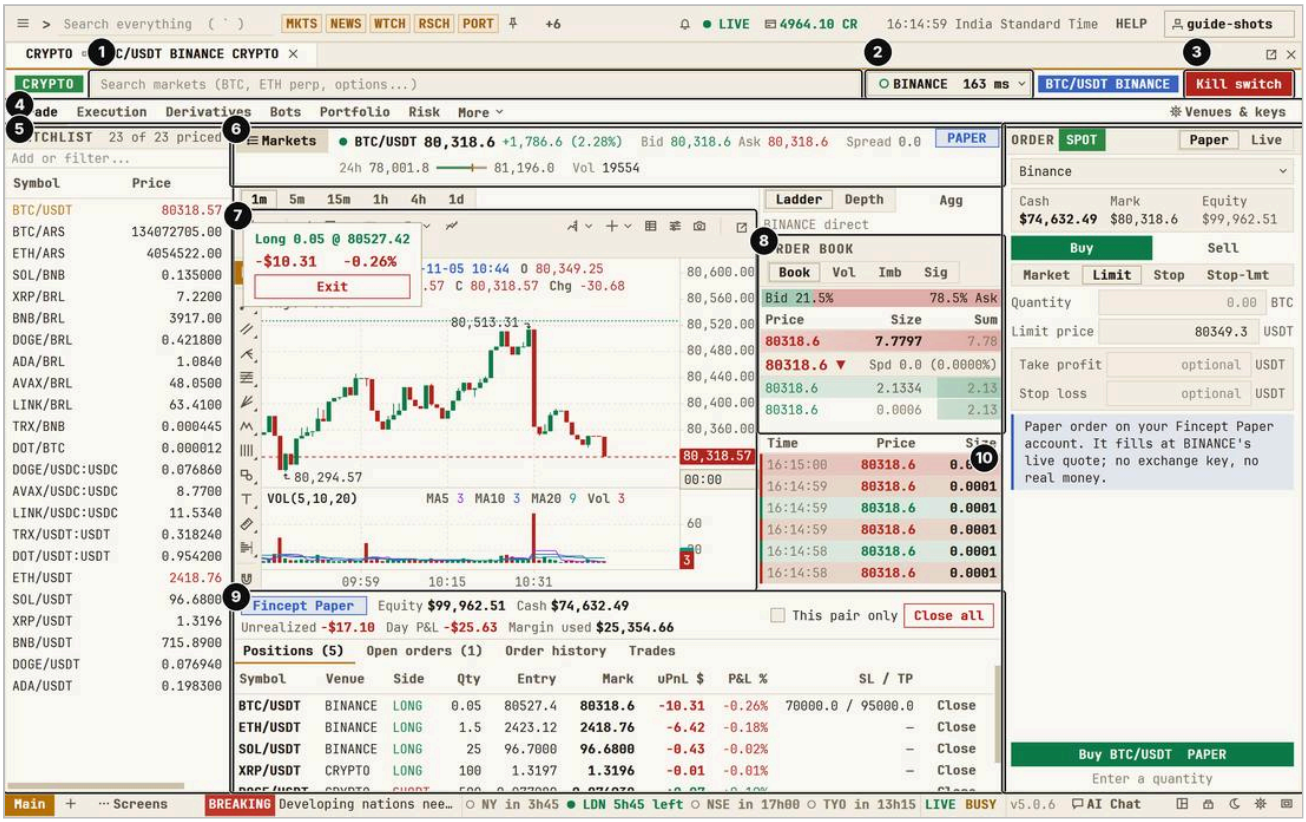


Figure 18.1 The Crypto screen on its Trade page, showing BTC/USDT on Binance with open paper positions.

1. **Search markets** finds any pair on any venue: spot, perpetuals and options.
2. The **venue picker**: the exchange on screen, its health dot and its response time.
3. **Kill switch** stops all LIVE trading at once (see **§18.13 Stop everything with the kill switch** p. 323).
4. The **page strip**: Trade, Execution, Derivatives, Bots, Portfolio, Risk, **More** and **Venues & keys**.
5. The **Watchlist**: this venue's pairs with live prices. Click one to open it.
6. The **instrument bar**: price, change, bid, ask, spread, 24-hour range and volume.
7. The **chart**, with the open paper position drawn on it.
8. The **order book** (ladder), with the **trade tape** below it.
9. The **blotter**: your paper positions, open orders, order history and trades.
10. The **order ticket**. It starts in **Paper** mode.

The header runs across the top of the screen. From left to right: the **CRYPTO** label, the **Search markets** box, the venue picker, a chip with the pair and venue on screen (for example **BTC/USDT BINANCE**), and the red **Kill switch**. Two more items appear only when they have something to say: a **Desk live** status pill once the screen's live connection to the trading server is up (it reads **Reconnecting** while that connection is down), and an **N approval(s) pending** button when orders are waiting for a second person to approve them.

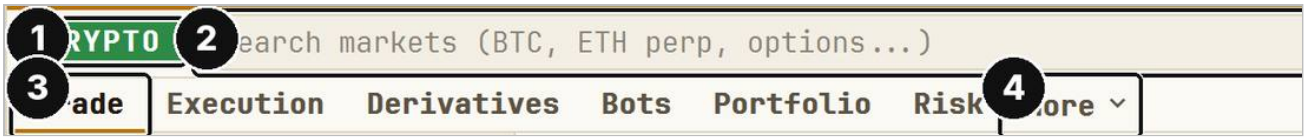


Figure 18.2 The left of the header and the page strip.

1. The screen's label.
2. **Search markets**: type two letters or more.
3. The six everyday pages.
4. **More** opens four further pages.



Figure 18.3 The right of the header and the page strip.

1. The venue on screen and its response time. Click to pick another.
2. The pair and venue every page is working on.
3. The kill switch.
4. Exchange keys, team members and the order policy.

The page strip under the header holds the pages. The six a trader uses every day are on the strip; four specialist pages wait behind **More**; **Venues & keys** sits at the right end.

Page	What it is for
Trade	Watch one pair and place paper or LIVE orders.
Execution	Work a large LIVE order over time with an algorithm, route it across venues, trade several legs at once, request quotes, and measure execution quality.
Derivatives	Funding rates, futures basis, option chains and volatility surfaces, greeks, delta hedging, open interest and liquidations.
Bots	Automated strategies (grid, DCA, market making, arbitrage, custom) that run on the server.
Portfolio	Net asset value, P&L attribution, tax lots, rebalancing and margin planning for the LIVE book.
Risk	Exposure, limits, value at risk, stress scenarios, circuit breakers and exchange risk.
More > Intel	Exchange money flows, crypto-to-macro correlation, signals and exchange transparency.
More > On-chain	DeFi yields, total value locked, stablecoins, bridges, exploits, your DeFi positions, staking and governance votes.
More > Custody	Custody accounts, balances, proof of reserves, collateral, transfers and credit lines.
More > Compliance	The audit trail, trade surveillance, sanctions screening, approvals, travel rule and reports.
Venues & keys	Register exchange API keys, add team members, and set the order policy.

While one of the four **More** pages is open, the **More** button shows that page's name instead (for example **Intel**), so you always know where you are.

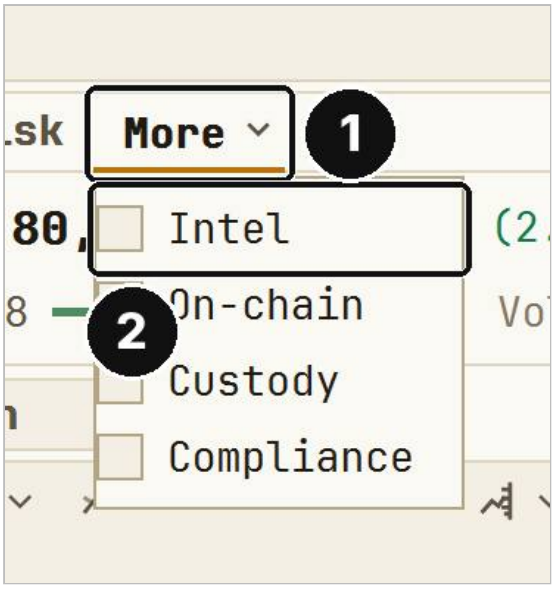


Figure 18.4 The More menu with the four specialist pages.

1. Click **More**.
2. Pick a page. The current one has a tick.

Note

Every page except **Trade** works on the LIVE side of the desk: it reads the accounts you hold at exchanges through registered keys. On an account with no key those pages still open and show their public market data (funding, basis, options, on-chain, intel), but your own book, exposure and orders stay empty.

18.2 Quick start

This buys a small amount of bitcoin with paper money. Nothing here touches a real exchange account.

1. Type `CRYP` in the command line at the top of the window and press `Enter`. The Crypto screen opens on its **Trade** page.
2. Look at the top of the order ticket on the right. **Paper** must be highlighted. If **Live** is highlighted, click **Paper**.
3. In the **Watchlist** on the left, click **BTC/USDT**. The chart, the book and the ticket switch to bitcoin.
4. In the ticket, click **Buy**, then click **Market**. A **market order** fills at once at the best price available now.

5 Click in **Quantity** and type `0.01` (one hundredth of a bitcoin).

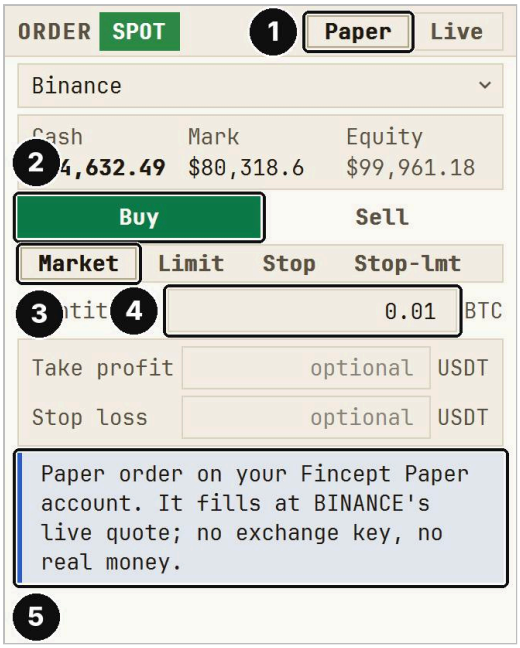


Figure 18.5 A paper market order for 0.01 BTC, ready to send.

1. **Paper** is on: practice money, real prices.
2. **Buy** is chosen.
3. **Market** fills at the live price.
4. The quantity, in BTC.
5. Where the order goes.

6 Click **Buy BTC/USDT PAPER** (or press Ctrl + Enter). A line under the button confirms the fill, for example *Paper BUY 0.01 BTC/USDT on BINANCE filled at 80527.4*.

7 Look at the blotter under the chart. The **Positions** tab now lists your bitcoin with its entry price, the live price (**Mark**) and your profit or loss. A small card on the chart shows the same position, with an **Exit** button.

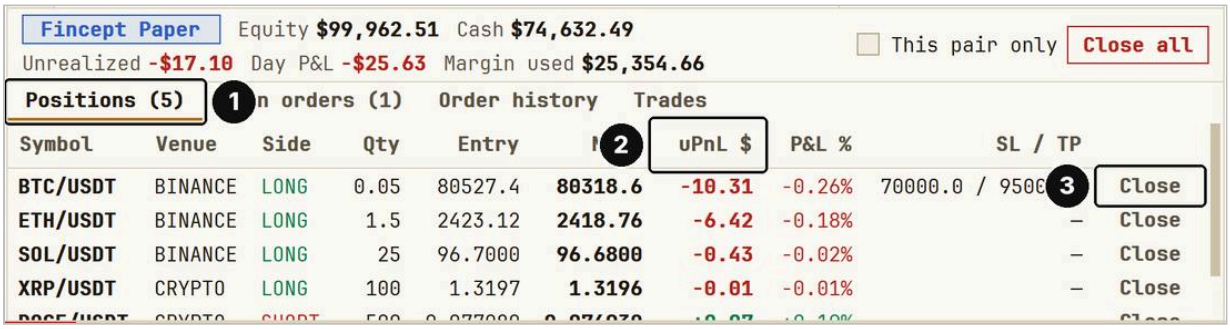


Figure 18.6 The new paper positions in the blotter. The position card on the chart is in **Figure 18.1** p. 299.

1. **Positions** lists every open crypto paper line.
2. Unrealised profit or loss, re-marked to the live price.
3. **Close** sells this line back at market.

Tip

Every paper fill costs a twentieth of a credit (0.05 CR). Orders that do not fill, cancels and every price you look at are free.

18.3 Pick a venue and a pair

The screen always works on one venue and one pair. You can change either at any time.

Change the venue

1. Click the venue picker in the header (it shows the current venue, for example **BINANCE 159 ms**).
2. Pick a venue from the menu.

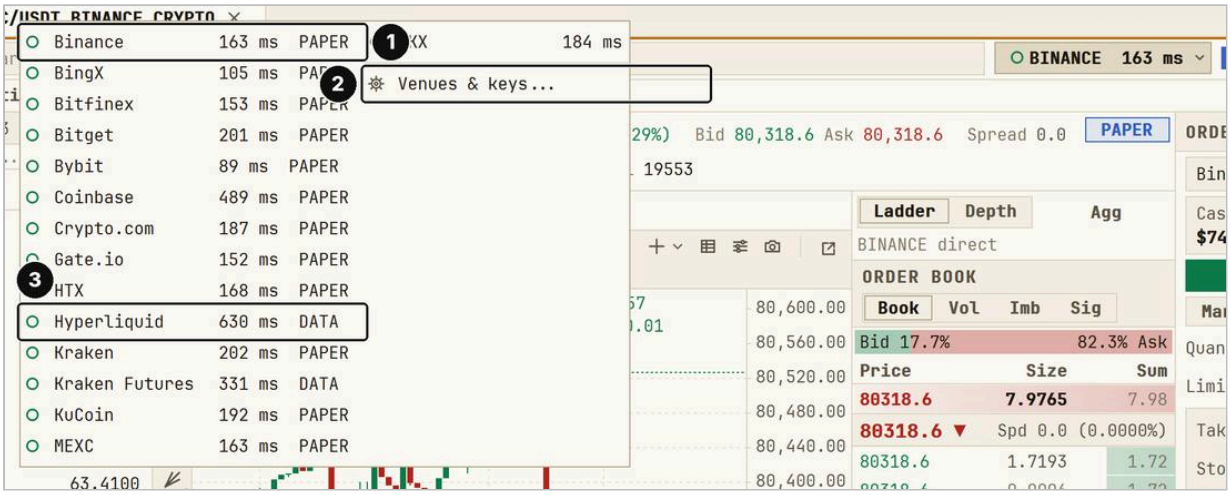


Figure 18.7 The venue menu. Each row shows the venue's health, its response time and what you can do there.

1. A venue row: health dot, name, response time in milliseconds, and **PAPER**, **LIVE** or **DATA**.
2. **Venues & keys...** opens the Venues & keys page.
3. **DATA**: market data only, no paper trading.

The tag at the right of each venue row says what that venue allows on your account:

Tag	Meaning
LIVE	Your organisation has an API key for this venue: live orders are possible. These rows sit in a **With your API key** section at the top.
PAPER	No key: market data and paper orders.
DATA	No key, and paper trading cannot price this venue (Hyperliquid and Kraken Futures): market data only.

Hover over a venue row to read its status, its round-trip time and whether a key is registered.

Find a pair

- **Search markets** (header): type two letters or more, for example `ETH`. A list shows matching pairs on every venue, each with its type (**SPOT**, **PERP**, **INV**, **FUT**, **OPT**) and its venue. Click one: the screen switches to that

venue and pair and shows the Trade page.

- **Watchlist** (left of the Trade page): click a row.
- **Command line**: type a coin, for example `btc`, and pick its crypto row. The screen opens on that coin's spot pair on a venue that lists it. If no venue lists it, a notice says so and the screen stays where it was.

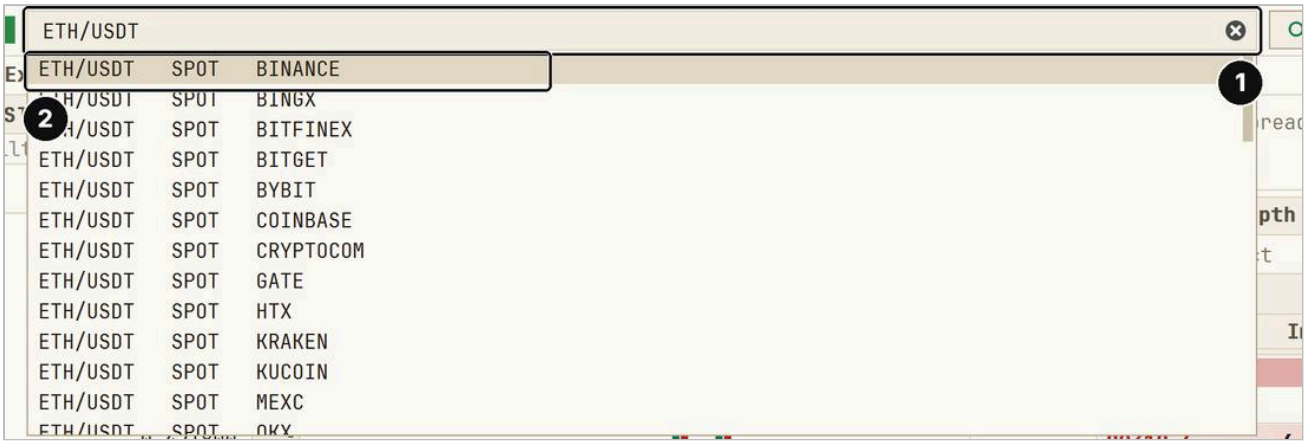


Figure 18.8 Searching for ETH/USDT lists the pair on every venue that has it, each row with its type and its venue.

1. Type at least two letters.
2. Each result: the pair, its type (**SPOT**, **PERP**, **FUT** ...) and its venue. Click one to open it.

The pair names follow one pattern on every venue:

Pattern	Example	What it is
`BASE/QUOTE`	`BTC/USDT`	**Spot**: you buy and own the coin.
`BASE/QUOTE:SETTLE`	`BTC/USDT:USDT`	A **perpetual** (perp): a contract that tracks the coin's price with no expiry date, settled in USDT.
`BASE/USD:BASE`	`BTC/USD:BTC`	An **inverse** perpetual, settled in the coin itself.
`...:SETTLE-YYMMDD`	`BTC/USDT:USDT-261225`	A **dated future** that expires on that day.
`...-STRIKE-C` / `-P`	`BTC/USD:BTC-261225-90000-C`	An **option** (a call or a put at that strike).

Keep your own watchlist

The watchlist is kept per venue, because a pair one exchange lists another may not. A venue's list starts with that venue's pairs for the major coins (on some venues these include local-currency pairs such as BTC/ARS); after that it is yours.

- **Add a pair**: type its name in **Add or filter...** at the top of the list. The list shows the venue's matching pairs. Press `Enter` to add the first one, or right-click any result and choose **Add ... to watchlist**.
- **Filter**: the same box narrows the list as you type. Clear it to see the whole list again.
- **Remove a pair**: right-click its row and choose **Remove ... from watchlist** (for example **Remove XRP/USDT from watchlist**). The pair the screen is on cannot be removed; click another row first.
- The count in the list's header (for example **17 of 17 priced**) is how many rows have a live price.



Figure 18.9 Right-click a watchlist row to remove it.

1. Removes this pair from this venue's list.
2. The row that was right-clicked.

18.4 Read the market

The instrument bar

The bar above the chart shows the pair at a glance: a live dot, the pair, the last price and the change over 24 hours (amount and per cent), the best **Bid** (the highest price a buyer offers) and **Ask** (the lowest price a seller accepts), the **Spread** between them, the **24h** low-to-high range with a marker at the last price, and the 24-hour volume (**Vol**). The bar shows the same readings for a perpetual: in 5.0.6 it does not show a perpetual's **Mark** price (the exchange's fair price, used for profit and loss and liquidations) or its **Index** price (the average spot price across exchanges). The chip at its right end reads **PAPER** or **LIVE**: where the ticket's orders go.

Markets at the left end hides or shows the watchlist. Hidden, the chart takes its width.

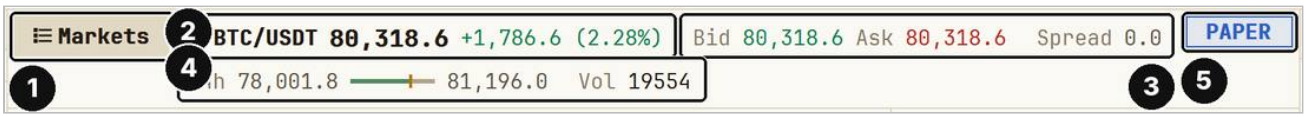


Figure 18.10 The instrument bar.

1. Show or hide the watchlist.
2. The pair, its last price and its change over 24 hours.
3. Best bid, best ask and the spread.
4. The 24-hour low-to-high range and the volume.
5. Where the ticket's orders go: **PAPER** or **LIVE**.

The chart

The chart shows candles for the pair. Click **1m**, **5m**, **15m**, **1h**, **4h** or **1d** above it to change the time each candle covers. The tool bar and the drawing tools are the terminal's standard chart tools (chart type, indicators, drawings, zoom, screenshot, pop-out).

- **Right-click** on the chart for its menu. Under **TRADE**, **Buy @ price** and **Sell @ price** set the ticket's side and limit price to the level under the pointer. The rest of the menu works at that price too — **Alert at ...** (a price alert), **Horizontal line at ...**, **Copy price ...** — followed by the chart's own tools: **Insert study...**, **Chart**

settings..., **Chart type settings...**, **Data Window**, **Go to date...**, **Reset price scale**, **Undo drawing** and **Remove all drawings**.

- When you hold a paper position in the pair, the chart draws a line at your entry price and shows a **position card**: side, size, entry, profit or loss, and an **Exit** button that closes it at market. Drag the card anywhere on the chart.

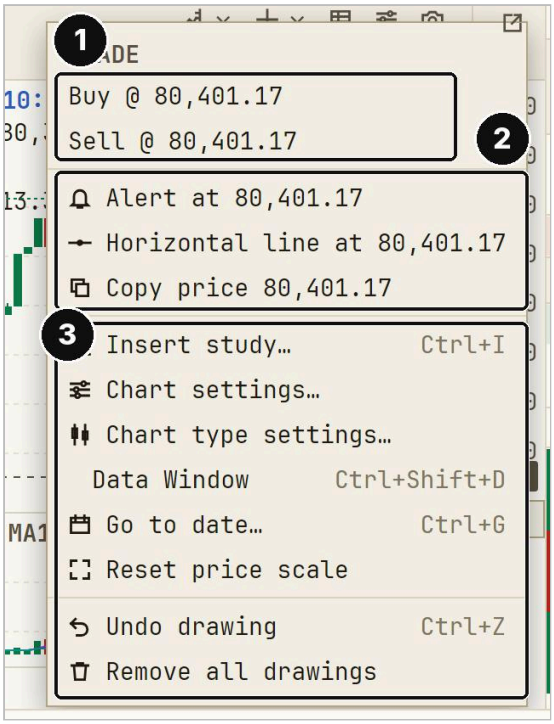


Figure 18.11 The chart's right-click menu: trade, alert or draw at the price under the pointer.

1. **Buy @** / **Sell @**: fill the ticket with this side and price.
2. A price alert, a horizontal line, or a copy of the price.
3. The chart's own tools.

The order book and the trade tape

The column right of the chart shows who wants to buy and sell, and what just traded.

- **Ladder** shows the **order book**: sellers' prices (asks, in red) above, buyers' prices (bids, in green) below, and the **mid price** with the **spread** in between. Each row has **Price**, **Size** (the amount waiting at that price) and **Sum** (the running total from the best price). Up to twelve levels show on each side; the biggest sizes on screen print in bold.
- The gauge on top (for example **Bid 25.5% ... 74.5% Ask**) splits the visible size between buyers and sellers.
- **Click a price** in the ladder (in **Book** view) to put it in the ticket's limit price.
- **Depth** swaps the ladder for a **depth chart**: the running total of bids and asks drawn as two areas around the mid price.
- **Agg** merges the book of every venue your organisation holds a key for into one ladder, built on the server. Without keys it has nothing to merge.
- The line under the buttons says where the book comes from: **BINANCE direct**, **Aggregated (server)**, or a warning such as **BINANCE degraded** or **BINANCE feed reconnecting**.
- The **trade tape** under the ladder lists the latest trades: **Time**, **Price** and **Size**, buys in green and sells in red (up to 200 trades).

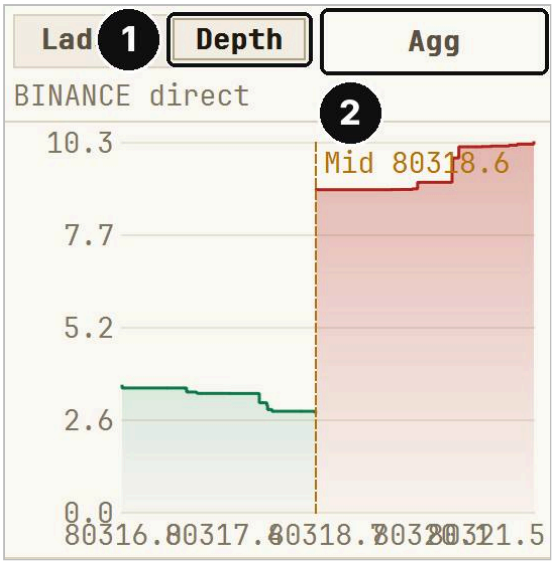


Figure 18.12 The depth chart view of the book.

1. **Depth** shows the book as a chart.
2. **Agg** merges several venues' books (needs keys).

The four buttons in the **ORDER BOOK** header change what the ladder area shows:

Button	Shows
Book	The ladder (the default).
Vol	The same ladder, read-only: rows do not highlight and a click does not set a price.
Imb	A history of **imbalance** readings — how far the visible bids outweigh the asks, from −1 to +1 — with a **Signal**: **Buy pressure** above +0.30, **Sell pressure** below −0.30, otherwise **Neutral**.
Sig	A history of trading hints: **Time**, **Rise%** (the price change over the last minute) and **Action**: **Strong buy**, **Buy**, **Hold**, **Sell** or **Strong sell**, from the imbalance and the rise together.

The readings start with the first book and the table keeps the 30 most recent. They are a quick read of order flow, not advice.

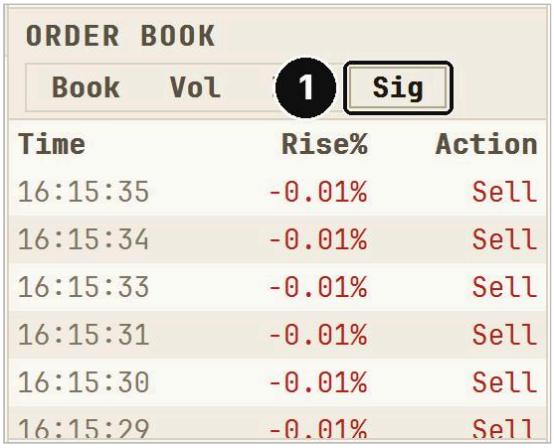


Figure 18.13 The signal history (Sig): the price change over the last minute and the hint it gives.

1. **Sig** is on.

18.5 Place a paper order

Use the ticket in **Paper** mode to practise. A paper order goes to your Fincept Paper account — the same practice account that Equity Trading and the AI use — and fills at the venue's live price.

1. Check that **Paper** is highlighted at the top of the ticket.
2. Check the venue in the box under the title. Paper orders can be priced on Binance, OKX, Bybit, Coinbase, Kraken, KuCoin, Bitget, Bitfinex, Gate.io, MEXC, HTX, Crypto.com and BingX. A venue that paper trading cannot price shows **(no paper quote)** after its name.
3. Click **Buy** or **Sell**.
4. Pick the order type: **Market**, **Limit**, **Stop** or **Stop-lmt**.
5. Type the **Quantity**, in the coin (the unit is shown at the right of the box).
6. For **Limit** and **Stop-lmt**, type the **Limit price**. For **Stop** and **Stop-lmt**, type the **Stop price**.
7. Optional: type a **Take profit** and a **Stop loss** price (see below).
8. Click the submit button (for example **Buy BTC/USDT PAPER**) or press Ctrl + Enter.

The order types:

Type	What happens
Market	Fills at once at the live price.
Limit	Waits until the price reaches your limit price or better. A buy limit sits below the price, a sell limit above.
Stop	Waits until the price touches your stop price, then fills at market. Used to cut a loss or to buy a breakout.
Stop-lmt	When the price touches the stop price, places a limit order at your limit price.

Take profit and **Stop loss** are a **bracket**: two exit prices attached to the order. When the order fills, Fincept Paper arms them. If the price reaches the take-profit level, or falls through the stop-loss level (rises through it for a short position), the position closes with a market order. Both are optional. For a buy, the take profit must be above the price and the stop loss below it; for a sell, the other way round. The blotter shows them in the **SL / TP** column.

The ticket's account card shows your paper **Cash**, the pair's **Mark** price and your paper **Equity** (cash plus the value of all positions), in your paper account's currency.

The submit button stays grey, with the reason on the ticket, until the order can be sent:

Message	What to do
Sign in to place orders	Sign in.
The Fincept Paper account is not ready yet.	Wait a few seconds after sign-in.
Pick a venue Fincept Paper can price.	Pick another venue (the venue box marks the ones it cannot price).

Message	What to do
Paper trading covers spot pairs and perpetuals. Dated futures and options trade live only.	Pick a spot pair or a perpetual.
Enter a quantity. / *A limit price is required for this order type.* / *A stop trigger price is required for this order type.*	Fill in the field.
A buy's take profit must be above its price. (and the other bracket rules)	Correct the bracket.

After you send, a line under the button answers: *Paper BUY 0.05 BTC/USDT on BINANCE filled at 80527.4.* for a fill, or *… placed (pending).* for an order that waits. If the paper engine has not answered yet, the ticket says *No answer from Fincept Paper yet. The order may have landed: check Open orders before sending it again (a resend is the same order).* Sending again is safe: it is recognised as the same order. If you send many paper orders in a short time, the ticket can answer *Too many paper orders in a minute. Try again in N s.* Wait that long, then send again.

Check the mode before you send

The ticket remembers **Paper** or **Live** between sessions. The submit button and the chip on the instrument bar always name the mode: **PAPER** or **LIVE**.

Trade perpetuals on paper

A **perpetual** (perp) lets you go long or short a coin's price without owning the coin. Paper trading supports perpetuals as well as spot pairs.

1. Search `BTC perp` in **Search markets**, or pick a pair ending in `:USDT` in the watchlist (for example **BTC/USDT:USDT**).
2. Check the pair name in the submit button (for example **Buy BTC/USDT:USDT PAPER**). In 5.0.6 the badge beside **Order** reads **SPOT** for every pair, perpetuals included, and the ticket shows no **Reduce only** box. The pair's name is what counts: a pair ending in `:USDT` goes to Fincept Paper as a perpetual.
3. Place the order as usual. **Sell** opens a short position. To shrink a position, use **Close** in the blotter or **Exit** on the chart's position card.

Note

A paper perpetual is margined in full: leverage and margin mode are LIVE-only settings. Dated futures and options cannot be paper traded.

18.6 Manage paper positions and orders

The blotter under the chart shows your crypto paper activity. Its top line is your Fincept Paper account: **Equity** (the whole practice account, every asset class), **Cash**, **Unrealized** (open profit or loss of your crypto lines at live prices), **Day P&L** and **Margin used**.



Figure 18.14 The blotter's Open orders tab with a resting limit order.

1. Your Fincept Paper account.
2. **This pair only** hides every other pair.
3. **Cancel all** (on Open orders) / **Close all** (on Positions).
4. Four tabs; the counts are in brackets.
5. **Cancel** one order.

Tab	Columns	Row button
Positions	Symbol, Venue, Side, Qty, Entry, Mark, uPnL (in your currency), P&L %, SL / TP	**Close**: closes the line at market
Open orders	Time, Symbol, Venue, Side, Type, Qty, Price, Stop, Filled, Status	**Cancel**
Order history	Today's orders that are no longer working: Time, Symbol, Venue, Side, Type, Qty, Price, Avg fill, Filled, Status	—
Trades	Time, Symbol, Venue, Side, Qty, Price, Fee and Realized (in your currency)	—

- **Double-click** a row to open that pair.
- **Close all** (Positions tab) asks *Close N crypto paper position(s) at market?* and then closes them one by one; after the first few they go out about two seconds apart.
- **Cancel all** (Open orders tab) asks *Cancel N working crypto paper order(s)?*
- **This pair only** limits the tabs and the bulk buttons to the pair on screen.
- **Exit** on the chart's position card closes the position of the pair on screen.

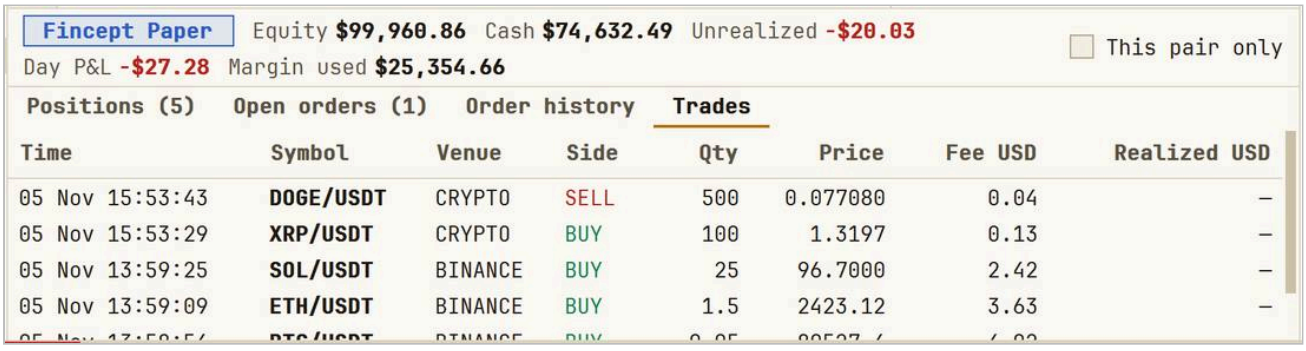


Figure 18.15 The Trades tab: every paper fill. Paper fills pay a simulated trading fee, shown in Fee.

18.7 Trade LIVE

LIVE mode sends real orders to an exchange through your organisation's API key for that venue. Use it only when you mean to trade real money.

Careful

A LIVE order is a real order on your exchange account. Fincept never withdraws funds, but LIVE orders, cancels and closes reach the exchange.

1. Register a key for the venue first (**§18.8 Register an exchange key** p. 312).
2. On the ticket, click **Live**. The chip on the instrument bar turns to **LIVE**, the blotter switches to your venue accounts, and the ticket shows more fields.
3. Pick the venue, the side, the type and the size. Use **25%**, **50%**, **75%** or **100%** to size the order from your free balance on that venue.
4. Read the **Estimate** card: the server's preview of the average price, slippage, fee, notional and margin impact.
5. Click the submit button (for example **Buy BTC/USDT LIVE**).

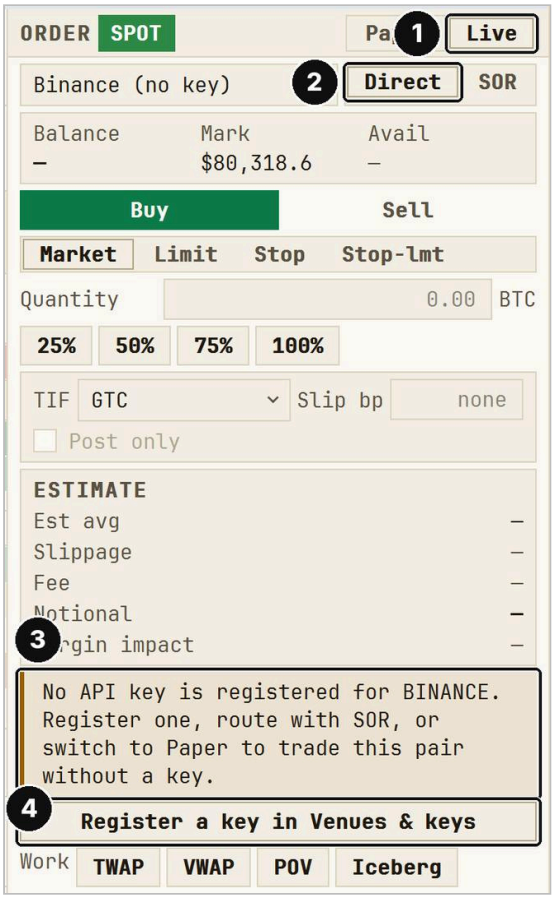


Figure 18.16 The ticket in Live mode on a venue with no key. The note explains the three ways forward.

1. **Live** is on.
2. **Direct** (to this venue) or **SOR** (smart order routing).
3. No key for this venue: register one, route with SOR, or switch to Paper.
4. Opens **Venues & keys**.

What LIVE adds to the ticket:

Field	What it does
Direct / SOR	**Direct** sends the order to the venue in the box. **SOR** (smart order routing) splits it across the merged book of every venue you hold a key for, so it can fill on a venue other than the one shown.
Balance / Avail	Your balance on the venue, in the quote currency, instead of paper cash and equity.
25% 50% 75% 100%	Quantity from your free balance at the price on screen. It does not include fees: 100% can still be refused.
TIF	**Time in force**: **GTC** (good till cancelled), **IOC** (immediate or cancel: fill what you can now, cancel the rest), **FOK** (fill or kill: fill all now or nothing).
Slip bp	The most slippage you accept, in **basis points** (1 bp = 0.01%). Empty means no ceiling.
Post only	The order must rest on the book (make liquidity); it is cancelled rather than filled at once.
Reduce only	Derivatives only: may only shrink a position. Not shown in 5.0.6 (see below).
Leverage	Derivatives only. **venue setting** (0) leaves your exchange setting alone; otherwise 1x to 125x. Not shown in 5.0.6.
Margin	Derivatives only: **Venue setting**, **Cross** (all your balance backs the position) or **Isolated** (only this position's margin is at risk). Not shown in 5.0.6.
Estimate	**Est avg**, **Slippage**, **Fee**, **Notional** (the order's value), **Margin impact** — from the server, re-checked when you send.
Work: TWAP VWAP POV Iceberg	Hands this ticket's pair, side and size to the Execution page's algorithm builder.

Other LIVE rules:

- Orders above your organisation's **four-eyes** amount are held. The button reads **Submit for approval**, and a member with the risk or admin role must approve the order on the Compliance page.
- With the kill switch engaged, LIVE orders are refused until a risk or admin member clears it.
- LIVE orders on perpetuals, futures and options need the Exclusive Pro plan. On a lower plan the server refuses them: *Perpetuals, futures and options need a higher plan.*
- In 5.0.6 the ticket treats every pair as spot (the badge reads **SPOT**), so **Reduce only**, **Leverage** and **Margin** never appear. A LIVE perpetual order goes out with the leverage and margin mode already set on your exchange account.
- The LIVE blotter has **Open orders** (with the order's **Route**), **Positions** (with notional, unrealised P&L in USD and the liquidation price **Liq.**) and **Balances**. Right-click an open order and choose **Amend...** to change its price or size; **Cancel** cancels one; **Close** on a position sends a reduce-only market order; **Cancel all** cancels the working orders of the pair on screen that this terminal placed (not orders you placed on the exchange's own website).

18.8 Register an exchange key

LIVE trading needs an **API key**: a credential you create on your exchange's website that lets software trade your account. Keys are kept on Fincept's server, sealed, and never shown again; the terminal itself never signs an exchange request.

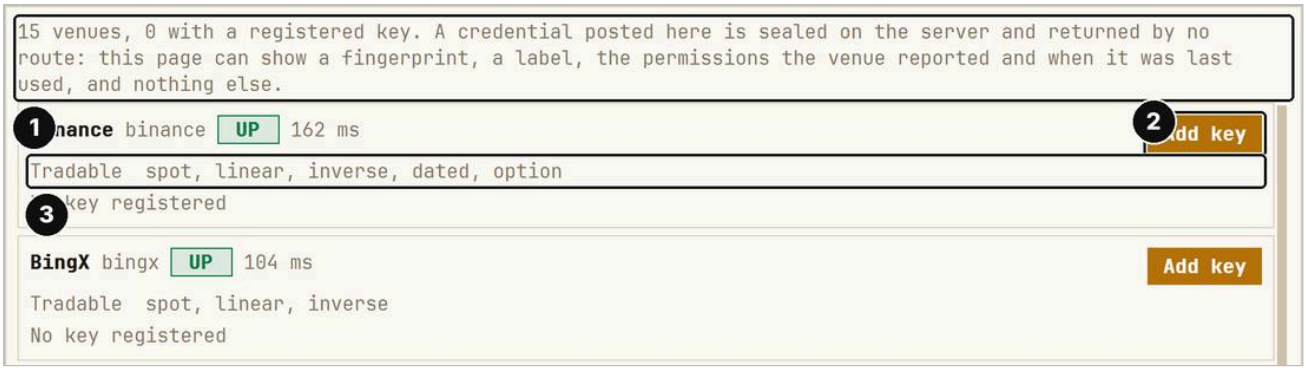


Figure 18.17 Venues & keys, left half: one card per venue, with its health, response time, what it can trade and its key.

1. How many venues there are and how many have a key.
2. **Add key** opens the registration form for that venue.
3. What this venue can trade here.

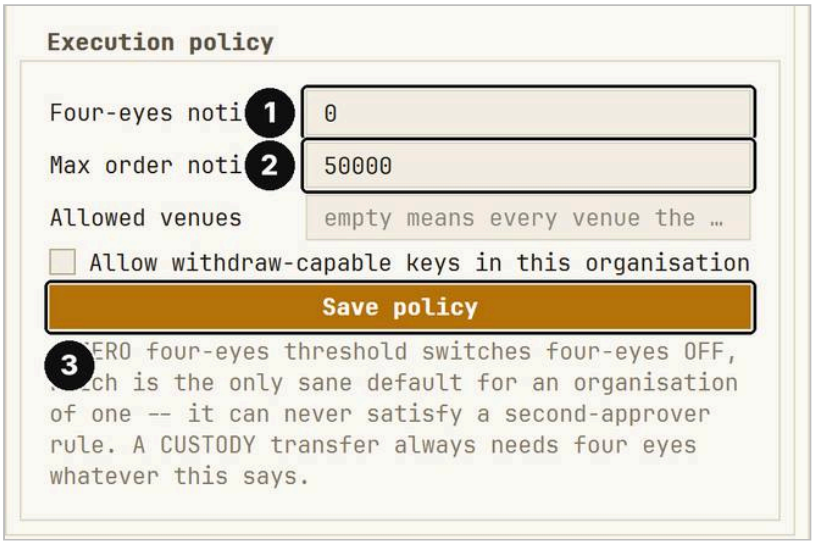


Figure 18.18 The execution policy on Venues & keys (admins only).

1. LIVE orders above this amount need a second approver. 0 = off.
2. The largest single LIVE order. 0 = no ceiling.
3. Saves the policy.

1. On your exchange's website, create an API key with **trading permission only**. Never allow withdrawals. Restrict it to Fincept's server IP address if the exchange offers that.
2. In the terminal, open **Venues & keys** (right end of the page strip).
3. Find the venue's card and click **Add key**. The **Register an exchange key** form opens.
4. Fill in **Label** (what the key is for), **API key** and **Secret**. Fill in **Passphrase** and **Site** when the venue asks for them (the hint under the form says what that venue needs).
5. Leave **Allow a withdraw-capable key** unticked.
6. Click **Register key**. The server checks what the key may do before it stores anything. A key that can withdraw, or whose permissions cannot be confirmed, is refused and nothing is stored.

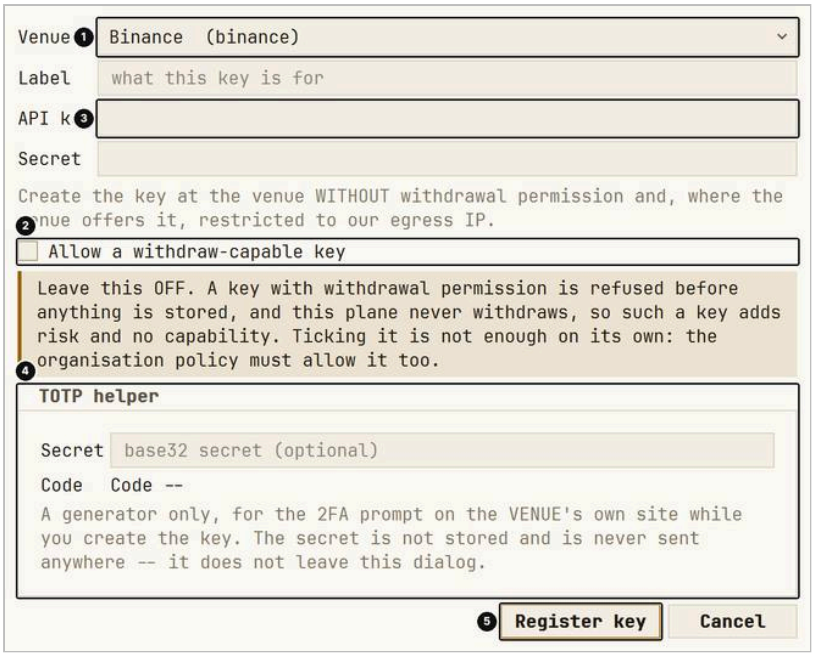


Figure 18.19 The Register an exchange key form for Binance, empty.

1. The exchange.
2. Leave this off.
3. **API key** and **Secret** from the exchange (hidden as you type). More fields appear for venues that need them.
4. A code generator for the exchange's own 2FA prompt; the secret never leaves the form.
5. **Register key** sends it to the server, which checks its permissions first.

The form's fields:

Field	Notes
Venue	The exchange.
Label	Your own note, for example *main desk*.
API key, Secret	From the exchange. Hidden as you type.
Passphrase	OKX, KuCoin and Bitget ask for it. Kraken calls it **Key 2FA password** (optional; a static password, not an authenticator code). Kraken Futures keys are separate: register them under Kraken Futures.
Site	OKX and Bybit only: the exchange site the key was made on (for example OKX's US / Australia site or its EEA site, or one of Bybit's regional sites). A key works only on its own site.
Private key (Coinbase)	Coinbase has no **Secret**: paste the key's name (organizations/.../apiKeys/...) in **API key** and its EC private key in **Private key**. Create the key with the ECDSA signature algorithm; Ed25519 keys are refused.
Wallet address, Private key	Hyperliquid has no API key: use an approved agent (API wallet) key, never your account's own wallet key. A wallet address alone gives a read-only view.
Allow a withdraw-capable key	Off. Turning it on is not enough on its own: the organisation policy must allow it too. Fincept never withdraws, so such a key only adds risk.
TOTP helper	Paste the exchange's base32 2FA secret to see the current six-digit code while you create the key on the exchange's site. Not stored, not sent.

Each venue card then shows the key: its label, fingerprint, status (**can trade**, **can withdraw**, **IP restricted**) and when it was last used, with **Probe** (ask the venue again what the key may do) and **Delete key** (destroys the stored key; it cannot be recovered).

> **Careful**
>
> If a key gains withdrawal permission after you registered it, the server stops using it (**STATUS REFUSED**). Remove the permission on the exchange and register the key again.

Members and the order policy

The right half of **Venues & keys** belongs to your **organisation** — the trading desk your account belongs to (a single user is an organisation of one, with the admin role).

- **Add member** adds a colleague by user ID, email and **Role**: **TRADER**, **RISK**, **OPS**, **COMPLIANCE** or **ADMIN**. Each member row has a role box and **Suspend** / **Reinstate**.
- **Execution policy** (admins only):
- **Four-eyes notional** — LIVE orders above this amount need a second approver. **0** switches four-eyes off, which is the only workable setting for an organisation of one. Custody transfers always need four eyes.
- **Max order notional** — the largest single LIVE order (0 means no ceiling).
- **Allowed venues** — a list of venue ids; empty means every venue.
- **Allow withdraw-capable keys in this organisation** — leave it off.
- **Save policy**.

18.9 Work a large order with an algorithm

An **execution algorithm** splits a large LIVE order into small child orders over time so it moves the price less. Open **Execution > Algos**, or click **TWAP**, **VWAP**, **POV** or **Iceberg** on a LIVE ticket to carry its pair, side and size there.

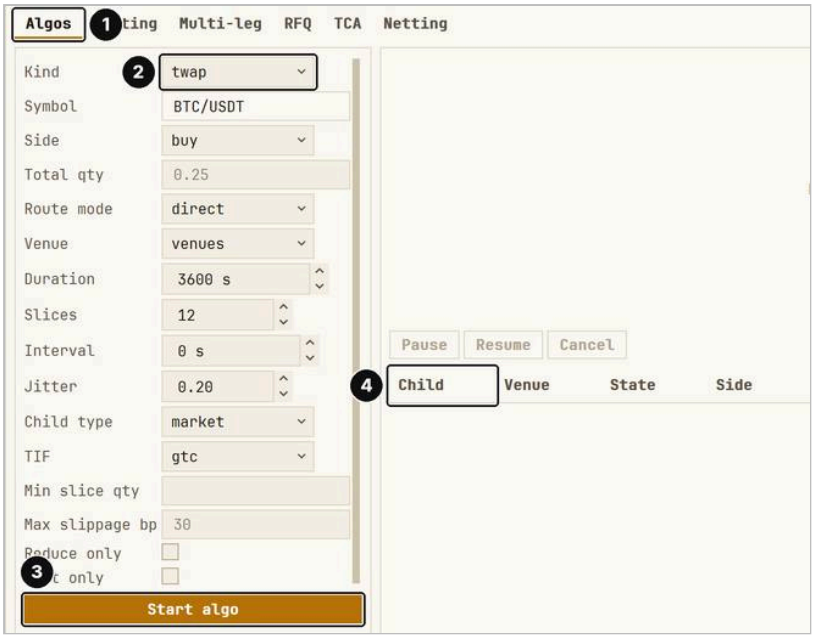


Figure 18.20 Execution > Algos: the algorithm form on the left, running algorithms and their child orders on the right.

1. The Execution page's six tabs.
2. The algorithm.
3. **Start algo** — starts the run and debits one credit.
4. The selected algorithm's child orders.

Kind	What it does	Its own fields
twap	Time-weighted: equal slices over a set time.	**Duration** (default 3600 s), **Slices** (12), **Interval**, **Jitter** (0.20: random spacing so the pattern is harder to spot)
vwap	Volume-weighted: follows the pair's usual volume profile.	**Duration**, **Buckets** (12), **Profile sessions** (20 days of history)
pov	Percent of volume: trades a share of the market's volume.	**Target %** (0.10), **Max %** (0.25)
iceberg	Shows only a small part of the order at a time.	**Display qty**
is / arrival	Implementation shortfall / arrival price: trades faster when the price runs away from the price at the start.	**Duration**, **Urgency** (0.60)
adaptive	Adjusts its participation as the market changes.	**Target %**, **Max %**

Every kind also takes **Symbol** (the screen's pair), **Side**, **Total qty**, **Route mode** (**direct** to one **Venue**, or **sor** across **Route venues** with an **Internalise** option), **Child type** (**market** or **limit** with a **Limit price**), **TIF**, **Min slice qty**, **Max slippage bp** (30), **Reduce only** and **Post only**.

> **Cost**
>
> **Start algo** debits one credit, once per run. The schedule is checked before the debit, so bad parameters cost nothing, and a paused algorithm that you resume does not pay again.

Select a running algorithm in the list to see its progress and its child orders (**Child**, **Venue**, **State**, **Side**, **Qty**, **Filled**, **Avg**, **Price**, **Created**), and use **Pause**, **Resume** or **Cancel**.

The other Execution tabs:

Tab	What it does
Routing	Previews how SOR would split an order of a given **Size** across venues (**Venues** — blank means every venue with a key; **Limit** — blank means market), with an **Internalise** option. **Preview** walks the merged book.
Multi-leg	Builds a structure of 2 to 8 legs (for example a spread between spot and a perp) and sends it as one: **Add leg**, **Remove**, each leg's **Symbol**, **Venue**, **Side**, **Ratio**, **Type** and **Price**; a **Quantity**, a skew deadline in ms (how long the structure may stay incomplete) and **On failure** (**unwind** or **keep**). **Submit structure**. A structure counts as filled only when every leg is filled.
RFQ	Request for quote: type the symbol, side and size, keep the channel on **manual**, set how long the request lives (default 300 s) and click **Create request**. **Add quote** as dealers answer you (price per coin, in the quote currency; each quote lives 120 s by default), then **Accept quote** before it expires: accepting places an ordinary LIVE order at the quote. A lapsed quote cannot be accepted. The other channel, **okx_block**, is not connected in 5.0.6: a request on it only says the integration is missing.
TCA	Transaction cost analysis for a date range and venue: per order the slippage against arrival price (**Arrival bp**), against VWAP (**VWAP bp**), implementation shortfall (**IS bp**), fees, fill rate and price reversion 1 and 5 minutes later. **Refresh**.
Netting	Orders the desk crossed against its own opposite orders before they reached a venue (zero fee), with the rules that apply.

18.10 Study funding, basis and options

The **Derivatives** page reads public market data from several exchanges, so it is useful even without a key. It has six tabs.



Figure 18.21 Derivatives > Funding: the annual funding rate of two perpetuals on three venues.

1. The Derivatives page's six tabs.
2. Perpetuals to compare (up to 25).
3. Venues to compare.
4. **Annualised** / **Per 8h**: how the rate is shown.
5. **Current** / **Predicted** funding.

Funding is the payment that keeps a perpetual's price close to spot: when it is positive, longs pay shorts. The heatmap shows each perpetual (rows) on each venue (columns), as an annual rate or per eight hours — never the raw rate, because venues charge at different intervals. Below it:

- the **cash-and-carry** table — buy spot, short the perp, and collect funding: **Spot**, **Perp mark**, **Entry basis bp**, **Funding APR**, **Carry APR**;
- the **predicted** table for the first symbol: the next funding per venue (**Predicted**, **Pred 8h**, **Pred APR**, **Interval**, **Premium**, **Interest**, **Cap**, **Mark**, **Index**, **Next** payment time). The prediction is an estimate from a snapshot.

The other tabs:

Tab	What it shows
Basis	For an underlying (default **BTC**) and venues: a **basis curve** — how far each dated future trades above spot, by expiry — plus tables of futures (**Expiry**, **DTE** days to expiry, **Mark**, **Spot**, **Basis bp**, **Annualised %**) and **calendar spreads** between two expiries.
Options	For an underlying, venue and expiry: the expiries (**Expiry**, **DTE**, **Contracts**, **Forward**, **ATM IV**), the **option chain** (calls left, puts right: **OI**, **Vega**, **Theta**, **Gamma**, **Delta**, **IV %**, **Bid**, **Ask** around the **Strike**) and the **volatility surface** (implied volatility by strike and expiry).
Greeks	The derivatives in your LIVE book with their **greeks** (how a position's value changes with price, volatility, time and rates). Pick an underlying and a ladder metric (**Delta USD**, **Delta base**, **Gamma USD per 1% move**, **Vega USD per 1 vol point**, **Theta USD per calendar day**, **Rho USD per 1% of rate**). Seven tiles show the book's totals; the **ladder** spreads the chosen metric by strike and expiry; the table lists each position (**Venue**, **Symbol**, **Kind**, **Size**, **Strike**, **IV**, **Mark USD**, the greeks, **Source**). Spot balances are not included.
Hedge	**Propose hedge** for a list of underlyings to a **target delta** in USD (blank = delta neutral), with a minimum leg size and venues; read the proposed legs, then **Execute** (asks once more: **Confirm execute**). Needs LIVE positions and keys.
OI & liquidations	**Open interest** (contracts outstanding) per perpetual and venue, and recent **liquidations** (positions the exchange closed by force) for one perpetual over the **Last 1h**, **Last 4h** or **Last 24h**, with long and short totals. Few venues publish liquidations, so totals are a minimum.

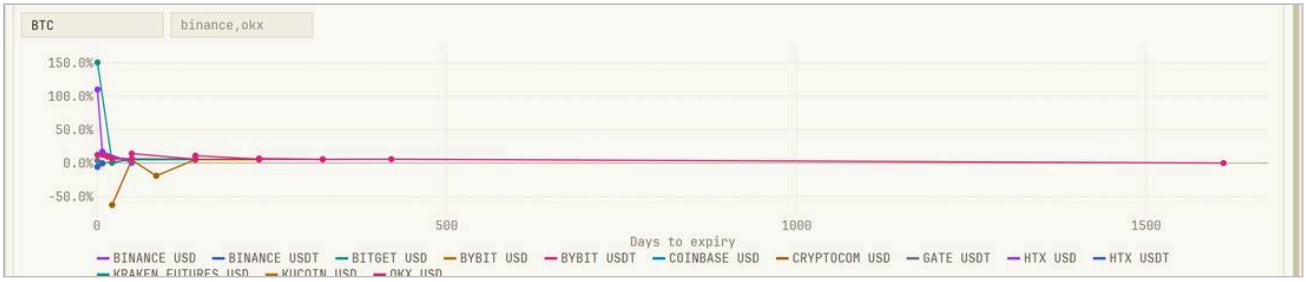


Figure 18.22 Derivatives > Basis: each venue's BTC futures as an annual premium over spot, by days to expiry.

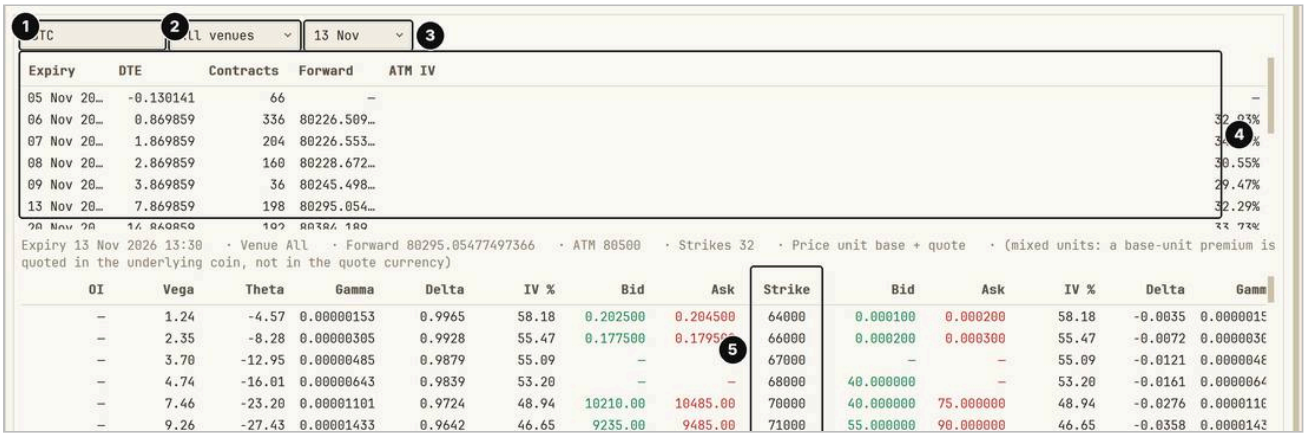


Figure 18.23 Derivatives > Options: BTC expiries across venues, and the option chain of the 13 November expiry — calls on the left, puts on the right of the strike.

1. The underlying.
2. One venue, or **All venues**.
3. The expiry the chain shows. Click an expiry row to pick it too.
4. The expiries: days to expiry, contracts, forward price and at-the-money implied volatility.
5. The strikes. Calls to the left, puts to the right.



Figure 18.24 Derivatives > Hedge: underlyings, target delta, minimum leg size and venues, then Propose hedge.

1. Shows the legs that would bring the book to the target delta.
2. Sends them (asks once more: **Confirm execute**).

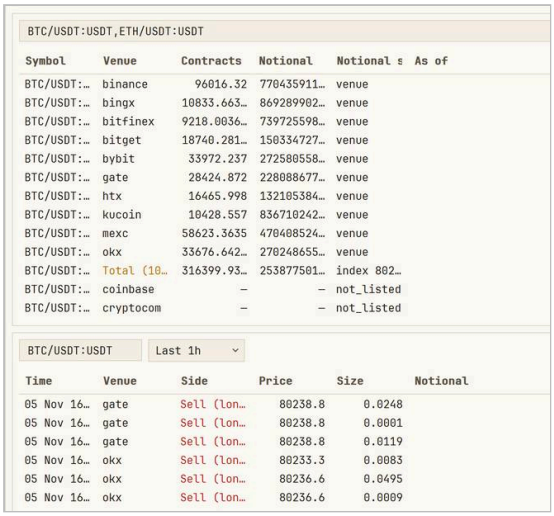


Figure 18.25 Derivatives > OI & liquidations: open interest per venue, and the latest forced closes.

18.11 Run a bot

A **bot** is an automated strategy that runs on Fincept's server, so it keeps working while your computer is off. Every new bot starts in the **sandbox**: it trades a separate paper book and touches no exchange.



Figure 18.26 The top of the Bots page: the filters and the cost of a running bot.

1. Filter by status: **Any status**, **RUNNING**, **PAUSED**, **STOPPED**, **KILLED**, **ERROR**.
2. Show sandbox bots only.
3. What a running bot costs.



Figure 18.27 With no bot yet, the page says so beside New bot.

1. **New bot** opens the bot editor.

Cost

A running bot costs **2 credits per bot, per day** (about 60 a month if left on). A sandbox bot pays the same as a live one. If your credits run out, the bot stops opening new positions but still exits, cancels and obeys the kill switch.

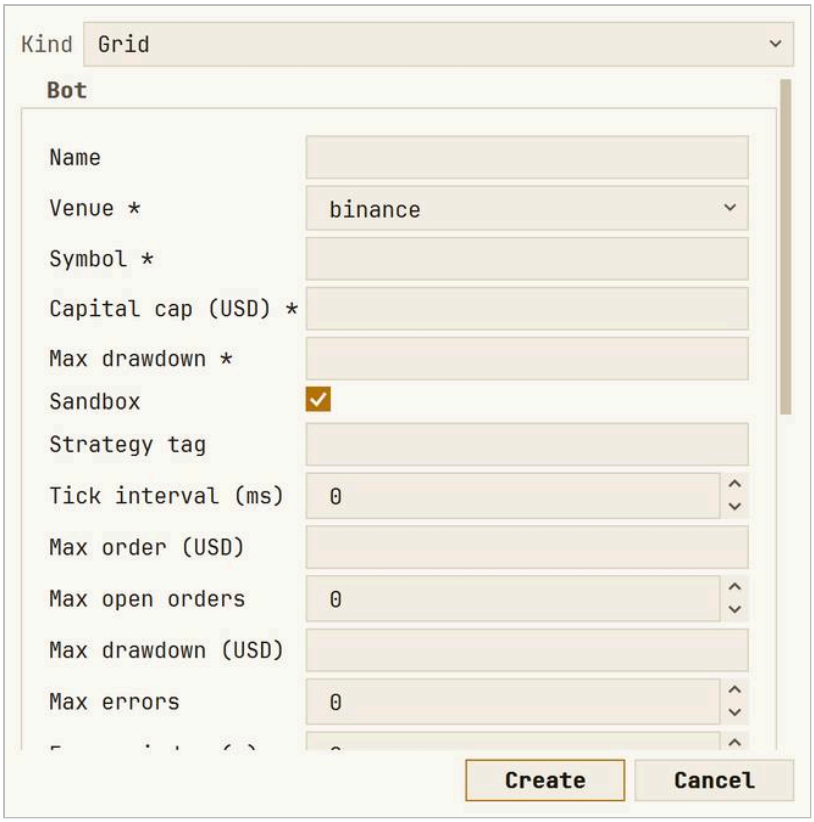


Figure 18.28 The New bot editor with the Grid kind.

1. Open **Bots** and click **New bot**.
2. Pick the **Kind**: **Grid**, **DCA**, **Market maker**, **Cross-venue arb**, **Triangular arb** or **Custom**.
3. Fill in the **Bot** section: **Name**, **Venue**, **Symbol**, **Capital cap (USD)**, **Max drawdown** (a fraction of peak equity: 0.15 is 15%), **Sandbox** (on), an optional **Strategy tag**, and the safety limits.
4. Fill in the section of your kind (fields with a star are required).
5. Click **Create**. Then click **Start** on the bot's card.

The kinds and their main settings:

Kind	Idea	Main settings
Grid	Buy and sell at evenly spaced price levels inside a range.	**Mode** (arithmetic or geometric spacing), **Lower**, **Upper**, **Levels** (2 to 200), **Order size**, **Max inventory** (required: stops a grid in a trend from becoming one big position), **Min inventory**, **Stop below** / **Stop above**
DCA	Dollar-cost averaging: buy (or sell) a fixed amount on a schedule.	**Side**, **Quote per order**, **Interval (s)** (60 or more), **Max orders**, an extra buy on a dip: **Dip trigger (%)**, **Dip reference** (last fill, high or moving average), **Dip lookback**, **Dip cooldown**, **Dip quote**
Market maker	Quote both sides around the mid price and earn the spread.	**Half spread (bp)**, **Size**, **Levels**, **Spacing**, **Target inventory**, **Max inventory**, **Skew**, **Requote**, **Fee override** / **Assume zero fee**
Cross-venue arb	Watch the same pair on several venues for a price gap.	**Venues**, **Min spread (bp)** after fees, **Size**, **Execute** (off = alerts only), **Cooldown**

Kind	Idea	Main settings
Triangular arb	Look for a profitable loop through three pairs on one venue.	**Venue**, **Leg 1-3**, **Min edge (bp)** after three fees, **Notional**, **Execute**, **Cooldown**
Custom	Your own rules, as the strategy document the Algo Trading screen builds.	**Order size**, **Timeframe**, **Lookback**, **Allow short**, **Order type**, **Strategy document**

Common limits for every kind: **Tick interval (ms)** (250 ms up to 6 hours), **Max order (USD)**, **Max open orders**, **Max drawdown (USD)**, **Max errors** within an **Error window (s)**, and **Max slippage (bp)**.

Each bot is a card with its kind, a **SANDBOX** or **LIVE** badge, capital used, realised P&L and equity, drawdown, order counts and the last tick. Its buttons: **Start**, **Pause**, **Stop**, **Kill** (press twice: **Confirm kill** — stops the bot and cancels its orders), **Events** (fills the event log on the right), **Backtest** (prepares a backtest of the bot that you can open with **Open in backtesting**; a backtest run costs a credit there), **Edit** and **Delete** (refused while the bot runs or holds orders). A bot that a risk control stopped (**KILLED** or **ERROR**) cannot start again until you click **Edit**, tick **Reset the risk stop so this bot can start again** and save. Filter the cards with the status box (**RUNNING**, **PAUSED**, **STOPPED**, **KILLED**, **ERROR**) and **Sandbox only**. Whether a bot trades live or in the sandbox is your decision alone: the AI cannot switch it.

18.12 The Portfolio and Risk pages

Portfolio

Portfolio shows the LIVE book across every venue you hold a key for (your paper book is in the Trade page's blotter and on the Portfolio screen, **Chapter 23, Portfolio** p. 430). Its ribbon shows **NAV** (net asset value: cash plus DeFi plus unrealised P&L), **Cash**, **Position value** (gross value of open derivatives — shown as exposure, not part of NAV), **DeFi**, **Unrealised** and **As of**.

Tab	What it shows
NAV	The NAV history chart and a **Break down** by venue, asset, strategy or chain, with the lines (**Venue**, **Symbol**, **Kind**, **Quantity**, **Price**, **Source**, **Value USD**). **Snapshot NAV** writes today's NAV now (ops role).
Attribution	Where P&L came from, **By** strategy, venue or asset, for a **Cost basis** method (**FIFO**, **LIFO**, **HIFO**, **AVERAGE**) and a date range.
Lots	Tax lots for a symbol (blank = all): **Open lots** and **Closed lots** with realised P&L and days held. **Load lots**. Spot and perp of the same coin are different instruments.
Rebalance	Set **Target weight**s per asset (fractions of NAV, for example 0.4) with **Add** / **Remove**, then the **Quote asset** (USDT), an optional **Venue**, **Min trade USD** (10), **Tolerance** (0.005) and **Max turnover** (0.5); **Propose** shows the trades (sells first) with estimated cost; **Send to execution** hands them to the Execution page. Nothing here places an order. Trader role.
Margin	Collateral and margin per venue (**Collateral**, **Used**, **Free**, **Transferable**, **Required**, **Gap**, **Health**) and **Proposed transfers** to fix shortfalls, with a **Safety buffer**. **Recompute plan**.

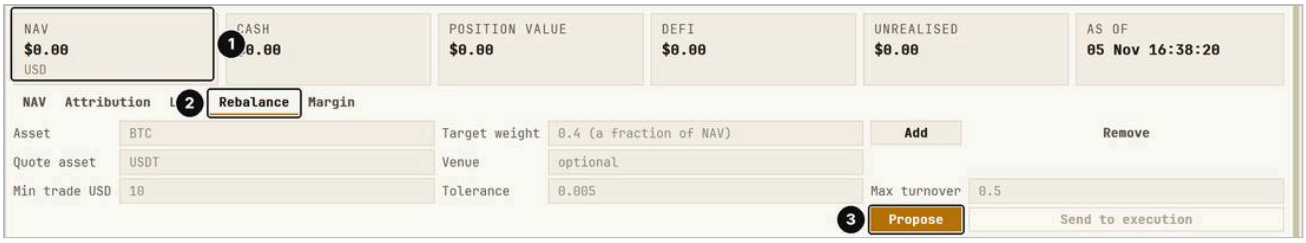


Figure 18.29 Portfolio: the NAV ribbon (empty on an account with no exchange key) and the Rebalance tab's form.

1. **NAV** and the other ribbon figures, for the LIVE book.
2. The Portfolio page's five tabs.
3. **Propose** prices the trades; **Send to execution** hands them over.

Risk

Risk measures the LIVE book. Its ribbon shows **Equity**, **Gross notional** (total value at work), **Net notional** (long minus short), **Net delta**, **BTC-equivalent** (exposure weighted by each coin's beta to bitcoin), **Leverage**, **Margin used** and **Unrealised**.

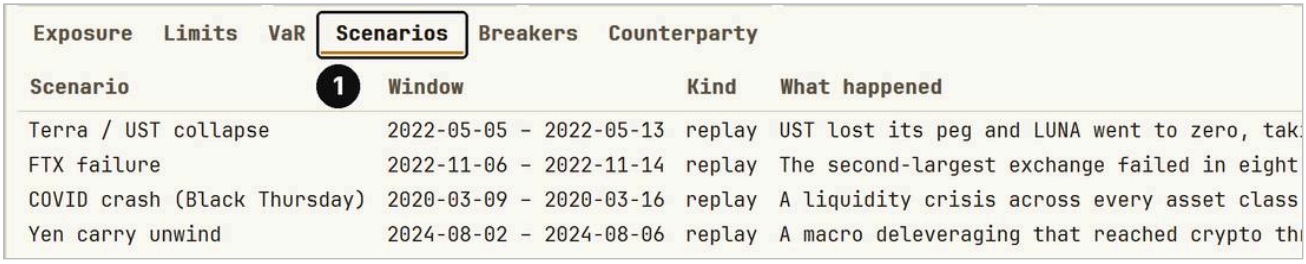


Figure 18.30 Risk > Scenarios: the library of historical crises to replay on your book.

1. The Risk page's six tabs.

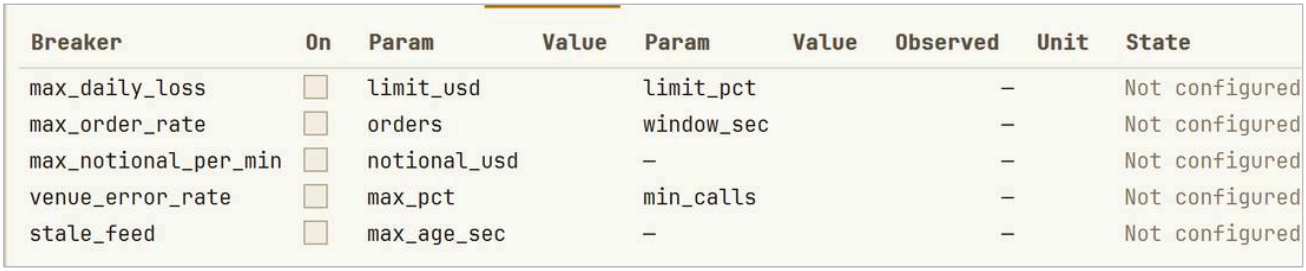


Figure 18.31 Risk > Breakers: the five automatic circuit breakers, each off until you set its threshold.

Tab	What it does
Exposure	A tree of exposure **Break down** by asset, venue, type, strategy or chain: gross, net, delta, beta to BTC, leverage, margin, unrealised P&L and share.
Limits	Your risk limits. Each has a **scope** (notional, asset, venue, counterparty, chain, leverage, drawdown, concentration), a subject, a **threshold** and **Warn** (alerts) or **Hard** (refuses the order; a reduce-only order is let through as a warning). **Add**, **Remove**, **Save all limits**. Below: recent **Breaches**.
VaR	**Value at risk**: the loss the book should not exceed on most days. Tick the methods — **Parametric**, **Historical** (both on by default), **Monte Carlo**, **LVaR** (VaR plus the cost of selling into the live book) — and set **Confidence** (0.90, 0.95, 0.975, 0.99; default 0.99), **Horizon days** (1-60), **Lookback days** (30-2000, default 365), **MC paths** (default 10,000) and **Student-t DoF** (default 4). **Run VaR**. Results show as a fan chart and a table (**VaR USD**, **CVaR USD** — the average loss beyond VaR).

Tab	What it does
Scenarios	Pick a historical crisis from the library — **Terra / UST collapse** (May 2022), **FTX failure** (November 2022), **COVID crash (Black Thursday)** (March 2020), **Yen carry unwind** (August 2024) — or type **Custom shocks** such as `BTC=-0.30, ETH=-0.45` (fractions) with volatility, funding and basis multipliers, a horizon and a window. **Run scenario** shows the P&L by asset, venue or type.
Breakers	Automatic circuit breakers: **max_daily_loss**, **max_order_rate**, **max_notional_per_min**, **venue_error_rate**, **stale_feed** — each **On**/off with its parameters and state (**Not configured** until it has a threshold, **OK**, **Would trip**, **Tripped**). **Save breakers**. The **Kill switch** card is here too.
Counterparty	A score for each exchange you hold money on, built from its proof of reserves and other solvency evidence (no score at all when too little evidence is available), and **Stablecoin pegs**: each stablecoin's **Price**, **Deviation bp** from its peg, **Circulating USD** and **State**.

Cost

Monte Carlo is the only charged VaR method — the price shows on **Run VaR** while Monte Carlo is ticked. Parametric, historical and LVaR are free. Every **Run scenario** is charged — **1 credit** per run, replay or custom, shown on the button and in the line beside it. Everything else on the Risk page is free.

Writing limits, breakers and the kill switch needs the **risk** or **admin** role; other members see this section read-only.

18.13 Stop everything with the kill switch

The **kill switch** is the emergency stop for LIVE trading. Engaging it cancels every working order the desk placed through Fincept, halts every algorithm and bot, and blocks new LIVE orders. Paper trading is not affected.

1. Click **Kill switch** in the header. It changes to **Confirm kill**.
2. Click **Confirm kill** within four seconds. (If you wait longer, it goes back to **Kill switch** and nothing happens.)
3. The button now reads **Kill switch engaged**, and a red notice says *Kill switch engaged: ….*

To clear it, a member with the **risk** or **admin** role clicks **Kill switch engaged**, then **Confirm clear**, and types the reason it is safe to resume in **Clear the kill switch**. The reason is recorded in the audit trail. The **Risk > Breakers** tab has the same controls: **Engage kill switch** (press twice) and **Clear kill switch** with a reason box.

Important

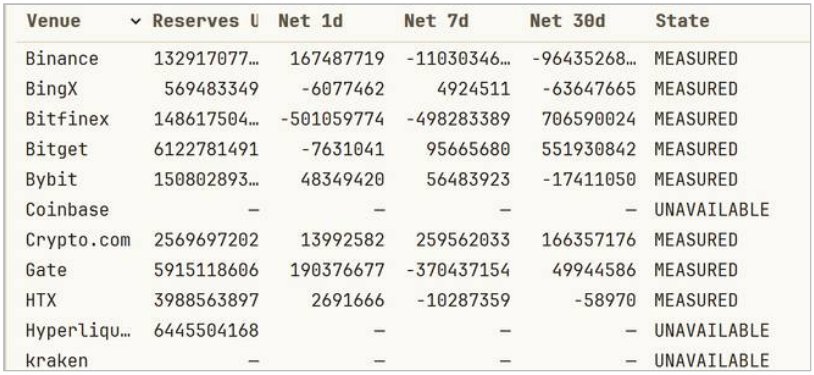
Only a person can clear the kill switch: the AI is not allowed to. The AI can engage it.

18.14 The More pages

Intel

Market intelligence across exchanges, refreshed every five minutes.

Tab	What it shows
Flows	Each exchange's reserves in USD and the net flow over 1, 7 and 30 days (positive = money flowing **into** the exchange), with a **State** (**MEASURED** or **UNAVAILABLE**).
Correlation	How crypto moves with macro markets: the correlation of daily returns between assets and macro series.
Signals	Derived cross-venue signals, or what the desk serves instead when a signal is not published.
CEX transparency	Per exchange: reserves, total and **clean** assets (excluding the exchange's own token), own-token share, inflows over 24 hours, 7 and 30 days, spot volume, open interest and leverage.



Venue	Reserves U	Net 1d	Net 7d	Net 30d	State
Binance	132917077…	167487719	-11030346…	-96435268…	MEASURED
BingX	569483349	-6077462	4924511	-63647665	MEASURED
Bitfinex	148617504…	-501059774	-498283389	706590024	MEASURED
Bitget	6122781491	-7631041	95665680	551930842	MEASURED
Bybit	150802893…	48349420	56483923	-17411050	MEASURED
Coinbase	–	–	–	–	UNAVAILABLE
Crypto.com	2569697202	13992582	259562033	166357176	MEASURED
Gate	5915118606	190376677	-370437154	49944586	MEASURED
HTX	3988563897	2691666	-10287359	-58970	MEASURED
Hyperliqu…	6445504168	–	–	–	UNAVAILABLE
kraken	–	–	–	–	UNAVAILABLE

Figure 18.32 Intel > Flows: exchange reserves and net flows.

On-chain

Decentralised finance (**DeFi**) data, plus your own registered DeFi positions.

Tab	What it shows
Yields	Lending and liquidity pools: **Project**, **Chain**, **Symbol**, **Pool**, **TVL USD** (total value locked), **APY** (base and reward), 30-day APY, 1- and 7-day changes, **Stable**, **IL risk** (impermanent loss) and **Sigma**. Filter by **Asset**, **Chain**, **Project** and **Stable only**. Up to 200 rows show.
TVL	Total value locked **By chain** or **By protocol** (with 1-hour, 1-day and 7-day changes and market cap).
Stablecoins	**Symbol**, **Name**, **Peg**, **Mechanism**, **Price**, **Deviation** from the peg (past the depeg threshold, 0.50%, it is flagged), **Supply**, **Net 1d** / **Net 7d** issuance (amount and %), **Chains**. Filter by chain.
Bridges	Cross-chain bridges with their history of exploits.
Exploits	Recent hacks and exploits with amounts.
Positions	DeFi positions you register to monitor: **Register position** adds a **WALLET** (its lending health factor; warns below the level you set in **Warn below health factor**), an **LP** position with its cost basis, or a **Staking** delegation. Nothing on-chain changes; deleting a registration only stops the monitoring.
Staking	Staking yields: **Project**, **Chain**, **Symbol**, base and reward rates.
Governance	Open DAO votes: **Token**, **Space**, **Proposal**, **State**, **Leading** choice, **Quorum**, **Ends**, **Your vote**.



Symbol	Name	Peg	Mechanism	Price	Deviation	Supply	Net 1d	Net 1d %	Net 7
USDT	Tether	peggedUSD	fiat-back…	0.999070	-0.0930%	177750786…	-426440414	-0.2393%	-3080
USDC	USD Coin	peggedUSD	fiat-back…	0.999874	-0.0126%	711088805…	170444753	+0.2403%	-2679
USDS	Sky Dollar	peggedUSD	crypto-ba…	0.999837	-0.0163%	6506404202	-25254889	-0.3867%	-993
DAI	Dai	peggedUSD	crypto-ba…	1.000245	+0.0245%	4735286175	22684671	+0.4814%	-84
USDe	Ethena US…	peggedUSD	crypto-ba…	0.999575	-0.0425%	4561061915	-26949967	-0.5874%	301
USD1	World Lib…	peggedUSD	fiat-back…	0.998076	-0.1924%	3701249454	-99111897	-2.6080%	-1998
USDG	Global Do…	peggedUSD	fiat-back…	1.000000	0.0000%	2747330601	-16356075	-0.5918%	-3236
PYUSD	PayPal USD	peggedUSD	fiat-back…	0.999375	-0.0625%	2667489082	-17592419	-0.6552%	-2892
RLUSD	Ripple USD	peggedUSD	fiat-back…	0.999974	-0.0026%	2597539271	32222418	+1.2561%	-60

Figure 18.33 On-chain > Stablecoins: each stablecoin's peg, price, deviation from its peg, supply and net issuance.

Custody

For desks that hold assets with custodians as well as exchanges.

Tab	What it shows
Adapters	Your custody connections: **Add**, **Edit**, **Delete**, **Declared balances** (balances you enter by hand for a manual custodian, with an as-of date). Credentials are sealed on the server; connecting a custodian never grants it the right to move assets.
Accounts & balances	Every custody and exchange account with balances (**Total**, **Available**, **Pending**, **Frozen**) and totals split **Cold** / **Hot** / **Unknown**.
Proof of reserves	Each exchange's published proof of reserves: how fresh it is (**Fresh** or stale), the auditor or method, the snapshot date and age, a link to the exchange's own page, and per asset the **Ratio** of reserves to customer liabilities, **Reserve** and **Liability**. An exchange that publishes nothing readable says so.
Collateral	Equity and margin use per venue (**Equity**, **Used margin**, **Free**, **Utilisation**, **Target equity**, **Movable surplus**) and **Build plan**: the transfers that would even it out, with **Keep free (USD)** (default 100), **Min transfer (USD)**, the venues and the assets to move.
Transfers	**Propose** a transfer (adapter, from account, a destination from the approved list — raw addresses are refused — asset, amount and a reason for the approver), then **Execute approved** once a second person has approved it. A custody transfer always needs a second approver.
Credit & insurance	Credit lines and insurance per counterparty.



Asset	Ratio	Reserve	Liability
APT	100.11%	104194750.547	104078837.11402799
ASTER	100.10%	427802006.898	428927580.11190385
BCH	100.10%	847175.652	846329.7927781
BNB	101.49%	42619574.466	42511971.85845944
BTC	100.03%	677407.894	685523.92323052
CAKE	105.48%	125103882.141	118599900.72205366
CHR	103.45%	526429354.989	509048314.75065202

Figure 18.34 Custody > Proof of reserves: an exchange's published reserves against what it owes its customers, asset by asset.

Compliance

Tab	What it does
Audit	Every action on the desk (key added, order placed, kill switch, role change ...) in a tamper-evident chain: **Seq**, **At**, **Actor**, **Action**, **Subject**. Filter with **From**, **To** and an action prefix (for example `keys.`, `order.`, `risk.`); **Reload**; **Verify chain** re-checks every row and answers **CHAIN INTACT** or **CHAIN BROKEN at row N** (a row edited or removed).
Surveillance	Alerts for suspicious trading patterns (for example spoofing), with **State** and **Kind** filters, **Run sweep now** (compliance role), and a triage note with **Set state**. The server sweeps every 60 seconds.
Sanctions	Screen wallet addresses or names against the sanctions list: paste them (one per line, up to 1000) and click **Screen**. If the list is not loaded, screening is refused, never answered as clean.
Approvals	LIVE orders held for four-eyes approval: **Raised**, **Kind**, **Subject**, **Notional USD**, **Requested by**, **State**, **Expires**. Select one, type a reason and click **Approve** or **Reject** (risk or admin role). You cannot decide a hold you raised yourself, and an expired hold can no longer be approved. *Nothing is waiting for a second pair of eyes.* when the queue is empty. The header's **approval(s) pending** button opens this tab.
Travel rule	Transfers above the reference threshold that need sender and receiver details.
Reports	**NAV statement**, **Trade blotter**, **Realised gains** or **Capital activity** for a **Period** (**MTD**, **QTD**, **YTD**, **30D**, **90D**) or a **From**/**To** range (which overrides the period): **Build report**, then **Export CSV**. Compliance or risk role.



Figure 18.35 Compliance > Audit: the tamper-evident record of every desk action.

1 **Verify chain** proves no record was changed.

18.15 Reference

Header

Control	What it does
Search markets (BTC, ETH perp, options...)	Typeahead over every venue's pairs (two letters or more). Click a result to open it on the Trade page.
Venue picker	Health dot, venue name, response time. Menu: venues grouped **With your API key** / **Market data and paper** (or **Venues** when you hold no key), each tagged **LIVE**, **PAPER** or **DATA**; **Venues & keys...** at the bottom.
Pair chip	The pair and venue every page works on, for example **BTC/USDT BINANCE**.
Desk live / Reconnecting	The live event connection for orders, fills, positions and the kill switch. Blotters fall back to a slower refresh while it reconnects.
N approval(s) pending	Shown when LIVE orders wait for a second approver. Opens **Compliance > Approvals**.
Kill switch	Press twice within 4 seconds to engage. Engaged, it reads **Kill switch engaged**; clearing needs the risk or admin role and a reason. Disabled until you sign in.
Notice strip	Messages from every page (a refused fetch, a feed gone quiet, a breach) with **Dismiss**.

Trade page layout

Area	Controls
Watchlist	**Add or filter...**; columns **Symbol**, **Price**, **%**; right-click: **Add ... to watchlist** / **Remove ... from watchlist**; count **N of M priced**. One list per venue; up to 50 pairs get live prices every 5 seconds.
Instrument bar	**Markets** toggle; pair, price, change; **Bid**, **Ask**, **Spread**, **24h**, **Vol**; **PAPER**/**LIVE** chip. (No **Mark** / **Index** for perpetuals in 5.0.6.)
Chart	**1m 5m 15m 1h 4h 1d**; standard chart tools; right-click menu (**Buy @**, **Sell @**, **Alert at**, **Horizontal line at**, **Copy price**, chart tools); position card with **Exit**.
Book bar	**Ladder** / **Depth**; **Agg**; source line.
ORDER BOOK	**Book**, **Vol**, **Imb**, **Sig**; gauge; **Price**, **Size**, **Sum**; spread row (**Spd**); click a price to fill the ticket's limit price.
Trade tape	**Time**, **Price**, **Size**; up to 200 trades; *Waiting for trades...* until the first one.
Blotter (Paper)	Account line (**Equity**, **Cash**, **Unrealized**, **Day P&L**, **Margin used**); **This pair only**; **Close all** / **Cancel all**; tabs **Positions**, **Open orders**, **Order history**, **Trades**.
Blotter (Live)	**This pair only**; **Cancel all**; tabs **Open orders**, **Positions**, **Balances**; **Cancel**, **Amend...**, **Close**.
Order ticket	See the next table.

All the dividers between areas can be dragged. The screen remembers the page, venue and pair, the timeframe, the book view, **Agg**, the ticket's mode, whether the watchlist is shown, the blotter tab, **This pair only**, the divider positions and each venue's watchlist.

Order ticket

Control	Paper	Live	Notes
Paper / Live	✓	✓	Paper is the default. Switching is refused while an order is in flight.
Type badge	✓	✓	Meant to read **SPOT**, **PERP**, **INV**, **FUT** or **OPT**; reads **SPOT** for every pair in 5.0.6.
Venue box	✓	✓	**(no paper quote)** / **(no key)** after a venue that cannot take this mode's order.
Direct / SOR		✓	Routing.
Account card	**Cash**, **Mark**, **Equity**	**Balance**, **Mark**, **Avail**	
Buy / Sell	✓	✓	
Market, Limit, Stop, Stop-lmt	✓	✓	
Quantity	✓	✓	In the base coin.
25% 50% 75% 100%		✓	From free balance.
Limit price, Stop price	✓	✓	As the type needs.
Take profit, Stop loss	✓		Optional bracket, armed on fill.
TIF (GTC, IOC, FOK), Slip bp, Post only		✓	

Control	Paper	Live	Notes
Reduce only	perps	derivatives	Not shown in 5.0.6 (every pair counts as spot).
Leverage, Margin		derivatives	0 = venue setting; up to 125x. Not shown in 5.0.6.
Estimate		✓	Est avg, Slippage, Fee, Notional, Margin impact.
Register a key in Venues & keys		✓	Shown when the venue has no key.
Work TWAP / VWAP / POV / Iceberg		✓	Opens Execution > Algos.
Submit button	✓	✓	**Buy PAIR PAPER** / **Buy PAIR LIVE**, **Submit for approval** above four-eyes. `Ctrl` + `Enter`.

Venues

Fifteen venues: Binance, BingX, Bitfinex, Bitget, Bybit, Coinbase, Crypto.com, Gate.io, HTX, Kraken, KuCoin, MEXC, OKX, Hyperliquid and Kraken Futures. Each card on **Venues & keys** lists what that venue can trade here (**spot**, **linear**, **inverse**, **dated**, **option**). Paper trading prices every venue except Hyperliquid and Kraken Futures.

Roles

Role	Can
trader	Trade, run algorithms and bots, propose rebalances.
risk	Write limits and breakers, engage and clear the kill switch, approve held orders, triage surveillance, build reports.
ops	Operational tasks such as a forced NAV snapshot.
compliance	Surveillance sweeps, triage and reports.
admin	Everything above, plus members and the execution policy.

Costs

Action	Price
Prices, books, charts, funding, options, on-chain, intel, reports	Free
A filled paper order	0.05 credits per fill
LIVE orders, cancels, previews	Free (the exchange charges its own fees)
Start algo	1 credit per run (a resume is free)
A running bot	2 credits per bot per day (sandbox too)
Run VaR with Monte Carlo	1 credit per run (shown on the button)
Run scenario	1 credit per run, replay or custom (shown on the button)

18.16 For advanced users

Keyboard and links

- Ctrl + Enter sends the ticket's order.
- The screen joins **symbol link groups** (the coloured badge on its panel tab): a pair you open here is sent to the other crypto panels in the same group, and a crypto pair picked in a linked panel opens here.
- Open the screen in its own window: ☰ › **View** › **Float panel** › **Crypto trading**, or right-click its tab and choose **Float panel**. The panel's tab reads **CRYPTO**.
- The Dashboard's **Crypto ticker**, **Trade tape** and **Crypto order book** widgets show the same live market data on a dashboard page (**Chapter 8, Dashboard** p. 123).

How paper orders are priced

A paper order is sent to your Fincept Paper account's main book named as the venue's own listing (for example Binance's BTCUSDT; a perpetual gets a `.P`). It fills at that venue's live quote; the ticket's price on screen goes with it as a reference. A bracket's take profit and stop loss are watched against the terminal's live prices once the order fills. Each send carries an order ID, so a retry after a timeout never makes a second order.

Paper bots run in a separate sandbox book, so a hand-placed paper order never nets against a bot's position.

Do it with AI

The AI can read every page of this screen and operate it, with your approval for any order.

- "Open the Crypto screen on ETH/USDT on OKX and switch the chart to 4h."
- "On Crypto > Derivatives, which venue pays the highest annualised funding on BTC perps right now?"
- "Buy 0.01 BTC on paper on the Crypto screen with a stop loss 5% below the price."
- "List my crypto paper positions with their P&L."

LIVE crypto orders always wait for you, and the AI cannot clear the kill switch, change members or the execution policy, or switch a bot between sandbox and live.

Numbers you can trust (and the ones you cannot)

- Every money and risk figure on the LIVE pages comes from the server. When a figure is not available the screen shows a dash, never a guess or a zero.
- Totals that miss data say so: *N line(s) could not be priced and are left out of every total*, coverage percentages on VaR and scenarios, and "lower bound" notes on liquidation totals and LVaR.
- Funding predictions are estimates from a snapshot; the exchange's own rate settles at the interval's end.

18.17 Troubleshooting

The book, the tape or the price stopped moving. The venue's live feed went quiet. A notice says … *market feed has gone quiet … The ladder, the tape and the price may be stale until it reconnects; orders still go through the server.* It recovers by itself; a second notice says … *market feed is back.* If a venue is down, pick another in the venue picker.

A notice says a venue refused this network. Some exchanges block certain countries or networks. The screen moves to another venue if it picked that one itself. Pick a venue that works from your location.

The paper Buy button is grey. Read the line on the ticket: it names the reason (see **§18.5 Place a paper order** p. 308). The most common: a venue paper trading cannot price, or a dated future or option.

"No answer from Fincept Paper yet." The order may have landed. Open **Open orders** or **Positions** before sending again. Sending again is safe: it is the same order.

Live mode says no API key is registered. Register a key for that venue on **Venues & keys**, route with **SOR**, or switch back to **Paper**.

The Execution, Portfolio and Risk pages are empty. They show your LIVE book, which needs registered keys and real balances on exchanges. Your paper trades are in the Trade page's blotter.

My key was refused. The server refuses a key that can withdraw funds, or whose permissions it cannot confirm. Nothing was stored: create a trade-only key on the exchange and register it again. If the exchange was only unreachable, try again later.

"Sign in to load the crypto desk." The screen opened before your session was ready. It loads by itself as soon as you are signed in.

CHAPTER 19

Algo Trading ALGO

Turn a trading idea into rules, test the rules on past prices, run them on paper money or with your broker, and watch every trade they make — all on one screen, with an AI assistant that writes the rules from plain words.

At a glance

Open it	• Type `ALGO` in the command line and press **Enter** • Type `algo`, `algotrading`, `scan`, `scanner`, `scrn` or `screener` in the command line and press **Enter** • **Screens** › **Algo Trading**
You need	• Signed in on any paid plan • Credits for backtests, AI help and running deployments (every price is shown before you pay) • A connected broker account only for live trading, F&O deployments and the live whole-market scan • Exclusive+ or higher for Optimize SL / TP; Exclusive Pro for live (real-money) deployments
Best for	• Automating a rule you already trade by hand • Testing an idea on history before risking money • Running strategies on paper money, even with the terminal closed • Finding stocks that match your conditions right now
Time to learn	30 minutes
Related	**Chapter 24, Backtesting** p. 464, **Chapter 17, F&O** p. 284, **Chapter 15, Brokers & Accounts** p. 248, **Chapter 16, Equity Trading** p. 264, **Chapter 21, Action Center** p. 381, **Chapter 37, AI Chat** p. 719

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An **algorithm** (an "algo") here is simply a set of written rules: *when this happens, buy; when that happens, sell; never lose more than 2%*. The Algo Trading screen lets you write those rules, check how they would have done in the past, and then let the terminal follow them for you — first with simulated money on **Fincept Paper**, later, if you choose, with real money at your broker.

Nothing on this screen trades until you **deploy** a strategy, and every new deployment starts on paper.

19.1 Screen tour

The screen has a menu down the left side (the **rail**) and one page on the right. It opens on the **Overview** page.



Figure 19.1 The Algo Trading screen on its Overview page.

1. **The rail.** Eight pages, grouped in the order you use them: build, test, discover, run.
2. **AI assistant.** Describe an idea in words and the assistant writes the rules for you.
3. **Try:** chips put a worked example in the box.
4. **Build with AI** sends your sentence to the Builder's assistant (Ctrl + Enter does the same).
5. **Status tiles.** What runs, what holds a position, your strategies, active alerts. Click a tile to open its page.
6. **How it works.** The four steps, each with its status and a button that takes you there.
7. **Templates.** Five ready-made rule sets. **Use template** opens one in the Builder.
8. **Running count.** Deployments running on paper or live, or stopped with an error. Click it to open the Live monitor.
9. **New strategy** opens the Builder on a blank strategy, from any page.

The eight pages

Rail entry	Group	What the page is for
Overview	—	Where you stand, the four steps, starter templates and the AI idea box.
Builder	BUILD	Write a strategy: rules as sentences, risk limits, F&O legs, and the AI assistant.

Rail entry	Group	What the page is for
Strategies	BUILD	Your saved strategies and the built-in library: edit, backtest, deploy.
Backtest	TEST	Test a strategy on one symbol or a basket over past prices.
Scanner	DISCOVER	Find symbols that match your conditions — once, or continuously on the live feed.
Alerts	DISCOVER	Watch conditions in the background and get a notification when they come true.
Live monitor	RUN	Running strategies: P&L, positions, controls. A number badge shows how many run.
Trade log	RUN	Every fill ever booked, paper or live, with time, price, value and P&L.

When the panel is narrow, the rail keeps only its icons. Hover an icon to read the page's name.

The Overview page

The **Overview** page answers two questions: *what is happening now?* and *where do I start?*

- **RUNNING NOW** — deployments running at this moment, with the total you have deployed.
- **IN A POSITION** — deployments that hold a position right now.
- **YOUR STRATEGIES** — strategies you saved, plus the number in the built-in library.
- **ACTIVE ALERTS** — alerts watching in the background.

Under **HOW IT WORKS**, each step card shows a live status line (for example "2 saved" or "1 running") and a button: **Open builder**, **Run a backtest**, **Pick a strategy**, **Open live monitor**.

The five templates under **START FROM A TEMPLATE** are:

Template	Bars	Entry	Exit	Stop / target
Golden Cross	1d	SMA(50) crosses above SMA(200)	SMA(50) crosses below SMA(200)	5% / 15%
RSI Reversal	1h	RSI(14) below 30	RSI(14) above 60	2% / 5%
MACD Cross	15m	MACD line crosses above its signal line	MACD line crosses below its signal line	2% / 5%
Bollinger Breakout	1h	Close crosses above the upper band (20, 2)	Close crosses below the middle band	2% / 5%
SuperTrend Follow	15m	Close crosses above SuperTrend(10, 3)	Close crosses below SuperTrend(10, 3)	2% / 5%

Browse the library (35) opens the Strategies page on the library's 35 ready-made strategies (four of them share their names with these templates).

19.2 Quick start

Your first strategy, tested and running on paper money, in about five minutes. You need no broker and no coding.

1. Type `ALGO` in the command line at the top and press `Enter`. The **Overview** page opens.

2 In the box under **Describe your strategy in plain words**, type your idea in one sentence. For example: *Buy when RSI(14) drops below 35 on 15-minute bars, sell when it rises above 60, stop-loss 2%, target 4%*. Then click **Build with AI**: the sentence goes to the assistant on the Builder page. (You can also type it straight into the assistant's own box, as here.)

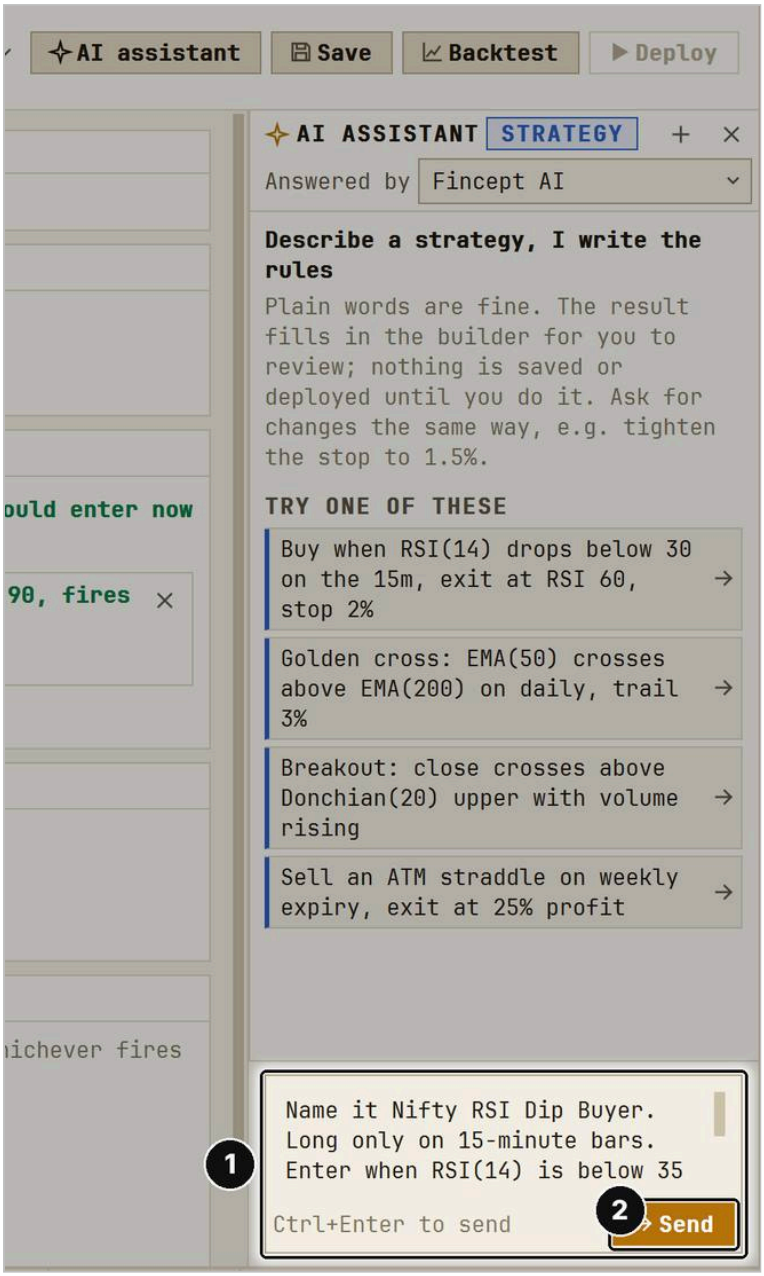


Figure 19.2 An idea typed into the Builder's assistant.

1. Your idea in plain words.
2. **Send** (or Ctrl + Enter).

3 The Builder opens and the assistant fills in the rules. Read the paragraph under **WHAT THIS STRATEGY DOES**: it says, in words, what the strategy will do. Type a name at the top, then click **Save**.

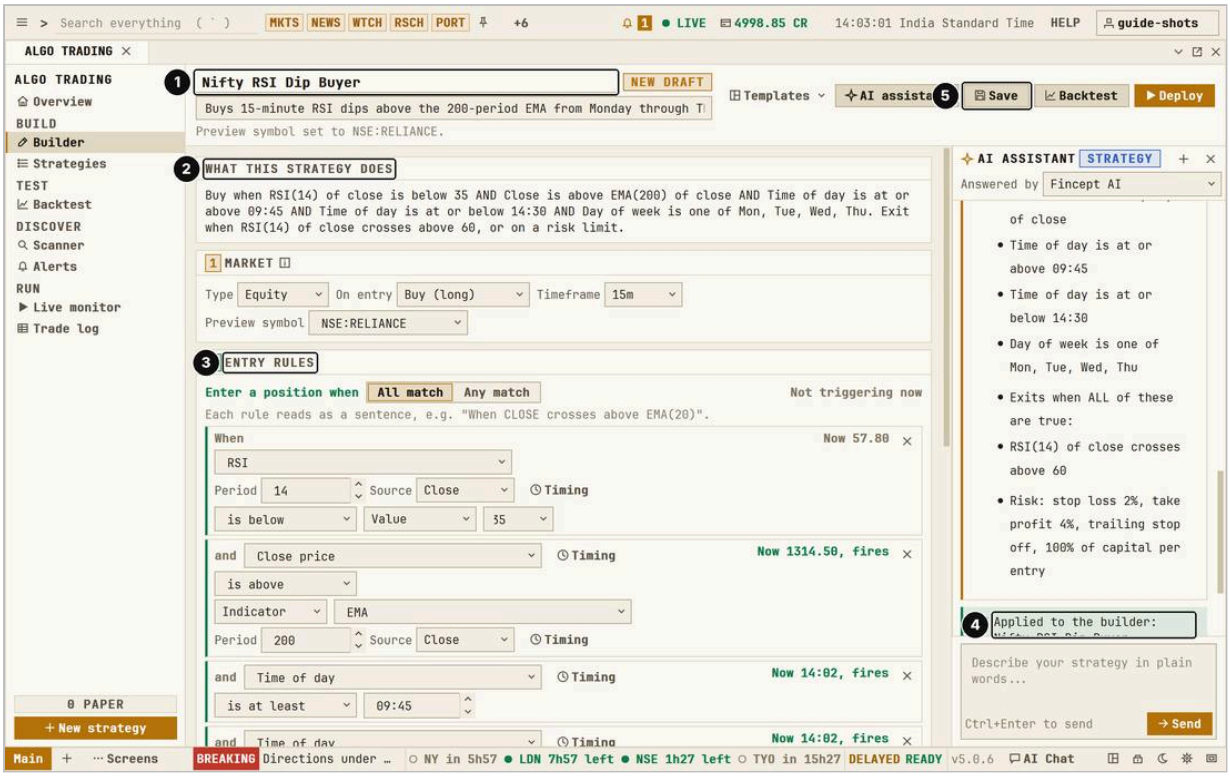


Figure 19.3 The assistant's rules, written into the Builder for you to check.

1. The strategy's name. Click it to type another.
2. The whole strategy in one paragraph.
3. The entry rules, one sentence each.
4. The assistant says what it changed.
5. **Save** keeps the strategy in your account.

4 Click **Backtest** in the Builder's header. The **Backtest** page opens with your strategy and its preview symbol. Click **Run backtest** (its price, usually **1 CR**, is on the button) and read the result: the return, the drawdown, the win rate and every trade.

5 Happy with it? Click **Deploy**. In the deploy window, leave **Mode** on **Paper (simulated)**, type the symbols to trade, pick **Fincept cloud** under **Runs on** so it keeps running when you close the terminal, and click **Deploy**.

6 The **Live monitor** opens. Your strategy is listed with its status, position and P&L. It trades on paper money only; nothing reaches a broker.

Tip

Not sure what to write? Click one of the **Try:** chips under the Overview's idea box — **RSI dip**, **Golden cross** or **Breakout** — to put a worked example in the box.

Credits

The AI assistant, each backtest and each running deployment use credits from your account. The price of a backtest is printed on its button (**· 1 CR**). The deploy window states the daily running cost before you deploy. Nothing is charged without that price on screen first.

19.3 Write a strategy with the AI assistant

Use the assistant when you know what you want in words but not how to build it rule by rule. It can also change a strategy you already have.

The assistant sits on the right of the **Builder** page (and of the **Scanner** and **Alerts** pages, where it sets up scans and alerts). Click **AI assistant** in the page header to show or hide it; the choice is remembered on every page.

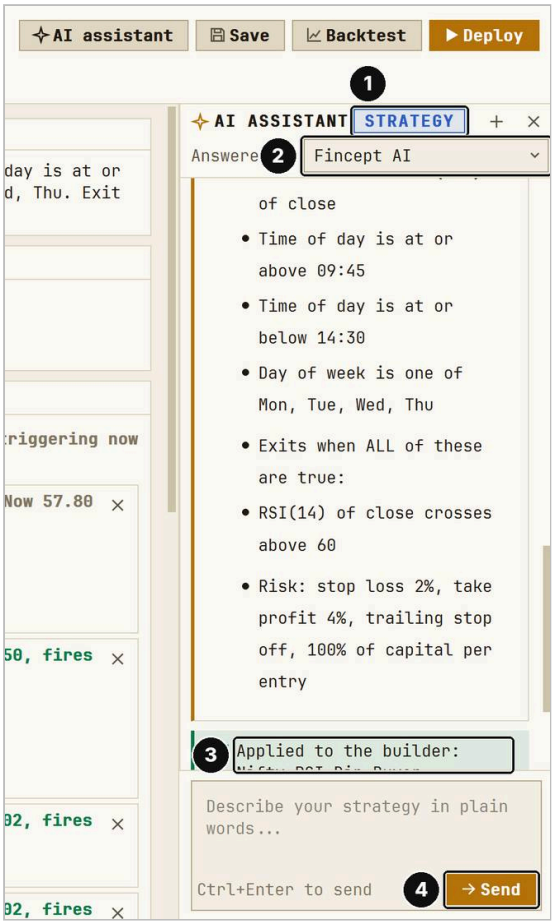


Figure 19.4 The assistant panel after it wrote a strategy.

1. What this assistant writes here: a **STRATEGY** (on the Scanner page **SCAN**, on Alerts **ALERT**).
2. **Answered by** — Fincept AI, or one of your Agent Studio personas or teams.
3. Every change the assistant makes is listed.
4. **Send** — or Ctrl + Enter in the box.

1. Open the **Builder** (or click **Build with AI** on the Overview page).
2. Type what you want in the box at the bottom of the assistant. Plain words are fine: name the indicators, the bar size, the stop and target, and a symbol to preview on.
3. Press Ctrl + Enter or click **Send**. The answer streams in; when it is done, the rules appear in the Builder and the assistant lists what it applied.
4. Read **WHAT THIS STRATEGY DOES**. If something is wrong, ask for the change in the same box — for example *tighten the stop to 1.5%* — and the assistant edits the same draft.

5 Click **Save** when you are happy. Nothing is saved or deployed until you do it yourself.

The four **TRY ONE OF THESE** cards (shown while the conversation is empty) send a worked example with one click. One of them builds an options strategy: *Sell an ATM straddle on weekly expiry, exit at 25% profit*.

+ in the panel's corner starts a new conversation; **×** hides the panel (bring it back with **AI assistant**). While the assistant is working, a **Stop** button beside **Send** ends the answer. **Answered by** also lists your Agent Studio teams.

Do it with AI

Example requests that work well:

- *Buy when the 20-day high breaks with volume above its 20-day average, trail 3%.*
- *Same as now, but only between 09:30 and 14:30 and never on Fridays.*
- *Make it short instead of long and add a 1% take-profit.*
- *Sell a NIFTY short strangle two strikes out on weekly expiry, exit at 50% of the credit.*

19.4 Write a strategy by hand in the Builder

The **Builder** is where every strategy is written and changed, whether by you or by the assistant. It is a numbered form: **1 MARKET**, **2 ENTRY RULES**, **3 EXIT RULES**, **4 RISK AND SIZING**.

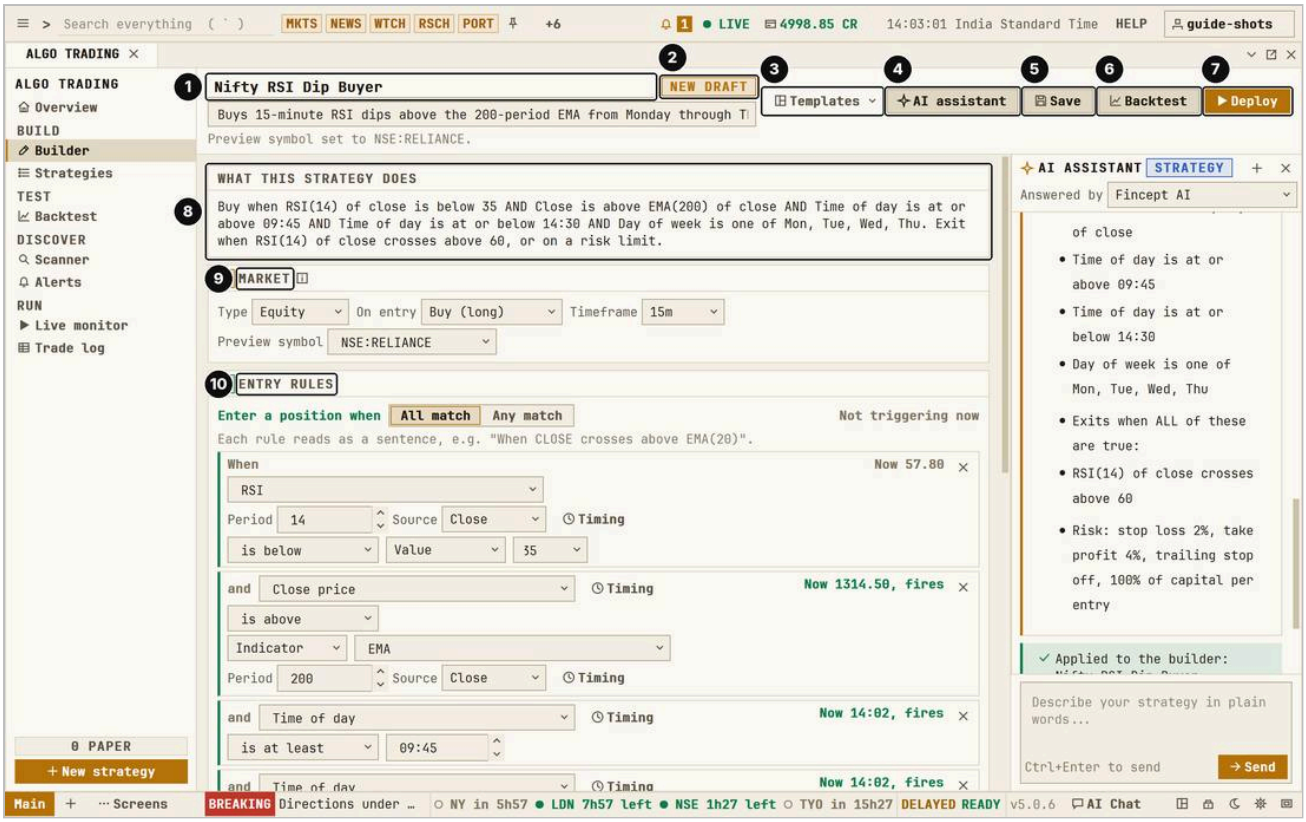


Figure 19.5 The Builder with a strategy the assistant wrote, before it was saved.

1. **Name** — click and type. Under it, an optional one-line description.
2. **NEW DRAFT** until the strategy is saved; **EDITING** for a saved one (Save then updates it).
3. **Templates** — load one of the five ready-made rule sets.
4. **AI assistant** — show or hide the assistant panel.
5. **Save** to your strategies.
6. **Backtest** — test this draft (saved or not) on the Backtest page.
7. **Deploy** — run it on paper or with a broker. Greyed out until the strategy has a name and runnable rules; its tooltip says what is missing.
8. **WHAT THIS STRATEGY DOES** — the strategy in one paragraph, rewritten as you edit.
9. **1 MARKET** — what it trades and on which bars.
10. **2 ENTRY RULES** — when to open a position.

1 · Market

Field	Choices	What it means
Type	**Equity**, **Option**, **Future**	What the strategy trades. **Option** and **Future** show the F&O legs section (see **§19.5 Build an options or futures strategy** p. 342).
On entry	**Buy (long)**, **Sell (short)**	Long buys when the entry rules fire and sells on exit. Short sells first and buys back on exit; the stop and target are mirrored. Not shown for option and future baskets — each leg has its own side.
Timeframe	**live**, **1m**, **3m**, **5m** (default), **10m**, **15m**, **30m**, **1h**, **4h**, **1d**, **1w**, **1M**	The bar size the rules are judged on. **1m** is one minute, **1M** one month. **live** judges every price tick.
Preview symbol	Any symbol (a list of index and F&O names is offered)	Only feeds the live checks beside each rule. You choose the symbols to trade when you deploy. An option or future strategy previews on its underlying.

2 · Entry rules and 3 · Exit rules

Each rule is a sentence: *When* **RSI** *is below* **35.** The sentences in one list are joined by **All match** (every rule must be true — AND) or **Any match** (one is enough — OR).

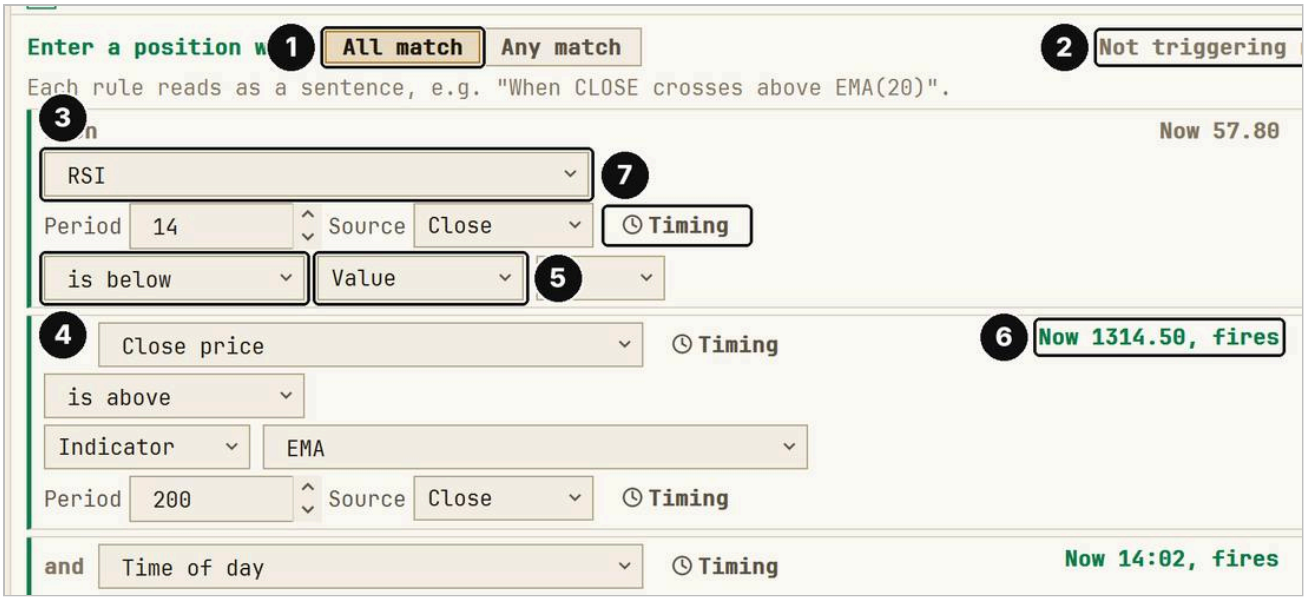


Figure 19.6 Entry rules written as sentences, each with its live check on the preview symbol.

1. **All match** (AND) or **Any match** (OR) for this list.
2. The list's live verdict: **Would enter now** or **Not triggering now**.
3. **The indicator**, with its settings under it (Period, Source).
4. **The comparison** (is below).
5. Compare with a **Value** or another **Indicator**.
6. Each rule's live check: the value now, and **fires** when this rule alone is true.
7. **Timing** — judge an earlier bar instead of the latest one.

A rule row has up to four parts:

1. **The indicator** — pick it from the list (type to search). Its settings appear under it, such as **Period** and **Source** (Default, Close, Open, High, Low, Volume, Hl2, Hlc3, Ohlc4).
2. **The comparison — is above**, **is below**, **is at least**, **is at most**, **touches level**, **crosses above**, **crosses below**, **is rising**, **is falling**, **is between**.
3. **What it is compared with — Value** (a number you type or pick) or **Indicator** (another indicator, with its own settings). **is between** takes two numbers; **is rising** and **is falling** need nothing.
4. **Timing** — off by default: the rule looks at the latest bar. Switch it on to look at an earlier bar ("RSI 1 bar ago").

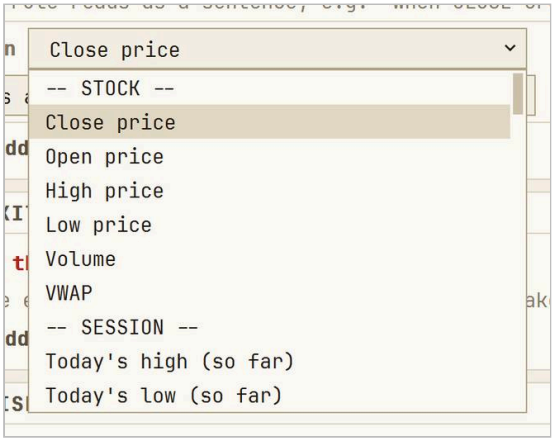


Figure 19.7 The indicator list, grouped by kind.

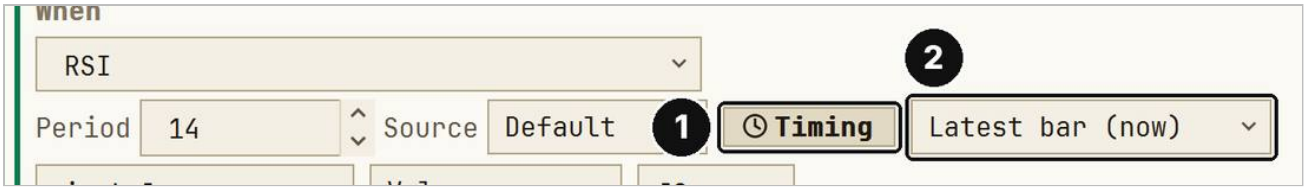


Figure 19.8 Timing switched on: the rule can look at an earlier bar.

1. **Timing** switched on.
2. Which bar: **Latest bar (now)**, 1, 2, 3, 5, 10 or 20 bars ago.

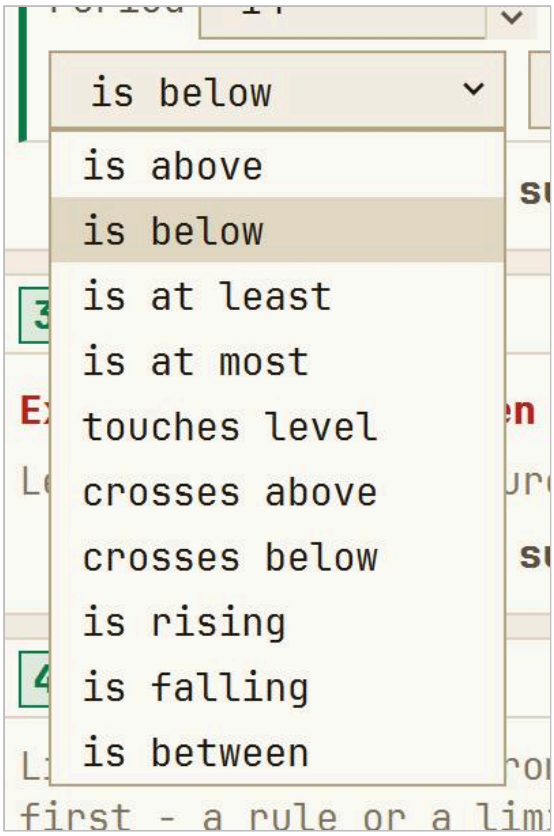


Figure 19.9 The comparison words.

Add rule adds a sentence to the list. **Add sub-group** adds a nested group with its own **All** / **Any** switch, so you can write *(A and B) or C*. A group with no rules never matches.

The exit list may stay empty: then the position is closed only by the limits in step 4.

Note

Crossing rules (**crosses above**, **crosses below**) compare this bar with the one before. A rule like *Close crosses above EMA(20)* fires on the one bar where the close moves from below the average to above it — not on every bar while it stays above.

Time-of-day and day-of-week rules

Two special indicators limit **when** a strategy may act:

- **Time of day** — the exchange's local time of the bar's close (IST on NSE and BSE). Compare it with a time such as **09:45** (**is at least**, **is at most**, **is between**). The live check prints the time now, for example "Now 14:02, fires". Time rules need intraday bars.

- **Day of week** — the weekday of the bar's trading date. Its comparison is always **is one of**, followed by day chips **Mon** to **Sun**: tick the days on which the rule holds. Pick at least one day.



Figure 19.10 The time and day rules of the RSI strategy: enter only between 09:45 and 14:30, Monday to Thursday.

1. **Time of day is at least 09:45** — 24-hour time, in the exchange's local time.
2. The live check: the time now, and whether the rule would fire.
3. A second rule, **is at most 14:30**, closes the window. Both must hold (All match).
4. **Day of week is one of** — the ticked days (here Mon to Thu).

If no day is ticked, the row says **Check failed** and *Pick at least one day.*, and the summary reads *(no valid days)*.

4 · Risk and sizing

Limits close a position whatever the rules say. They are measured from the entry price and checked on every tick when the deployment runs on this device (on Fincept cloud: on each closed bar's high and low); **0** turns a limit off. Whichever fires first — a rule or a limit — closes the position.

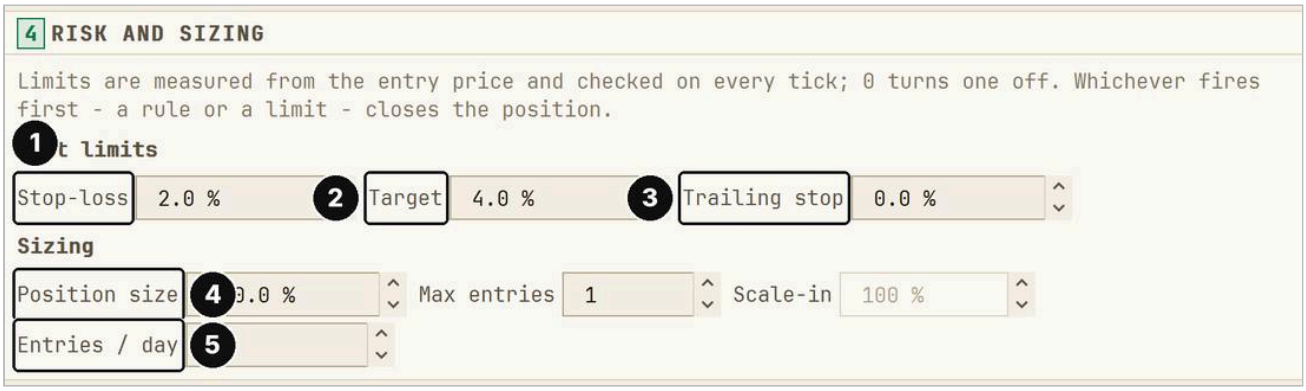


Figure 19.11 Exit limits and sizing of the RSI strategy: stop 2%, target 4%.

1. **Stop-loss** — sell if the price falls this % below your entry.
2. **Target** — sell if the price rises this % above your entry.
3. **Trailing stop** — a stop that follows the price up and sells on this % pullback.
4. **Position size** — the share of capital each entry uses (for backtests).
5. **Entries / day** — how many new positions one trading day may open.

Field	Range	Default	What it does
Stop-loss	0–100 % (up to 1,000 % for an F&O basket measured on the net credit / debit)	2.0 %	Closes when the price is this far below the entry (above it, for a short).

Field	Range	Default	What it does
Target	0–500 %	5.0 %	Closes when the price is this far above the entry (below it, for a short).
Trailing stop	0–100 %	0.0 % (off)	A stop that moves up with the highest price since entry and closes on this pullback.
Position size	0–100 %	100 %	The share of capital each entry uses when the strategy is backtested.
Max entries	1–10	1	How many entries may stack into one position. 1 = one entry per trade; more lets it **scale in** while the entry rules keep firing.
Scale-in	10–100 %	100 %	Size of each extra entry as a % of the first one. Only active when **Max entries** is above 1.
Entries / day	Default, 0–50	Default	New positions per trading day. **Default** = one a day for an F&O basket, no limit for a share strategy. **0** = no limit. Scale-in adds do not count.

19.5 Build an options or futures strategy

Set **Type** to **Option** or **Future** and the Builder grows a section for the **legs** — the individual option or future contracts the strategy buys and sells together as one **basket**. Each leg row has these columns:

Column	Choices	Meaning
B/S	**BUY**, **SELL**	Buy the contract (pay the premium) or sell it (receive the premium).
Type	**CE**, **PE**, **FUT**	A call option, a put option, or a future.
Strike	**ATM**, **ATM_OFFSET**, **DELTA**, **ABSOLUTE**	How the strike is chosen: at the money; a number of listed strikes away from it; by delta; or a fixed strike price.
Value	a number	For **ATM_OFFSET** the number of **strikes** (not points): +2 = two strikes above ATM, −2 = two below. For **DELTA** the target delta from 0 to 1 (0.25 = the 25-delta strike). For **ABSOLUTE** the strike price.
Expiry	**WEEKLY**, **MONTHLY**, **NEAREST_DTE**, **ABSOLUTE**	The leg's own expiry rule. When legs carry their own expiry, they win over the panel's **Expiry**.
Exp Val	days or DD-MMM-YY	The minimum days for **NEAREST_DTE**, or the date for **ABSOLUTE**.
Lots	1–10,000	How many lots of the contract.

A new leg's expiry is left blank, which means it follows the panel's **Expiry**. The delete button at the end of a row (**Remove leg**) deletes that leg. There is no fixed limit on the number of legs.

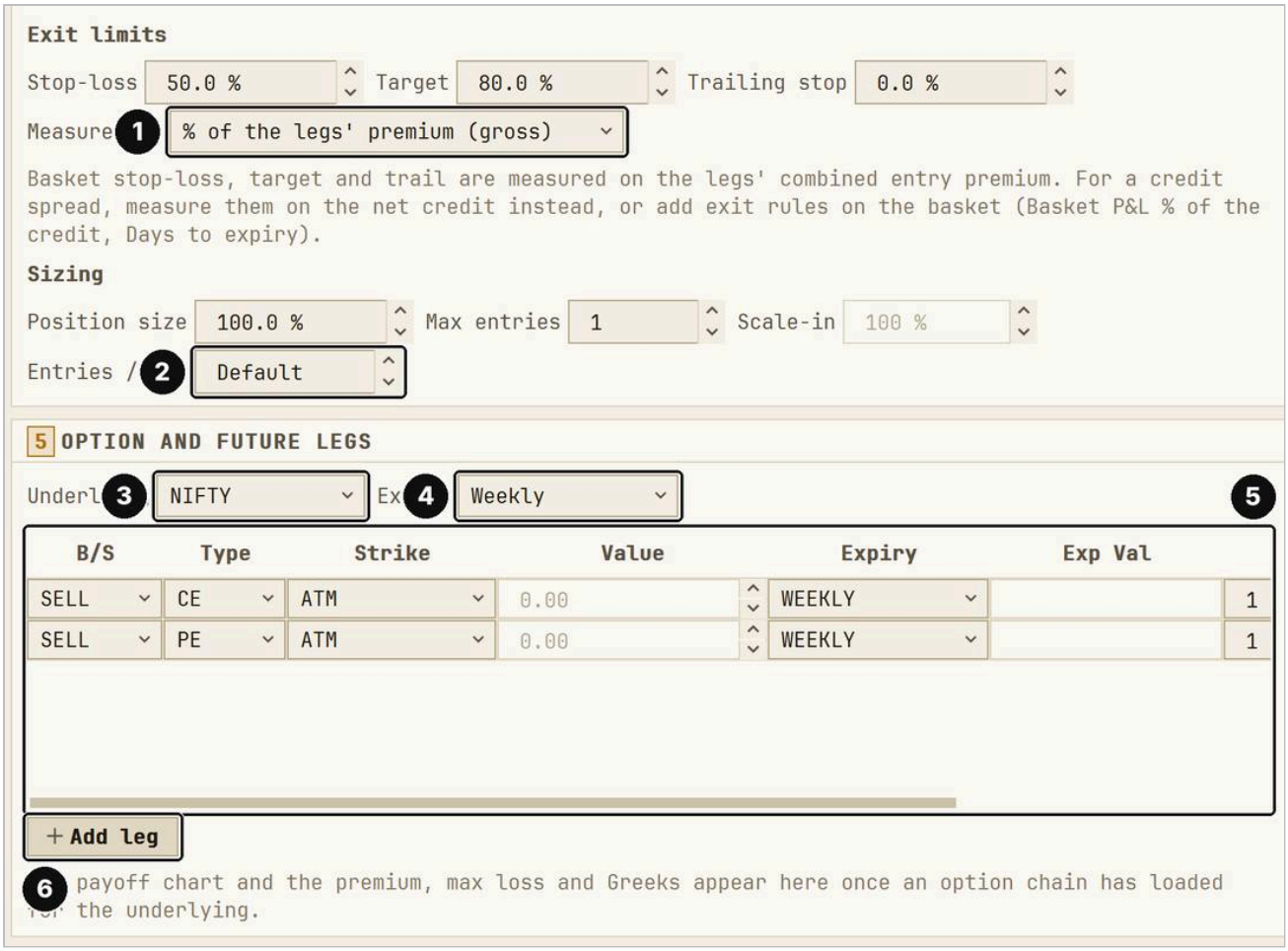


Figure 19.12 The library's NIFTY Expiry Short Straddle in the Builder: sell the at-the-money call and put of the weekly expiry.

1. **Measured on** — what the basket's stop-loss and target are a percent of (see the table below).
2. **Entries / day** — for a basket, **Default** means one a day.
3. **Underlying** — the index or stock whose options are traded.
4. **Expiry** — the rule that picks the expiry: Weekly, Monthly, Nearest DTE or Absolute.
5. **The legs**, one row each: here SELL CE ATM and SELL PE ATM, weekly, 1 lot each.
6. **Add leg** adds a row (BUY, CE, ATM, 1 lot).

Careful

An **ATM_OFFSET** of 20 or more is flagged: it almost always means points were typed where strikes were meant. On 50-point NIFTY strikes, 100 points is 2 strikes.

Under the legs, the Builder shows the payoff chart and the premium, maximum loss and Greeks once an option chain has loaded for the underlying, and the margin: your broker's own figure when a live broker account is connected, otherwise an estimate (the basket's maximum loss, the least a broker blocks). A structure whose loss has no limit, such as a short straddle, shows *Undefined risk: no estimate.*

For a basket, the **Stop-loss**, **Target** and **Trailing stop** are percentages of something else, chosen in **Measured on**:

Measured on	Meaning
% of the legs' premium (gross)	Of the legs' combined entry premium (the default).
% of the net credit / debit	Of the credit received or the debit paid: a 200% stop exits at a loss of twice the credit.
% of the max loss	Of the structure's maximum loss at expiry (spreads and other defined-risk structures only).

Rules that only F&O strategies can use

An option or future strategy has extra indicators in the **F&O BASKET** group of the indicator list. They read the open basket, so most of them work only in **exit** rules:

Indicator	Reads	Where
Days to expiry (DTE)	Calendar days to the expiry (0 on expiry day). Before entry, the expiry the first leg would trade.	Entry and exit rules. *Days to expiry is at most 0* trades on expiry day only.
Net premium (points)	The basket's entry net premium per unit: positive = a credit received, negative = a debit paid.	Exit rules
Basket P&L	Realised + unrealised P&L of the open basket, in account currency.	Exit rules
Basket P&L % of the credit or debit	Basket P&L as a % of the credit or debit: 50 = half the credit captured, −200 = a loss of twice the credit.	Exit rules
Basket P&L % of max loss	Basket P&L as a % of the maximum loss at expiry (defined-risk structures only).	Exit rules
Leg premium	The live premium of one leg (**leg** 1 = the first row).	Exit rules

Note

F&O strategies backtest on the exchange's own settled option and future history (NSE and BSE), free of charge, on the **Backtest** page. Deploying one needs a connected broker account and runs on this device only.

19.6 Manage your strategies

The **Strategies** page lists every strategy you can open: the ones you saved and the 35 in the built-in **library**. From here you open one in the Builder, test it, deploy it, see its saved versions or delete it.

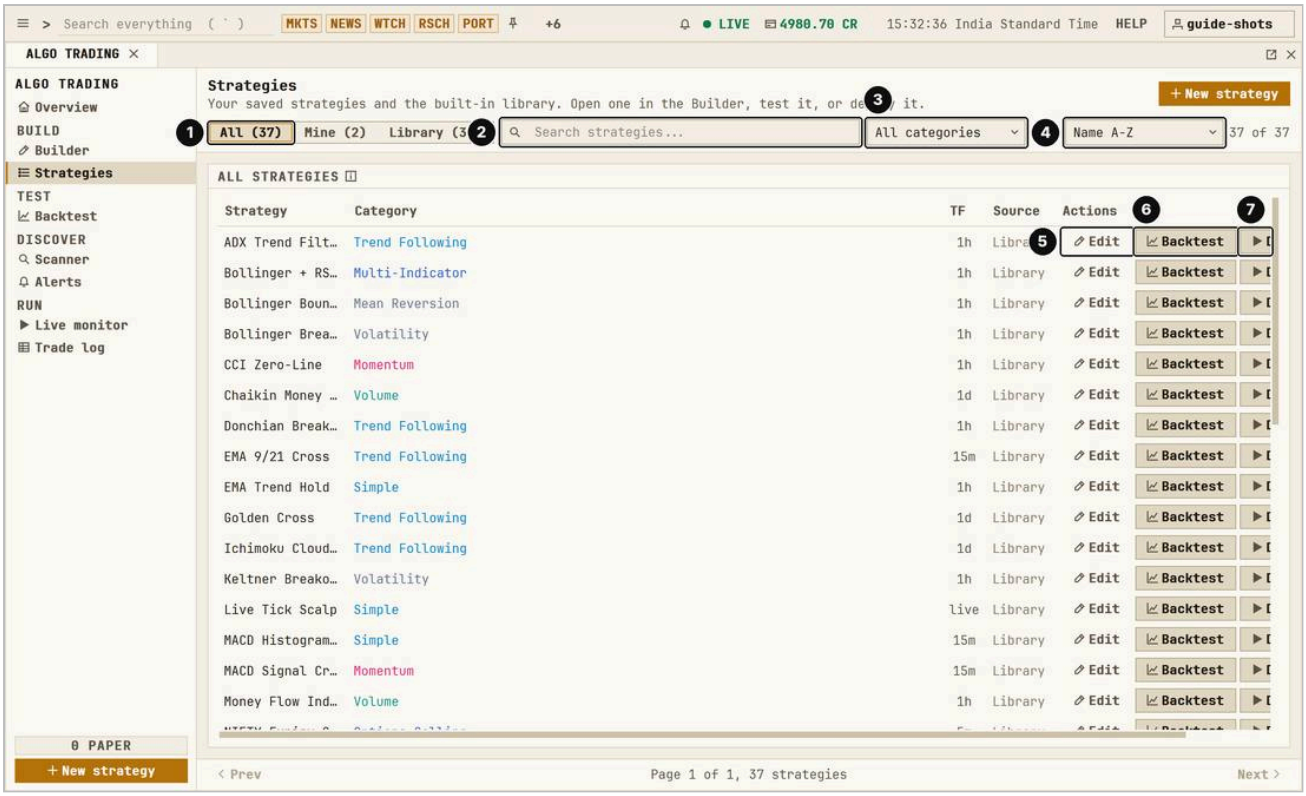


Figure 19.13 The Strategies page: your strategies and the library in one list.

1. **All**, **Mine** or **Library** — which strategies to list, with counts.
2. Search by name or category.
3. Show one category only (Trend Following, Momentum, Options Selling…).
4. **Sort** — Name A-Z, Name Z-A or Category.
5. **Edit** opens the strategy in the Builder.
6. **Backtest** asks for the symbols, then stages it on the Backtesting screen (nothing runs yet).
7. **Deploy** opens the deploy window.

Column	Meaning
Strategy	The name. Your own strategies also show their saved version (for example · *v1*).
Category	For a library strategy, its family: Trend Following, Momentum, Mean Reversion, Volatility, Volume, Multi-Indicator, Simple, Options Selling, Test. For your own, its one-line description.
TF	The bar size (timeframe).
Source	**Library** for a built-in strategy, **Mine** for one you saved.
Actions	**Edit**, **Backtest**, **Deploy** and ⋯.

The ⋯ (**More actions**) menu holds:

- **Quick test in the Lab...** — a small window asks for a **Symbol** (empty: type the one you want) and a **Start** and an **End** date (filled in for you, sized to the strategy's bar size). **Run backtest · 1 credit** runs the test on this screen's **Backtest** page; **Cancel** runs nothing. An option or future strategy needs no symbol: it opens straight on the Backtest page and runs there, free.
- **Version history...** — every saved version of one of *your* strategies; pick one and **Restore** it into the Builder. A strategy saved only once says *No saved versions yet - versions accumulate every time this strategy is saved.*
- **Delete** — deletes one of your strategies after you confirm (*Delete "name"?*).

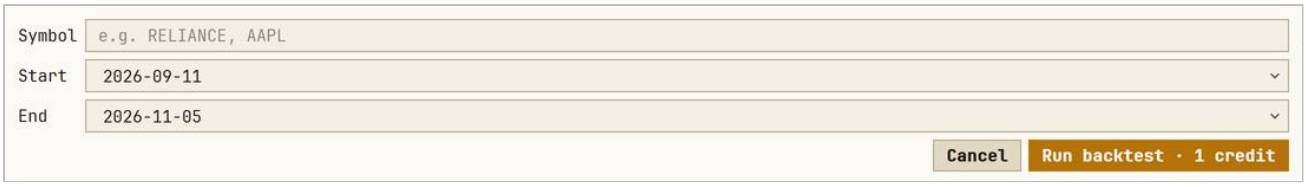


Figure 19.14 Quick test in the Lab: type a symbol; the dates are filled in, and the run's price is on its button.

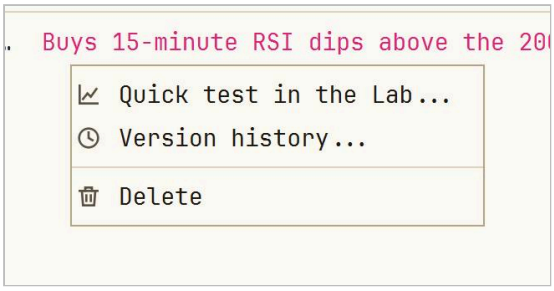


Figure 19.15 More actions on one of your own strategies.

Note

A library strategy cannot be changed or deleted. **Edit** opens a copy: when you save it, it becomes your own strategy and the library one stays as it was. Its ⋯ menu offers only **Quick test in the Lab...**.

Double-click a row to open it in the Builder. Your strategies are saved to your account, so they appear on every computer you sign in on. The list shows up to 50 strategies per page; **Prev** and **Next** at the bottom move between pages (*Page 1 of 1*). If the list cannot load, **Retry** asks again.

The row's **Backtest** first asks for the **Symbols to test on** (comma separated; add the exchange when a ticker trades in several countries, for example *NSE:RELIANCE*, *NASDAQ:AAPL*), then stages the strategy on the Backtesting screen. An option or future strategy cannot go there — test it on this screen's **Backtest** page instead.

19.7 Test a strategy on history

The **Backtest** page replays a strategy over past prices and shows what would have happened: every trade, the return, the worst fall and more. It is the quick test; the separate **Chapter 24, Backtesting** p. 464 screen adds cost models, confidence intervals and walk-forward validation.

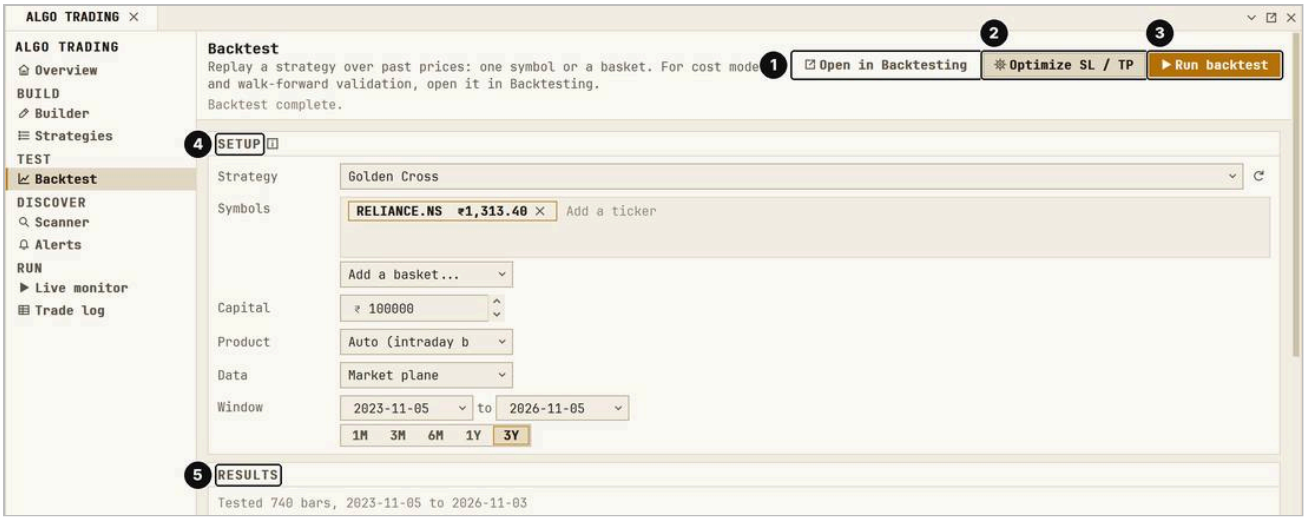


Figure 19.16 The Backtest page after a run: the run buttons, the setup, and the start of the results.

1. **Open in Backtesting** — hand this setup to the full Backtesting screen (nothing runs).
2. **Optimize SL / TP** — try many stop-loss and take-profit pairs (2 CR for a share strategy; free for an option basket).
3. **Run backtest** — 1 CR per symbol for a share strategy; free for an option basket.
4. **SETUP** — strategy, symbols, capital, product, data and window.
5. **RESULTS** — the verdict, the key figures, the equity curve and every trade.

Set up a test

Field	What to enter
Strategy	Pick a saved or library strategy. A draft sent from the Builder appears as *name (Builder draft)*. The ↻ button reloads your saved strategies.
Symbols	Type tickers (press **Enter**, a comma or a space after each), or **Add a basket...**: **NIFTY 50**, **NIFTY Bank**, **F&O universe (all stocks)**. When a ticker trades on several exchanges, **Which listing?** asks you to pick one.
Capital	Starting money for each run, 1,000 to 100,000,000 (default 100,000), in the currency the symbols trade in.
Product	**Auto (intraday below 1d, else delivery)**, **Intraday (MIS)** or **Delivery (CNC)** — how an Indian trade would be costed and held.
Charges	Option and future strategies only: **Indian F&O charges** on or off, and the brokerage per executed order (default ₹20).
Data	**Broker (…)** — your connected broker's own history, with its name in the brackets; chosen by default when a broker is connected (*Broker (none connected)* otherwise). Or **Market plane** — Fincept's market data. Fincept's intraday history is days deep: 1-minute bars go back 5 days, 5-minute bars 30 days, hourly bars 92 days. Daily bars go back years.
Window	From and to dates, or a preset: **1M**, **3M**, **6M**, **1Y** (default), **3Y**.

1. Open **Backtest** in the rail (or click **Backtest** in the Builder, which sends the current draft here).
2. Pick the **Strategy** and add one or more **Symbols**.
3. Choose a **Window**. For a strategy on minute bars, keep it short (see **Data** above).

4. Click **Run backtest** (**Run backtest · 1 CR** for a share strategy). With one symbol the button's price is the whole charge. With several, a window says how many backtests will run and their total price; click the button that names the total to go ahead. More than 25 symbols are not run one by one: the window **Run the basket as one portfolio** offers **Open in Backtesting**, which tests them all in one portfolio run there (one run's price, up to your plan's symbol limit).

5. Read **RESULTS**. With several symbols, a comparison table lists each one; click a row to see that symbol's full report below.

Read the results

The report shows ten key figures, then the charts and the trade list.



Figure 19.17 The key figures and the equity curve of the Golden Cross on RELIANCE.NS over three years.

1. Each tile: the figure's name, its value, and a small label that reads it for you — here *Final ₹94,728*; under **SHARPE** its verdict (**Weak**); under **TRADES** the wins and losses.
2. **Equity curve**: the strategy against **Buy & Hold**.

Figure	What it tells you	The small label under it
TOTAL RETURN	How much the capital grew or shrank over the window, in %.	The final value.
SHARPE	Return earned per unit of risk (ups and downs), per year. Above 1 is good.	**Excellent** (1 or more), **Good** (0.5 or more), **Weak**.
SORTINO	Like Sharpe, but counts only the downward moves as risk.	Downside-adj.
MAX DRAWDOWN	The deepest fall from a peak to a later low, in %.	Peak-to-trough.
CALMAR	Yearly return divided by the max drawdown.	Return / MaxDD.
WIN RATE	The share of trades that made money.	**Above average** (50% or more) or **Below average**.
PROFIT FACTOR	Money won on winners divided by money lost on losers. Above 1 = profitable overall.	**Strong** (1.5 or more), **Profitable** (1 or more), **Losing**; *No trades* or *No losing trades* when it cannot be divided.
TRADES	How many round trips (in and out).	Wins / losses, for example 12W / 9L.
EXPECTANCY	The average profit or loss per trade.	Avg P&L / trade.

Figure	What it tells you	The small label under it
AVG BARS HELD	How long a trade lasted on average, in bars.	Holding period.

Below them:

- **Equity curve** — the strategy's value over time against **Buy & Hold** (simply buying at the start and holding).
- **Drawdown %** — how far below its last peak the strategy was at each point.
- **Monthly returns %** — a grid of months and years, green for gains and red for losses. It is left out for a window shorter than two months.
- **The trade list** — **#**, entry and exit times and prices, **Qty**, **P&L**, **P&L %**, **Bars**, **Costs** and **Reason** — why it closed, shown as a short code: *exit_signal* (an exit rule), *stop_loss*, *take_profit*, *trailing_stop*, *intraday_square_off* or *end_of_data* (still open when the window ended).

A note under the results says what the run covered: the bars tested, the dates, the costs model, and any warning (for example *Data starts …, later than the requested …* when the data did not reach back as far as asked).

Tip

A test with no trades is not a failure of the screen: it means the entry rules never fired in that window. The result says so ("Backtest complete - no trades: the entry rules never fired"). Loosen a rule or test a longer window.

Find a better stop and target

Optimize SL / TP re-runs the same test over a grid of stop-loss and take-profit pairs (on the first symbol, when several are listed) and opens the window **Parameter optimization: stop-loss vs take-profit** with one row per pair: **SL %**, **TP %**, the return (**CAGR %** for a share strategy, **Return %** for an option basket), **Sharpe**, **MaxDD %**, **Win %** and **Trades**. The best pair is written at the top and shown in bold in the table. **0** means that limit was off. **Close** closes the window; nothing is changed in the strategy — copy the pair you like into the Builder's **Risk and sizing** yourself.

For a share strategy the sweep runs on Fincept's servers and costs 2 CR (the button shows **Optimize SL / TP · 2 CR**). For an option or future basket it is a free replay on your computer, like the test itself — the button still shows its usual price, but nothing is charged. **Optimize SL / TP** needs the **Exclusive+** plan or higher; on Exclusive the button is locked and explains why.

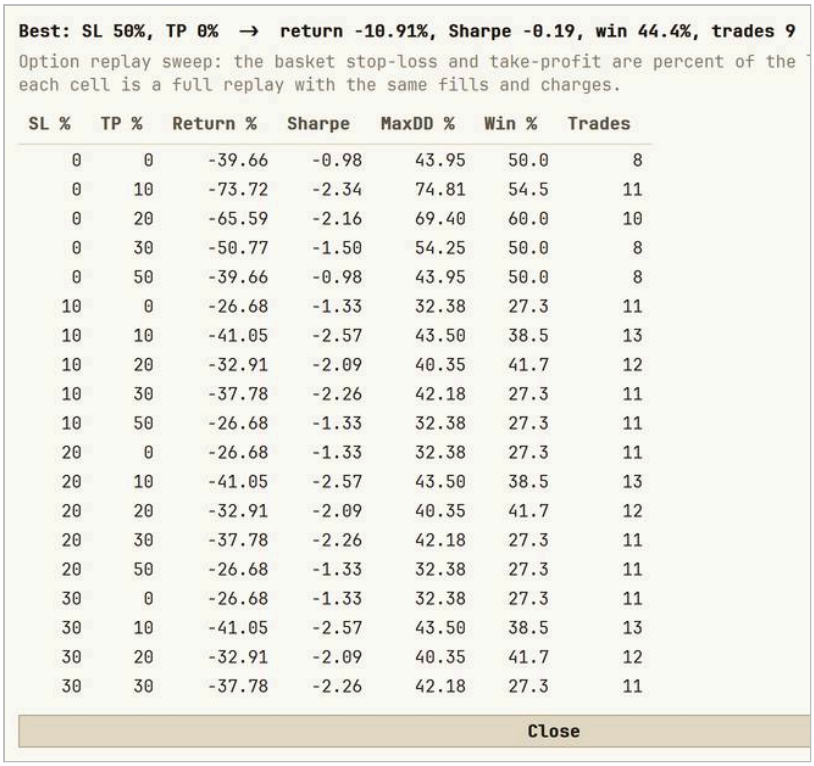


Figure 19.18 Optimize SL / TP on the short straddle: every pair of basket stop-loss and target, each a full replay.

Careful

The best pair of a grid is the one that fitted *this* history best. It will rarely be the best in the future. Prefer a pair whose neighbours (a slightly tighter or looser stop and target) also did well to one that stands alone, and confirm it with walk-forward validation on the **Chapter 24, Backtesting** p. 464 screen.

Test an options strategy

An option or future strategy is replayed on the exchange's own settled history of its contracts (NSE and BSE), on your computer, free of charge. The buttons still show their usual price (**· 1 CR**, **· 2 CR**), but an option replay and its stop / target sweep are never charged. Send the strategy from the Builder with **Backtest** (a library basket needs its **Underlying** set, so open it with **Edit** first), pick a window and run.

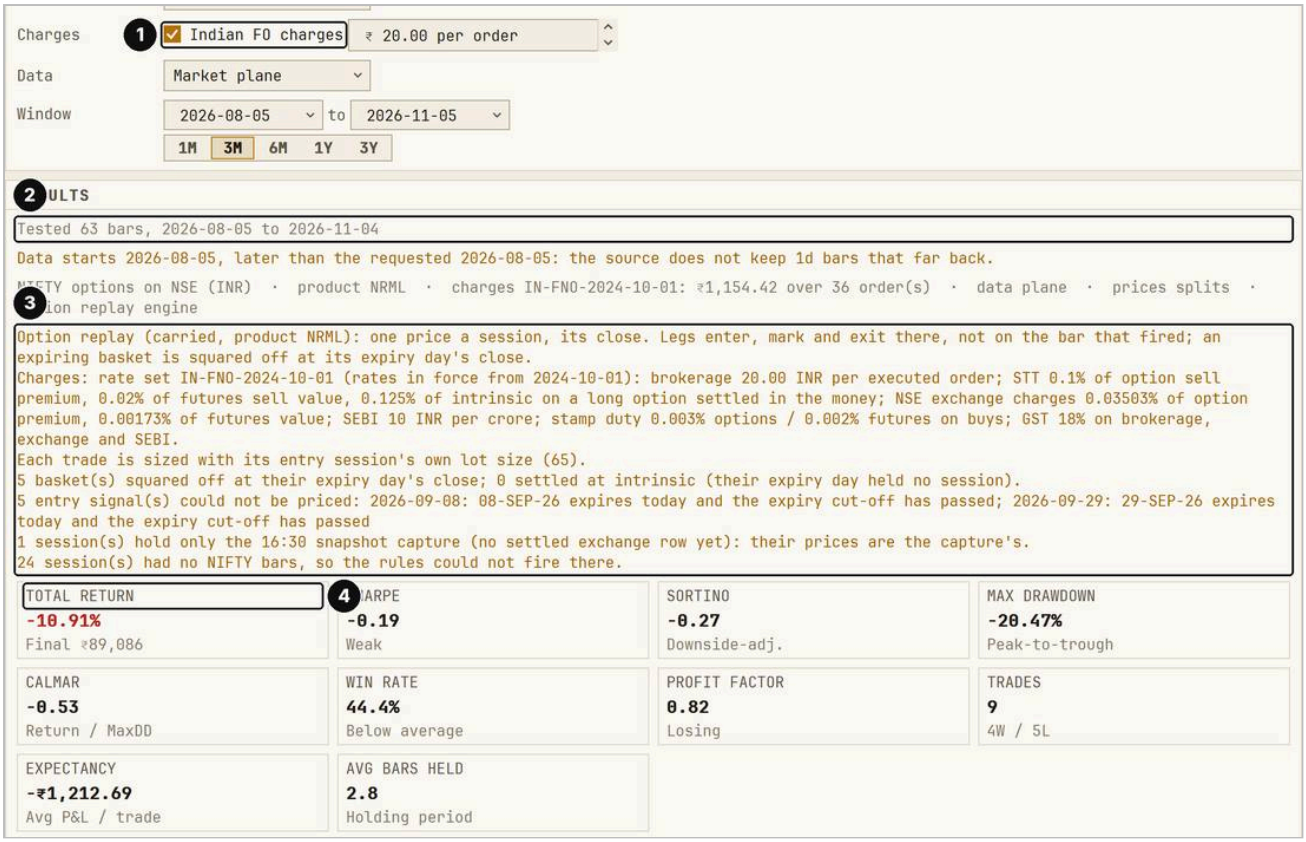


Figure 19.19 The short straddle replayed over three months: the charges, what the replay assumed, and the key figures.

1. **Indian F&O charges** on, with the brokerage per executed order (default ₹20).
2. What was tested: the sessions and the dates.
3. How the replay worked: one price a session (its close), each charge with its rate, the lot size, baskets squared off at expiry, and any signal that could not be priced.
4. The same key figures, charts and trade list as a share test.

What to know about an option replay:

- **One price a session** (with **Product** on **Auto** or **Delivery**). Legs enter, are marked and exit at the session's closing price, not on the bar that fired.
- **Intraday (MIS).** With **Product** set to **Intraday (MIS)** the replay uses each session's open, high, low and close instead: entries at the open (or at a premium modelled at the signal time), stop-loss and target checked on the day's high and low (the stop first when both are inside it), and anything still open squared off at 15:15 at the session's close price. It is not a tick-by-tick replay.
- **Expiry.** A basket still open on its expiry day is squared off at that day's close.
- **Charges.** With **Indian F&O charges** ticked, every leg order pays brokerage plus the statutory charges (STT, exchange charges, SEBI fee, stamp duty and GST) at the rates in force; the note lists each rate.
- **Lot size.** Each trade is sized with the lot size in force on its entry day.
- **Gaps.** Sessions with no data for the underlying, and expiries that had already passed their cut-off, are counted and listed; the rules could not fire there.

19.8 Deploy a strategy

To **deploy** is to start a strategy running: the terminal watches the market for it and places its orders. Deploy from the Builder's **Deploy** button or from **Deploy** on any row of the Strategies page.



Figure 19.20 The deploy window, top part, with one symbol typed.

1. **Trade on** — the symbols you type, or a whole universe (basket, index, exchange, watchlist, holdings, all F&O underlyings).
2. **Mode** — **Paper (simulated)** is the default. **Live (real money)** needs a connected broker.
3. **Symbols:** — each symbol becomes a chip with its live price.
4. **The costs**: the daily running cost and the charge per paper fill.
5. **Runs on** — this device, or Fincept cloud (keeps running when the terminal closes).
6. **Deploy** starts it.

1. Click **Deploy** on the strategy (Builder header or Strategies row).
2. Under **WHAT TO TRADE**, keep **Single symbol** and type the symbols in **Symbols:**, each followed by a comma or a space (it becomes a chip). Each symbol gets its own runner.
3. Under **EXECUTION**, leave **Mode:** on **Paper (simulated)**. Check **Exchange:**, **Product type:**, **Timeframe:** and **Run:**.
4. Under **SIZE & SAFETY LIMITS**, set the **Quantity:** per order and, if you like, a **Max order value:** and **Max daily loss:**.
5. Read the cost lines, choose **Runs on**, and click **Deploy**. The Live monitor opens with the new deployment.

The deploy window, field by field

WHAT TO TRADE

Field	Choices and meaning
Trade on:	**Single symbol** (one runner per symbol you type), **Basket**, **Index**, **Whole exchange**, **Watchlist**, **Holdings**, **All F&O underlyings**. Every choice except Single symbol makes an **auto-trader** that screens the whole universe and trades the matches — see **§19.13 Run an auto-trader on a whole market** p. 365. For an F&O strategy the first choice reads **Single underlying**.
Symbols:	The tickers to trade (Single symbol).
Add basket:	Adds a ready-made or saved basket's symbols as chips.
Build F&O options basket...	Opens a window to pick option legs from a live chain (needs a broker).
Basket name:	Optional name for a group of symbols.

EXECUTION

Field	Choices and meaning
Mode:	**Paper (simulated)** — simulated fills against live prices; no real orders. **Live (real money)** — real orders through your broker account; it needs the **Exclusive Pro** plan (on other plans the line under it says so) and a connected broker (until one is picked under **Broker**, **Deploy** stays off). The line under it says which, in plain words.
Broker (data source): / Broker (orders + data):	The broker account whose prices feed the deployment (for live, it also receives the orders). With no broker connected it reads **No connected accounts**, and a paper deployment uses Fincept's own market data (its detail then shows a feed chip such as **DELAYED · Fincept**).
Exchange:	The exchange the symbols trade on.
Product type:	For Indian brokers: delivery or intraday products (CNC, MIS…). Intraday positions are squared off before the session ends.
Timeframe:	The bar size; it should match the strategy's. A different one asks you to confirm (**Timeframe mismatch**), because the rules would mean something else.
Judge rules on:	**Strategy default**, **Closed bars (like the backtest)**, or **Every tick (intrabar)**. Closed bars judge the rules once per bar, when it closes — what a backtest sees. Every tick judges the forming bar, so it can act on a signal that is gone by the close. Stop-loss and target run on every tick either way on this device (Fincept cloud checks them on each closed bar's high and low). A single-symbol deploy uses the strategy's own setting (the field is greyed out); an auto-trader lets you choose.
Run:	**One trade** (the default), **Today only**, **Every day until I stop it** — see below. Not shown for an auto-trader.
Order execution:	Live only: **Market** or **Limit (slippage budget)**, with a budget in **bps** and a re-price timeout (500–60,000 ms, default 5,000). Greyed out for paper: a paper order is a market order, booked at the price the paper engine fills it at.

SIZE & SAFETY LIMITS

Field	Default	Meaning
Quantity:	1	Shares or units per order.
Max order value:	No limit	An entry whose value would be above this is skipped.

Field	Default	Meaning
Max daily loss:	No limit	When the day's loss (booked plus open) reaches this, the open position is closed (reason *Daily-loss cap*) and new entries stop for the day.

How long a deployment runs

Every deployment ends by itself unless you choose otherwise. The **Run:** choice says when:

Run	What happens
One trade	Enters once. The run **completes** by itself when that trade closes (target, stop-loss, exit rule, time exit or square-off). If there was no entry by the end of the session it started in, it completes with "no entry". A position still open at the close is managed until it closes.
Today only	Trades the session it starts in, then completes at the session's end (after the square-off for an intraday product), with or without a trade.
Every day until I stop it	Runs every trading day until you stop it.

A run never completes while it still holds a position, an order in doubt or an unfinished exit. You can change the choice later with the **Run:** button on the deployment's row in the Live monitor.

This device or Fincept cloud

Runs on decides where the strategy is evaluated:

- **This device** — inside this terminal. If the terminal closes, the computer sleeps or loses its connection, it stops evaluating: no new entries and no app-managed exits. Open positions stay at the broker. It resumes when the terminal starts again on this computer.
- **Fincept cloud** — on Fincept's servers. It keeps running when the terminal closes, and you can pause, resume, stop or remove it from any computer signed in to your account. It evaluates the strategy after every closed bar while its market trades; stop-loss and target are checked on each closed bar's high and low, and the exit is sent when that bar closes.

Fincept cloud is offered for **Fincept Paper** deployments of a single share strategy. The button stays visible but greyed out otherwise, and the line under it says why: live deployments stay on this device (your broker's login never leaves it), F&O baskets need a broker connected here, auto-traders scan here, strategies on bars other than 1m, 5m, 15m, 30m, 1h, 1d or 1w run here, and rules on company fundamentals are not evaluated in the cloud. A **live** (every-tick) strategy can run in the cloud, but there it is judged on closed 5-minute bars. A cloud deployment joins the strategy at its next entry.

What a deployment costs

The deploy window states both charges before you deploy:

- **Runtime cost** — a daily rate (shown as, for example, **2 CR per day**) for as long as the deployment runs. Paper deployments are charged the same rate as live ones: they run the same engine. If your credits run out, only **new entries** pause; exits, stop-losses and open positions keep working.
- **Paper deploys also pay per fill** — a small charge for each simulated fill (for example **0.05 credits per filled trade**). Live fills happen at your broker and carry no fill charge.

Enter deploys

In the deploy window, Enter presses **Deploy**. Add symbols with a comma or a space, and press Enter only when everything is set.

Live trading

Live (real money) sends real orders to your broker. It needs a connected broker account, and the terminal asks you to confirm a live deployment in a separate window, **Confirm LIVE deployment**, that says **This will trade REAL MONEY.** and reminds you that stop-loss and take-profit are managed by the terminal and do not trigger while it is closed or offline. Start every strategy on paper, and watch it for a while before you consider live.

19.9 Watch your deployments

The **Live monitor** shows every deployment — running, paused, completed or stopped — with its position and P&L, and the controls to pause, exit or stop it.

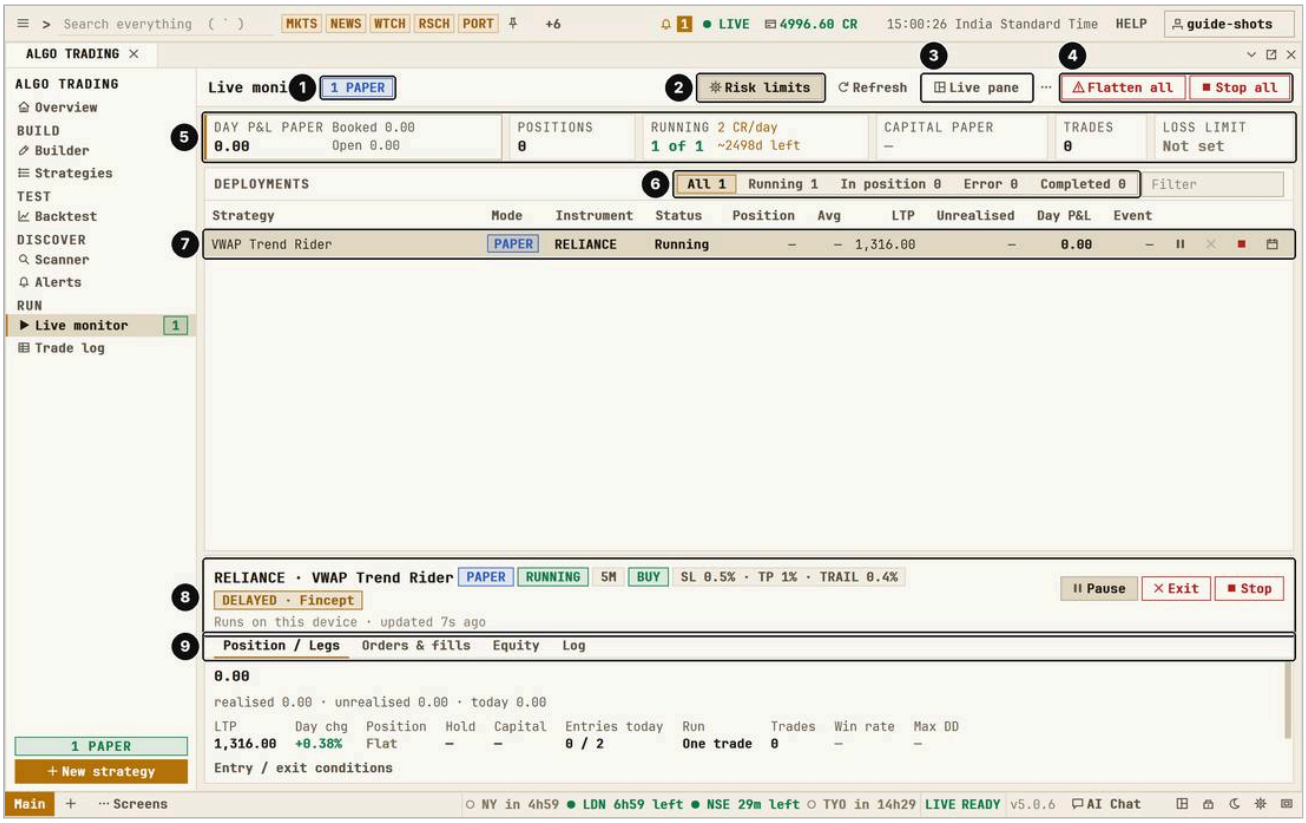


Figure 19.21 The Live monitor with one paper deployment running, its detail below.

1. How many deployments run on paper (and, in amber, live).
2. **Risk limits** — account-wide limits.
3. **Live pane** — open positions and the live trades feed. **Refresh**, beside it, reloads the list.
4. **Flatten all** and **Stop all** — the emergency controls.
5. **Key figures** across the listed deployments.
6. Filter chips: All, Running, In position, Error, Completed.
7. One row per deployment. Click it to show its detail below.
8. **The detail**: what runs, where, on which bars, with which limits — and Pause, Exit, Stop.
9. **Position / Legs**, **Orders & fills**, **Equity** and **Log**.

The key figures

Tile	What it shows
DAY P&L	Today's realised P&L (**Booked**) plus the open positions' unrealised P&L (**Open**). It reads **Day P&L live** when a live deployment is listed, **Day P&L paper** for paper only.
POSITIONS	Deployments holding a position now, split into long and short.
RUNNING	Deployments running or starting, of all listed (*1 of 3*), with what running them costs a day (**CR/day**) and how many days your credits last at that rate.
CAPITAL DEPLOYED	What the open positions hold (for an F&O basket, its margin). **Capital live** / **Capital paper**.
TRADES	Closed round trips and the share won, since each deployment started.
LOSS LIMIT	Today's loss against the daily loss limit of the closest account; **Not set** when none applies. Click it to review the limits.

The deployment rows

Column	Meaning
Strategy	The strategy's name (hover it for the basket's name).
Mode	**PAPER** or **LIVE**; **PAPER · CLOUD** when it runs on Fincept cloud.
Instrument	The symbol, or the underlying and the number of legs for a basket (*NIFTY · 4 legs*).
Status	**Starting**, **Running**, **In position** (running and holding a position), **Paused**, **Halted**, **Feed down**, **Broker offline**, **Exits held**, **Other device**, **Pending**, **Completed**, **Stopped** or **Error**. Hover it for the reason.
Position	The quantity held now, or **Flat**.
Avg	The average entry price.
LTP	The last traded price.
Unrealised	The open position's P&L.
Day P&L	Realised today plus unrealised.
Event	The latest thing that happened (a fill, an exit, a warning).
Actions	See below.

The chips above the table filter the rows: **All**, **Running**, **In position**, **Error**, **Completed**, each with its count. The **Filter** box beside them narrows the rows by text, and a click on a column header sorts by it.

At the end of each running row are four small buttons (hover one for its name):

- **Pause** (⏸) / **Resume** — stop evaluating the rules (the position stays open) / start again.
- **Exit** (⨯) — square off the open position at market, then stop. Greyed out while the deployment is flat.
- **Stop** (■) — stop the deployment after you confirm; an open position is left as it is.
- **Run** (calendar) — how long it runs: **One trade**, **Today only** or **Every day until I stop it**. A run that is over completes by itself. The children of an auto-trader have no **Run** button.

A stopped, completed or failed row offers **Exit** (if it still holds a position) and **Remove** (delete the row and its algo history). Removing a row that still holds a position asks first: **Close positions first** (square it off at market, then remove the row once it is flat — the default), **Remove anyway**, or **Cancel**. A live deployment that holds a position is never removed without closing it.

A deployment's detail

Click a row to open its detail under the table.

- **The title line** — the symbol and strategy, then chips: **PAPER** or **LIVE**, **CLOUD** or **AUTO-TRADER** where they apply, the status (**RUNNING**, **STOPPED**…), the bar size (**5M**), the side (**BUY** or **SELL**), the limits (**SL 0.5% · TP 1% · TRAIL 0.4%**), the broker, and the price feed (for example **DELAYED · Fincept** when prices are delayed; real time with a broker feed).
- **Where it runs** — *Runs on this device*, *Runs on Fincept cloud* or *Runs on device …*, and how long ago it last updated.
- **Pause**, **Exit** and **Stop** for this deployment.
- **Position / Legs** — the P&L (realised, unrealised, today), and **LTP**, **Day chg**, **Position**, **Hold**, **Capital**, **Entries today** (against the per-day limit), **Run**, **Trades**, **Win rate**, **Max DD**, then the entry and exit conditions in words.
- **Orders & fills** — every order and fill of this deployment.
- **Equity** — its realised P&L after each closed trade.
- **Log** — its events.

A run that is over

When a deployment completes, its row reads **Completed**, the **Completed** chip counts it, and its detail says when it ran and why it ended — for example *Ran on this device · ran 15:00 → 15:15 · 14m 45s* and *Completed: exit rule met (1 trade, P&L -1.30)*.

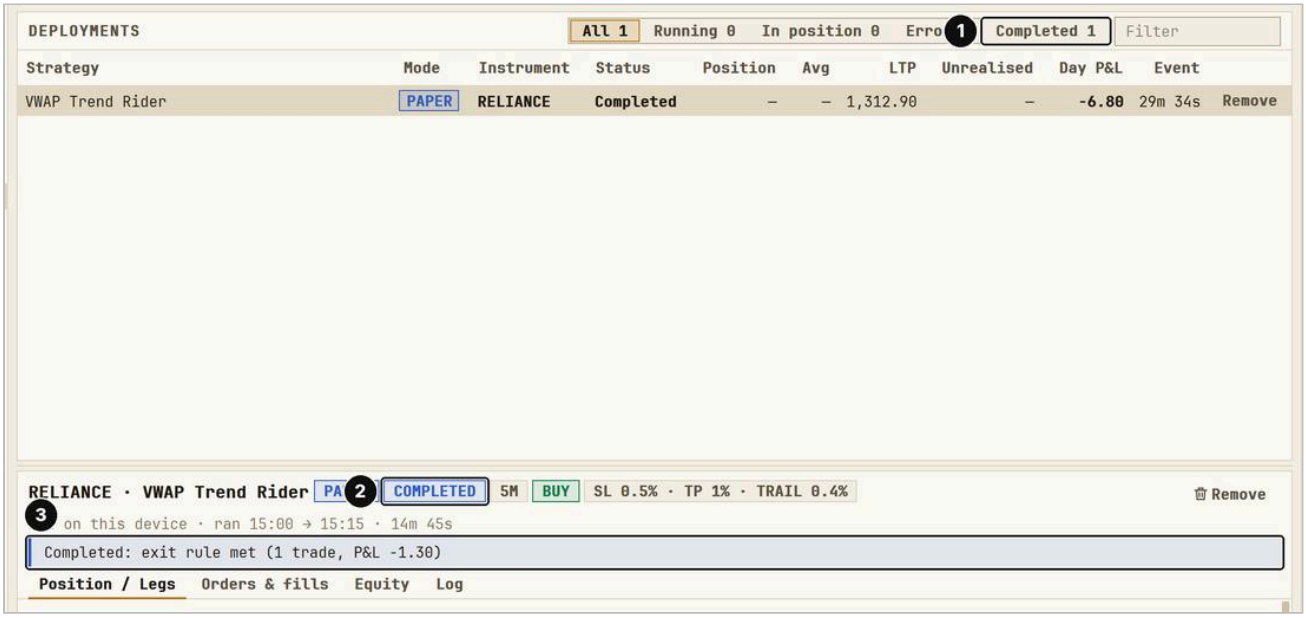


Figure 19.22 A one-trade deployment that completed by itself when its exit rule fired.

1. The **Completed** chip shows only finished runs.
2. **COMPLETED** — the run ended by itself.
3. Why and with what result it ended.

Further down, a **RUN COMPLETE** card sums the run up: why it ended, when it entered and exited, how long it was held, each leg's entry and exit, and the gross P&L. For an F&O basket it adds the charges, the net P&L and the **Return on margin used**; a share run says *charges not estimated for a share run*. Completed rows stay until you remove them; **More actions** (⋯) > **Remove stopped / completed / errored** clears them all at once.

The live pane

Live pane in the header shows or hides a pane with the **Open positions** of every deployment and the **Live trades** feed — each fill as it happens. The feed lists only deployments that still run or hold a position; the Trade log keeps the rest.



Figure 19.23 A deployment's Orders & fills tab, and the live pane: open positions and the live trades feed.

1. **Orders & fills** of the selected deployment.
2. **OPEN POSITIONS** of every deployment.
3. **LIVE TRADES** — each fill as it happens.

Emergency controls

Control	What it does
Flatten all	Squares off every in-position deployment running on this computer at market, pauses the rest, halts new entries engine-wide until you resume them, and stops every auto-trader. Asks first. Deployments on another computer are not affected.
Stop all	Asks first, then stops every deployment running on this computer and every armed auto-trader. Open positions are left as they are (use **Flatten all** to close them). Deployments that belong to another computer are skipped.
Resume entries...	Shown after a halt: asks first, then allows new entries again. Auto-traders stay stopped; arm them again yourself.
⋯ > Remove stopped / completed / errored (N)...	Removes all N finished rows at once. A row that still holds a position offers **Close positions first**.
⋯ > Reset dashboard...	Stops and removes every deployment and deletes all algo paper portfolios and trade history. Asks first; cannot be undone.

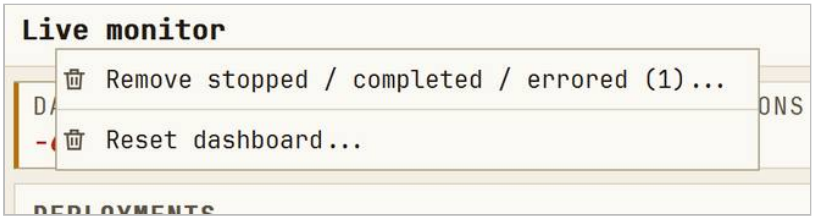


Figure 19.24 The Live monitor's More actions menu.

Risk limits

Risk limits opens **Algo risk limits**:

- **PER BROKER ACCOUNT** — for a live broker account: **Max daily loss**, **Max gross exposure**, **Max open positions**, **Max entry orders/day**. A line shows today's figures against them. On a breach, new entries on that account halt for the day, its auto-traders stop and its deployments are flattened (their open positions closed). Paper deployments have no account-wide limits; the window then says *No broker account - paper deployments have no account-wide limits.*
- **THIS MACHINE (ALL DEPLOYMENTS)** — **Max total exposure** and **Max concurrent positions** across every deployment on this computer. Every field starts at **No limit**.

Save keeps the limits; **Cancel** closes the window without changing them.



Figure 19.25 The Algo risk limits window.

Deployments on another computer

A deployment that runs on this device belongs to it. On your other computers it shows **OTHER DEVICE - READ-ONLY** with when that device was last seen. **Take over...** moves it to the computer you are on (stop it on the other one first). A Fincept cloud deployment belongs to no computer, so every computer can control it.

19.10 Read the Trade log

The **Trade log** lists every fill the algo engine has booked — paper and live, from every deployment. Use it to check what a strategy really did, and **Export CSV** to save the filtered trades as a CSV file. **Refresh** reloads the list.

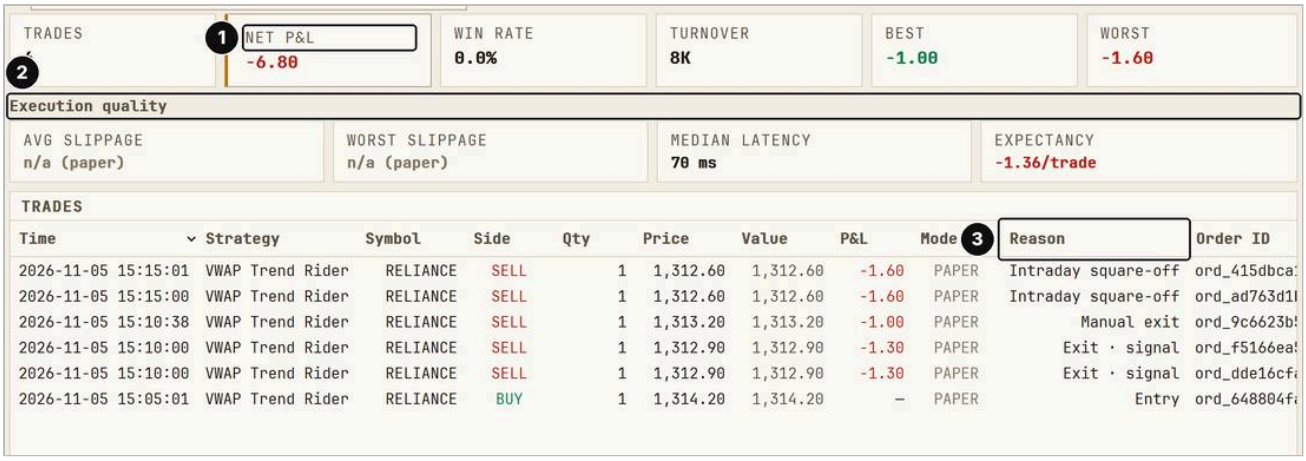


Figure 19.26 The Trade log of a paper deployment: totals, execution quality and every fill.

1. **Totals** for the trades the filters let through: Trades, Net P&L, Win rate, Turnover, Best, Worst.
2. **Execution quality** — slippage and latency of live fills; *n/a (paper)* for paper fills.
3. **Reason** — why each fill happened: Entry, Exit · signal, Manual exit, Intraday square-off…

Filter	Choices
Strategy	**All deployments**, or one deployment.
Mode	**All**, **Paper**, **Live**.
Side	**All**, **Buy**, **Sell**.
Search box	Filter by symbol or strategy.

The table's columns are **Time**, **Strategy**, **Symbol**, **Side**, **Qty**, **Price**, **Value**, **P&L**, **Mode**, **Reason**, **Order ID**, **Slippage** and **Latency**.

The **Execution quality** tiles: **Avg slippage** (how far, on average, fills were from the signal's price; positive is worse) and **Worst slippage** measure live fills only, so with paper fills they read *n/a (paper)*. **Median latency** (signal to fill) uses every fill that carries timing. **Expectancy** (average win × win rate − average loss × loss rate, per trade) uses every exit the filters let through, paper included; hover it for a per-strategy breakdown. Hover a **Reason** for its short code (for example *exit_signal*).

19.11 Scan the market

The **Scanner** page finds the symbols that match your conditions. It has two modes, switched at the top right:

- **One-time scan** — checks a list of symbols once and shows what matches right now (or at any past moment you choose). Free.
- **Live scan** — runs a saved strategy across a whole market on the live feed, and can deploy it on each match as it happens. Needs a connected broker account.

One-time scan

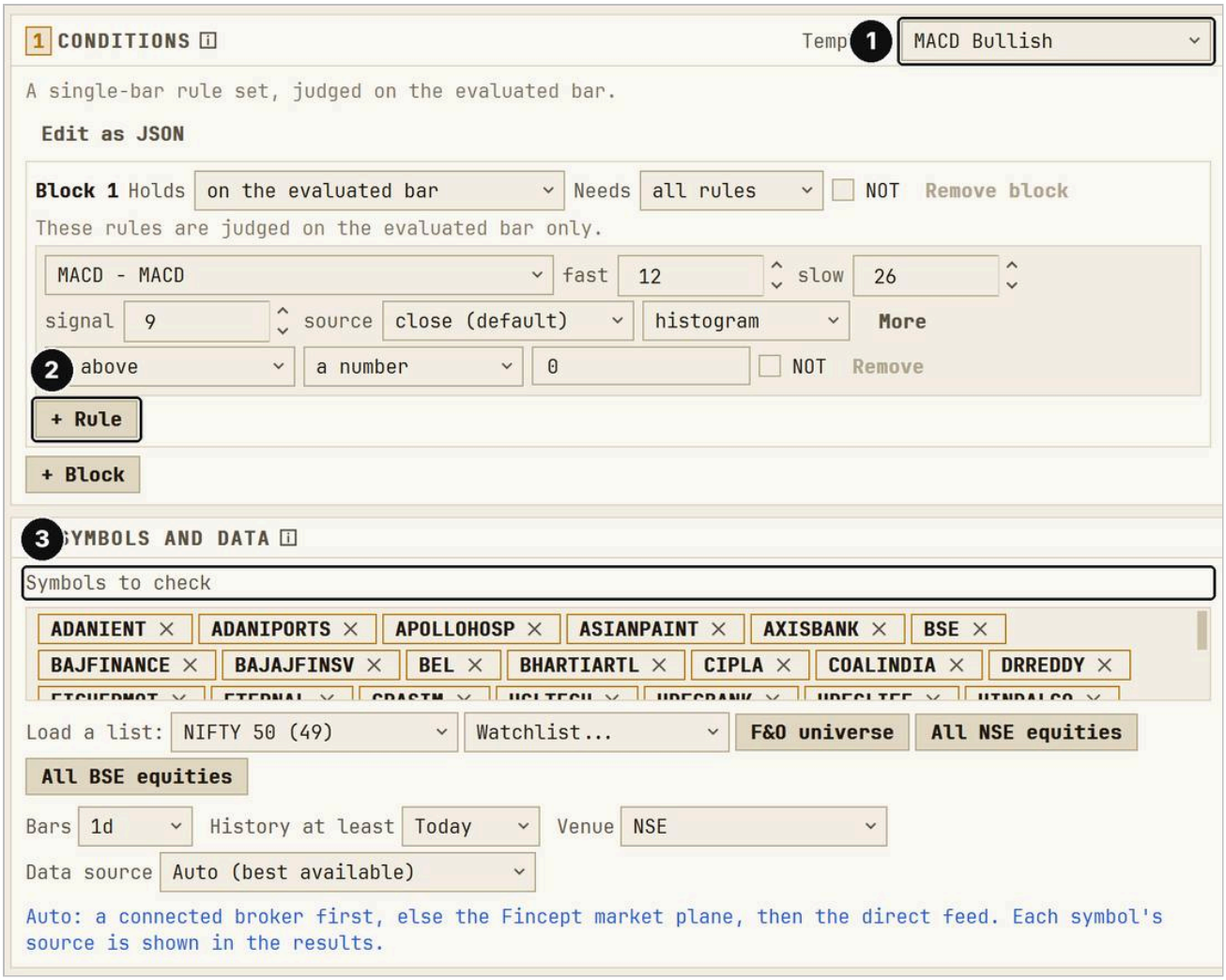


Figure 19.27 A one-time scan of the NIFTY 50 for a bullish MACD on daily bars: the conditions and the symbols.

1. **Template** — a ready-made condition set, or **Custom**.
2. **+ Rule** adds a rule to the block; **+ Block** adds another block.
3. **2 SYMBOLS AND DATA** — the list, bars, history, venue, data source.

The page is four numbered cards.

1 CONDITIONS. Rules are grouped in **blocks. A symbol matches when ALL of the blocks** or **ANY of the blocks** hold. A block has:

- **Holds** — *when* its rules must be true: **on the evaluated bar**, **at least once in a window**, **on every bar of a window**, **on no bar of a window**, **on N bars of a window** (with **min bars** / **max bars**), **for the first time (now)**, **on the window's last bar**, or **in order, step by step**. A window is **a time of day** (from / to, venue-local HH:MM, or *open* / *close* / *now*) or **the last N bars**.
- **Needs** — **all rules** or **any rule**.
- **NOT** — inverts the whole block.

A rule is *indicator — comparison — right side*: the right side is **a number** or **an indicator**. **More** opens extra settings: bars ago, another bar size, or another symbol (an index) for this operand, and a multiplier and offset for the right side (2 = twice; 0.97 = within 3% below). Each rule also has its own **NOT** and **Remove**; **Remove block** deletes a whole block. **Edit as JSON** shows the rules as text for copying or pasting.

The templates include intraday ideas such as *Opening-range breakout (first 15 minutes)*, *Gap down 2% or more, back above the open by 10:30*, *Crossed above VWAP with the daily trend up*, *Outperforming NIFTY today* and *Relative volume 2x or more on 2 of the last 6 bars*, plus the classics **RSI Oversold**, **RSI Overbought**, **MACD Bullish**, **Bollinger Squeeze** and **High Volume**.

2 SYMBOLS AND DATA.

Field	Choices
Symbols to check	Type tickers, or **Load a list:** a **Basket...** (NIFTY 50, NIFTY Bank, sector baskets and your saved baskets), a **Watchlist...**, **F&O universe**, **All NSE equities**, **All BSE equities**.
Bars	1m, 3m, 5m (default), 10m, 15m, 30m, 1h, 4h, 1d, 1w, 1M.
History at least	**Today**, **5D**, **1M**, **6M**, **1Y**, **Max** — only the choices shorter than the bar size's longest history are offered. The scan loads more when a rule needs it.
Venue	**from each symbol** (RELIANCE.BO = BSE, a bare ticker = NSE), or one exchange: NSE, BSE, NYSE, LSE, XETRA, TSE, HKEX, CRYPTO.
Data source	**Auto (best available)** — a connected broker first, else Fincept's market data, then the direct feed; **Broker account**; **Direct (free delayed data)**. Each symbol's source is shown in the results.



Figure 19.28 The same scan: when to judge, the run buttons and the matches.

1. **Run scan** — free; judges any moment you choose.
2. **Screen on server** — the latest bar only, judged on Fincept's servers; its price is on the button.
3. **Create alert** — turn these conditions into a background alert.
4. **4 RESULTS** — the symbols that match, with the values each rule saw.
5. **Backtest these** — open the matches on the Backtesting screen.

3 WHEN. **Evaluate Now (latest data)**, **Today at** a time, or **On a date at** a date and time. **Judge Closed bars only** (a 5-minute scan at 10:07 judges the 10:00–10:05 bar) or **Include the forming bar**.

4 RESULTS. Matching symbols with **Symbol**, **Price**, **Bar**, **When it held**, **Values** (the numbers each rule saw) and **Data**. Symbols that could not be judged are listed under **Not judged** with **Status**, **Why**, **Last bar** and **Data**. From here:

- **Backtest these** — sends the matches to the Backtesting screen.
- **Copy symbols** — copies the matches, one per line.
- **Add matches to watchlist** — pick a watchlist and add them.

1. Open **Scanner** and keep **One-time scan** selected.
2. Pick a **Template**, for example **MACD Bullish**, or write your own rules.
3. Under **Load a list:**, pick the basket **NIFTY 50**. Set **Bars** to **1d**.
4. Click **Run scan**. A progress bar runs while symbols are fetched and judged; **Stop** ends it early.
5. Read the matches. Click **Create alert** to be told when the condition comes true again, or **Backtest these** to test a strategy on them.

Live scan

Live scan watches a whole market on the live feed with one of your saved strategies and lists each symbol the moment it meets the entry rules. Every match can be deployed on the spot.



Figure 19.29 The live whole-market scan, before it is started.

1. **One-time scan** / **Live scan** — the two modes.
2. **1 WHAT TO RUN** — the strategy, the universe and the broker account.
3. **2 HOW IT RUNS** — how often to re-check, the cooldown, and notifications.
4. **Start scan**.
5. **3 MATCHES** — each match as it happens, with its **Deploy** button.

Field	Meaning
Strategy	A saved strategy whose entry rules define a match.
Universe	**All NSE equity**, **All BSE equity**, **NIFTY 50** or **Custom symbols**.

Field	Meaning
Broker account	The connected broker whose live feed is scanned. Required.
Re-check every	200–5,000 ms (default 500 ms).
Cooldown per symbol	0–240 minutes (default 5): after a match, the same symbol is not reported again for this long.
Also send matches to your notification providers	Sends matches to Telegram and the other providers set in Settings.

Start scan begins; **Stop scan** ends it. Each match is a row of **MATCHES: Symbol**, **Signal**, **Price**, **Matched rules** and a **Deploy** button that opens the deploy window for that symbol. A running live scan also appears on the **Alerts** page, read-only.

19.12 Set background alerts

An **alert** watches conditions in the background and notifies you when they come true, even while you work on another screen. Alerts use the same blocks and rules as the Scanner.

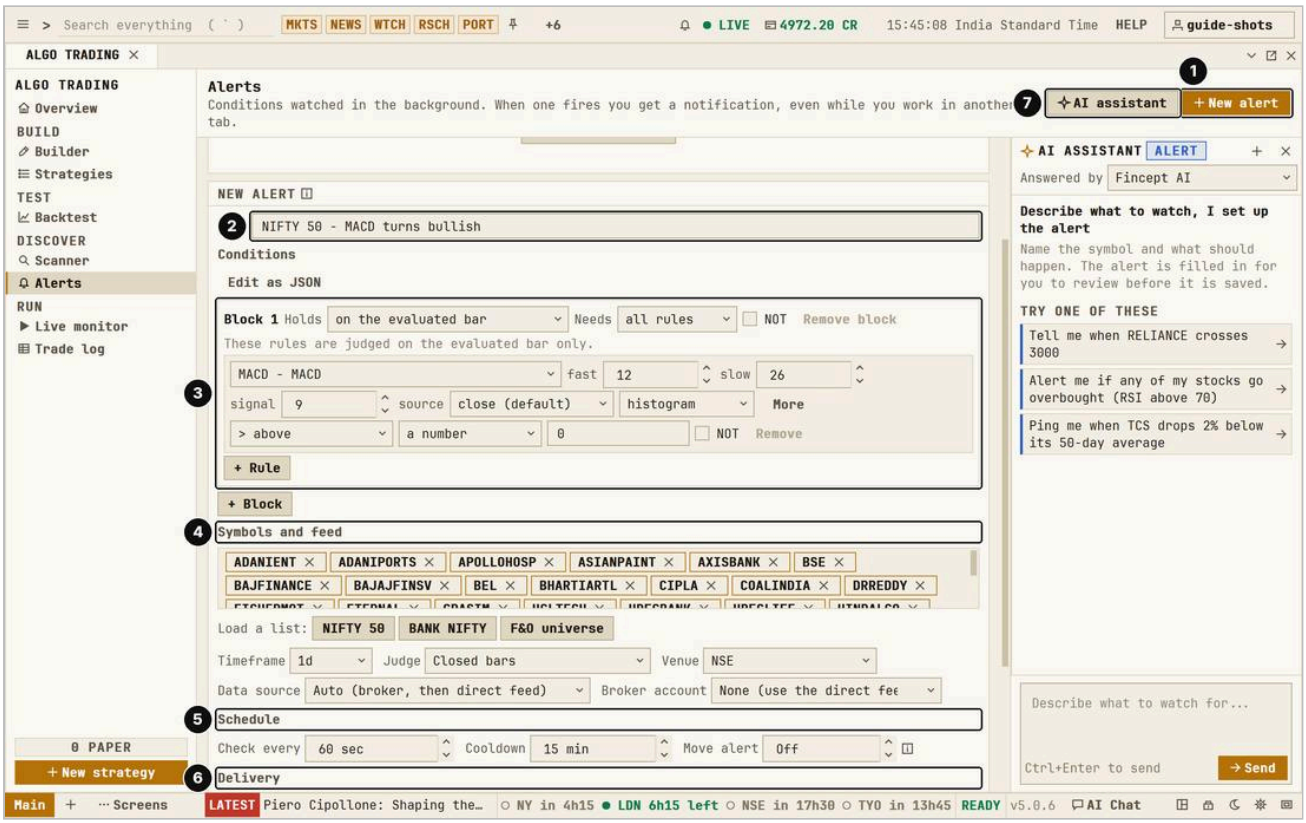


Figure 19.30 A new alert, filled in from a scan: MACD turning bullish on any NIFTY 50 stock.

1. **New alert** starts a blank form.
2. **Name** — what the notification will say.
3. **Conditions** — blocks of rules, as on the Scanner page.
4. **Symbols and feed** — what to watch, on which bars, from which data source.
5. **Schedule** — how often to check, the cooldown, and a Move alert.
6. **Delivery** — once or recurring, and your other notification channels.
7. **AI assistant** — describe the alert in words instead.

1. Open **Alerts** and click **New alert** (or press **Create alert** on the Scanner page to start from a scan).

2. Give it a **Name**, for example *RELIANCE breaks 3000*.
3. Set the **Conditions** (or ask the assistant on the right: *Tell me when RELIANCE crosses 3000*).
4. Under **Symbols and feed**, type the symbols or **Load a list:** (**NIFTY 50**, **BANK NIFTY**, **F&O universe**), and choose the **Timeframe** (1m for a new alert), **Judge** (**Closed bars** or **Include the forming bar**) and **Venue**.
5. Set the **Schedule** and **Delivery** (below), then click **Save alert**.

Setting	Default	Meaning
Data source / Broker account	Broker only / your preferred broker account	Where prices come from: **Broker only** (a connected broker's feed), **Auto (broker, then direct feed)**, or **Direct (free delayed data)**.
Check every	60 sec (30 sec – 1 day)	How often the alert is evaluated. Not used on the live tick feed.
Cooldown	15 min (0 – 1,440)	The quiet time after a fire.
Move alert	Off (0 – 50 %)	Notifies every time the price moves this % from where it was, either way, re-anchoring each time. Needs a broker feed; conditions are optional.
Keep alerting (recurring)	on	On = keeps firing (after each cooldown); off = fires once and completes.
Also notify my providers (Telegram and others)	on	Also sends through Settings > Notifications.

Each alert in **YOUR ALERTS** has a tick box (untick to pause), **Edit** (load it into the form; **Save changes** or **Cancel**), **Check now**, **Test** (send a test notification) and **Delete** (at once, without a question). **RECENTLY FIRED** lists what fired; **Clear fired** removes one-time alerts that already fired (their history stays).

> **Note**
>
> Alerts are checked by this terminal while it is open. A live whole-market scan started on the Scanner page shows here as **Universe scan (read-only)**, with **View** instead of **Edit**; change it with **Open on the Universe page**, which takes you to the Scanner's **Live scan**.

19.13 Run an auto-trader on a whole market

An **auto-trader** applies one strategy to a whole universe of stocks at once. It screens every member, and each stock that passes gets its own small deployment (a **child**) that trades one round trip and then retires. Choose a universe under **Trade on:** in the deploy window: **Basket**, **Index**, **Whole exchange**, **Watchlist**, **Holdings** or **All F&O underlyings**.

1. Click **Deploy** on a strategy and pick the universe under **Trade on:** — for example **Index**, then type *NIFTY 500*.
2. Under **PRE-SCREEN (whole universe, on quote snapshots)**, click **Add filter** to narrow the universe before the strategy's own rules: **Day change %**, **Gap %**, **Relative volume (x)**, **Price**, **Turnover** or **Time window**. The preview line says how many stocks pass now; **Refresh** screens again.
3. Under **PER MATCH AND CAPS**, set how much each match may use and how many may run (below).

4 Read the plan text (it describes, step by step, what will happen), choose the mode, and click **Deploy**.

Cap	Default	Meaning
Capital per trade:	25,000	Each match is sized from this capital at its own price.
Max open positions:	5 (1–200)	Positions this auto-trader may hold at once.
Max new entries/day:	20 (0 = **Unlimited**)	New entries per trading day, counted when an entry fills.
Universe daily loss cap:	No cap	When the children lose this much today (realised + open), scanning stops and the children close.
Re-arm cooldown:	60 min	After a stock's child retires, it is not traded again for this long.
Entry grace:	300 s	A child that has not entered by then is retired.
Max streamed:	Plan capacity	The most candidates streamed at once.
Exclude:	—	Symbols never to trade, comma separated.

Auto-traders run on this device. In the Live monitor they have their own section with each one's funnel (stocks in the universe and passing the pre-screen, candidates streamed, matches and children deployed, slots used, today's fills and day P&L) and buttons to **Arm**, **Stop scanning** or **Remove** (it asks first; child deployments keep their rows). If three children in a row fail before they can enter, new children pause and you are told once; a fresh price or **Resume entries** lifts the pause.

> **Tip**
> The **Live scan** mode of the Scanner is the hands-on cousin of an auto-trader: it shows each match as it happens, and you deploy the ones you like.

19.14 Reference

Rail

Item	What it does
ALGO TRADING	The screen's title.
Overview, Builder, Strategies, Backtest, Scanner, Alerts, Live monitor, Trade log	The eight pages. **Live monitor** carries a count of running and errored deployments; **Alerts** a count of active alerts.
Running pill (e.g. 0 PAPER, *2 paper · 1 live · 1 error*)	Running deployments by kind of money; red when one stopped with an error. Click it to open the Live monitor.
New strategy	Opens the Builder on a blank strategy (asks first if the draft holds unsaved work).

Builder header

Control	What it does
Name / description	The strategy's name and an optional one-line description.
NEW DRAFT / EDITING	Whether this is a new strategy or an edit of a saved one.
Templates	Golden Cross (1d), RSI Reversal (1h), MACD Cross (15m), Bollinger Breakout (1h), SuperTrend Follow (15m). Asks before replacing a draft that holds work.
AI assistant	Shows or hides the assistant (remembered on every page).
Save	Saves to your account; the status line reads *Saved (id)*. A draft that is not saved stays in the Builder between sessions.
Backtest	Sends the draft — saved or not — to the Backtest page.
Deploy	Opens the deploy window. Disabled until the strategy has a name and a runnable rule set.

Indicators the rules can use

Group	Indicators
Stock	Close price, Open price, High price, Low price, Volume, VWAP
Session	Today's high (so far), Today's low (so far), Today's open, Previous close, Previous day high, Previous day low, Day change %, Opening range high / low (first N minutes, default 15), Session close, Session VWAP, Session volume, Opening gap, Price range between two times, Price at a time, Relative volume, Time of day, Day of week
MA (moving averages)	SMA, EMA, WMA, DEMA, TEMA (period 1–5,000, default 20)
Momentum	RSI (period default 14), MACD (12, 26, 9; output *line*, *signal_line* or *histogram*), Stochastic (14, 3, smooth 1; output *k* or *d*), CCI, Williams %R, MFI, Rate of change
Trend	ADX (output *value*, *plus_di* or *minus_di*), SuperTrend (10, 3; *value* or *direction*), Aroon (*up*, *down*), Ichimoku (9, 26, 52; *tenkan_sen*, *kijun_sen*, *senkou_a*, *senkou_b*)
Volatility	ATR, Bollinger Bands (20, 2; *upper*, *middle*, *lower*, *width*, *pct_b*), Keltner Channel, Donchian Channel
Volume	On balance volume, Chaikin money flow, Volume window Δ%
Fundamentals	P/E (TTM), EPS (TTM), Dividend yield %, Market cap, 52W high, 52W low (refreshed daily; no value = the rule is false)
Rolling	Highest, Lowest (period default 20; **Exclude current** leaves out the bar being judged)
F&O basket	Option and future strategies only — see **§19.5 Build an options or futures strategy** p. 342.

Today's high and low **exclude** the bar being judged, so *Close crosses above Today's high (so far)* is a real break of the session's high. The opening range is empty until it has finished forming, so an opening-range rule cannot fire too early.

Comparison words

Word	Means	Notes
is above / is below	> / <	

Word	Means	Notes
is at least / is at most	≥ / ≤	
touches level	=	
crosses above / crosses below	moved from one side to the other on this bar	Compares this bar with the one before.
is rising / is falling	higher / lower than the bar before	Needs nothing on the right side.
is between	between two values	Two numbers (two times for Time of day).
is one of	the day is one of the ticked days	Day of week only.

Limits

Item	Limit
Stop-loss / trailing stop	0–100 % (stop-loss up to 1,000 % for an F&O basket on the net credit / debit)
Target	0–500 %
Max entries (stacked into one position)	1–10
Entries per day	0–50 (0 = no limit)
Legs per F&O strategy	no fixed limit (**Leg premium** reads legs 1–12)
Lots per leg	1–10,000
Backtest page capital	1,000–100,000,000
Backtest page window	from 1 January 2000 to today
Alert check interval	30 seconds to 1 day
Live scan re-check	200–5,000 ms

19.15 For advanced users

Keyboard

Keys	Where	Does
Ctrl + **Enter**	Overview idea box, assistant box	Sends the text (plain **Enter** is a new line).
Enter, **Space**, **comma**	Symbol boxes	Adds the typed symbol as a chip (**Tab** accepts the highlighted suggestion; **Backspace** in an empty box removes the last chip). In the deploy window **Enter** also presses **Deploy**.

How the rules are evaluated

- **Closed bars.** By default a deployment judges its rules once per bar, when the bar closes — exactly what a backtest sees. Stop-loss, target and trailing stop are checked on every tick on this device; a Fincept cloud deployment checks stop-loss and target on each closed bar's high and low.
- **Bars ago. Timing** on a rule shifts it to an earlier bar: 1, 2, 3, 5, 10 or 20 bars ago.
- **Whichever first.** When an exit rule and a limit are both true, whichever is seen first closes the position.

- **Paper fills.** A paper fill is booked at the price the paper engine fills it at, not at the signal's own price. An order the paper engine queues (outside market hours) is booked provisionally at the signal price and re-priced when it fills. If the paper engine does not answer in time, the order is held as *unknown* and asked about again, rather than guessed.
- **A bare ticker is NSE first.** *RELIANCE* means the NSE listing. Write *RELIANCE.BO* for BSE, or a US ticker like *AAPL*.

Hand-offs to and from other screens

From	To	How
Strategies row	Backtesting screen	**Backtest** asks for the symbols, then stages it on Backtesting > Build (nothing runs until you press its priced **Run backtest**).
Backtest page	Backtesting screen	**Open in Backtesting** stages the setup there.
Backtesting screen	Builder	**Send to Algo Trading** loads a **Rules** strategy into the Builder. **Paper trade this strategy** on its Results page loads it and opens the deploy window with Paper chosen.
Scanner	Backtesting / Watchlist / Alerts	**Backtest these**, **Add matches to watchlist**, **Create alert**.
Command line	Algo Trading	`algo`, `algotrading`, `scan`, `scanner`, `scrn` or `screener` opens this screen.

Do it with AI

The AI Chat can drive this screen for you. Try:

- *Open Algo Trading and show me my running deployments.*
- *Build a strategy that buys NIFTY 50 stocks when RSI(14) falls under 30 on the daily and sells at 60, then backtest it on RELIANCE for a year.*
- *Scan the NIFTY 50 for stocks above their 200-day average with rising volume.*

Deploying, choosing live money, and anything that spends credits always ask you to confirm first.

19.16 Troubleshooting

If something goes wrong

Deploy is greyed out. The strategy needs a name and at least one runnable entry rule. Hover the button: its tooltip says what is missing. Fix any rule flagged in red.

If something goes wrong

The backtest shows no trades. The entry rules never fired in that window. Check the live verdict in the Builder (**Would enter now** / **Not triggering now**), loosen a rule, or test a longer window or another symbol.

If something goes wrong

"Data starts ..., later than the requested ...". Fincept's intraday history is limited (1-minute bars 5 days, 5-minute bars 30 days, hourly bars 92 days). Use a shorter window, daily bars, or a connected broker's history.

If something goes wrong

Fincept cloud is greyed out in the deploy window. It is offered only for Fincept Paper deployments of a single share strategy on 1m, 5m, 15m, 30m, 1h, 1d or 1w bars (or **live**, judged there on 5-minute bars) without fundamentals rules. The line under the buttons says which condition failed.

If something goes wrong

A deployment stopped trading when I closed the terminal. It runs on **This device**. Start the terminal again on the same computer and it resumes. For a paper strategy that should run all day without you, deploy it on **Fincept cloud**.

If something goes wrong

A row says OTHER DEVICE - READ-ONLY. It runs on another of your computers. Control it there, or stop it there and use **Take over...** here.

If something goes wrong

New entries are paused. A daily loss limit was hit, your credits ran out, or the price feed is down. The row's event or the banner says which. Exits keep working in every case; a daily loss limit also closes the open position.

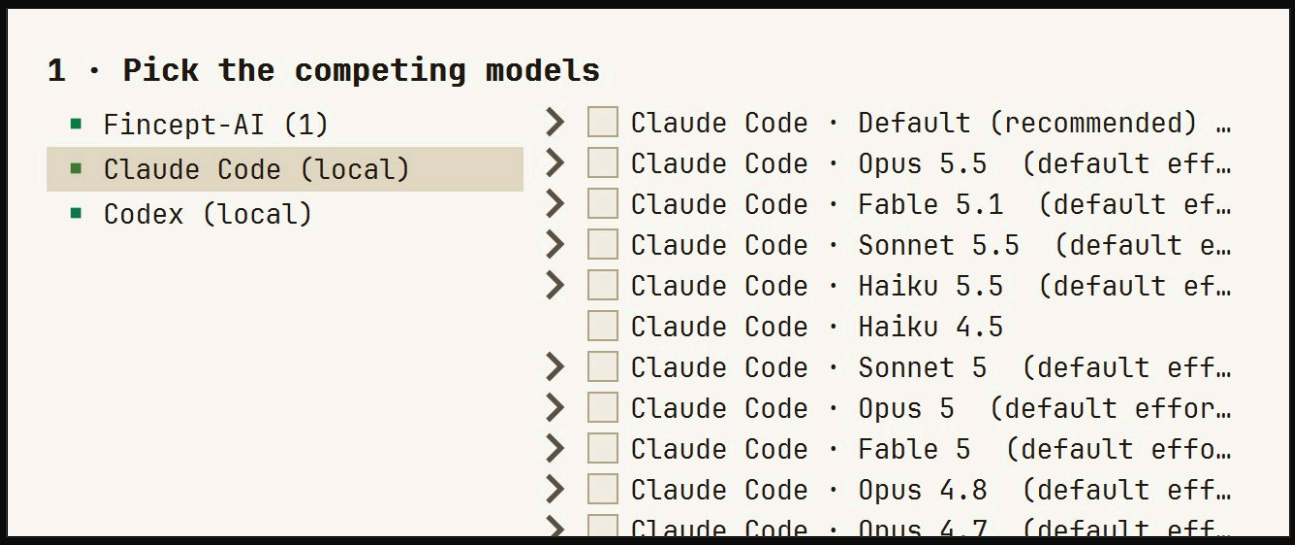
If something goes wrong

The live scan will not start. It needs a connected broker account: its live feed is what is scanned. Use the one-time scan without a broker.

CHAPTER 20

Alpha Arena ARNA

Let AI models trade against each other. Each competitor gets the same market data every round, decides what to buy and sell, and trades its own Fincept Paper book — you watch the leaderboard, read every decision and compare them with simply holding the market.



At a glance

Open it	• Type ARNA in the command line and press Enter (or type arena) • Screens › Trading › Alpha Arena
You need	• Any paid plan and your Fincept Paper account • Credits: about 1 a round for Fincept-AI competitors, 0.05 a paper fill • Optional: Claude Code or Codex on this computer
Best for	• Seeing how different AI models trade the same market • Testing an AI trading prompt on paper • Comparing a model with simply holding the market
Time to learn	15 minutes to set up
Related	**Chapter 37, AI Chat** p. 719, **Chapter 42, Use Your Own AI** p. 819, **Chapter 18, Crypto Trading** p. 298, **Chapter 19, Algo Trading** p. 331

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20.1 Screen tour

Alpha Arena is a trading competition between AI models. You pick the competitors (the models), a market and a list of instruments. Every few minutes a **round** runs: each competitor receives the same snapshot of prices and indicators plus its own account, and answers with what it wants to do — open a position, close one, or hold. Its orders go to its own book in your **Fincept Paper** account (practice money, real prices). The screen shows who is ahead, why each model did what it did, and how all of them compare with simply holding every instrument in equal amounts.

No real money is used and there is no live mode.



Figure 20.1 Alpha Arena before the first competition: the header controls and the New competition button.

1. The competition box: open a current or past competition (**No competitions yet** until you create one).
2. **Pause** / **Resume** the running competition.
3. **Force round** runs a round now (charged like any round).
4. **Kill all** closes every position and ends the competition.
5. **New competition** opens the set-up wizard.

Once a competition exists, the screen fills in from top to bottom:

1. **The header**: the title, a **FINCEPT PAPER** badge with the market's name, the status badge (**RUNNING**, **PAUSED**, **ENDED**), **Round N** and the countdown to the next round. At the right: the competition box, **Pause**, **Force round**, **Kill all**, **New competition** and an **i** button with the price of a round.
2. **The price strip**: each instrument's latest price, and **Cadence** — the time between rounds.
3. **The score tiles**: **LEADER**, **MARKET**, **ROUNDS**, **TRADES** and **ANSWERS**.
4. **EQUITY** (left) and **LEADERBOARD** (right): each competitor's equity over time against the market, and the ranking.
5. **The detail panels**: **MODEL CHAT** (left), **PERFORMANCE** and **POSITIONS** (middle), **TRADES** and **AUDIT** (right).

While a round is in progress, **Round N** also shows how many competitors have answered and how many orders went out. The countdown reads **Next in 4:12**, or **Market closed · opens Mon 09:15 (in 2d 3h)** when no instrument's market is open. **Pause** reads **Resume** while the competition is paused.

The price strip lists each instrument's latest price with an arrow for its last move; prices refresh every 15 seconds between rounds. At its right, **Cadence** sets the time between rounds (see **§20.5 Control a running competition** p. 377).

20.2 Quick start

This runs a small competition on the crypto market, which is open around the clock.

1. Type `ARNA` in the command line and press **Enter**.
2. Click **New competition**. The wizard opens on **1 · Pick the competing models**.
3. Click **Fincept-AI** in the left list, then tick **Fincept-AI** in the right list. (If Claude Code or Codex is signed in on this computer, you can tick their models too.)

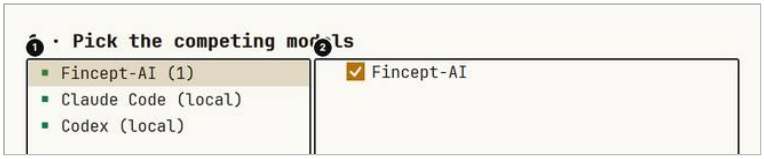


Figure 20.2 Step 1: the model sources on the left, their models on the right.

1. Where models come from: Fincept-AI, and the AI tools found on this computer. The number in brackets counts the models you ticked.
2. Tick each model that should compete.

4. Click **Next**. On **2 · Market and settings**, type a **Name** and pick **Crypto** in **Market**. The first ten instruments of the market's first list are ticked.

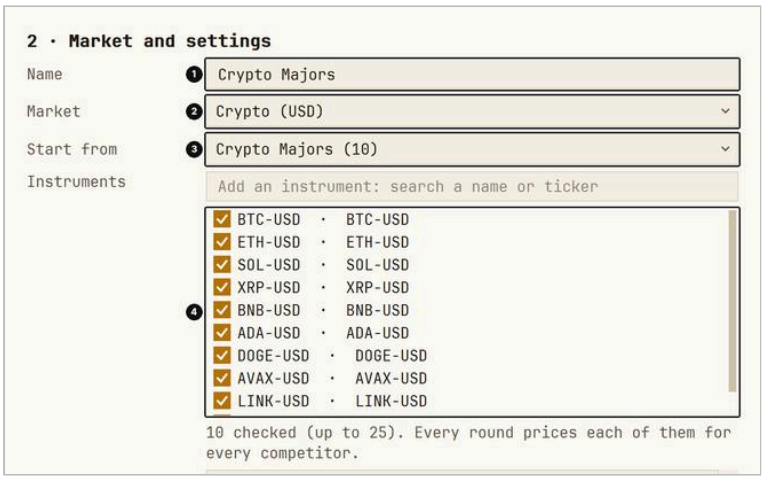


Figure 20.3 Step 2: the name, the market and the starting list of instruments.

1. The competition's name.
2. The market.
3. The starting list of instruments.
4. Tick or untick instruments (up to 25), or add one by search above.

5 Further down, check **Capital / agent** and **Round cadence (s)**, read the cost line, then click **Create & start**.

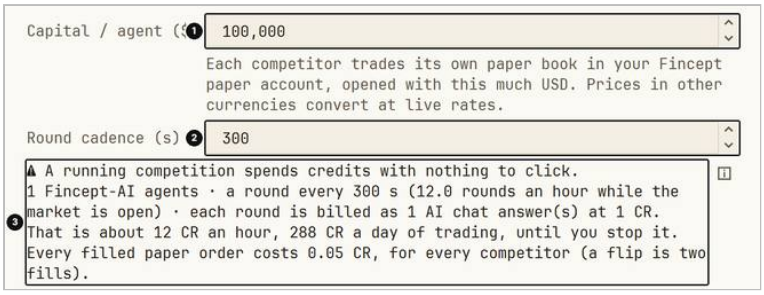


Figure 20.4 Further down step 2: the cadence and what the competition will cost to run.

1. Starting capital of each competitor's paper book.
2. Seconds between rounds.
3. Rounds per hour, the price of a round, credits per hour and per day, and the price of a paper fill.

6 A **Start competition** box says *This competition will spend credits until you stop it.*, repeats the cost per hour and per day and the price of a paper fill, and reminds you that rounds keep running while the tab is closed. Click **Start and spend** (or **Cancel** to go back to the wizard: nothing is created).

7 The first round starts. After a minute or two the **MODEL CHAT** panel shows each model's decision and the **TRADES** panel its orders.

8 When you have seen enough, click **Pause**. Nothing more is spent until you click **Resume**.

What this costs

Each round of Fincept-AI competitors is billed as AI chat answers: one charge covers up to eight Fincept-AI competitors, so one to eight of them cost about **1 credit per round**. At the fastest cadence (a round every 5 minutes) that is about 12 credits an hour while the market is open. Every filled paper order costs **0.05 credits**, for every competitor, whatever model it runs. Claude Code and Codex competitors are not billed in credits, but their answers count against your own plan with those tools.

20.3 Create a competition

The wizard has two steps. **Back** returns to step 1; **Cancel** closes it without creating anything.

Step 1: pick the competing models

The left list shows where models come from; the right list shows that source's models.

- **Fincept-AI** — Fincept's managed model. Always available, billed in credits.
- **Claude Code (local)** and **Codex (local)** — listed when they are installed on this computer (`Settings › AI harness` , **Chapter 42, Use Your Own AI** p. 819); their models can be ticked while the tool is signed in. Their models are the ones each tool reports. A model runs at its default effort when ticked; unfold it to tick a specific **effort** (for example *high effort*). The same model at two efforts counts as two competitors.
- An LLM endpoint you set up in **Settings > AI harness** is listed too.

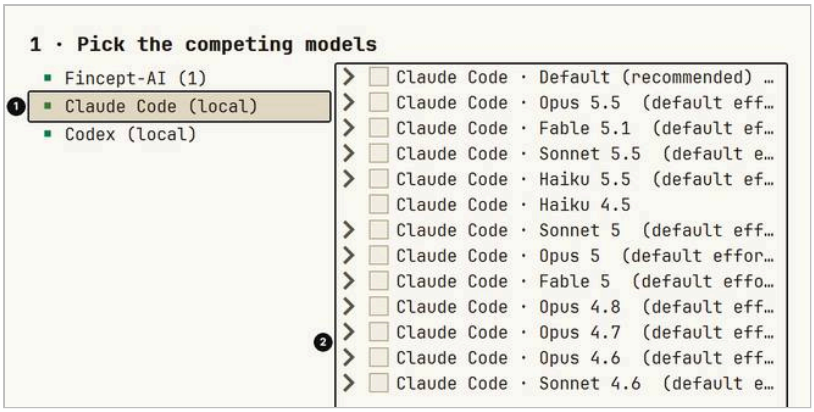


Figure 20.5 The models Claude Code reports on this computer. Each can be ticked at its default effort, or unfolded to pick an effort.

1. A tool found on this computer.
2. Its models. Unfold one to see its efforts.

A model that is not ready shows why next to its name (for example *signed out of Codex*) and cannot be ticked. **Selected:** under the lists names every competitor you picked. **Next** refuses to move on with *Pick at least one model.*

Step 2: market and settings

Field	What it does
Name	The competition's name (up to 80 characters). Default: **Arena-** with the date and time.
Market	The market the competitors trade, with its currency (for example **India (INR)**, **Crypto (USD)**). Your profile country's market comes first. **Other: search only** starts with an empty list.
Start from	A list of instruments in that market: indexes first, then sectors and themes, each with its size. **Nothing: I'll search** starts empty.
Instruments	The instruments to trade. The first 10 of the list are ticked; tick up to **25**. Type in **Add an instrument: search a name or ticker** to add any other listing; added instruments stay when you change the list or the market.
Capital / agent	Each competitor's starting capital, in your paper account's currency (shown in the label). Default: your paper account's opening balance.
Round cadence (s)	Seconds between rounds: 300 to 3600 (5 minutes to 1 hour). Default: 300.
Cost line	What the competition costs to run: rounds per hour, the price of each round, about how many credits an hour and a day, and the price of each paper fill.
Advanced	Tick to write a **Custom system prompt**: your own instructions to every model. The required answer format is always added after it. Leave it empty for the default arena prompt.



Figure 20.6 Advanced: your own instructions for every model.

Create & start creates the competition and starts it after the **Start competition** check. If another competition is running, the terminal first asks: *… is running. Starting a new competition pauses it; it resumes from the competition list later. Continue?* Only one competition runs at a time.

What can be traded

Instruments are bought with cash, like shares: stocks, ETFs and crypto. Futures, options, bonds, indices, funds and economic series cannot be added (*… cannot be traded in the arena: …*). One competition trades each ticker once, on one listing.

20.4 Watch the competition

The score tiles

The five tiles under the price strip sum up the competition:

Tile	Shows
LEADER	The competitor with the highest equity, its return and its equity.
MARKET	The **equal-weight market**: what holding every instrument in equal amounts since the first round would have made. "after the first round" until there is one.
ROUNDS	Rounds run so far and the cadence (for example **every 5 min**).
TRADES	Filled orders across all competitors, and the fees paid.
ANSWERS	Valid answers out of all answers asked for, and the average time a model took to answer.

The equity chart and the leaderboard

EQUITY draws each competitor's equity after every round, one colour per model. The dashed line is the equal-weight market. The chart button at the top of the pane (**Show return %** / **Show equity**) switches between equity in money and return in per cent.

The **LEADERBOARD** ranks the competitors by equity:

Column	Shows
Model	The competitor (model, and effort when set).
Equity	Its book's equity now (hover: open positions and how much of the equity is invested).
Return	Equity against the starting capital.
vs Mkt	Its return minus the equal-weight market's over the same rounds, in percentage points.
Max DD	**Maximum drawdown**: the largest fall of its equity from a peak.
Trades	Fills (hover: fills, closes won and lost, refused orders).
Last	Its last decision and reason.
Now	During a round: **thinking…**, **answered**, **failed**, **trading** or **order refused**. Between rounds: **waiting**, **market closed**, **paused**, **not started**, **ended**, **halted** or **halted: 3 failures**.
Buttons	**Halt agent** / **Resume agent**, and **Close positions & halt (kill)**.

Click a row to follow that model: the chart highlights its line and the panels below show only its decisions, positions and trades. Click it again to see everyone.

The detail panels

Panel	Shows
MODEL CHAT	Every decision, newest round first: **ROUND N** with its time, then per model its answer time and tokens, and each action — **OPEN**, **CLOSE** or **HOLD**, the instrument, long or short, the amount — with the model's **reason**. A failed answer shows the error in red.
PERFORMANCE	The competitors side by side, ranked as on the board: **Return**, **vs market**, **Equity**, **Max drawdown**, **Realized P&L**, **Open P&L**, **Fees**, **In positions**, **Fills**, **Win rate**, **Best / worst close**, **Valid answers**, **Avg answer**, **Tokens**, **Status**.
POSITIONS	Open positions: **Agent**, **Symbol**, **Side**, **Qty**, **Entry**, **Last**, **Value**, **Open P&L**.
TRADES	Every order: **Time**, **Agent**, **Symbol**, **Action**, **Side**, **Qty**, **Price**, **Value**, **Fee**, **Realized**, **Status**, **Reason**.
AUDIT	The competition's event log: rounds started and finished, answers, orders, halts, pauses, errors.

An order's **Status** is what the paper engine answered: **filled**, **partial**, **pending** (it waits for the next session), **rejected_venue** (with the reason), **rejected_risk** (stopped by the arena's own risk rules before it reached the book) or **unknown** (no answer yet; the order is never counted as refused).

20.5 Control a running competition

Control	What it does
Pause / Resume	Stops or restarts the rounds. A pause drops the round in progress (late answers are ignored). Positions stay open.
Force round	Runs a round now instead of waiting for the countdown. It is charged like any round.
Cadence + ✓	Changes the time between rounds of the running competition (300 to 3600 seconds). Click the tick to apply; a value outside the range is refused, not rounded.
Halt agent / Resume agent (leaderboard)	Stops or restarts one competitor. A halted competitor is asked nothing and costs nothing; its positions stay open. Resuming also resets its failure count.
Close positions & halt (kill) (leaderboard)	Asks *Close all positions of … and halt it?*, then closes that competitor's positions and halts it.
Kill all	Asks *Close every competitor's positions and end the competition? An ended competition cannot be resumed.* Then closes everything and ends it for good.
Competition box	Opens another competition. Resuming a paused one while another runs asks first, and pauses the running one.

Rounds keep running

A running competition keeps spending credits while the Alpha Arena screen is closed, as long as the terminal is open. Use **Pause** or **Kill all** to stop it. If the terminal closes while a competition runs, the next start asks *The previous session left N competition(s) running. Resume the most recent one?*

Rounds run only while at least one instrument's market is open: crypto always, stock markets in their trading hours (holidays included). With every market closed, the header shows when the next one opens and nobody is asked anything. An instrument whose own market is closed during a round is marked closed for the models and cannot be traded.

20.6 Reference

Header and strip

Control	Notes
Status badge	**CREATED**, **RUNNING**, **PAUSED**, **ENDED**; **IDLE** with no competition open.
Venue badge	**FINCEPT PAPER · market**. Competitions from older versions of the terminal show **Simulator (retired)**: read-only.
Round N	The last round; while one runs, **Round N · a/b answered, n orders**.
Countdown	**Next in m:ss**, or **Market closed · opens ... (in ...)**.
Competition box	**No competitions yet** until you create one.
Pause / Resume, Force round, Kill all, New competition, i (round price)	See above.
Price strip	Each instrument's price and last move; *Prices show while the competition runs*.
Cadence	300-3600 s, with ✓ **Apply cadence to the running competition**.

Limits and rules

Rule	Value
Instruments per competition	Up to 25 (10 ticked by default)
Round cadence	300 to 3600 seconds (the server may raise the minimum)
Actions per answer	Up to 20
Size of one position	At most 50% of the competitor's equity
New positions in one round	At most 100% of equity together
Cash check	Order value plus a 0.2% fee reserve must fit in free cash
Failed answers	One repair attempt per answer; three failures in a row halt the competitor (**halted: 3 failures**)
A round that hangs	Dropped after 15 minutes when the next round is due
One running competition	Starting or resuming another pauses it

Costs

What	Price
A round with Fincept-AI competitors	Billed as AI chat answers: one charge per round for every 1-8 Fincept-AI competitors (the **i** button shows the price)
Claude Code, Codex, your LLM endpoint	Not billed in credits (your own plan with that tool)

What	Price
A filled paper order	0.05 credits, every competitor
A halted competitor, a paused or ended competition	Nothing

20.7 For advanced users

What a model receives and must answer

Each round a competitor receives the arena's instructions (or your custom prompt), the market snapshot — every instrument's price in its own currency and, when there are enough hourly candles, its **EMA 20** and **EMA 50** (exponential moving averages), **RSI 14** (relative strength index) and **ATR 14** (average true range) — and its own account: cash, positions, equity and margin. It must answer with JSON:

```
{"actions": [
  {"action": "open",  "symbol": "BTC", "side": "long", "size": 10000, "reason": "breakout above
EMA 50"},
  {"action": "close", "symbol": "ETH", "reason": "RSI overbought"},
  {"action": "hold",  "symbol": "SOL", "reason": "no edge"}
]}
```

`size` is in the competition's currency (your paper account's); a **close** without a size closes the whole position; **short** sells. The arena reads answers generously (JSON inside text, numbers as strings, buy and sell for long and short). It turns each size into a quantity at the round's price, rounded down to what the market trades (whole shares; fractions for crypto and US shares), and sends market orders.

The books

Each competitor trades its own book in your Fincept Paper account, named *Arena · competition · competitor* and opened with the competition's capital. Arena books do not count against your number of paper portfolios. Money is in your paper account's currency; instruments in other currencies are converted at live rates.

A competition's set-up (name, competitors, instruments, capital, cadence and custom prompt) is saved to your Fincept account. On your other computers it appears **PAUSED**, on the same paper books; its rounds, decisions and trades so far stay on the computer that ran them. The Dashboard's **Alpha Arena** widget shows a competition's leaderboard on a dashboard page (**Chapter 8, Dashboard** p. 123).

Do it with AI

The AI can read this screen (the leaderboard, the panels and the tables) and press its buttons with your approval:

- "On Alpha Arena, which model is leading and what was its last decision?"
- "Summarise the MODEL CHAT reasons of the last three rounds."
- "Pause the running Alpha Arena competition."

Good practice

- Start with the 5-minute cadence and a handful of instruments, watch two or three rounds, then pause.
- Compare **vs Mkt**, not **Return**: a model that made 2% while the market made 4% did worse than holding.

- Read **Valid answers** and **Avg answer**: a model that often fails the answer format, or answers slowly, misses rounds.
- Use the same model at two efforts, or the same model with two custom prompts in two competitions, to see what the extra thinking or the prompt changes.

20.8 Troubleshooting

The competition paused by itself. The server refused an answer (out of credits, a spending cap, the plan) or the competitors' paper books could not be opened (*Paused: the competitors' paper books could not be opened (...). Resume to try again.*). Fix the cause and click **Resume**.

A competitor shows "halted: 3 failures". Its model failed to answer three rounds in a row (an error, a timeout or an unreadable answer). For Claude Code or Codex, check that the tool is still signed in on this computer. Then click **Resume agent** on its leaderboard row.

"Market closed" and nothing happens. No instrument's market is open. The header shows when the next one opens; the competition starts again by itself a minute later. Use crypto instruments to test at any hour.

A round says it could not read the market. *Round N could not read the market: ... The next round runs on schedule.* The price snapshot failed; no one was asked and nothing was charged for the models.

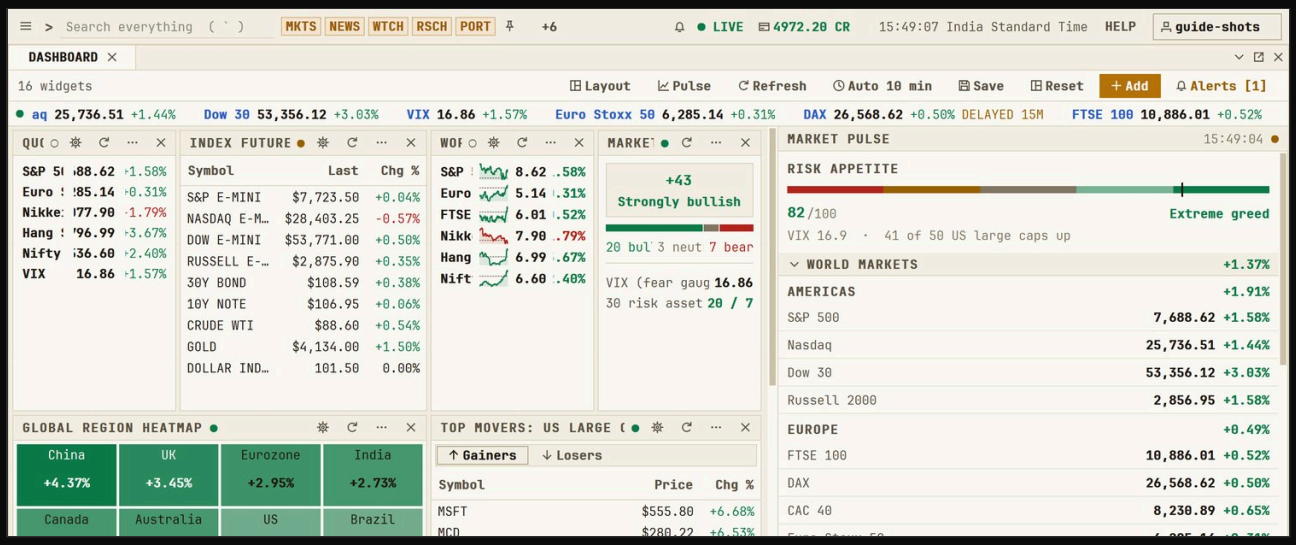
An order shows rejected_venue. The paper engine refused it, for example because that instrument's market was closed. The reason is in the **Reason** column.

An old competition cannot be started. Competitions made with an earlier version of the terminal ran on a retired simulator (badge **Simulator (retired)**). Their rounds, decisions, orders and equity remain readable; create a new competition to run again.

CHAPTER 21

Action Center

The places where the terminal waits for you — orders that need your approval, your alerts and notifications, price alerts that watch the market while the terminal is closed, and one live view of every broker account's positions.



At a glance

Open it	• Pending orders: click the amber **n pending** badge in the Dashboard toolbar, or **Review** on the **Pending approvals** tile • Notifications: click **Alerts** in the Dashboard toolbar • Price alerts: click **Price alerts** on the Watchlist screen • Portfolio monitor: click **Unified** in the Equity Trading top bar
You need	• Signed in on any paid plan • Price alerts: one small daily charge for the account (1 credit when this guide was written) while any alert is armed • Live positions in the monitor: a connected Indian broker account
Best for	• Approving orders before they reach your broker • Seeing what happened while you were away • Watching every account's positions in one table
Time to learn	10 minutes
Related	**Chapter 15, Brokers & Accounts** p. 248, **Chapter 16, Equity Trading** p. 264, **Chapter 10, Watchlist** p. 172, **Chapter 8, Dashboard** p. 123, **Chapter 51, Settings** p. 932, **Chapter 19, Algo Trading** p. 331

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21.1 Screen tour

The Action Center is not one screen. It is four small tools that sit where you already work:

Tool	What it is for	Where it lives
Pending orders	Orders that wait for your **Approve** before they are sent	Dashboard toolbar badge, **Pending approvals** tile
Notifications	A list of what just happened: fills, price alerts, workflow messages	**Alerts** bell in the Dashboard toolbar, plus your computer's own notifications
Price alerts	Price levels watched on Fincept's servers, even while the terminal is closed	**Price alerts** on the Watchlist screen
Portfolio monitor	Every Indian broker account's positions and holdings in one table	**Unified** in Equity Trading



Figure 21.1 The right end of the Dashboard toolbar holds the pending-orders badge (only while orders wait) and the Alerts button.

1. The amber **n pending** badge appears between **Add** and **Alerts** while orders wait for approval.
2. **Alerts [1]**: one unread notification.

21.2 Quick start

See what happened today.

1. Type `DASH` in the command line and press `Enter` to open the Dashboard.
2. Look at the right end of the Dashboard toolbar. **Alerts [n]** in amber means you have unread notifications; an amber **n pending** badge next to it means orders are waiting for your approval.
3. Click **Alerts**. The **NOTIFICATIONS** list opens with the newest item at the top.



Figure 21.2 The notifications list, opened from the Dashboard toolbar.

1. Newest first. Unread items are bold.
2. Clears the unread count.

4. Click **Mark all read** when you have seen them, or click outside the list to close it.

21.3 Approve or reject pending orders

An order **waits for approval** when it is sent to several accounts at once, as a basket, or by a workflow, to an account whose **Order approval** is set to **Semi-Auto — require approval** (**§15.7 Choose how orders are approved** p. 258), or when a workflow or an algo strategy asks you to confirm it. (A single order from the Equity Trading ticket on a Semi-Auto account asks in a **Confirm LIVE order** window instead.) Nothing is sent to the broker until you approve.

1. Click the amber **n pending** badge in the Dashboard toolbar (or **Review** on the **Pending approvals** tile). The **PENDING ORDERS** panel opens.
2. Choose an account in **Account:** if you have several, and keep **Show:** on **Pending**.
3. Read each row: the account, the **Mode** (PAPER, DEMO or LIVE), the symbol, side, quantity and price, and the live price now in **Price / LTP**.
4. Click **Approve** to send the order now, or **Reject** to drop it (you can type a reason). A LIVE row's button reads **Approve LIVE**: it sends a real order with real money.
5. To handle everything at once, use **APPROVE ALL** (asks **Execute ALL pending orders now?**) or **REJECT ALL** (one account at a time).

Prices move while an order waits

A row queued in an earlier trading session turns amber and says so ("queued in an earlier ... session"). The price and your position have probably changed: check before you approve, or reject it and send a fresh order.

What happens when you click Approve

The terminal checks everything again at that moment, not when the order was queued:

- A **PAPER** row goes to your Fincept Paper account.
- A **DEMO** row goes to the broker's demo environment (no real money).
- A **LIVE** row goes through the same checks as any live order: your plan, Fincept's pre-trade check, and the account's live confirmation. An account that is not yet confirmed for live trading shows **LIVE - confirm the account first** and its **Approve** button is greyed out; the row stays pending until you confirm the account.
- If the account changed mode since the order was queued (for example from DEMO keys to live keys), the approval is refused and nothing is sent. Reject it and send it again.
- A **smart order** (sized to reach a target position) is sized again from the broker's fresh position.

Every approval ends with a notification: **Approval APPROVED: ...**, **Approval REJECTED: ...** and so on.

The AI never approves

The AI assistant can fill a ticket and send an order to the queue, but **Approve**, **Approve LIVE** and **APPROVE ALL** are always your own clicks.

Where pending orders come from

Origin (as the tile shows it)	What sends it
Order ticket	The Equity Trading ticket sending to several accounts at once, where some are Semi-Auto
Basket / Basket: name	An order basket executed on a Semi-Auto account
Smart order, Split order, GTT order	Workflow trading nodes and other order tools
Workflow	A Node Editor workflow's live order node (**Chapter 40, Node Editor** p. 776)
Algo / Algo unwind	An algo strategy; an F&O basket whose entry filled only partly, with its proposed unwind (**Chapter 19, Algo Trading** p. 331)

Closing positions, cancelling orders and modifying orders are never queued: they always go straight out, so you can always reduce risk.

The Pending approvals tile

Add the **Pending approvals** tile to a dashboard (**Chapter 8, Dashboard** p. 123) to see the queue at a glance: click **Add** in the Dashboard toolbar and search for it (it is in the **Trading** group).



Figure 21.3 The Pending approvals tile in the Add widget window.

1. Type **Pending approvals**.
2. The tile. Its card says what it shows.

Once added, it lists **Origin**, **Symbol**, **Side**, **Qty** and **Age**, and turns a row's age amber after an hour. Click **Review** (or double-click a row) to open the Pending Orders panel. Nothing is sent from the tile itself. The tile's settings (**Configure pending approvals**) set **Rows** (3–50, default 8) and **Order by** (**Longest waiting first**, the default, or **Newest first**).

21.4 Read your notifications

The terminal records each event in the **Notifications** list and also shows it as a notification from your operating system (the small pop-up in the corner of your screen).

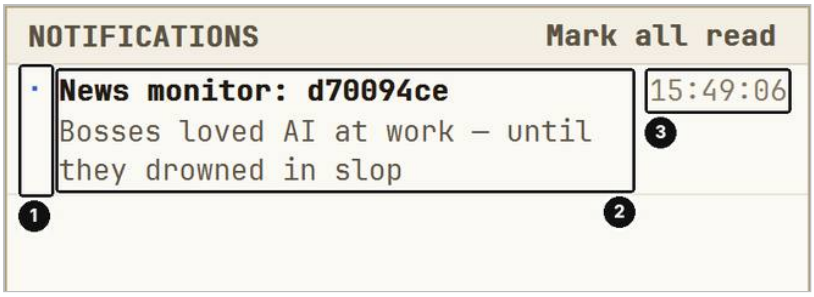


Figure 21.4 One notification — a news monitor's match — with its time.

1. The dot's colour shows the level: blue information, amber warning or alert, red critical.
2. Title (bold while unread) and message.
3. When it happened.

- The **Alerts** button in the Dashboard toolbar shows **Alerts [n]** in amber when you have unread items. It pulses when a new one arrives.
- Click it to open **NOTIFICATIONS**. Unread items are bold. **Mark all read** clears the count.
- The list keeps the newest items of this session (up to 200 in memory, the newest 50 shown). It starts empty each time you start the terminal.
- Your computer's own notifications are grouped: several events within two seconds arrive as one **N new notifications** message.

What creates a notification

Event	Title
An order is placed (paper, demo or live)	Order Placed
An order fails	Order Failed
Cancel all orders finished	All Orders Cancelled
Square off all finished	All Positions Squared Off
A price alert fires	Price alert: SYMBOL
A pending order is approved or rejected	Approval STATUS: …
A workflow's notify node runs	The node's own title

Choose what notifies you, and where

Open **Settings > Notifications** (**Chapter 51, Settings** p. 932):

- **Alert triggers** switch whole groups on or off: **Desktop alerts (system notification + bell)**, **Price alerts**, **News alerts** (off by default) and **Order fill alerts**.
- **Notification providers** send the same events to Telegram, Discord, Slack, email, WhatsApp, Pushover, ntfy, Pushbullet, Gotify, Mattermost, Microsoft Teams, a webhook, PagerDuty, Opsgenie or SMS. Tick **Enabled** on a card, fill its boxes, and click **Test send**. Every enabled provider receives every event that passes the triggers.

21.5 Set a price alert

A **price alert** fires when a symbol crosses a level. Price alerts run on Fincept's servers, so they fire even while your terminal is closed; you see them as notifications (and on your providers) and, if you were away, as one summary when you come back.

1. Open the Watchlist screen (`WTCH`) and select the symbol in your list.
2. Click **Price alerts** in the side bar. The **Price alerts** window opens with the symbol filled in.

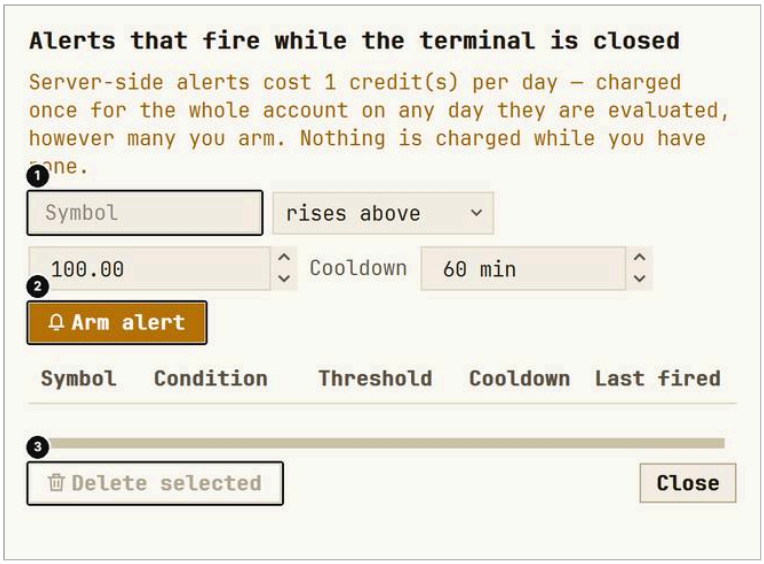


Figure 21.5 The Price alerts window.

1. The symbol to watch.
2. Starts the alert on Fincept's servers.
3. Removes the selected alert.

3. Choose the condition (**rises above**, **falls below**, **gains** % or **loses** %) and type the level.
4. Set **Cooldown**, the shortest time between two firings, if you want more or fewer repeats.
5. Click **Arm alert**. The alert appears in the table; **Last fired** fills in when it fires.

Credits

Price alerts cost one small charge **per day** for the whole account (1 credit when this guide was written) while you have at least one armed — the same whether you arm one alert or twenty. The dialog shows the rate. Nothing is charged on a day with no armed alert.

- **Condition**: **rises above**, **falls below**, **gains** % or **loses** %. A percentage alert measures from the price when you arm it.
- **Cooldown** (5–1440 minutes, default 60): the shortest gap between two firings of the same alert.
- Alerts are checked every 5 minutes, only while the symbol's market is open.

Other kinds of alerts

Two more alert tools work only while the terminal is running: the **Alerts** dock in Equity Research (price markers for the symbol you are researching, **Chapter 22, Equity Research** p. 392) and **Algo Trading > Alerts** (conditions on indicators, checked in the background, **Chapter 19, Algo Trading** p. 331).

21.6 Portfolio monitor

The portfolio monitor shows the positions and holdings of every active **Indian (rupee) broker account** in one tree, symbol by symbol, with one line per account under each symbol.

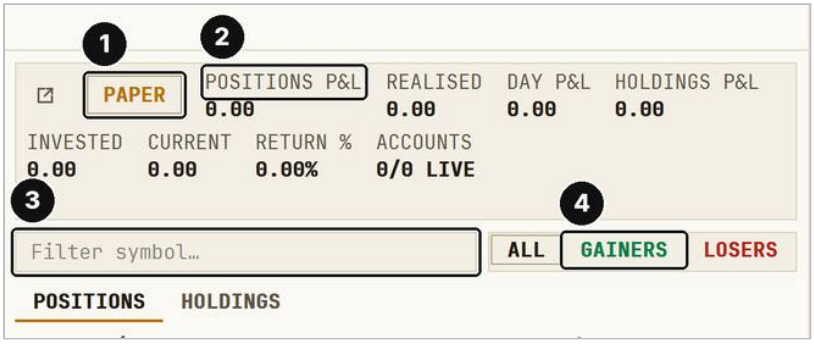


Figure 21.6 The portfolio monitor beside Equity Trading. With no Indian broker account connected its tables are empty.

1. **PAPER** / **LIVE**: which positions are shown.
2. Totals across every account.
3. Narrow the rows by symbol.
4. **ALL**, **GAINERS** or **LOSERS**.



Figure 21.7 The monitor's action bar.

1. A ticket for any listed account.
2. Read every account again.
3. Close every open position (asks first).

- **Unified** in the Equity Trading top bar opens it as a column on the right. The arrow button at its top detaches it into its own window (**Unified Portfolio — All Accounts**).
- **PAPER** / **LIVE** switches between the accounts' paper books and the real broker positions. LIVE is red.
- The figures across the top add up every account: **POSITIONS P&L**, **REALISED**, **DAY P&L**, **HOLDINGS P&L**, **INVESTED**, **CURRENT**, **RETURN %** and **ACCOUNTS**. An account whose figures are not live (logged out, not connected) is greyed out and left out of the totals; a note says so.
- **Filter symbol...** and **ALL** / **GAINERS** / **LOSERS** narrow the rows; the totals follow.
- **EXIT** closes one line at market; **EXIT ALL** closes a symbol on every account. **SQUARE OFF ALL** closes every open position on every connected account — each asks first. On **PAPER** the question names the intraday / NRML paper positions of every account's paper portfolio; on **LIVE** it says it squares off every open position, all products, on every connected LIVE account with market orders.
- **New order** opens a small ticket for any of these accounts; its button reads **PLACE PAPER ORDER** or **PLACE LIVE ORDER**. With no Indian broker account it says **No active INR broker accounts.**

21.7 Reference

Pending Orders panel

Control	What it does
Account:	**All Accounts** or one account.
Show:	**Pending** (default), **Approved**, **Rejected**, **All**, **Partial**, **Unknown outcome**.
PENDING / APPROVED / REJECTED / BUY / SELL	Counts of every row, whatever the filter.
APPROVE ALL	Sends every pending order of the chosen account (or all accounts) after one question.
REJECT ALL	Rejects every pending order of one account (choose the account first). Asks for a reason.
Approve / Approve LIVE	Sends this order now. **Approve LIVE** means real money.
Reject	Drops this order. Asks for a reason (default **Rejected by user**).

Column	Shows
Queued	When the order was queued and how long ago. Amber when it was queued in an earlier session.
Account	The account name and broker.
Mode	**PAPER (Fincept Paper)**, **DEMO**, **LIVE**, or why it cannot be approved.
Type, Symbol, Side, Qty	The order. A basket reads **Basket (N orders)**.
Price / LTP	Order type and price, plus the live price now.
Margin	The broker's margin figure for this order, fetched when you look.
Status	**PENDING**, **APPROVED**, **PARTIAL**, **REJECTED** or **UNKNOWN**.
Actions	The buttons, or the result once handled (for example **Placed: id**).

Pending orders never expire: a row waits until you approve or reject it. The panel shows up to 200 rows.

Price alerts dialog

Control	What it does
Symbol	The symbol to watch (filled in from the selected watchlist row).
Condition	**rises above**, **falls below**, **gains %**, **loses %**.
Threshold	The price, or the percentage.
Cooldown	Minutes between two firings (5–1440).
Arm alert	Starts watching.
Table	**Symbol**, **Condition**, **Threshold**, **Cooldown**, **Last fired**.
Delete selected	Removes the selected alert.

Portfolio monitor

Control	What it does
Detach / dock button	Floats the monitor in its own window, or docks it back.
PAPER / LIVE	Which positions are shown. Remembered.
Filter symbol…, ALL / GAINERS / LOSERS	Narrow the rows.
POSITIONS / HOLDINGS tabs	Columns: **Symbol / Account**, **Product** (Holdings: **Today's P&L**), **Qty**, **Avg Price**, **LTP**, **P&L**, **P&L %**, **Action**.
New order	A ticket for any listed account (**PLACE PAPER ORDER** or **PLACE LIVE ORDER**).
REFRESH	Reads every account again.
SQUARE OFF ALL	Closes every open position (asks first).

21.8 For advanced users

- **Outcome UNKNOWN.** If the broker does not answer clearly, a row ends as **UNKNOWN** with **OUTCOME UNKNOWN - check the order book before sending again**. The order may be live at the broker: look before you send it again.
- **Baskets.** A basket row lists each leg; after approval the detail area under the table shows each leg's result. A live F&O basket runs hedges first and stops at the first leg that fails; any counter-orders that would flatten what filled are listed as **UNWIND NOT SENT** for you to place yourself.
- **Algo unwinds.** When an F&O algo entry fills only partly, the strategy holds and queues an unwind basket. On **Approve** the terminal re-reads the broker's positions and order book first and closes only what both the broker and the strategy still hold.

Do it with AI

- "Open the Pending Orders panel and tell me which orders are waiting."
- "Which of my pending orders are LIVE?"

The assistant reads the panel like you do; approving stays with you.

21.9 Troubleshooting

I don't see the pending badge. It is hidden while nothing is pending. Use **Review** on the **Pending approvals** tile to open the panel anyway.

Approve is greyed out. Hover over it: the reason is shown. Most often the account is not yet confirmed for live trading, its session has ended, or it changed mode since the order was queued.

My notifications list is empty after a restart. The list lives in memory for one session. Your operating system's notification centre may still hold older ones.

A price alert did not fire at night. Alerts are checked only while the symbol's market is open.

New order in the portfolio monitor says "No active INR broker accounts". The monitor covers Indian broker accounts. Connect one in **Chapter 15, Brokers & Accounts** p. 248, or use the Equity Trading screen's own tabs for Fincept Paper.

PART IV

Research & Analytics

Institutional-grade research desks — company research, portfolios, backtesting, derivatives, volatility surfaces, M&A, alternatives and quant.

22	Equity Research	RSCH
23	Portfolio	PORT
24	Backtesting	BTST
25	Derivatives	DERV
26	Surface Analytics	SURF
27	M&A Analytics	MERG
28	Alternative Investments	ALTS
29	Relationship Map	RMAP
30	Concept Studio	CNPT
31	AI Quant Lab	QLAB

CHAPTER 22

Equity Research RSCH

A full research desk for one company at a time — price and profile, filed statements, valuation models, quality screens, technicals, peers, owners, macro links, scenarios, filings, news and sentiment — with an AI analyst, notes and price alerts beside it.

At a glance

Open it	• Type a ticker such as `AAPL` or `RELIANCE` in the command line and pick the stock from the list • Type `RSCH` in the command line and press **Enter** (also `research` or `equity`) • Click **RSCH** in the top bar • Right-click a position in Portfolio and choose **Open in Equity Research**
You need	• Signed in on any paid plan • Free to read; the Copilot analysis, a full backtest and filing documents past the monthly allowance use credits
Best for	• Studying a company before you buy • Checking a holding's fundamentals and valuation • Comparing a stock with its peers • Reading filings and news in one place
Time to learn	20 minutes
Related	**Chapter 16, Equity Trading** p. 264, **Chapter 23, Portfolio** p. 430, **Chapter 24, Backtesting** p. 464, **Chapter 10, Watchlist** p. 172, **Chapter 31, AI Quant Lab** p. 623, **Chapter 11, News** p. 182

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22.1 Screen tour

Equity Research shows one listed company at a time. You pick the company, and fifteen **sections** on the left give you every angle on it: the business, its accounts, what it is worth, how its price moves, who owns it and what is being said about it. A **dock** on the right holds an AI analyst, your notes, price alerts and the order book.

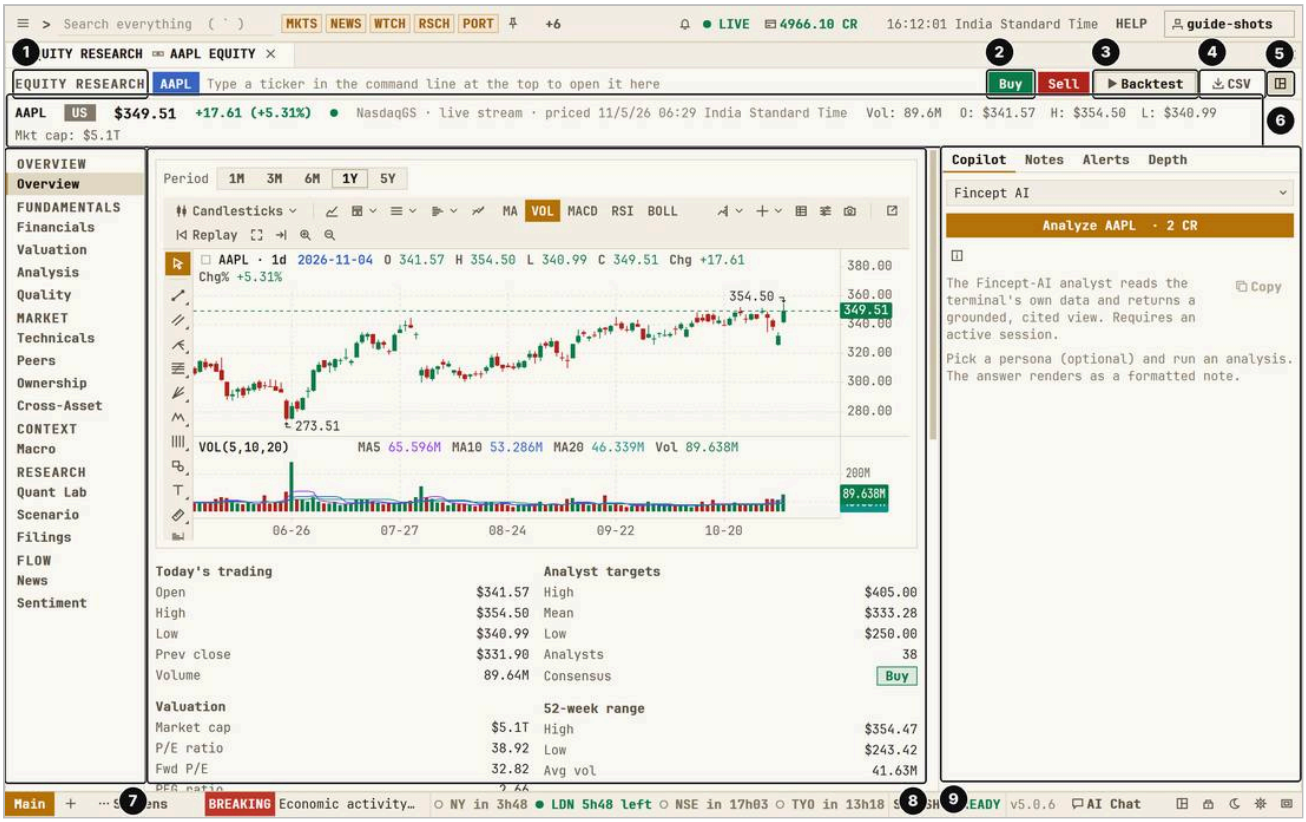


Figure 22.1 Equity Research on Apple (AAPL), Overview section, with the research dock open.

1. **The title bar**: the screen name, the ticker you are on, and a hint line.
2. **Buy** and **Sell** open an order ticket for this stock (see **Chapter 16, Equity Trading** p. 264).
3. **Backtest** opens the Backtesting screen with this stock already filled in.
4. **CSV** downloads the price history as a spreadsheet file.
5. The **dock** button opens and closes the research dock on the right.
6. **The quote bar**: price, day change, a LIVE / DELAYED badge, volume, the day's range and market value.
7. **The section rail**: fifteen sections in six groups. Click one to open it.
8. **The canvas**: the section you picked. Most sections scroll.
9. **The research dock**: Copilot, Notes, Alerts and Depth tabs.

The screen has five parts:

- **The title bar** — the words EQUITY RESEARCH, the ticker chip, and the buttons **Buy**, **Sell**, **Backtest**, **CSV** and the dock button. You can drag the ticker chip onto any other panel to send it the same stock.
- **The quote bar** — the last price, the change today, a freshness badge (**LIVE**, **DELAYED**, **STALE**, **CLOSED** or **SNAPSHOT**), where and when the price was printed, the day's volume, open, high and low, and the market value (**Mkt cap**). A small chip names the home market: **US**, **IN** (India) or **GLOBAL**.
- **The section rail** — the list of sections on the left.
- **The canvas** — the section you are reading.
- **The research dock** — closed when the screen opens. Open it with the dock button at the right end of the title bar.

The rail groups the fifteen sections like this:

Group	Sections
OVERVIEW	Overview
FUNDAMENTALS	Financials, Valuation, Analysis, Quality
MARKET	Technicals, Peers, Ownership, Cross-Asset
CONTEXT	Macro
RESEARCH	Quant Lab, Scenario, Filings
FLOW	News, Sentiment

Note

Every section reads its data when you first open it, so the first click on a section can take a few seconds. The screen remembers which section you were on, and opens on it next time.

22.2 Quick start

This gives you a first look at any company in about two minutes.

1. Click the command line at the top of the window (or press the backtick key) and type `AAPL`. A list of matches drops down.

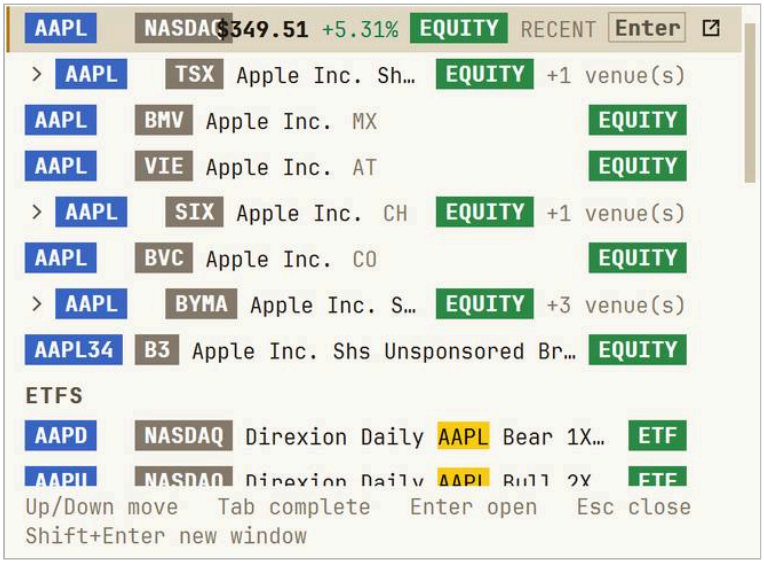


Figure 22.2 Typing a ticker in the command line lists matching instruments.

2. Click the row for the stock (here **Apple Inc.**). Equity Research opens on its **Overview**.
3. Read the quote bar. The big number is the last price; the coloured number beside it is today's change. The badge says whether the price is **LIVE** or **DELAYED**.
4. Look at the chart. Click **1M**, **3M**, **6M**, **1Y** or **5Y** above it to change the period.
5. Scroll down to **Company overview** for a plain description of the business.

6 Click **Analysis** in the rail. Six cards rate the company's valuation, financial health, cash flow, profitability, growth and risk in one word each.

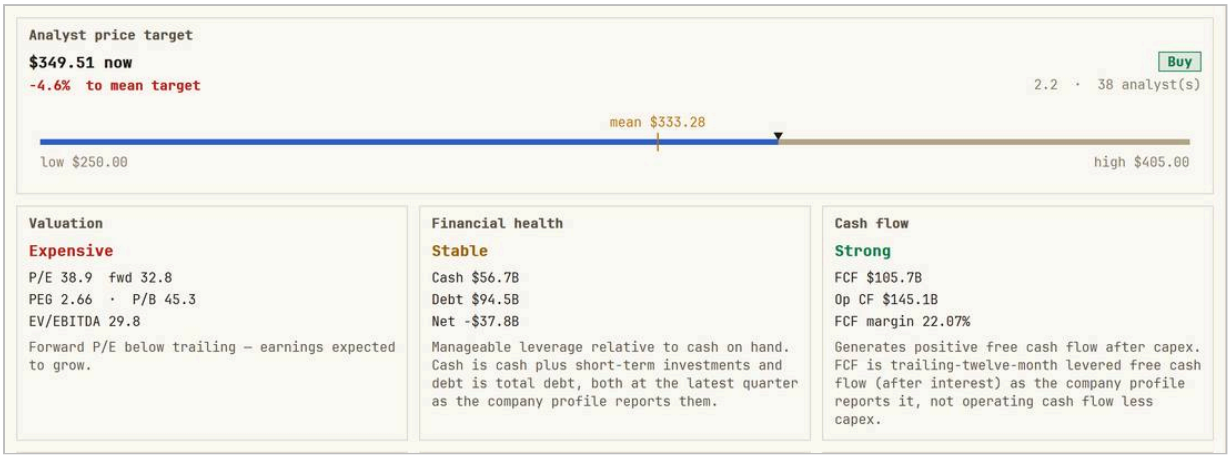


Figure 22.3 The Analysis section — one verdict per card, with the figures behind it.

7 Click **News** for the latest stories about the company.

Tip

To research an Indian company, type its NSE ticker, for example `RELIANCE`, and pick the NSE listing. The screen then adds the company's own NSE filings (see **§22.22 Research an Indian (NSE) listing** p. 418).

22.3 Open a company

There are several ways to put a company on the screen. All of them load the same fifteen sections.

- **From the command line.** Type a ticker or a company name and pick the stock. A stock opens here; a currency, index or bond opens Asset Research, a fund or ETF opens Fund Research (see the last sections of this chapter).
- **From another screen.** Right-click a position in Portfolio and choose **Open in Equity Research**. In this screen's Peers section, double-click a row.
- **Through a link group.** If this panel and another one share a link colour, picking a symbol in the other panel loads it here too. See **Chapter 5, The Terminal Window** p. 70.
- **By dragging.** Drag a symbol from another panel and drop it on this screen.

The hint line beside the ticker chip always reads *Type a ticker in the command line at the top to open it here*, even with a company loaded: it reminds you how to open the next one.

Note

For Indian shares the screen always uses the exchange spelling: `RELIANCE`, `NSE:RELIANCE-EQ` and `RELIANCE.NS` all open as **RELIANCE.NS**. A BSE listing opens as `.BO`.

22.4 Read the Overview

The Overview is a one-page summary. On a wide window the chart sits between two columns of figures; on a narrower one it moves above them.

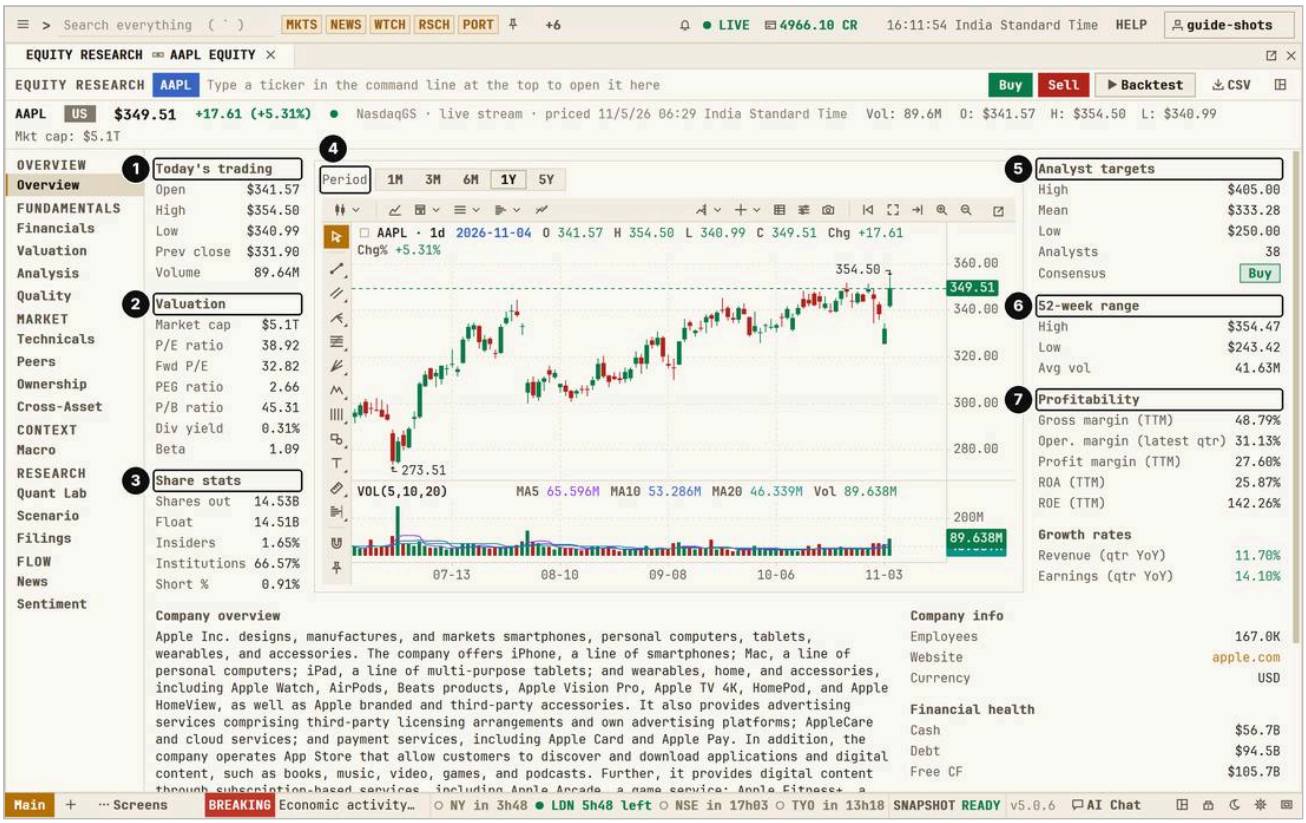


Figure 22.4 Overview — key figures on both sides of the price chart.

1. **Today's trading**: open, high, low, previous close and volume.
2. **Valuation**: market cap, P/E, forward P/E, PEG, P/B, dividend yield and beta.
3. **Share stats**: shares outstanding, float, insider and institution holdings, short interest.
4. **Period** buttons: 1M, 3M, 6M, 1Y (the default) and 5Y of daily bars.
5. **Analyst targets**: the high, mean and low price target, the number of analysts and their consensus.
6. **52-week range** and the average daily volume.
7. **Profitability** and **Growth rates**: margins, returns and growth.

Below the chart:

- **Company overview** — what the company does, in a few paragraphs.
- **Company info** — employees, website (click to open it) and the currency the shares trade in.
- **Financial health** — cash, debt and free cash flow.

Some terms you will meet:

- **P/E ratio** — price divided by earnings per share: how many years of today's profit the price pays for.
- **Fwd P/E** — the same, using next year's expected earnings.
- **PEG ratio** — P/E divided by the expected growth rate. Under 1 is often read as cheap for the growth.
- **P/B ratio** — price divided by book value (the accounting value of the company's net assets).
- **Beta** — how much the share moves when the market moves 1%. Above 1 means it moves more.
- **Float** — the shares that can actually be traded (not held by insiders).
- **Short %** — the share of the float sold short by investors betting the price will fall.

- **TTM** — trailing twelve months: the last four reported quarters added together.

The chart is the same chart used across the terminal. Its toolbar has drawing tools, indicators, screenshots and a pop-out button; see **Chapter 5, The Terminal Window** p. 70 for chart controls. Each Overview figure has a tooltip: point at it to see where it comes from.

22.5 Read the financial statements

The **Financials** section shows the company's filed annual accounts as charts and tables.

1. Click **Financials** in the rail.
2. Pick a statement with the switch at the top: **Income statement**, **Balance sheet** or **Cash flow**.

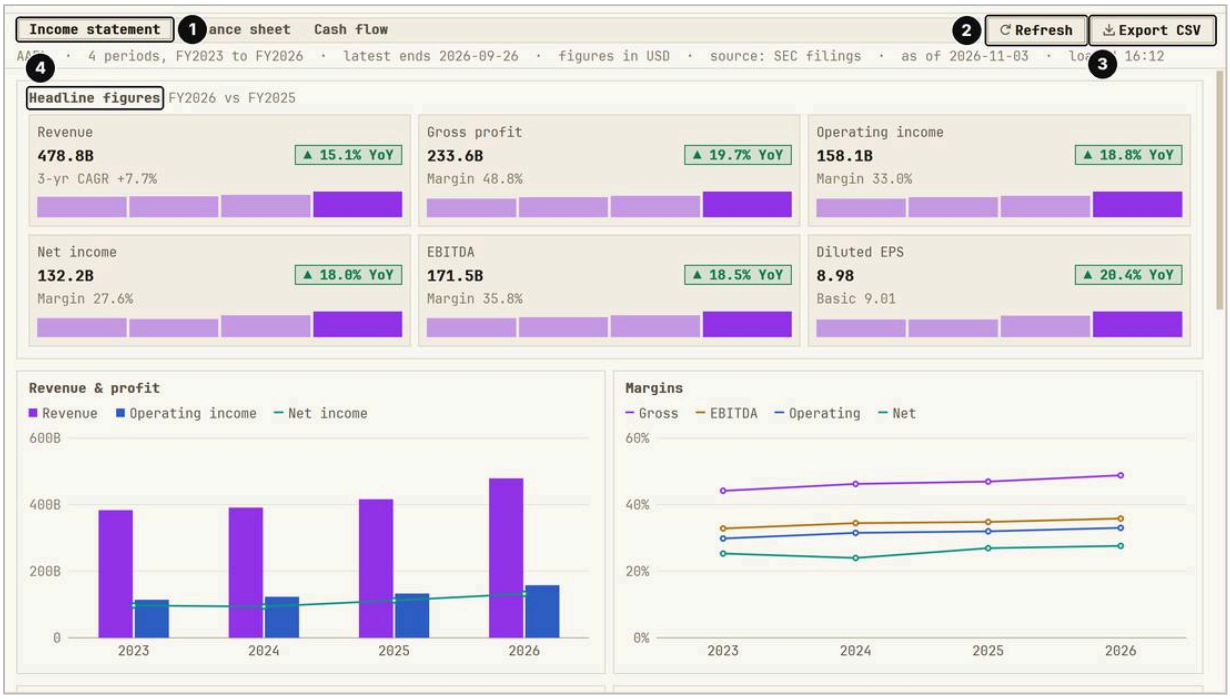


Figure 22.5 Financials, Income statement — headline figures, revenue and profit trend, margins and returns.

1. The statement switch.
2. **Refresh** asks for the statements again (for example after a new annual report).
3. **Export CSV** saves the statement on screen to the File Manager.
4. **Headline figures**: revenue, gross profit, operating income, net income, EBITDA and diluted EPS, each with its change on the year before.

3. Read the line under the switch. It says how many years are shown, the currency of the figures and where they come from.
4. Scroll down for the charts and the full statement table.

What each statement shows:

Statement	Panels
Income statement	**Headline figures**; **Revenue & profit** (bars per year, with the growth rate over the years shown); **Margins** (gross, EBITDA, operating, net); **Returns on capital** (return on equity, assets, invested capital, capital employed, each with a guide level); **DuPont: what drives ROE** (net margin x asset turnover x equity multiplier); the full statement, shown as **Values**, **% of revenue** or **YoY growth**
Balance sheet	Total assets, total liabilities, shareholders' equity, cash, total debt and **Net debt** (or **Net cash**); **What it owns vs how it is funded** (two stacked bars); **Liquidity & leverage** (current ratio, quick ratio, debt / equity, debt / assets, interest coverage); **Balance sheet trend**; the full statement with **% of assets**
Cash flow	Operating cash flow, capital expenditure, **Free cash flow**, dividends paid, share buybacks and **Returned to shareholders**; **Where the cash went** (a waterfall from operating cash to what was retained); **Cash flow trend**; the full **Cash flow statement**

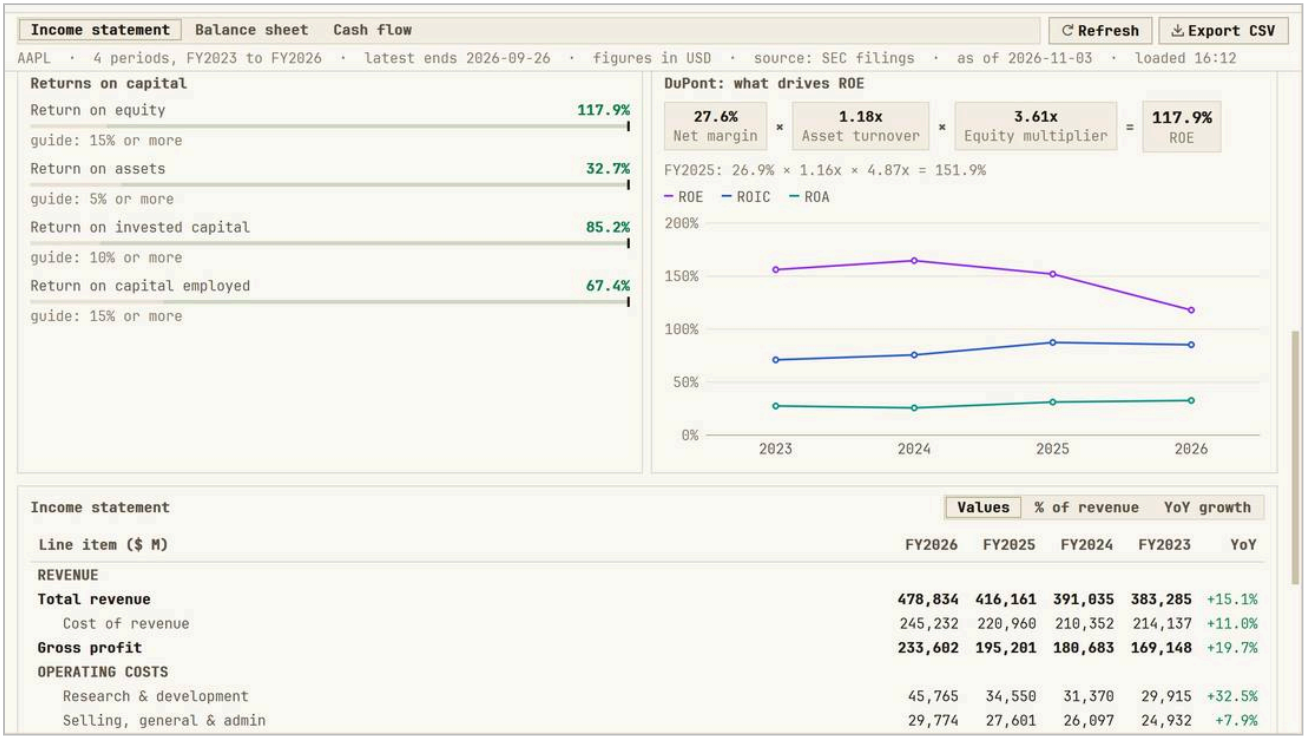


Figure 22.6 Further down the income statement — returns on capital, the DuPont breakdown and the statement table.

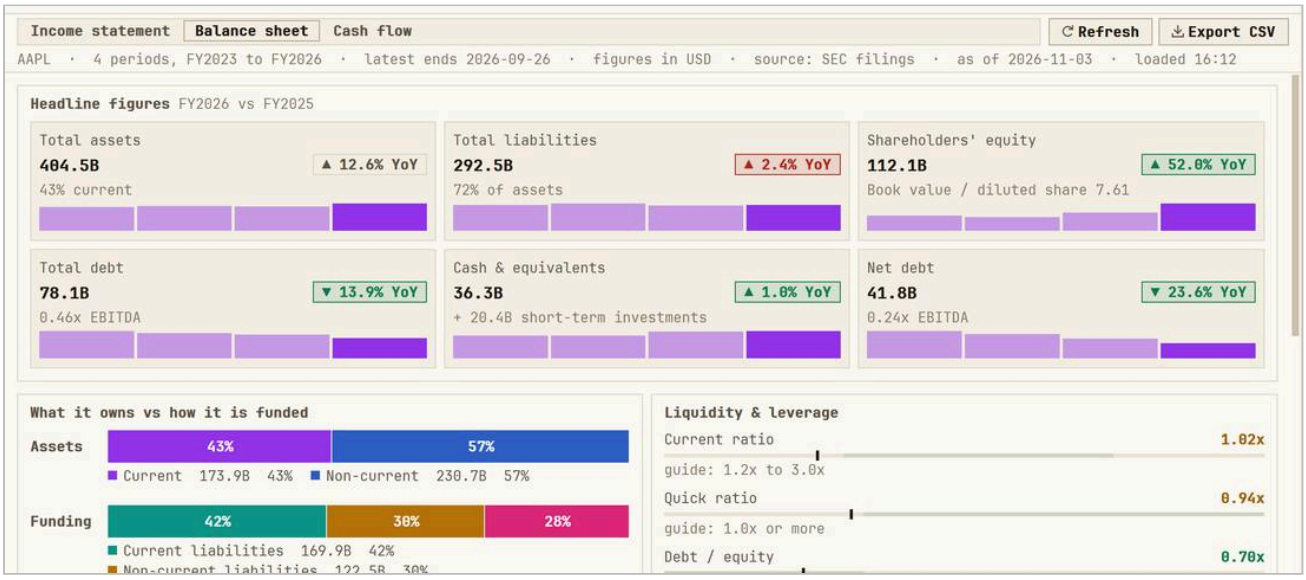


Figure 22.7 Balance sheet — what the company owns against how it is funded, and its liquidity ratios.

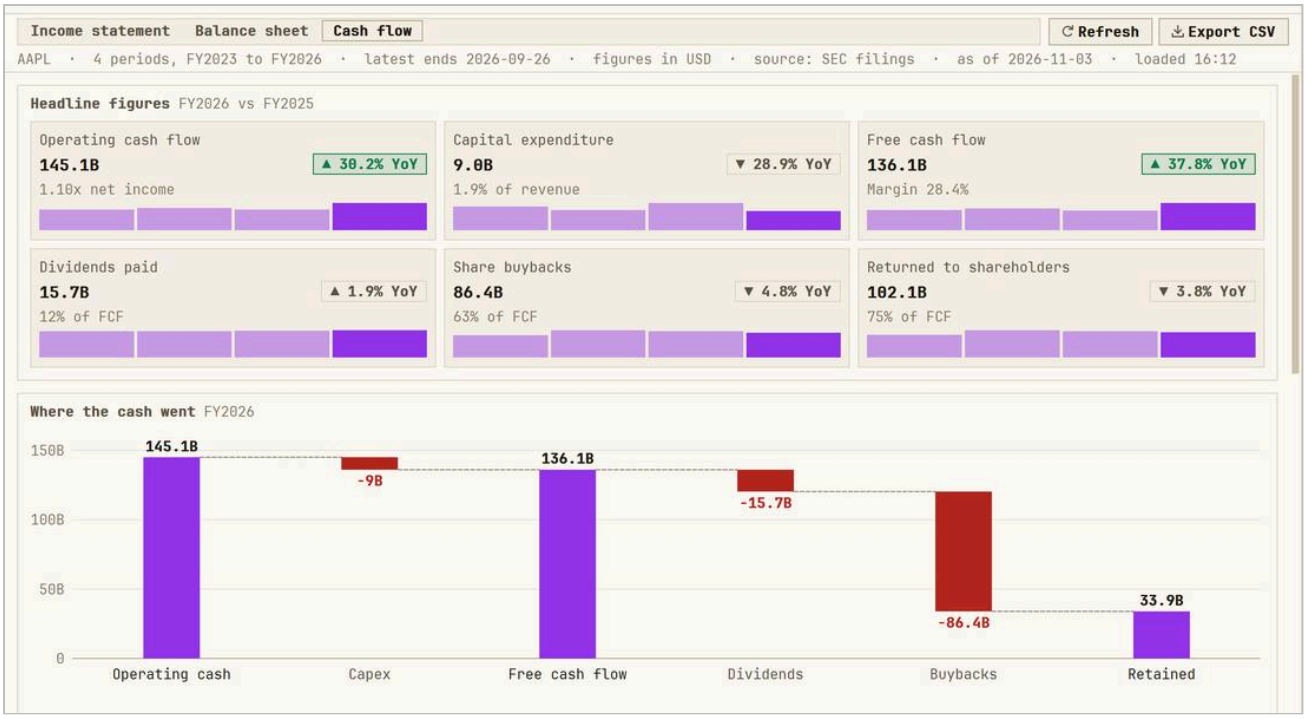


Figure 22.8 Cash flow — where the operating cash went — investment, dividends, buybacks — and what was left.

Words used in this section:

- **EBITDA** — earnings before interest, tax, depreciation and amortisation: a rough measure of cash profit from operations.
- **Free cash flow** — operating cash flow minus capital expenditure (money spent on buildings, machines and software).
- **Net debt** — total debt minus cash. A negative figure is shown as **Net cash**.
- **Current ratio** — current assets divided by current liabilities. Above 1 means short-term bills are covered.
- **ROE** (return on equity) — net income divided by shareholders' equity.

Banks and insurers

For a financial company the screen switches to the ratios that make sense for it: **Deposits** instead of debt, **Loans / deposits**, **Equity / assets** and the **Efficiency ratio**. The context line says *financial company: bank / insurer ratios*.

Export CSV writes the statement on screen, in filing order and with full-precision figures, to the File Manager (**Chapter 47, File Manager** p. 882), as `<TICKER>_income_<date>_<time>.csv` (`_balance_` or `_cashflow_` for the other statements). The message *Saved … to the File Manager* confirms it.

22.6 Value the company

The **Valuation** section (**Valuation lab**) estimates what one share is worth with a discounted cash flow (DCF) model, and works out what growth today's price already assumes.

A **DCF** values a company as all the cash it will generate in future, brought back to today's money with a **discount rate** (the return an investor demands for the risk). A **reverse DCF** runs the same model backwards: it finds the growth rate that makes the model's value equal to today's price.

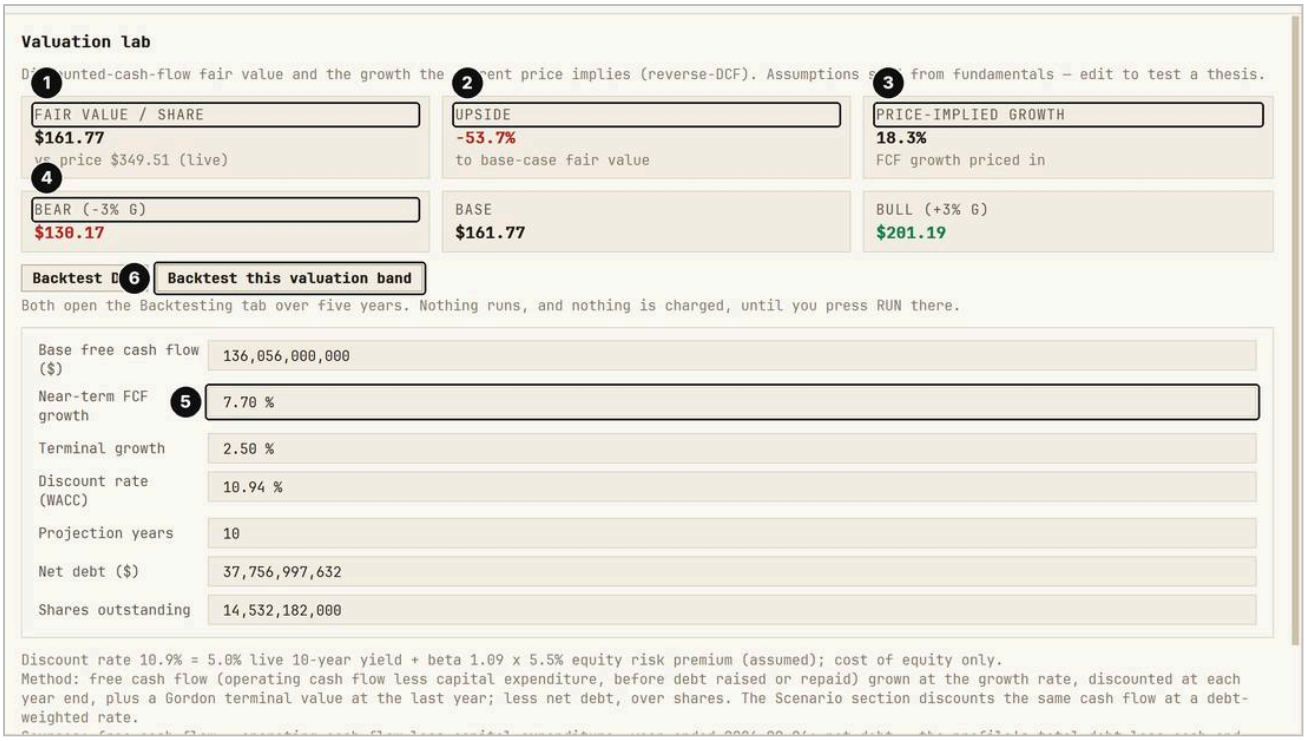


Figure 22.9 The Valuation lab — fair value, upside, the growth the price implies, and three cases.

1. **Fair value / share** from the base case.
2. **Upside** from the current price to the base-case fair value.
3. **Price-implied growth**: the cash-flow growth today's price assumes.
4. **Bear**, **Base** and **Bull** cases: growth 3 points lower, as entered, and 3 points higher.
5. The assumptions. Every box can be edited.
6. Test a buy-below-bear, sell-above-bull rule on history.

The assumptions fill in from the company's own figures when the section opens:

Assumption	Range	Filled from
Base free cash flow	any	operating cash flow less capital expenditure from the last annual statement, else the profile's trailing figure
Near-term FCF growth	-20% to 60%	revenue growth over the filed years, else the profile's growth; 8% if none is known
Terminal growth	0% to 6%	2.5%
Discount rate (WACC)	3% to 25%	the live 10-year government yield + beta x 5.5% equity risk premium, kept between 6% and 20%
Projection years	3 to 15	10
Net debt	any	total debt less cash and short-term investments
Shares outstanding	any	the diluted average for the last year, else market cap divided by price

1. Click **Valuation** in the rail and wait for the tiles to fill.
2. Change one assumption, for example type `9` in **Discount rate (WACC)** and press `Tab`. The tiles update at once.
3. To go back to the company's own figures, click **Reset to fundamentals** (it appears once you edit).

4 Read the notes under the inputs: they list every source and every assumption the model used.

Careful

A DCF is very sensitive to the discount rate and the terminal growth. A one-point change in either can move the fair value by a third. Treat the result as a range (Bear to Bull), not a target.

The two buttons under the tiles open the Backtesting screen over five years. Nothing runs and nothing is charged until you press **Run** there:

- **Backtest DCA** — a dollar-cost-averaging baseline: buy and hold with a monthly contribution.
- **Backtest this valuation band** — buys below the **Bear** value and sells above the **Bull** value. It needs both cases to be positive prices, with the bull above the bear.

22.7 Get the one-word verdicts (Analysis)

The **Analysis** section turns the company's figures into six plain verdicts, so you can see strengths and weak spots at a glance. At the top, **Analyst price target** shows where the price sits between the analysts' lowest and highest targets.

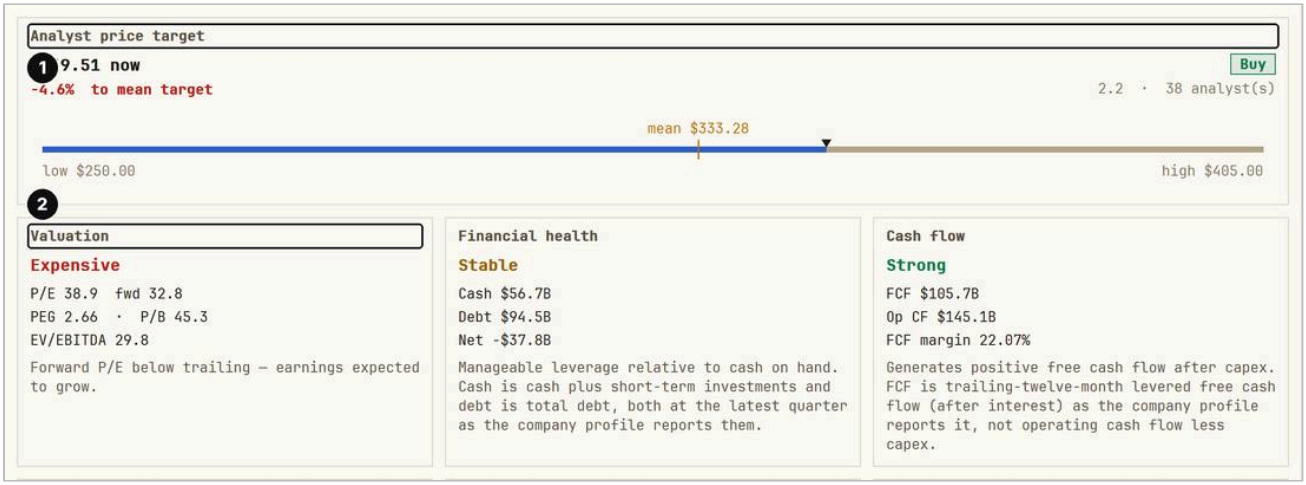


Figure 22.10 Analysis — the analyst target gauge and six verdict cards.

1 The gauge: today's price against the low, mean and high target, the upside to the mean, and the consensus.

2 Each card shows a verdict word, two or three figures and one line explaining why.

How each card decides its verdict:

Card	Verdicts and rule
Valuation	**Undervalued** when PEG is under 1 (or, with no PEG, P/E under 15); **Fairly valued** for PEG up to 2 (P/E up to 30); **Expensive** above that
Financial health	**Strong** when cash is larger than debt; **Stable** when debt is less than twice the cash; **Stretched** above that; **Partial** when only one side is known
Cash flow	**Strong** when free cash flow is positive; **Reinvesting** when operating cash is positive but free cash flow is negative; **Cash generative** when only operating cash is known and positive; **Burning cash** when operating cash is negative
Profitability	**Loss-making** when the net margin is negative; **Excellent** when ROE is over 20% and net margin over 15%; **Solid** when ROE is over 10% or net margin over 8%; else **Thin**

Card	Verdicts and rule
Growth	On revenue growth (earnings growth if revenue is missing): **High growth** over 20%; **Moderate** 5% to 20%; **Flat** -2% to 5%; **Declining** below -2%
Risk / sentiment	**Elevated** when beta is over 1.5 or more than 10% of the float is sold short; **Moderate** when beta is over 1; **Low** below that. The card also shows where the price sits in its 52-week range

N/A means the figure is not published for this company. The line under the verdict then says why, and whether the filed statements were used instead.

22.8 Screen the quality of the accounts (Quality)

The **Quality** section (**Quality & Forensics**) runs five well-known accounting screens on the filed statements. They flag companies that may be in financial trouble or whose profits are not backed by cash.

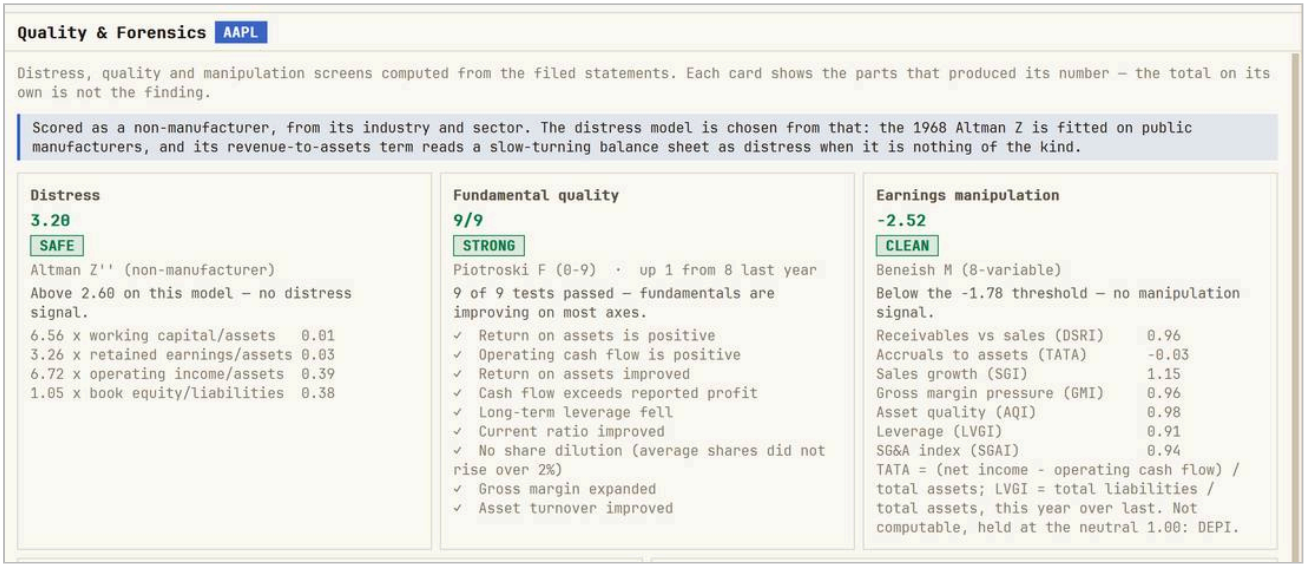


Figure 22.11 Quality & Forensics — five screens, each with its score, a band and the terms behind it.

Card	Model	Bands
Distress	Altman Z — for a manufacturer the 1968 five-term model; otherwise the four-term Z'' model	**SAFE** (Z of 2.99 or more; 2.60 for Z''), **GREY ZONE**, **DISTRESS** (below 1.81; 1.10 for Z'')
Fundamental quality	Piotroski F: nine pass/fail tests (profit, cash flow, rising return on assets, cash above profit, falling leverage, better current ratio, no dilution, wider gross margin, better asset turnover)	**STRONG** (7-9 passed), **MIDDLING** (4-6), **WEAK** (0-3)
Earnings manipulation	Beneish M (eight ratios such as receivables against sales and accruals to assets)	**FLAG** above -1.78, **CLEAN** below
Accruals	Sloan accruals ratio: profit minus operating cash, over average assets	**HIGH** (10% or more), **ELEVATED** (4% or more), **CLEAN**
Cash conversion	Operating cash divided by net income	**STRONG** (1.0x or more), **ADEQUATE** (0.7x or more), **WEAK**

Each card lists its terms, so you can see which line drove the result, and how the figure changed from last year.



Figure 22.12 The Accruals and Cash conversion cards, each with the figures that produced its number.

Note

The distress and manipulation screens are not defined for banks and insurers. For a financial company those cards say **Not applicable** and why. A screen that needs two years of statements says **No data** when only one year is on file.

Careful

These are screens, not findings. A **FLAG** or **DISTRESS** band is a reason to read the accounts more closely, not proof of a problem.

22.9 Check the technical picture (Technicals)

The **Technicals** section reads up to 27 indicator values on a year of daily bars and turns them into one **Technical rating**.

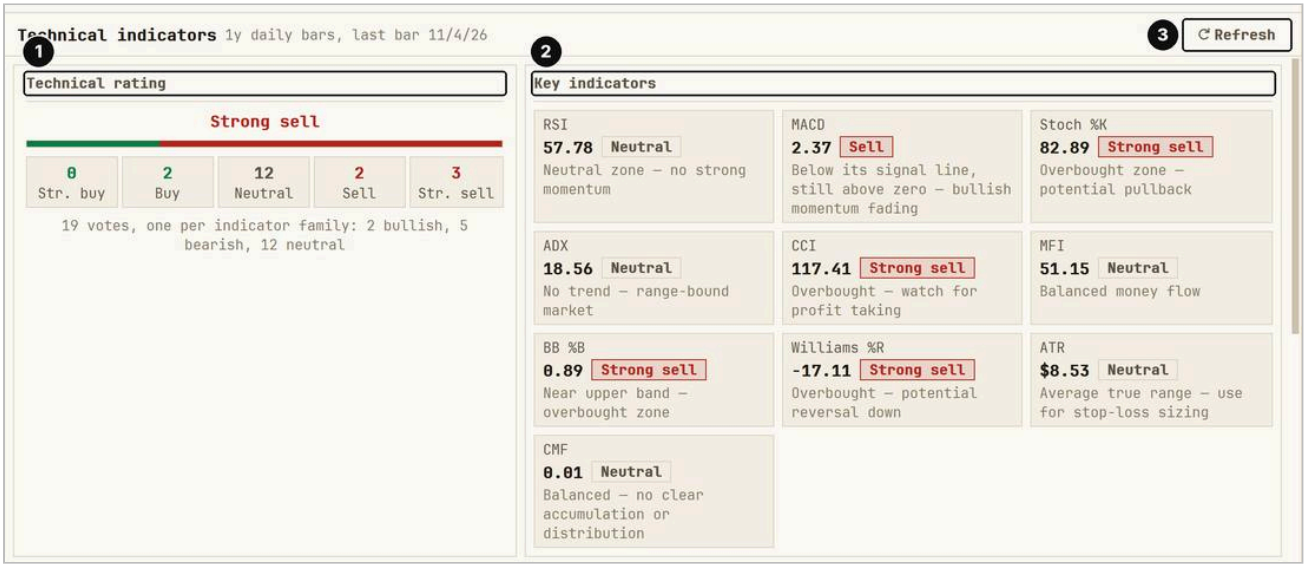


Figure 22.13 Technicals — the overall rating and the key indicators.

1. **Technical rating**: the rating word, a bar splitting the bullish against the bearish votes, and the counts under **Str. buy**, **Buy**, **Neutral**, **Sell** and **Str. sell**.
2. **Key indicators**: the most-watched readings at a glance.
3. **Refresh** reads the indicators again.

Below the rating, four tables list the indicators by group — **Trend indicators**, **Momentum indicators**, **Volatility indicators** and **Volume indicators**. Each row has **Indicator**, **Value**, **Signal** (**Strong buy**, **Buy**, **Neutral**, **Sell** or **Strong sell**) and an **Interpretation** in plain words; the badges in each table's title count its **buy**, **hold** and **sell**

signals. Click a card under **Key indicators**, or a row of a table (the tooltip says *Show RSI on the chart*), to draw that indicator on the daily price chart at the foot of the section.

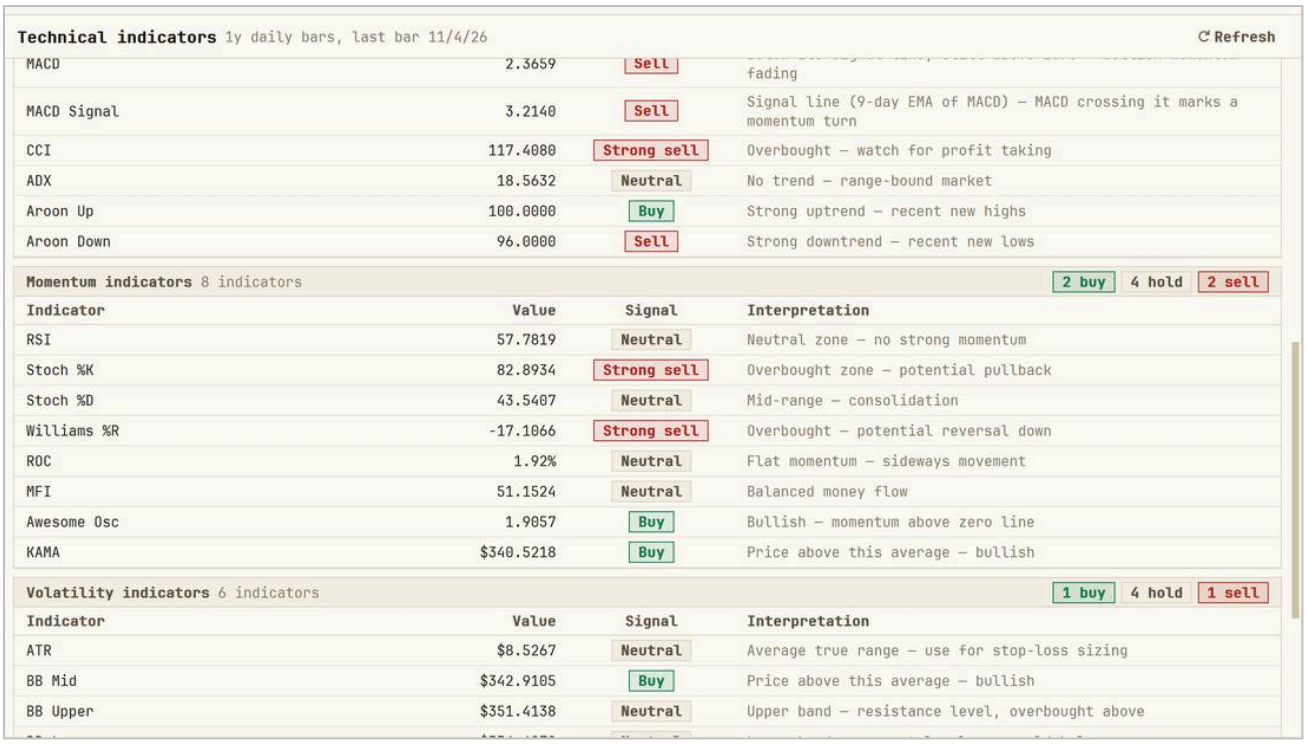


Figure 22.14 The indicator tables — value, signal and a plain-words interpretation for each indicator.

The indicators and their settings:

Table	Indicators
Trend	Simple moving average (**SMA 20**), exponential (**EMA 12**) and weighted (**WMA 9**) moving averages; **MACD** (12, 26) and **MACD Signal** (9); commodity channel index (**CCI**, 20); average directional index (**ADX**, 14); **Aroon Up** and **Aroon Down** (25)
Momentum	Relative strength index (**RSI**, 14); stochastic oscillator **Stoch %K** (14) and **Stoch %D** (3); **Williams %R** (14); rate of change (**ROC**, 12); money flow index (**MFI**, 14); awesome oscillator (**Awesome Osc**, 5 and 34); Kaufman adaptive moving average (**KAMA**, 10)
Volatility	Average true range (**ATR**, 14); Bollinger bands (20, 2): **BB Mid**, **BB Upper**, **BB Lower**, **BB %B** and **BB Width**
Volume	On-balance volume (**OBV**); volume-weighted average price (**VWAP**); Chaikin money flow (**CMF**, 20); accumulation/distribution (**ADI**)

Each indicator casts one vote: strong buy, buy, neutral, sell or strong sell. Rows that are one reading count once: MACD with its signal line, %K with %D, Aroon up with Aroon down, and the six "price against an average" rows (the three moving averages, KAMA, BB Mid and VWAP). The line under the counters says it, for example *19 votes, one per indicator family: 2 bullish, 5 bearish, 12 neutral*. The bar shows the bullish votes against the bearish ones; neutral votes are not counted.

- **RSI** (relative strength index) — a 0-100 gauge of recent gains against losses. Above 70 is usually called overbought, below 30 oversold.
- **MACD** — the gap between a 12-day and a 26-day average, against its own 9-day average (the signal line).
- **Bollinger bands** — a band two standard deviations either side of a 20-day average.

22.10 Compare with peers

The **Peers** section puts the company beside comparable companies in one table of ratios.

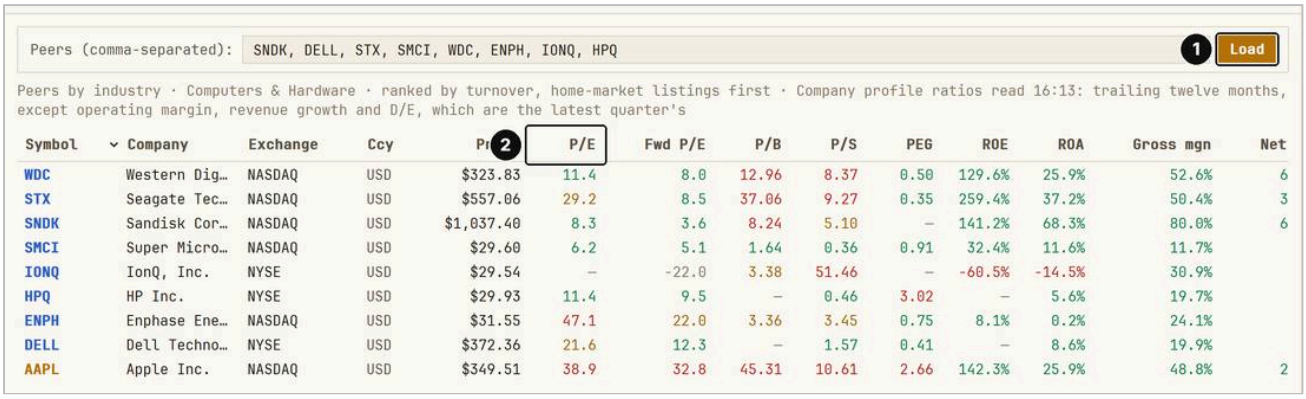


Figure 22.15 Peers — the company and its peer set side by side, best values tinted.

1. Edit the comma-separated list, then click **Load** to compare your own set.
2. Ratio columns. Click a header to sort.

1. Click **Peers**. The screen fills the list with companies from the same industry (or the same sector when no industry match exists), ranked by turnover, home-market listings first.

2. To compare your own set, edit the box **Peers (comma-separated):**, for example `MSFT, GOOGL, AMZN, META`, and click **Load**.

3. Double-click any row to open that company in Equity Research.

The columns are **Symbol**, **Company**, **Exchange**, **Ccy**, **Price**, **P/E**, **Fwd P/E**, **P/B**, **P/S** (price to sales), **PEG**, **ROE**, **ROA**, **Gross mgn**, **Net mgn**, **Op mgn (qtr)**, **Rev growth (qtr YoY)**, **D/E (qtr)** (debt to equity), **Div yield** and **Beta**. Colours mark **Positive / Good** and **Negative / High Risk** values; the legend sits under the table. At most 16 peers are loaded at once; the caption says how many were left out.

22.11 See who owns the shares (Ownership)

Ownership & Flows shows who holds the company and how much of it is sold short.



Figure 22.16 Ownership & Flows for a US company — four headline tiles, the largest institutional holders and the insiders.

1. Four tiles: **Held by institutions**, **Held by insiders**, **Short % float** and **Days to cover**.
2. The largest institutional holders as the company profile lists them (13F filings when it lists none), usually a quarter old.

- **Top institutional holders** — **Holder**, **Shares**, **Value**, **% Out** (share of all shares), the change since the last report and **Reported** (the report date).
- **Insider holders** — **Name**, **Title**, **Shares**, **% Out** and **Last** (the last trade, BUY or SELL).
- **Days to cover** — the shares sold short divided by the average daily volume: how many days of normal trading it would take short sellers to buy back.

For an Indian listing this section shows the NSE shareholding pattern instead (see **§22.22 Research an Indian (NSE) listing** p. 418).

22.12 See what the stock moves with (Cross-Asset)

The **Cross-Asset** section measures how the share has moved with the assets that drive most share prices, then looks at its own volatility.

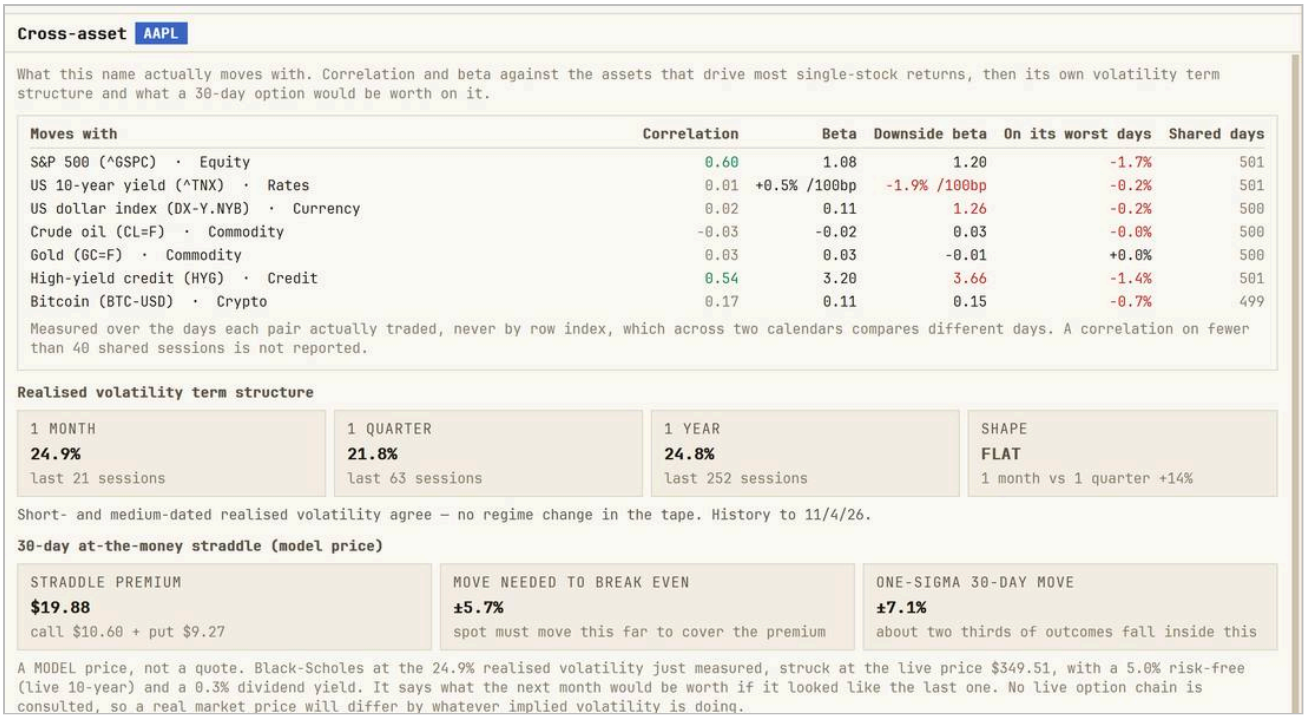


Figure 22.17 Cross-asset — correlation and beta against indices, rates, the dollar, oil, gold, credit and bitcoin.

The **Moves with** table compares the stock with its home index (S&P 500 for US shares, Nifty 50 for Indian ones, FTSE 100, Euro Stoxx 50, Nikkei 225, Hang Seng, TSX Composite or ASX 200 for others), the S&P 500, the US 10-year yield, the US dollar index, crude oil, gold, high-yield credit and bitcoin. For each one:

- **Correlation** — from -1 to +1: how closely the two move together.
- **Beta** — how far the stock moves for a 1% move in the other asset (for the yield: per +100 bp).
- **Downside beta** and **On its worst days** — the same measure on the days the other asset fell most.
- **Shared days** — the trading days both had a price, which every figure is computed on.

Below it, **Realised volatility term structure** shows the stock's volatility over **1 month**, **1 quarter** and **1 year**, and its **Shape**. The last card, **30-day at-the-money straddle (model price)**, prices a one-month option pair on that volatility and shows the **Straddle premium**, the **Move needed to break even** and the **One-sigma 30-day move**. It is a model price, not a market quote.

22.13 Link the stock to the economy (Macro)

The **Macro** section shows where the US economic cycle stands and how this stock has moved when rates and credit moved.



Figure 22.18 Macro — where the US cycle stands, series by series, with a reading for each.

- **Where the US cycle stands** — a one-line verdict (for example **NO ACUTE SIGNAL**) and a short summary, then a table of **Series**, **Latest**, **As of**, **1y change** and a **Reading** of **Easy**, **Neutral**, **Tight** or **Alarm**, with a sentence explaining it. The series are the policy rate, the 2-year and 10-year yields, 10-year breakeven inflation, the high-yield credit spread, CPI inflation, the unemployment rate and industrial production.
- **What this name did when US rates and credit moved** — the stock's move **Per 25bp** and its **Correlation** to the US 10-year yield, the 2-year yield, breakeven inflation and high-yield spreads.
- **Macro prints ahead** — the next eight medium- and high-impact economic releases for the US and, for a company listed elsewhere, its own country and currency, in the time zone set in Settings > General.

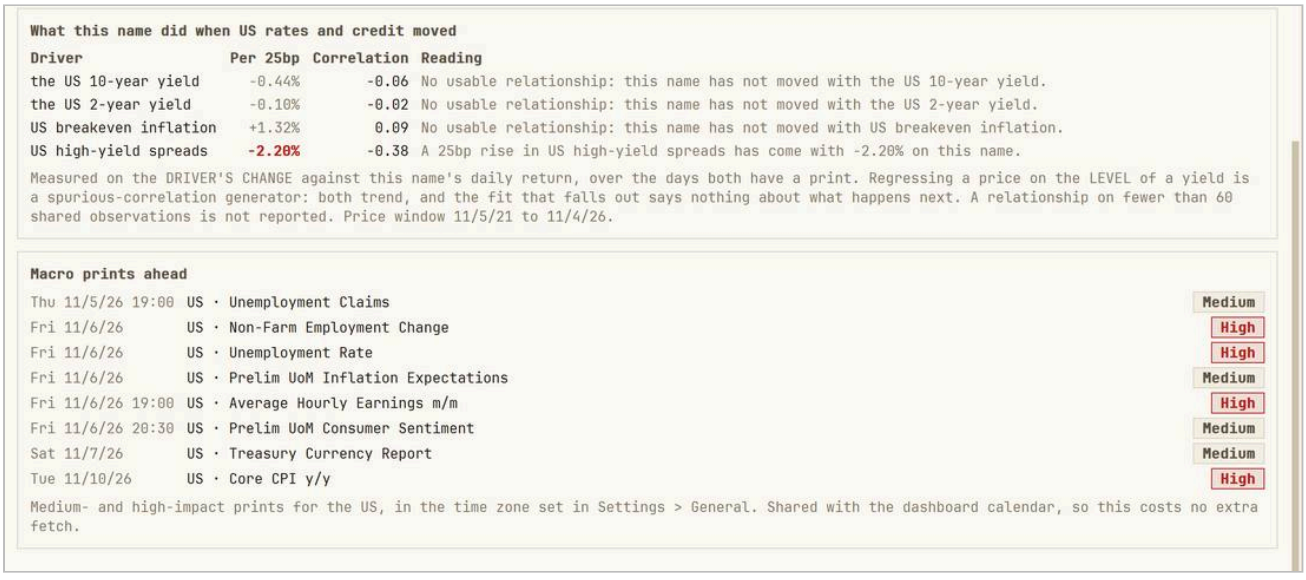


Figure 22.19 Macro, further down — how the stock moved with US rates and credit, and the releases ahead.

> **Note**
>
> The cycle and the drivers are United States series. For a company outside the US the section says so: the figures then tell you how it moved with US rates, not with its home economy.

22.14 Measure return and risk (Quant Lab)

The **Quant Lab** section is a quick risk profile of the stock from its own closing prices over five years.

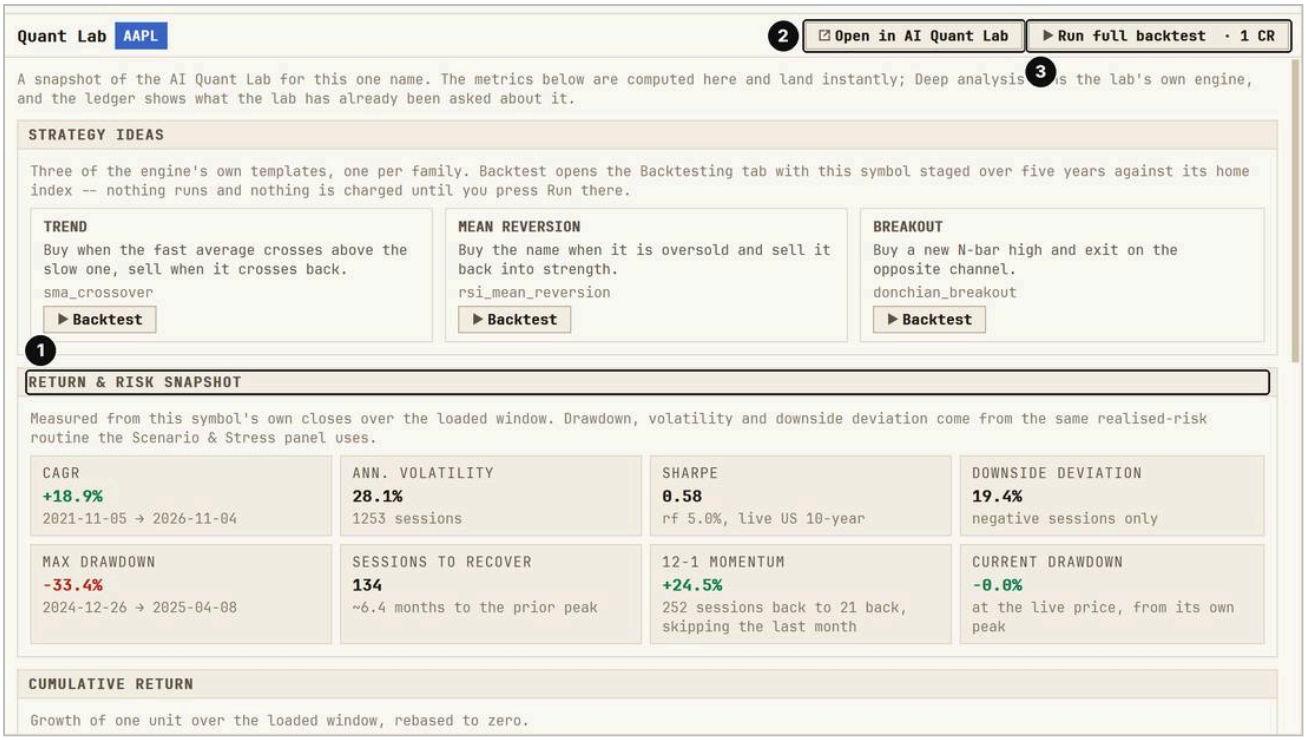


Figure 22.20 Quant Lab — three strategy ideas to backtest, and the return and risk snapshot.

1. **Return & risk snapshot**: eight figures from the stock's own prices.
2. **Open in AI Quant Lab** sets the lab's research universe to this stock.
3. **Run full backtest** stages a backtest and runs it at the price shown on the button.

Figure	Meaning
CAGR	compound annual growth rate of the price
Ann. volatility	standard deviation of daily returns, scaled to a year
Sharpe	return above the risk-free rate, per unit of volatility
Downside deviation	volatility of the down days only
Max drawdown	the largest fall from a peak
Sessions to recover	trading days it took to regain that peak (or *not yet*)
12-1 momentum	return over the last twelve months, skipping the most recent month
Current drawdown	how far the price is below its own peak today



Figure 22.21 Quant Lab, further down — the cumulative return since the window began, and the daily return distribution with its 95% and 99% one-day loss.

The section is a column of cards, top to bottom:

- **Strategy ideas** — three ready-made strategies, one per family (**TREND**, **MEAN REVERSION**, **BREAKOUT**), each with a **Backtest** button that opens the Backtesting screen over five years against the home index. Nothing runs until you press Run there.
- **Return & risk snapshot** — the eight figures above, each with the dates or the number of sessions it covers.
- **Cumulative return** and **Daily return distribution** — two charts of the same history.
- **Deep analysis — AI Quant Lab engine** — **Run deep analysis** computes a further set of figures on Fincept's servers: volatility, Sharpe, Sortino, Calmar, maximum drawdown, value at risk at 95% and 99%, skew, kurtosis, mean daily return and daily standard deviation.
- **What the lab already knows** — earlier AI Quant Lab runs on this stock. See **Chapter 31, AI Quant Lab** p. 623.

Plan & credits

Run full backtest spends credits: the price is on the button (for example *Run full backtest · 1 CR*). The strategy **Backtest** buttons only open the Backtesting screen; nothing is charged until you press Run there. **Run deep analysis** is free, like the AI Quant Lab's own analyses.

22.15 Stress-test the valuation (Scenario)

The **Scenario** section (**Scenario & stress**) values the company in six economic scenarios, weights them by probability, and shows how far the share has fallen in real market stress.



Figure 22.22 Scenario & stress — probability-weighted value across six scenarios.

1. Four headline figures: **Probability-weighted value**, **Upside to price**, **Price implies growth of** and **Value in terminal year**.
2. **Base-case assumptions**: every input can be edited; **Reset to fundamentals** restores them.

The scenario table lists **Base case** (40%), **Soft landing** (15%), **Rate shock +200bp** (15%), **Hard landing** (15%), **Stagflation** (7%) and **Margin squeeze** (8%). Each row shows its **Prob.** (editable), **WACC**, **Yr-1 growth**, **Terminal g**, **FCF base**, **Fair value**, **Upside** and **Terminal %** (the share of the value that comes after the last projected year). Change a probability and the weighted value updates.

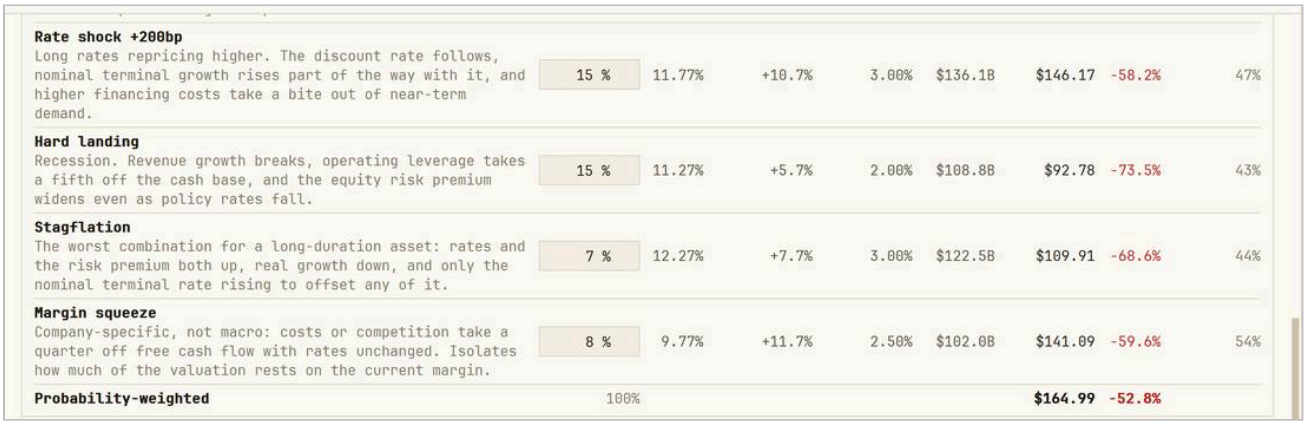


Figure 22.23 The scenario table, continued — each scenario's assumptions, fair value and upside, the probability you give it, and the weighted total.

The assumptions are **Free cash flow**, **Year-1 growth**, **Terminal growth**, **Horizon**, **Net debt**, **Shares**, **Risk-free**, **Equity risk prem.**, **Beta**, **Cost of debt**, **Tax rate** and **Equity weight**. Growth fades in a straight line from the year-1 rate to the terminal rate.

Further down:

- **Market shock** table — the market falling 5%, 10%, 20% and 35%, the **Beta-implied move** of this stock, the **Price after**, and how that compares with the 52-week low and the worst scenario's value.

- **Risk this name has actually delivered** — annualised volatility, maximum drawdown, sessions to recover, drawdown now, worst single day, worst rolling month, and the 95% one-day and one-month loss.



Figure 22.24 Market shocks and the risk the stock has actually delivered.

22.16 Read the filings

The **Filings** section (**Filings & events**) lists the company's regulatory filings and lets you read them beside the list. For US companies these are SEC filings; Indian listings get NSE filings instead.



Figure 22.25 Filings & events — the filing list on the left, the document on the right.

1. Filter by group: **All**, **Annual**, **Quarterly**, **Current**, **Insider** and other forms.
2. Find a form code (for example `S-8`, `13G`) or a word in its description.
3. **Form**, **What it is**, **Filed** and **Period**, newest first.
4. The monthly allowance of documents you can open.

1. Click **Filings**.
2. Click a group, for example **Annual**, to see only annual reports (form 10-K).

3 Click a row. The document opens in the pane beside the list. Use the arrow keys to move through the filings.

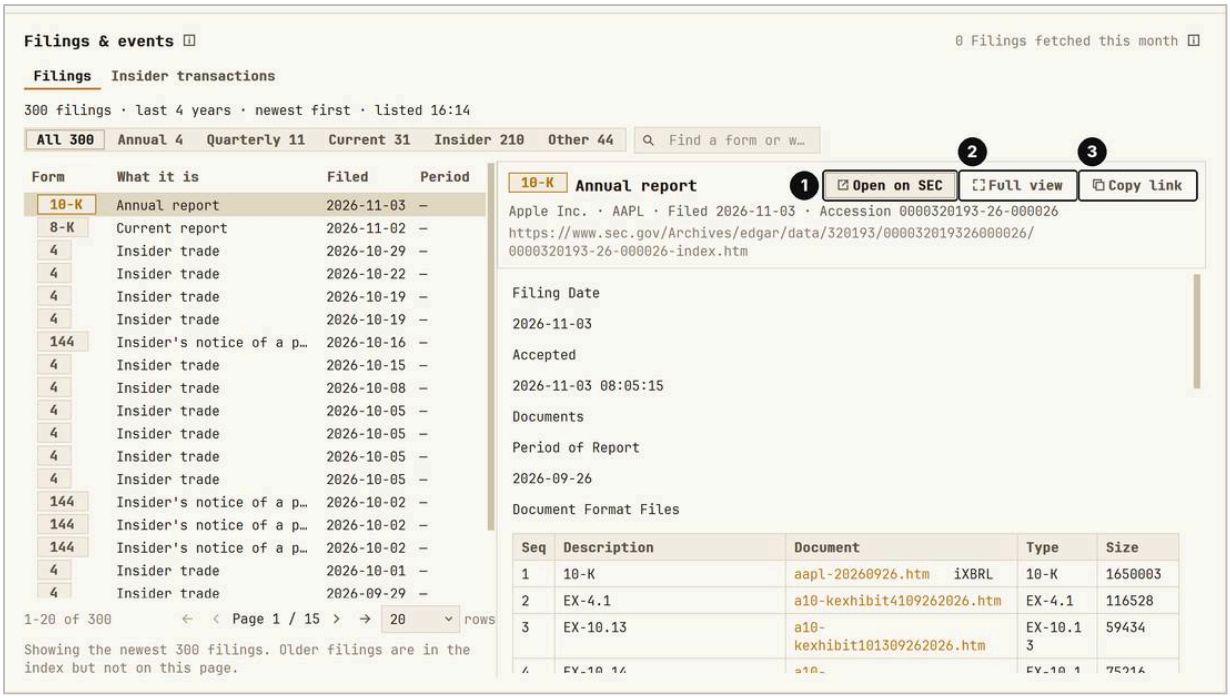


Figure 22.26 A filing opened in the preview pane.

1. **Open on SEC** opens the document on sec.gov in your browser.
2. **Full view** opens it in a window of its own.
3. **Copy link** copies its address.

4 Double-click a row to open the document full size.

Each group button shows how many filings it holds (for example **Annual 4**). The list shows the newest 300 filings of the last years, 20 rows to a page: move with the page arrows under it, or pick how many **rows** a page shows.

The **Insider transactions** tab lists trades by the company's officers and directors from forms 3, 4 and 5: **Date**, **Insider**, **Role**, **Transaction**, **Shares**, **Price** and **Value**. Point at a row for details such as the SEC transaction code or whether the trade was under a 10b5-1 trading plan.

Plan & credits

Exclusive includes 10 filing documents a month; Exclusive+ and Exclusive Pro have no monthly limit. The meter **Filings fetched this month** shows how many you have used. Past the allowance, opening a document that has not been fetched before costs credits (the note under the meter gives the price); re-opening one you already fetched stays free. The filing list itself is always free. Insider transactions start at Exclusive+; on Exclusive the tab shows **Show insider transactions** with a lock.

22.17 Follow the news and sentiment

News lists the latest 20 stories about the company, newest first. Each story shows the date and time, the headline, the publisher and, when the source gives one, a short summary. Click **Read full article** to open the story in your browser. The header says how many stories are listed and when they were updated. **Refresh** reads

the list again. The source box at the top chooses where stories come from: **Auto** uses Fincept's default sources; a news service you have added a key for under **Chapter 48, Data Sources** p. 891 can be picked instead.

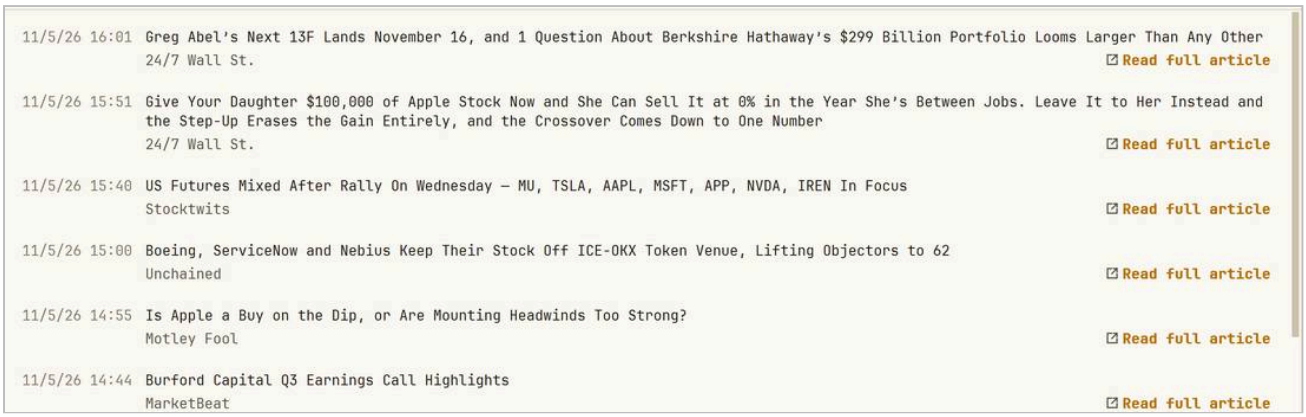


Figure 22.27 News — the latest stories about the company.

Sentiment (**Market sentiment**) blends several signals into one **Composite sentiment** reading:

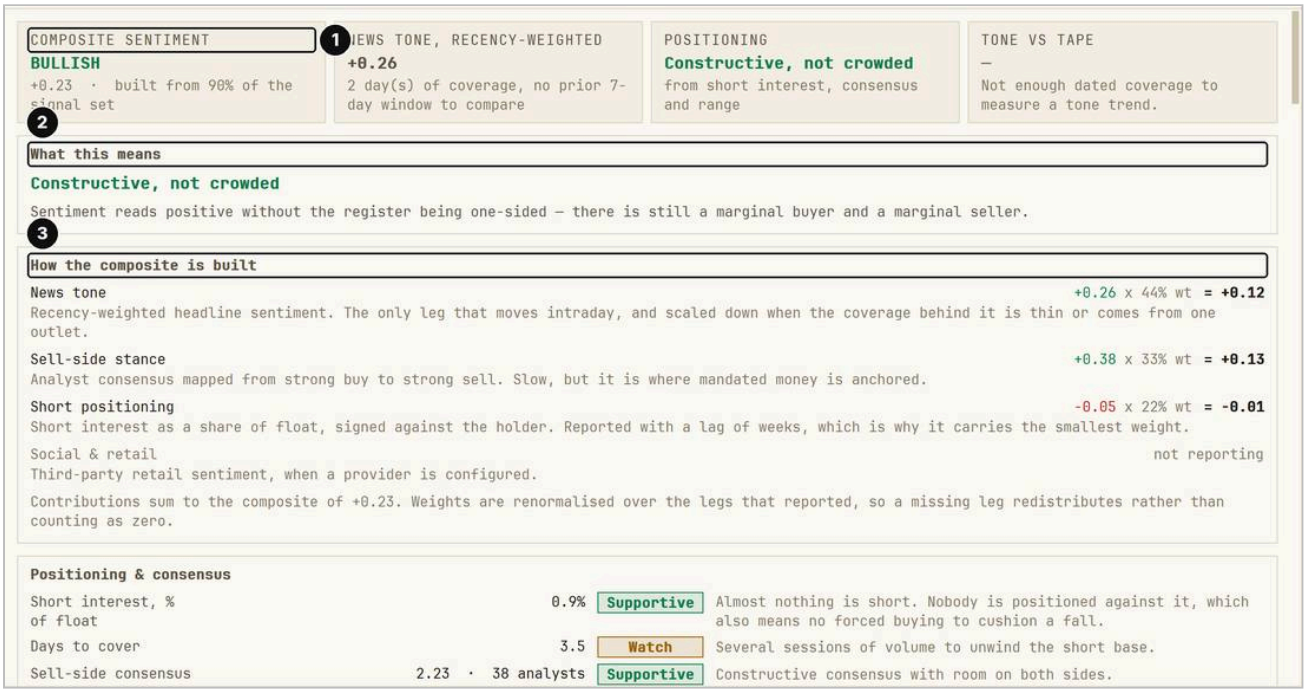


Figure 22.28 Sentiment — the composite reading, its legs and what it means in words.

1. **Composite sentiment**: **BULLISH**, **NEUTRAL** or **BEARISH**, with a score from -1 to +1 and how much of the signal set it was built from.
2. **What this means** says it in words.
3. **How the composite is built**: each leg's score, its weight and its share of the total.

The composite has four legs: **News tone**, **Sell-side stance** (the analysts' consensus), **Short positioning** (short interest as a share of the float) and **Social & retail** (shown as *not reporting* when no source is configured). Missing legs do not count as zero: the weights of the legs that reported are scaled up.

- **News tone** — the tone of recent headlines, weighted to the newest, and how it moved against the previous seven days.
- **Positioning** — from short interest, analyst consensus and where the price sits in its range. The **Positioning & consensus** panel lists each reading (short interest, days to cover, consensus, target dispersion, institutional and insider ownership, position in the 52-week range) with a band of **Supportive**, **Neutral**, **Watch** or **Extreme**.

- **Tone vs tape** — whether the news tone and the price agree (**Aligned**) or not (**Diverging**).
- **Coverage & narrative** — a bar per day: height is the number of stories, colour is that day's tone.
- **Headlines** — switch between **Most polarising** and **Most recent**. Click a headline to open it.

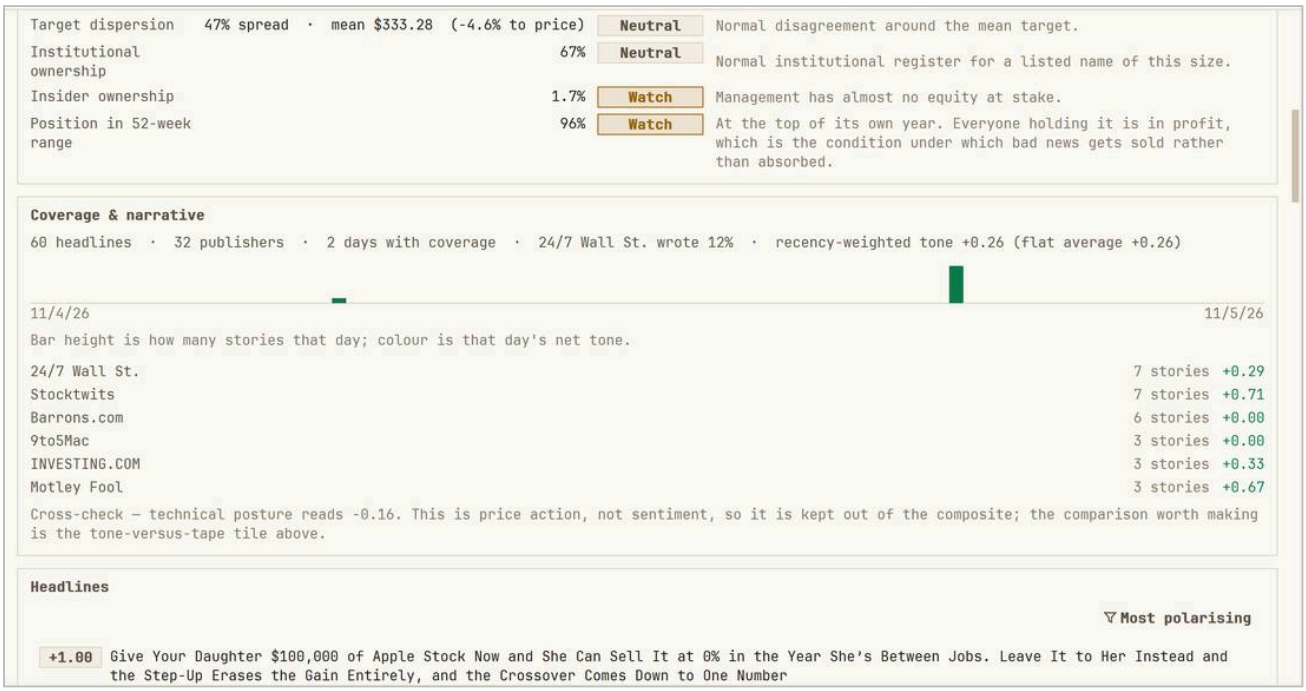


Figure 22.29 Sentiment, further down — the positioning readings, coverage by day with its publishers, and the headlines.

22.18 Write notes and set price alerts

The research dock keeps your own work beside the data. Open it with the dock button at the right end of the title bar.

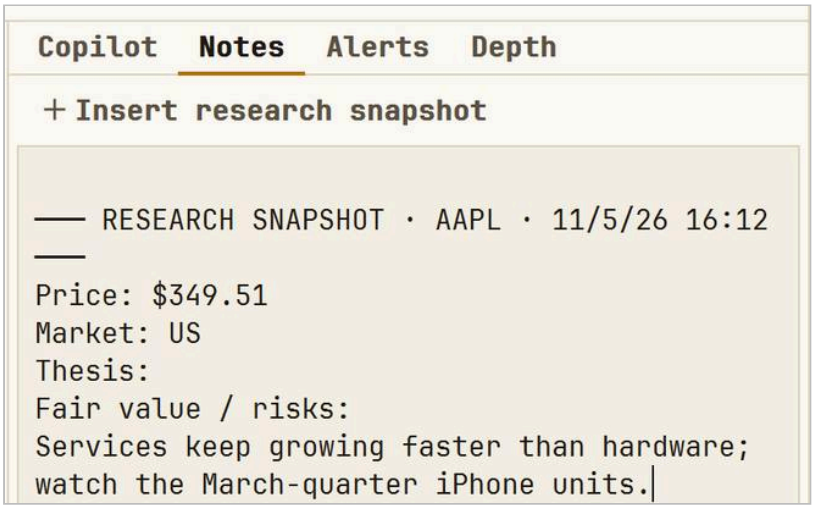


Figure 22.30 The Notes tab with a research snapshot inserted.

Notes — a free-text note per company, saved to your account as you type and shown again whenever you open that company, on any device. **Insert research snapshot** adds a dated block with the price and market, plus *Thesis:* and *Fair value / risks:* lines to fill in.

Alerts — price markers for this company:

1. Click **Alerts** in the dock.
2. Pick **Above** or **Below**, type a price (the **Last price** line under the box helps), and click **Add**.

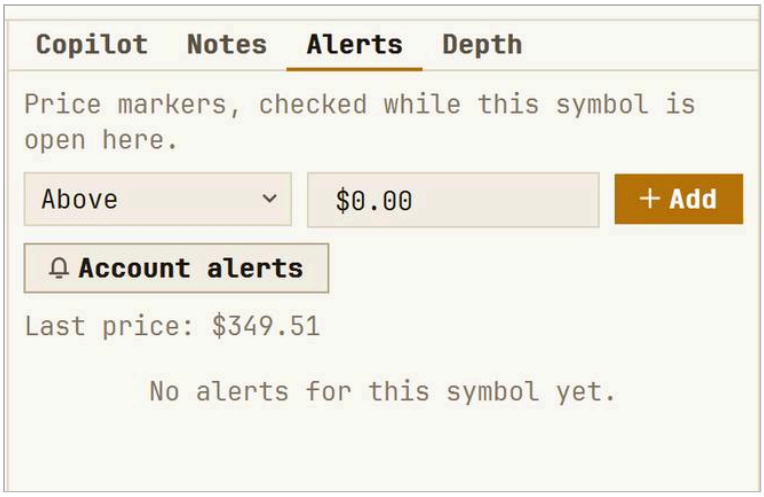


Figure 22.31 The Alerts tab — pick Above or Below, type a price and click Add.

3. The marker shows **Armed**. When the live price crosses it, it changes to **Triggered** and a banner says how many markers fired.
4. Click the remove button on a row to delete a marker.

> **Important**
>
> These markers are checked only while the company is open on this screen. For an alert that fires while the terminal is closed, click **Account alerts**: it opens the account's price alerts, which are checked on Fincept's servers. See **Chapter 21, Action Center** p. 381.

Depth shows the order book (five levels of bids and asks: **Bid qty**, **Bid**, **Ask**, **Ask qty**, and the spread) for NSE and BSE shares only. It streams here from a connected Fyers account; with another Indian broker the tab says *Depth is streamed only for the Equity Trading selected symbol on …*, so use the order book in **Chapter 16, Equity Trading** p. 264. Level 2 depth needs Exclusive Pro: on other plans the tab says *Depth needs a plan with Level 2.* and offers **Stream market depth** with a lock.



Figure 22.32 The Depth tab for a US share — depth is streamed only for NSE and BSE listings through an Indian broker.

22.19 Ask the AI analyst (Copilot)

The **Copilot** tab runs Fincept's AI analyst on the company. It reads the terminal's own data and writes a research note with sources.

1. Open the dock and click **Copilot**.
2. Optional: pick a persona (an agent or team you set up in **Chapter 38, Agent Studio** p. 739) from the picker at the top.
3. Click **Analyze AAPL** (the button names the current ticker and its price in credits).
4. The note streams in and is shown formatted when it is done. **Copy** copies it as Markdown.

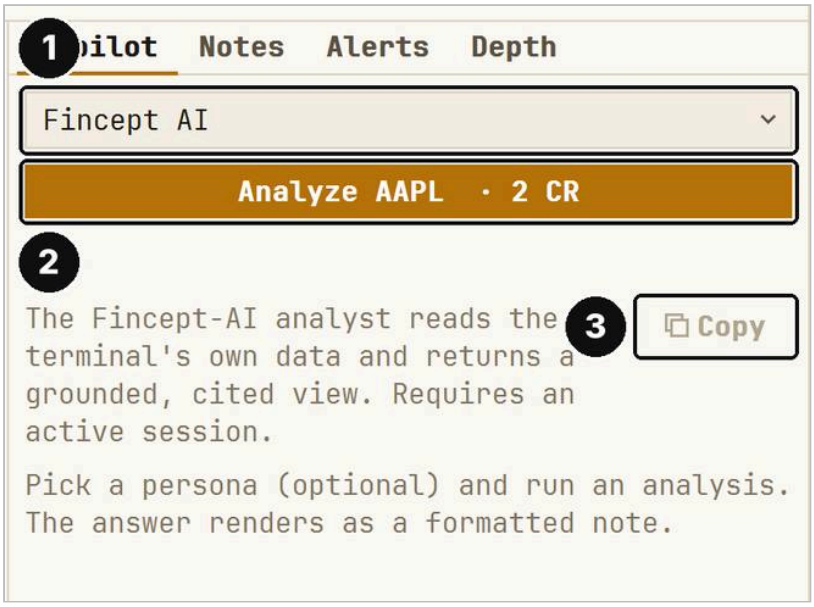


Figure 22.33 The Copilot tab — the persona picker and the Analyze button with its price.

1. Who answers: **Fincept AI**, or one of your agents or teams.
2. The run button names the ticker and the price in credits.
3. **Copy** copies the finished note as Markdown.

Plan & credits

Each Copilot run costs credits, charged only when the note arrives. The price is shown on the button before you click. With **Fincept AI** picked it is billed as an AI research note; with one of your agents or teams it is billed as an agent run or a team run, and the button shows that price instead.

22.20 Download the price history

1. Click **CSV** in the title bar. The **Download Price Data** dialog opens.

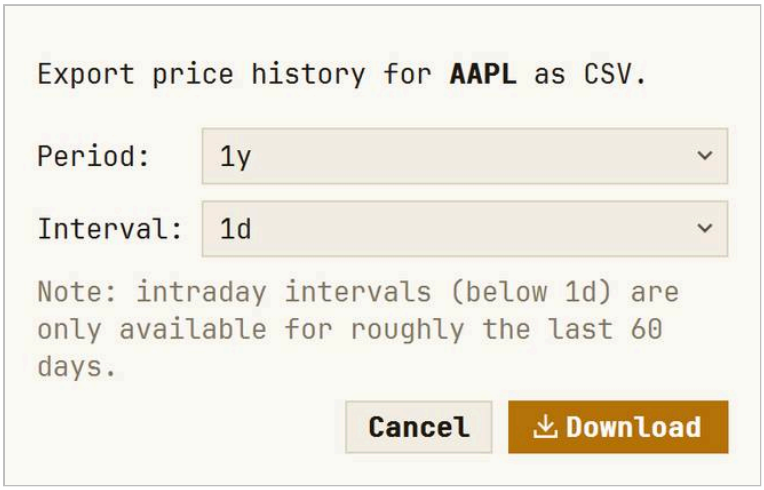


Figure 22.34 Download Price Data — pick a period and an interval.

2. Pick a **Period** (1mo, 3mo, 6mo, 1y, 2y, 5y, 10y or max; default 1y) and an **Interval** (1m, 5m, 15m, 30m, 1h, 1d, 1wk or 1mo; default 1d).

3. Click **Download** and choose where to save the file. The suggested name is `<SYMBOL>_<period>_<interval>.csv`.

The file has the columns `date`, `datetime_utc`, `timestamp`, `open`, `high`, `low`, `close`, `volume` and `adjustment` (what the prices are adjusted for, such as splits and dividends).

> **Note**
> Intraday intervals (below 1d) are only available for roughly the last 60 days.

22.21 Trade or backtest from research

- **Buy** / **Sell** open the order ticket of **Chapter 16, Equity Trading** p. 264 for this stock, at the last price. The ticket names the account and says **LIVE** or **PAPER** before anything is sent. The buttons work for any listing the Fincept Paper account or a connected broker trades. For an index, a currency pair, a future or a crypto pair the button explains where to trade it instead.
- **Backtest** opens **Chapter 24, Backtesting** p. 464 with this stock and starts a run as soon as you confirm the price.

22.22 Research an Indian (NSE) listing

Indian companies get extra views built from what they file with the National Stock Exchange of India.

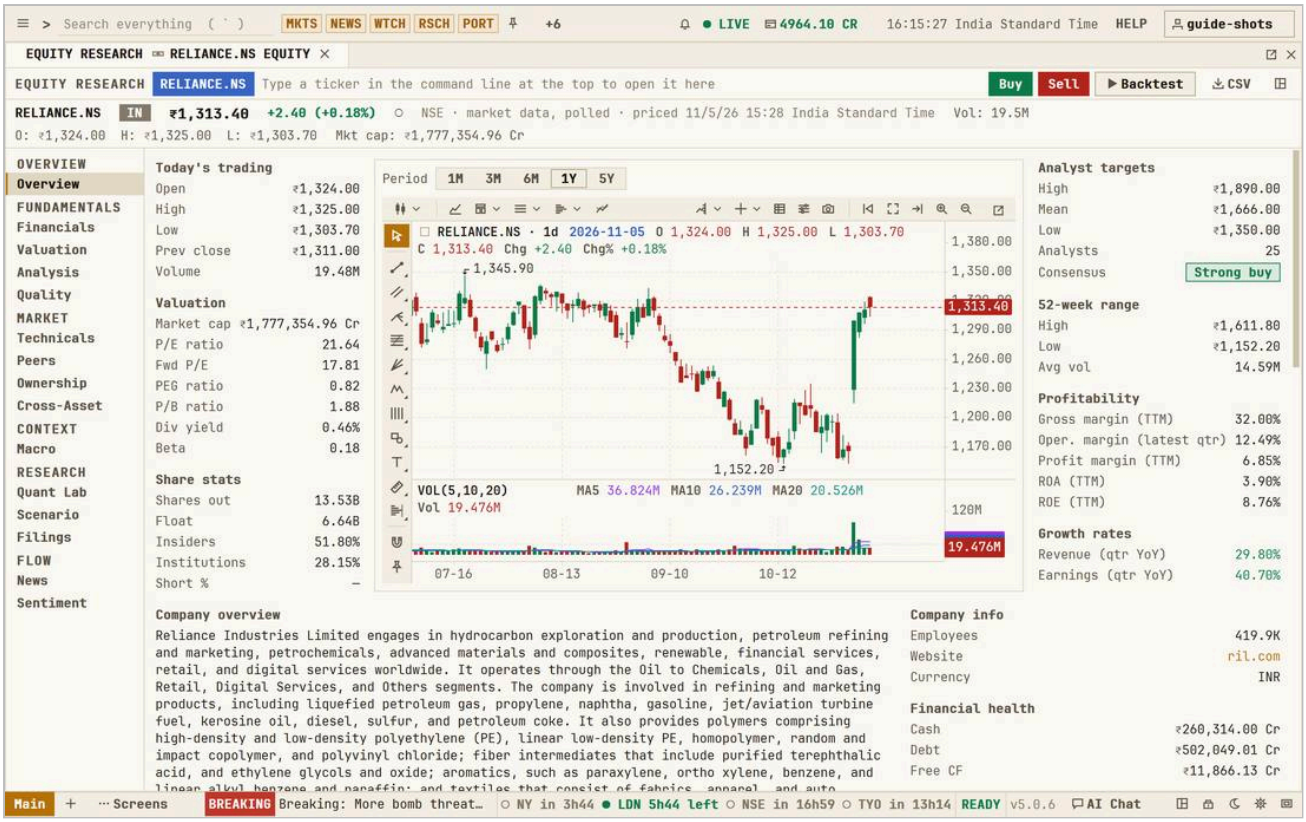


Figure 22.35 Reliance Industries (RELIANCE.NS) — the IN market chip and prices in rupees.

Overview adds an **Exchange filings** panel: listing details (**Company**, **Classification**, **ISIN**, **Listed on NSE**, **Face value**, **Issued shares**, **Market cap (exchange)**, **P/E (sector)**, **Delivery (last session)**, **Price band**, **Index memberships**, **Segments** such as *F&O stock* and *SLB eligible*, **Trading status**), the **Latest reported results**, **Board meetings and events** (upcoming and past) and **Corporate actions.**

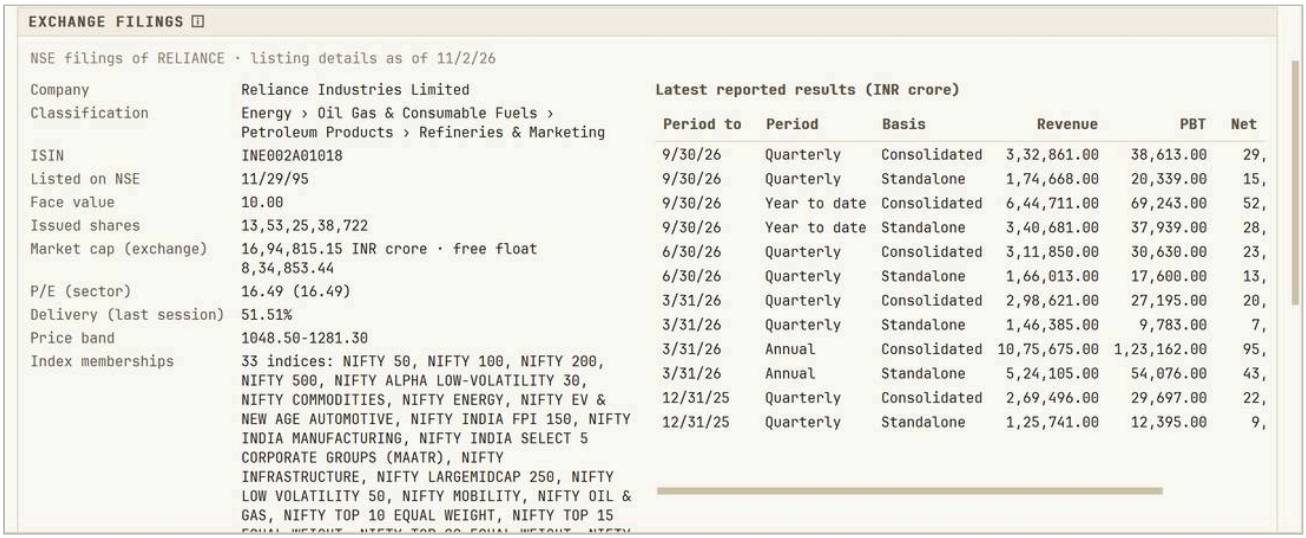


Figure 22.36 The Exchange filings panel on an Indian company's Overview.



Segments F&O stock · SLB eligible
Trading status Active · EQ

Board meetings and events

Date	When	Type	Purpose	Document
10/30/26	Past	Board meeting	Financial Results/Fund …	Open
10/30/26	Past	Board meeting	Board Meeting Intimation	Open
7/17/26	Past	Board meeting	Financial Results	Open
7/17/26	Past	Board meeting	Board Meeting Intimation	Open
4/24/26	Past	Board meeting	Financial Results/Dividend	Open
4/24/26	Past	Board meeting	Board Meeting Intimation	Open

6 rows.

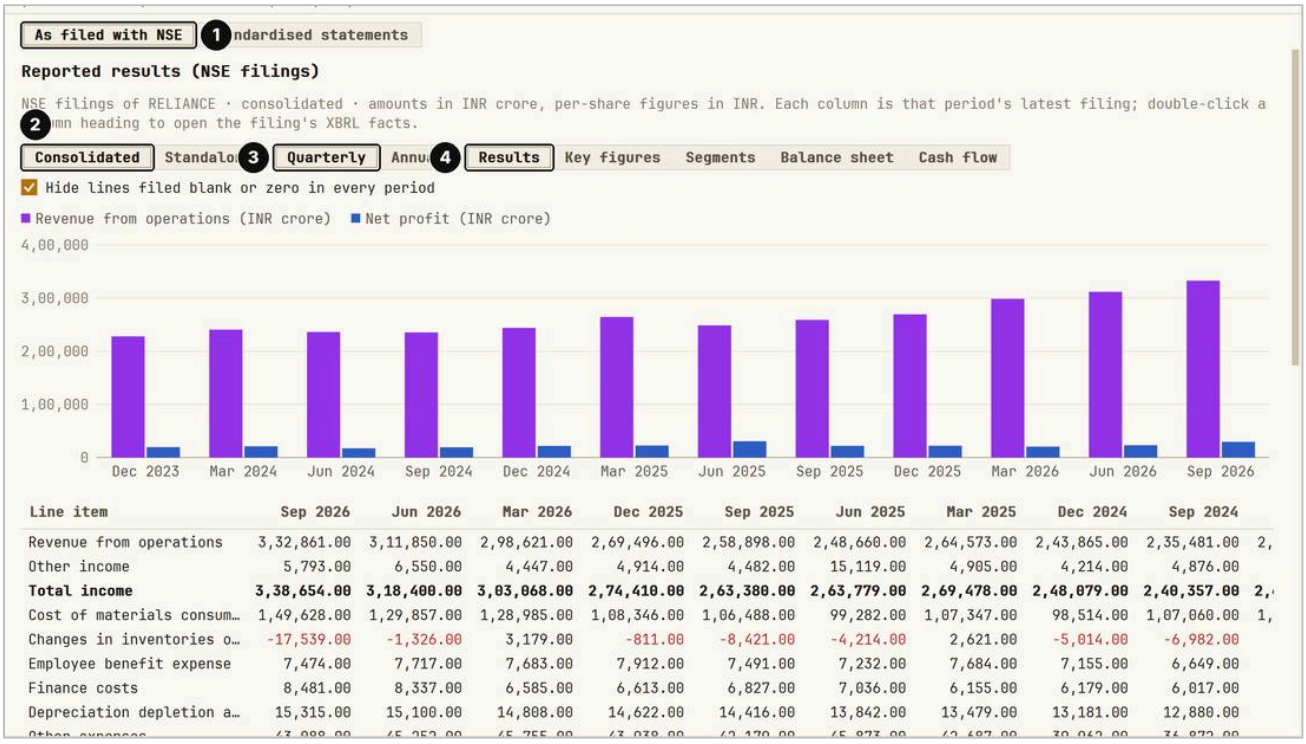
Corporate actions

Ex-date	Action	Record date
6/5/26	Dividend - Rs 6 Per Share	6/5/26
8/14/25	Dividend - Rs 5.5 Per Share	8/14/25
10/28/24	Bonus 1:1	10/28/24
8/19/24	Dividend - Rs 10 Per Share	8/19/24
8/21/23	Dividend - Rs 9 Per Share	8/21/23
7/20/23	Demerger	7/20/23
8/18/22	Dividend - Rs 8 Per Share	8/19/22
6/11/21	Dividend - Rs 7 Per Share	6/14/21
7/2/20	Dividend - Rs 6.50 Per Share	7/3/20
5/13/20	Rights 1:15 @ Premium Rs 1247	5/14/20
8/2/19	Annual General Meeting/Dividend - Rs 6.50 …	8/5/19
6/27/18	Dividend- Rs 6 Per Share	6/28/18

12 rows.

Figure 22.37 Latest reported results, board meetings and corporate actions from the exchange filings.

Financials opens on **As filed with NSE**: the results exactly as reported to the exchange, line by line.



As filed with NSE (1) ndardised statements

Reported results (NSE filings)

NSE filings of RELIANCE · consolidated · amounts in INR crore, per-share figures in INR. Each column is that period's latest filing; double-click a (2) mn heading to open the filing's XBRL facts.

Consolidated Standalo (3) Quarterly Annu (4) Results Key figures Segments Balance sheet Cash flow

Hide lines filed blank or zero in every period

Revenue from operations (INR crore) Net profit (INR crore)

4,00,000
3,00,000
2,00,000
1,00,000
0

Dec 2023 Mar 2024 Jun 2024 Sep 2024 Dec 2024 Mar 2025 Jun 2025 Sep 2025 Dec 2025 Mar 2026 Jun 2026 Sep 2026

Line item	Sep 2026	Jun 2026	Mar 2026	Dec 2025	Sep 2025	Jun 2025	Mar 2025	Dec 2024	Sep 2024	
Revenue from operations	3,32,861.00	3,11,850.00	2,98,621.00	2,69,496.00	2,58,898.00	2,48,660.00	2,64,573.00	2,43,865.00	2,35,481.00	2,
Other income	5,793.00	6,550.00	4,447.00	4,914.00	4,482.00	15,119.00	4,905.00	4,214.00	4,876.00	
Total income	**3,38,654.00**	**3,18,400.00**	**3,03,068.00**	**2,74,410.00**	**2,63,380.00**	**2,63,779.00**	**2,69,478.00**	**2,48,079.00**	**2,40,357.00**	**2,**
Cost of materials consum…	1,49,628.00	1,29,857.00	1,28,985.00	1,08,346.00	1,06,488.00	99,282.00	1,07,347.00	98,514.00	1,07,060.00	1,
Changes in inventories o…	-17,539.00	-1,326.00	3,179.00	-811.00	-8,421.00	-4,214.00	2,621.00	-5,014.00	-6,982.00	
Employee benefit expense	7,474.00	7,717.00	7,683.00	7,912.00	7,491.00	7,232.00	7,684.00	7,155.00	6,649.00	
Finance costs	8,481.00	8,337.00	6,585.00	6,613.00	6,827.00	7,036.00	6,155.00	6,179.00	6,017.00	
Depreciation depletion a…	15,315.00	15,100.00	14,808.00	14,622.00	14,416.00	13,842.00	13,479.00	13,181.00	12,880.00	

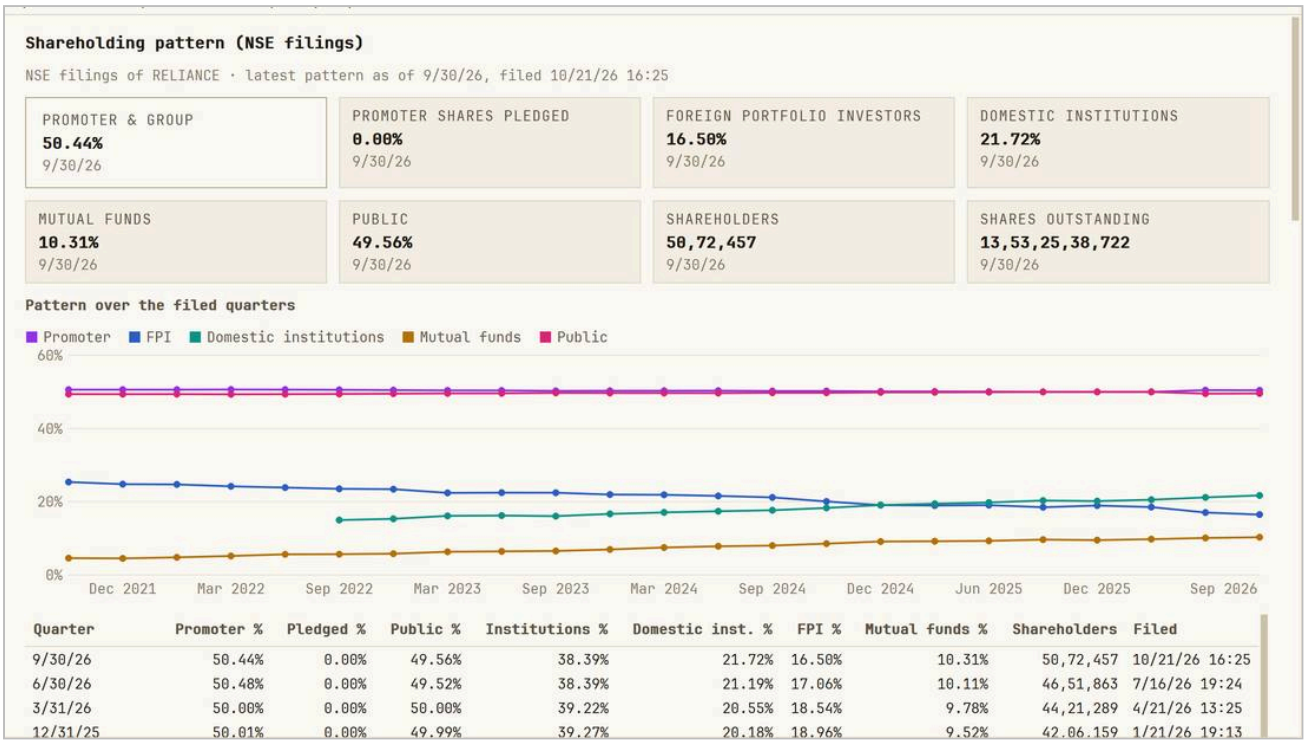
Figure 22.38 Financials as filed with NSE — quarterly results, consolidated.

1. **As filed with NSE** or **Standardised statements** (the same view as for US companies).
2. **Consolidated** (the group) or **Standalone** (the parent company alone).
3. **Quarterly** or **Annual** periods.
4. Tables: **Results**, **Key figures**, **Segments**, **Balance sheet** and **Cash flow**.

Amounts are in INR crore (or INR million, as filed); per-share figures in INR. Each column is that period's latest filing. Double-click a column heading to open the filing's detailed facts (its XBRL data) in a window of its own. Tick **Hide lines filed blank or zero in every period** to shorten the table.

Ownership shows **Shareholding pattern (NSE filings)**: eight tiles (**Promoter & group**, **Promoter shares pledged**, **Foreign portfolio investors**, **Domestic institutions**, **Mutual funds**, **Public**, **Shareholders** and **Shares outstanding**, each with its filing date), the **Pattern over the filed quarters** (a chart and a table of promoters, FPIs, domestic institutions, mutual funds and the public), the **Largest named holders (latest filing)**, **One filing,**

complete (pick any filed quarter, the latest by default, then a tab: **Summary**, **Promoters**, **Public**, **Non-public**, **Beneficial owners**, **Acting in concert**, **Foreign limits**, **Declarations**, **Unclaimed shares**), and **Large deals and short sales on the exchange** (**Bulk deals**, **Block deals**, **Short selling**).



Quarter	Promoter %	Pledged %	Public %	Institutions %	Domestic inst. %	FPI %	Mutual funds %	Shareholders	Filed
9/30/26	50.44%	0.00%	49.56%	38.39%	21.72%	16.50%	10.31%	50,72,457	10/21/26 16:25
6/30/26	50.48%	0.00%	49.52%	38.39%	21.19%	17.06%	10.11%	46,51,863	7/16/26 19:24
3/31/26	50.00%	0.00%	50.00%	39.22%	20.55%	18.54%	9.78%	44,21,289	4/21/26 13:25
12/31/25	50.01%	0.00%	49.99%	39.27%	20.18%	18.96%	9.52%	42,06,159	1/21/26 19:13

Figure 22.39 Shareholding pattern from NSE filings — promoters, foreign and domestic institutions over time.

9/30/25	50.01%	0.00%	49.99%	38.98%	20.33%	18.50%	9.66%	43,93,764	10/17/25 20:16
6/30/25	50.07%	0.00%	49.93%	39.01%	19.80%	19.07%	9.32%	44,35,756	7/21/25 20:10
3/31/25	50.11%	–	49.89%	38.52%	19.46%	18.97%	9.21%	47,65,728	4/21/25 16:10
12/31/24	50.13%	–	49.87%	38.25%	19.10%	19.07%	9.14%	47,14,959	1/21/25 16:55
10/29/24	50.24%	–	49.76%	38.48%	18.31%	20.08%	8.56%	42,90,633	11/8/24 19:42
9/30/24	50.24%	–	49.76%	38.97%	17.68%	21.19%	8.03%	38,34,968	10/21/24 20:22
6/30/24	50.33%	–	49.67%	39.16%	17.41%	21.59%	7.84%	34,93,125	7/20/24 18:48
3/31/24	50.31%	–	49.69%	39.15%	17.09%	21.90%	7.50%	34,63,276	4/20/24 00:20
12/31/23	50.30%	–	49.70%	38.82%	16.68%	21.97%	6.97%	36,13,814	1/19/24 22:06
9/30/23	50.27%	–	49.73%	38.67%	16.07%	22.46%	6.56%	36,98,648	10/21/23 14:19

23 rows.

Largest named holders (latest filing)

Holder	Group	Category	Shares	% of shares	Pledged %
Srichakra Commercials LLP	promoter	Any Other (specify)	1,47,91,99,658	11.11%	0.00%
Devarshi Commercials LLP	promoter	Any Other (specify)	1,09,11,38,920	8.20%	0.00%
Karuna Commercials LLP	promoter	Any Other (specify)	1,09,11,38,920	8.20%	0.00%
Tattvam Enterprises LLP	promoter	Any Other (specify)	1,09,11,38,920	8.20%	0.00%
Life Insurance Corporation of India	public	Insurance Companies	94,59,08,925	7.11%	–
Reliance Industries Holding Private Ltd	promoter	Any Other (specify)	60,80,30,142	4.57%	0.00%
Reliance Industrial Investments and Holdings Limited	promoter	Any Other (specify)	48,18,84,012	3.62%	0.00%
Reliance Services and Holdings Limited	promoter	Any Other (specify)	34,37,65,640	2.58%	0.00%
SBI Mutual Funds	public	Mutual Funds	33,80,19,479	2.54%	–
Samarjit Enterprises LLP	promoter	Any Other (specify)	24,92,50,548	1.87%	0.00%
ICICI Prudential Mutual Funds	public	Mutual Funds	24,63,42,274	1.85%	–
NPS Trust	public	Provident Funds/ Pension Funds	21,59,63,942	1.62%	–
Sikka Ports & Terminals Limited	promoter	Any Other (specify)	7,00,00,000	0.53%	0.00%
K D Ambani	promoter	Individuals/Hindu undivided Family	3,14,82,644	0.24%	0.00%

40 rows.

Figure 22.40 The rest of the quarter-by-quarter pattern table and the largest named holders in the latest filing.

Filings shows the NSE filings instead of SEC ones, in tabs: **Announcements**, **Integrated filings**, **Results filings**, **Annual reports**, **BRSR** (business responsibility and sustainability reports), **Board meetings**, **Shareholder votes** and **Postal ballots.** Each tab lists 50 rows, newest first; **Load more** fetches older ones, and the box above the list

finds a word in the subjects and details (for example *buyback* or *dividend*). Double-click a row to open its document; a filing with XBRL data opens its facts, and a voting result opens the **Resolutions voted on**.



Figure 22.41 NSE filings for an Indian company — the Announcements tab, with Load more for older rows.

Note

A BSE listing (`.BO`) is matched to its NSE filings by ISIN. If no NSE-listed company matches, each view says *No NSE filings are shown for …* and why.

22.23 Research a currency, index or bond (Asset Research)

When you pick something that is not a company — a currency pair, a market index, a bond or a CFD — from the command line, it opens in **Asset Research** instead. This screen has no code of its own: you reach it by picking a search result.

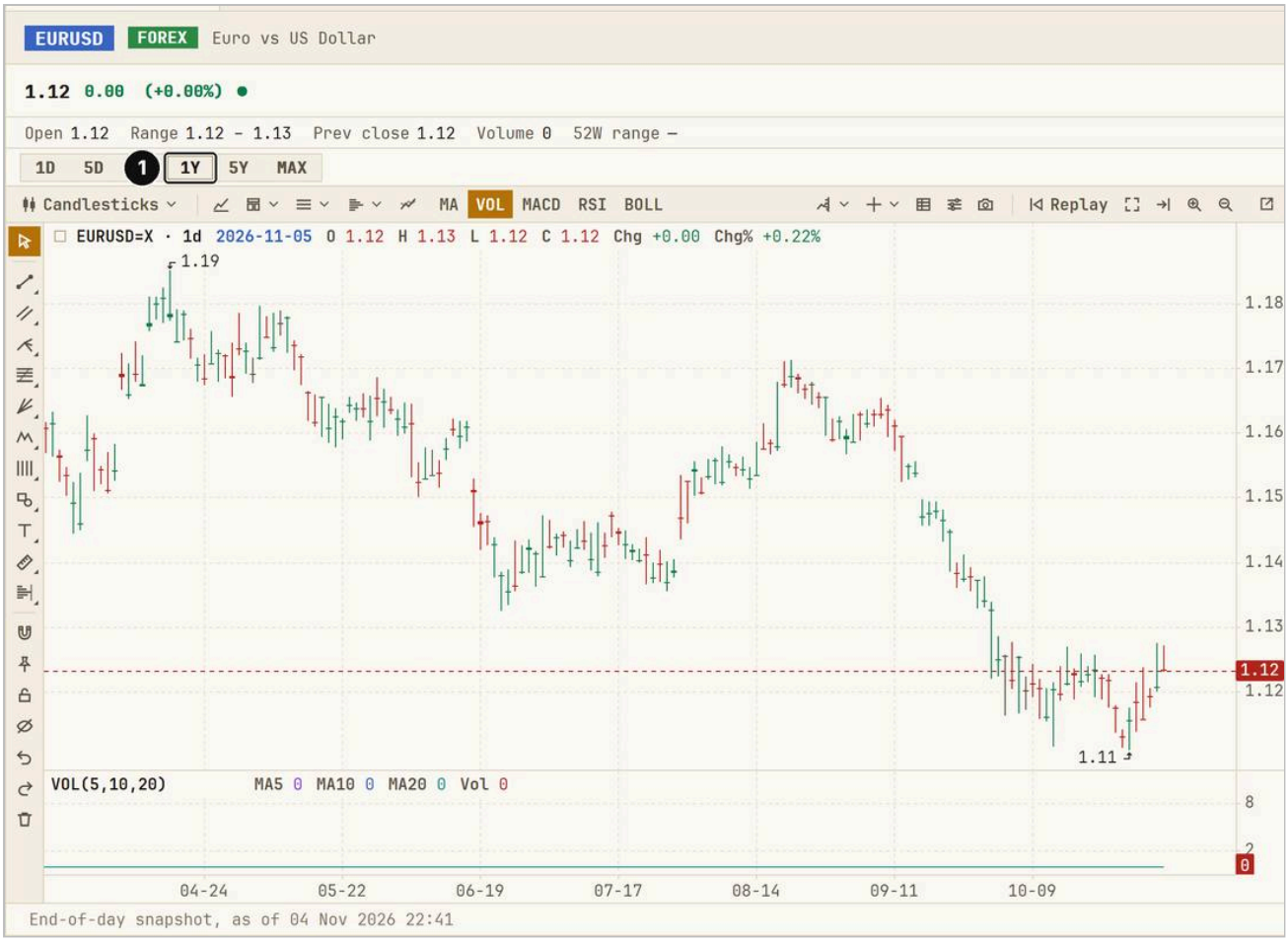


Figure 22.42 Asset Research on the euro / US dollar rate — live quote, session figures and chart.

1 Chart ranges: **1D**, **5D**, **1M**, **1Y** (the default), **5Y** and **MAX**.

From top to bottom:

- **The header** — the symbol, its asset-class chip (for example **FOREX**), its name, and on the right the venue and currency.
- **The quote line** — the live price and change, with *Price from Fincept market data* beside it.
- **Session figures** — **Open**, **Range**, **Prev close**, **Volume** and **52W range**.
- **The chart** — ranges **1D** (5-minute bars), **5D** (15-minute bars), **1M** and **1Y** (daily bars; 1Y is the default), **5Y** (weekly bars) and **MAX** (ten years of monthly bars), with the usual chart toolbar and quick indicator buttons (**MA**, **VOL**, **MACD**, **RSI**, **BOLL**).
- **The metric column** on the right — a short description, then groups such as **INSTRUMENT** (**Fetch symbol**, **ISIN**, **FIGI**, **MIC**, **Sector**, **Industry**, **Market cap**), **PRICE & ACTIVITY** and **PERFORMANCE** (1 week, 1 month, year to date, 1 year).
- **The footer** — *End-of-day snapshot, as of …*: the metric column is a daily snapshot, while the quote and chart are live.

When an instrument has no price source (many bonds and economic series), the screen says *No price source for this instrument* and shows the reference data alone, instead of an empty chart.



Figure 22.43 A market index (Nifty 50) in Asset Research, with the metric column on the right.

Typing `EURUSD` in the command line lists crypto pairs first (under **CRYPTO**) and currency pairs under **CURRENCIES**: pick a row tagged **FX** to open Asset Research. Other non-equity picks go to their own screens: a crypto pair opens **Chapter 18, Crypto Trading** p. 298, a future or an option opens **Chapter 17, F&O** p. 284, an economic series opens **Chapter 32, Global Data** p. 648.

22.24 Research a fund or ETF (Fund Research)

A fund, an ETF or a money-market fund picked in the command line opens **Fund Research**. You can also search inside it with the box **Find a fund: name, ticker or ISIN**.

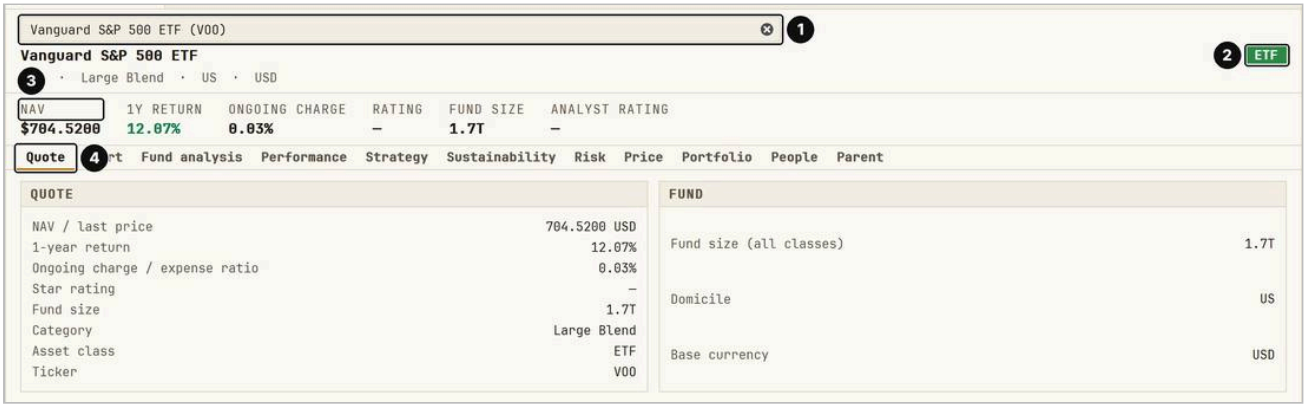


Figure 22.44 Fund Research on an ETF — the header, the key strip and the Quote tab.

1. Search funds, ETFs and money-market funds by name, ticker or ISIN.
2. The fund's type: **ETF** or **Fund**.
3. The key strip: **NAV**, **1Y return**, **Ongoing charge**, **Rating**, **Fund size** and **Analyst rating**.
4. The tabs.

1. Type `VOO` (or a fund name or ISIN) in the command line, or open Fund Research and type in its search box.
2. Pick the fund from the list. The header shows its name, ticker, category, country and currency.
3. Read the key strip, then click through the tabs.

The tabs, left to right:

Tab	What it shows
Quote	NAV or last price, 1-year return, ongoing charge / expense ratio, star rating, fund size, category, asset class, ticker; the fund's size, domicile and base currency
Chart	NAV and total-return history (NAV plus distributions, rebased) over **1M**, **6M**, **1Y**, **3Y**, **5Y** (the default) or **10Y**
Fund analysis	the analyst view and quantitative rating, risk rating, fee level against the category, equity style box, and **Ratings by window** (rating, performance, risk, risk score, category rank, risk-adjusted return)
Performance	**Trailing total return** by period; for US funds also the monthly class returns from their SEC filings
Strategy	the investment strategy, benchmark and the published documents
Sustainability	sustainability rating and rank, low-carbon designation
Risk	**Risk vs benchmark** and **Risk statistics**: standard deviation, max drawdown, Sharpe and Sortino ratios, alpha, beta, tracking error and information ratio over 1, 3 and 5 years
Price	price, price date, currencies, exchange, distribution yield, fees and dealing terms (minimum investments, entry and exit charges)
Portfolio	holdings with **Asset class exposure**, **Sector exposure** and **Country exposure**; for US funds, the positions from the SEC N-PORT filing
People	the named portfolio managers and since when
Parent	the fund company and the service providers (administrator, adviser)

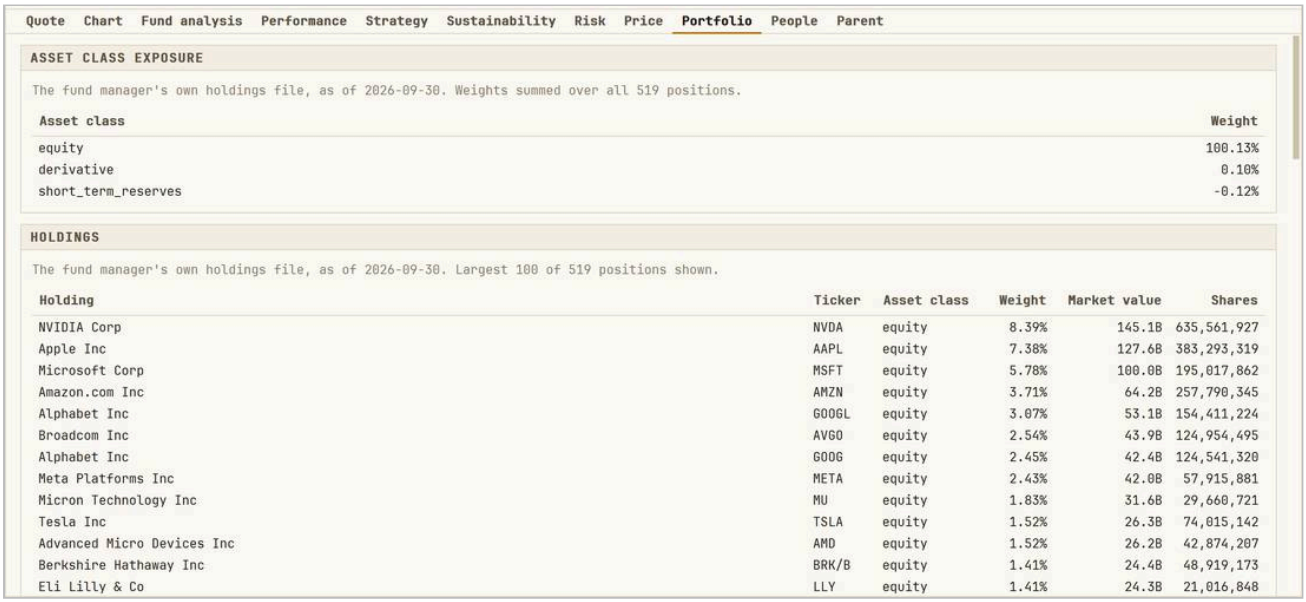


Figure 22.45 The Portfolio tab — the fund's holdings and its exposures.

A tab with nothing published says so in a sentence (for example *No holdings breakdown is published for this fund.*), so an empty tab is never mistaken for a fund that holds nothing. When the fund was matched to the symbol by its ticker or name rather than a shared identifier, the header says so (*Matched to this fund by name (confidence ...): no shared identifier exists for this symbol.*), and a ticker found only by a search is marked *(inferred from search)* — check the ISIN before you rely on the figures. A share class that takes no new money shows **Closed to new investment** in the header.

22.25 Reference

Title bar

Control	What it does
Ticker chip	The symbol on screen. Drag it onto another panel to send that panel the same symbol (*Drag to broadcast this symbol to any panel*).
Buy / Sell	Open the Equity Trading order ticket for this listing at the last price. Shown once a symbol is loaded; the tooltip names the venue and accounts, or why it cannot be traded.
Backtest	Opens Backtesting with this symbol and runs after you confirm the price.
CSV	*Download price history (CSV)*: the Download Price Data dialog.
Dock button	*Toggle the research dock (Copilot / Notes / Alerts / Depth)*. Closed when the screen opens.

Quote bar

Field	Meaning
Symbol	The listing on screen
Market chip	**US**, **IN** or **GLOBAL** (indices, currencies, futures, crypto)
Price	Last price, in the listing's currency (with your home-currency equivalent when Settings > Currency asks for one)
Change	Today's change and % change
Freshness badge	**LIVE**, **DELAYED**, **STALE**, **CLOSED** or **SNAPSHOT** — see **Chapter 5, The Terminal Window** p. 70
Provenance	The venue and the time the price was printed
Vol / O / H / L	The day's volume, open, high and low
Mkt cap	Shares outstanding x the last price
You hold ...	Your position in this stock across connected live broker accounts (hidden when you hold none)

Sections and their main controls

#	Section	Group	Controls
1	**Overview**	OVERVIEW	Chart **Period** 1M / 3M / 6M / 1Y / 5Y (default 1Y)
2	**Financials**	FUNDAMENTALS	Statement switch; **Refresh**; **Export CSV**; NSE: **As filed with NSE** / **Standardised statements**, **Consolidated** / **Standalone**, **Quarterly** / **Annual**, five tables, **Hide lines filed blank or zero in every period**

#	Section	Group	Controls
3	**Valuation**	FUNDAMENTALS	Seven assumption boxes; **Reset to fundamentals**; **Backtest DCA**; **Backtest this valuation band**
4	**Analysis**	FUNDAMENTALS	none (read only)
5	**Quality**	FUNDAMENTALS	none (read only)
6	**Technicals**	MARKET	**Refresh**; click a key-indicator card or a table row to draw it on the chart
7	**Peers**	MARKET	**Peers (comma-separated):** box; **Load**; sortable headers; double-click a row
8	**Ownership**	MARKET	NSE: view tabs, filing tabs, deals tabs
9	**Cross-Asset**	MARKET	none (read only)
10	**Macro**	CONTEXT	none (read only)
11	**Quant Lab**	RESEARCH	**Open in AI Quant Lab**; **Run full backtest**; three **Backtest** buttons; **Run deep analysis**
12	**Scenario**	RESEARCH	Twelve assumption boxes; **Reset to fundamentals**; a **Prob.** box per scenario
13	**Filings**	RESEARCH	**Filings** / **Insider transactions** tabs; group filter; find box; **Open on SEC**, **Full view**, **Copy link**; NSE: eight tabs, **Load more**
14	**News**	FLOW	Source box; **Refresh**; **Read full article**
15	**Sentiment**	FLOW	**Refresh**; **Most polarising** / **Most recent**

Research dock

Tab	Controls
Copilot	Persona picker; **Analyze AAPL · 2 CR** (the ticker and the price); **Copy**
Notes	**Insert research snapshot**; the note editor (*Research notes for this symbol — saved to your account.*)
Alerts	**Above** / **Below**; price box; **Add**; **Account alerts**; per marker: status (**Armed** / **Triggered**) and remove
Depth	Order book (**Bid qty**, **Bid**, **Ask**, **Ask qty**), spread line, **Stream market depth** when locked

Download Price Data dialog

Field	Options	Default
Period	1mo, 3mo, 6mo, 1y, 2y, 5y, 10y, max	1y
Interval	1m, 5m, 15m, 30m, 1h, 1d, 1wk, 1mo	1d
Buttons	**Cancel**, **Download**	

What is saved

- Per workspace desk: the symbol and the section on screen.
- Per account (every device): your notes and price markers for each symbol, and the news source you picked.

22.26 For advanced users

Shortcut

- The backtick key focuses the command line; type a ticker and pick it.
- In Filings, the arrow keys move through the list while the preview follows.
- In Peers, double-click a row to research that company.

Link groups. Give Equity Research a link colour (see **Chapter 5, The Terminal Window** p. 70) and it follows the symbol picked in any panel of the same colour — a watchlist, a positions table, the order ticket. Picking a symbol here sends it to them.

Where the figures come from. US companies take their fundamentals from SEC filings; other listings from the company profile and reported statements. Every section says on screen what it read and when (*as of*, *loaded*, *read at*). A figure that is missing is shown as a dash with a reason, never as zero.

Currencies. Every figure is printed in the currency it is in. For a company that reports in one currency and trades in another (for example an ADR), the Valuation and Scenario sections say so and do not mix the two.

How the rating votes. In Technicals each indicator casts one vote (rows that are one reading count once). The bar is the share of bullish votes among the votes that took a side. The rating word weighs a strong vote twice: **Strong buy** when the bullish weight is more than twice the bearish, **Buy** when it is larger, **Strong sell** and **Sell** the same way round, **Neutral** when they are equal.

Do it with AI

The AI chat can work this screen for you. Try:

- *Open RELIANCE in Equity Research and summarise its latest NSE results.*
- *Compare AAPL with MSFT, GOOGL and META on P/E, margins and growth.*
- *What does the Quality section say about NVDA, and which term drove the score?*
- *Write a research note on TCS and save it to my notes.*

22.27 Troubleshooting

The quote bar says "Loading..." and the sections stay empty. The quote or profile could not be read yet. Wait a few seconds. If the quote fails, the price reads *Price unavailable* and is asked for once more about 15 seconds later. If a section says *Waiting for sign-in*, your session is still starting.

Buy and Sell are greyed out. Point at the button: the tooltip says why — for example *… is an index - it cannot be bought or sold*, or that no account trades that market. Fincept Paper trades every listing that has a market price; just after sign-in the tooltip may say *the Fincept Paper account is not ready* — wait a moment, then switch to another screen and back (the buttons are checked again each time the screen is shown).

A section shows "N/A" or a dash. The figure is not published for this company. The line under it says why, and whether the filed statements were used instead.

Financials shows only a few years. The caption says how many periods are on file. Click **Refresh** after a new annual report.

Filings says "Filings for … are coming soon" or "No filings yet". Filings are SEC filings and exist only for US-listed companies. Indian listings use the NSE filings view.

The Valuation tiles show a dash. A required input is missing (*Free cash flow for … is not available - enter it above.*) or the discount rate is not above terminal growth (*The discount rate must exceed terminal growth.*). Fix the box named.

Depth says "Broker depth is available for NSE and BSE cash equities only". The order book comes from a connected Indian broker, so it exists only for NSE and BSE shares. If it says *Depth is streamed only for the Equity Trading selected symbol on …*, your broker streams depth to the Equity Trading screen only: read the book there.

CHAPTER 23

Portfolio `PORT`

Record what you own — in any market and any currency — and see its value, profit and loss, income, tax lots, performance, risk, stress tests, rebalancing and reports, all computed from the transactions you enter.

At a glance

Open it	• Type `PORT` in the command line and press **Enter** (also `portfolio`, `pf` or `holdings`) • Click **PORT** in the top bar • Type `PORT RISK`, `PF PERF`, `PORT LEDGER` and so on to open a tab directly
You need	• Signed in on any paid plan • Free to use; AI insights, the backtest comparison and the end-of-day attribution run use credits
Best for	• Tracking long-term investments across countries • Checking performance against a benchmark • Seeing risk, income and tax lots in one place • Planning a rebalance
Time to learn	30 minutes
Related	**Chapter 22, Equity Research** p. 392, **Chapter 16, Equity Trading** p. 264, **Chapter 24, Backtesting** p. 464, **Chapter 10, Watchlist** p. 172, **Chapter 8, Dashboard** p. 123, **Chapter 45, Report Builder** p. 858

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23.1 Screen tour

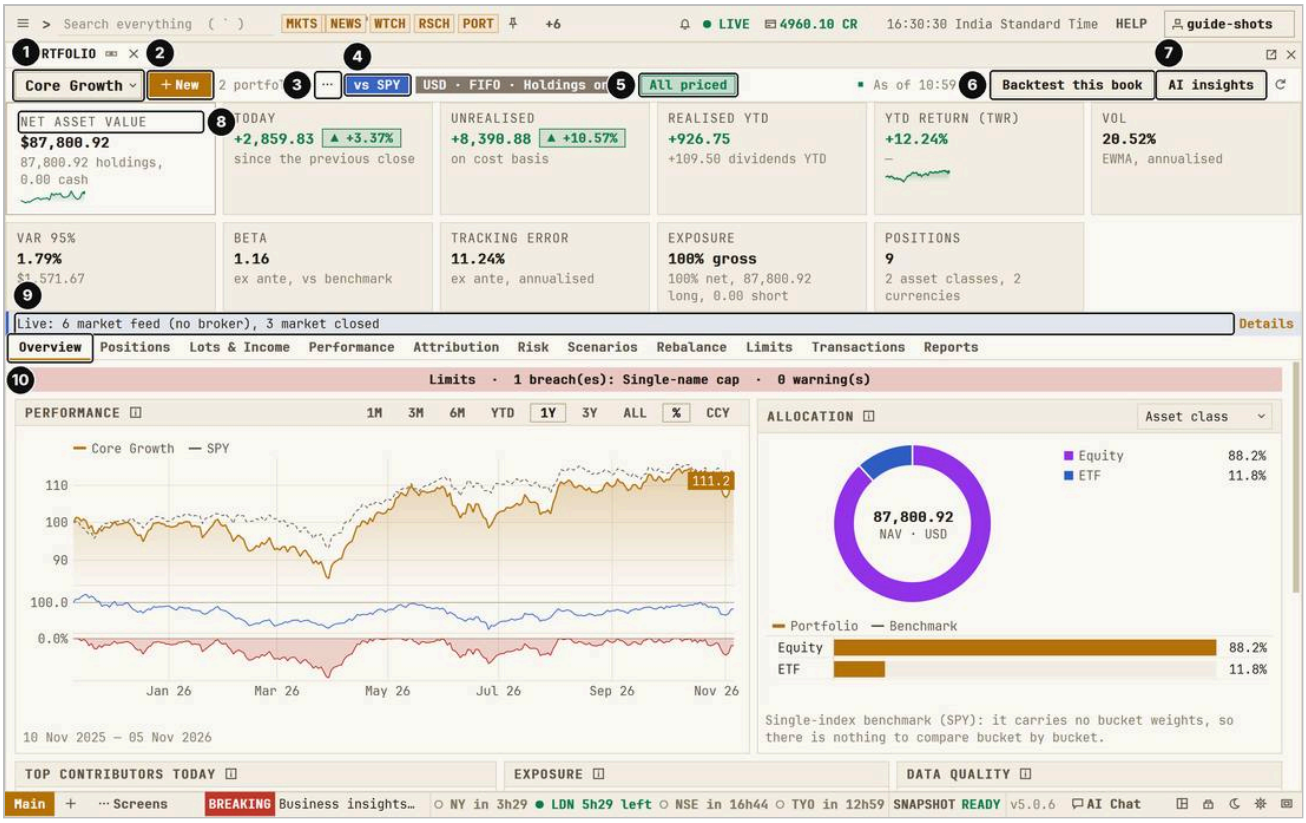


Figure 23.1 The Portfolio screen on the Core Growth book, Overview tab.

1. **The portfolio picker**: switch books, or pick **All portfolios** for a combined view.
2. **New** creates a portfolio. The counter beside it shows how many you have of your plan's limit.
3. **Portfolio actions** (the ... button): edit, import, broker sync and delete.
4. Chips: the benchmark, then the base currency, cost method and whether cash is tracked.
5. **Pricing health**: **All priced**, or how many lines are unvalued, stale, at cost or expired. Click it to see them.
6. **Backtest this book** tests today's weights as a monthly-rebalanced strategy.
7. **AI insights** opens the AI analyst over this book.
8. **The KPI ribbon**: value, today's change, profit and loss, return and risk at a glance.
9. **The live status bar**: how the book's prices are arriving right now.
10. **The eleven tabs**.

From top to bottom:

1. **The header** — the portfolio picker, **New**, the quota counter, **Portfolio actions**, the chips, the pricing-health pill, a live dot with the time of the last valuation (**As of ... UTC**), **Backtest this book**, **AI insights** and the refresh button.
2. **The KPI ribbon** — eleven tiles, twelve when the valuation includes projected income (described in **§23.6 Read the KPI ribbon** p. 436). A note on the ribbon lists anything left out of the totals, for example *P&L excludes 1 line(s) with unknown cost* or *no FX rate for ...*.
3. **The live status bar** — for example *Live: 3 delayed (no broker), 6 market feed (no broker)*. **Details** lists every line and why it is priced the way it is.
4. **The tab strip** — **Overview**, **Positions**, **Lots & Income**, **Performance**, **Attribution**, **Risk**, **Scenarios**, **Rebalance**, **Limits**, **Transactions**, **Reports**. On a narrow window the strip wraps onto a second line.
5. **The tab itself.**

The first time you open the screen with no portfolio, it says **No portfolio yet** and offers **Create portfolio** and **Import from broker**.



Figure 23.2 Before your first portfolio — the empty screen.

23.2 How a portfolio works

A **portfolio** (the screen also calls it a **book**) is a list of **transactions**: buys, sells, dividends, deposits, fees, splits. You record them; Fincept's servers rebuild everything else from them — your positions, their cost, the profit and loss, the income, the performance and the risk. The terminal itself only re-prices the positions as live prices arrive.

This has three consequences you should know from the start:

- **Every figure can be traced.** If a number looks wrong, the cause is a transaction. Fix or delete the transaction and every tab follows.
- **Your portfolios are kept on your Fincept account.** They appear on every device you sign in on.
- **A portfolio is not a broker account.** Recording a buy here does not place an order. To trade, use **Chapter 16, Equity Trading** p. 264; you can then record the fill here, or let a broker sync do it.

Each portfolio has a **base currency** (the currency its totals are shown in), a **cost method** (how a sale is matched to earlier buys), an optional **benchmark** (what its performance is compared with) and may track a **cash** balance.

23.3 Quick start

Create a portfolio and record your first purchase in about three minutes.

1. Type `PORT` in the command line and press `Enter`.
2. Click **New** (or **Create portfolio** on the empty screen). The **New portfolio** dialog opens.

3. Type a **Name**, for example `Core Growth`. Leave **Base currency** on USD (or pick yours) and the other fields as they are. Click **Create**.



Figure 23.3 The New portfolio dialog.

4. Open the **Positions** tab and click **Add position**. The **Add transaction** dialog opens on **Trade**.

5. Leave **Side** on **Buy**. In **Symbol**, type `AAPL` and pick **Apple Inc.** from the list — a typed symbol is not enough, you must pick it.

6. Enter the **Quantity** (for example `10`), the **Price** you paid, any **Fees**, and the **Trade date**. Click **Record**.

7. The position appears in the table, priced live. The ribbon at the top shows the portfolio's value and today's change.

> **Tip**
>
> Have many trades to enter? Paste them all at once with **Import transactions (CSV)** — see **§23.10 Import transactions from a file** p. 444.

23.4 Create and manage portfolios

Create a portfolio

Click **New**. The dialog has these fields:

Field	What it means
Name	Required. The name in the picker, for example *Core Growth*.
Base currency	The currency every total is shown in (USD by default; any major currency). Holdings in other currencies are converted at live rates.

Field	What it means
Cost method	How a sale is matched to earlier purchases: **FIFO** (oldest first, the default), **LIFO** (newest first), **HIFO** (highest cost first) or **AVERAGE** (one pooled average price). A hint under the box explains each.
Track cash balances in this book	Off by default. On: the book carries a cash balance per currency — a buy spends cash, a sale or dividend adds to it, and deposits and withdrawals must be recorded. Off: every trade counts as money coming in or going out, and the value is the holdings only.
Opening cash	Shown when cash tracking is on: the starting deposit, in the base currency.
Benchmark	**Default for USD** (or your base currency: the server picks the home-market index), **None**, **Single index or ETF**, or **Blend (e.g. 60/40)**. See **§23.5 Set a benchmark** p. 435.
Inception date	Optional. The day the book starts. Left blank, it starts with the first transaction.

Create saves the book and selects it. If you leave **Name** empty, the field is marked **required** and the message *The portfolio needs a name.* appears.

Plan & credits

Your plan sets how many portfolios you can have: 1 on Exclusive, 10 on Exclusive+ and no limit on Exclusive Pro. The counter beside **New** shows how many you have (for example *2 portfolios*). At the limit, **New** shows a lock and offers an upgrade.

Switch between portfolios

Click the picker (the portfolio's name at the left of the header) and choose a book. The screen remembers the last one you opened.



Figure 23.4 The portfolio picker, with the combined All portfolios view.

Edit, import, sync or delete

Portfolio actions (the **...** button) holds:

- **Edit portfolio...** — the **Portfolio settings** dialog: the same fields as New (without **Opening cash**), plus **Description**. Changing the cost method rebuilds every lot and every realised figure; the dialog warns you (*Changing FROM FIFO TO LIFO re-closes every lot in the book...*).
- **Import transactions (CSV)...** — see **§23.10 Import transactions from a file** p. 444.
- **Sync from a connected broker...** — reads the holdings of a connected broker account into this book or a new one (see below and **Chapter 15, Brokers & Accounts** p. 248).
- **Delete portfolio...** — deletes the book and all its transactions after you confirm. This cannot be undone.

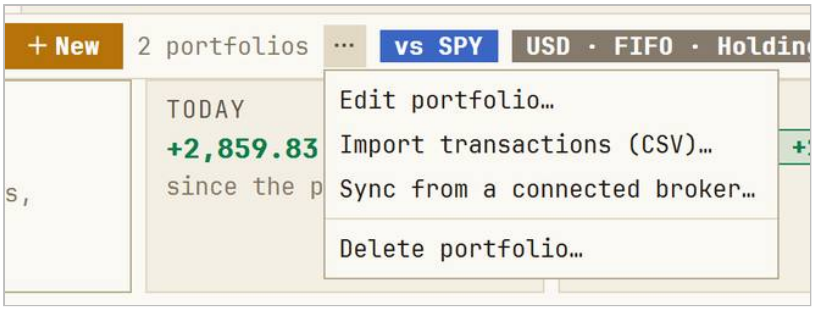


Figure 23.5 The Portfolio actions menu.

Careful

The **Base currency** can be changed only while the book has no transactions. Once it has some, saving a new base currency is refused with *base_currency cannot change once the portfolio has transactions*, because every trade's exchange rate and cost are stated in the old currency. Choose it carefully when you create the book; to change it later, create a new book and import the ledger into it.

Sync from a broker account

Use this to start a book from what a connected broker account already holds, instead of typing the trades.

1. Open **Portfolio actions > Sync from a connected broker...** (or **Import from broker** on the empty screen). The **Sync from a broker account** dialog opens.
2. Pick the **Broker account**. The dialog reads it straight from the broker — holdings, open positions and today's trades — and previews every line: **Symbol**, **Venues**, **Type**, **Product**, **Qty**, **T1**, **Bought today**, **Avg cost** and **Notes**.
3. In **Into**, pick an existing book or **A new book from this account**, and give a new book a **Book name**.
4. Read the notes under the table (lines with unknown cost, lines that could not be valued or imported), then click **Sync**. **Read again** reads the broker once more.

Lots of one company on NSE and BSE, and split T1 rows, become one line; today's delivery buys join their holding. After the sync the book is linked to that account and re-syncs from the broker by itself. A book already linked to another account offers a **Re-link** box to move it. If part of the account could not be read, the sync adds and updates lines but removes none. With no broker connected, the dialog says *No broker account is connected - log in to one under Accounts.*

23.5 Set a benchmark

A **benchmark** is what the book's performance is measured against — usually an index or an index ETF. It drives the active return, beta, tracking error and attribution.

1. Click **Portfolio actions** (the **...** button) and choose **Edit portfolio...** (or set it in **New** when you create the book).

2. In **Benchmark**, pick one of:
   - **Default for USD** (or your currency) — the server measures the book against its home-market index for that currency (for a US dollar book, SPY).
   - **None** — no relative statistics.
   - **Single index or ETF** — type in the search box under it (for example `Nifty 50`) and pick the result.
   - **Blend (e.g. 60/40)** — click **Add leg** for each part, pick its symbol and weight (the weights must add up to 100%), and choose how often it is rebalanced (**Monthly** or **Daily**). Each leg can also name the asset class it stands for (**no bucket**, Equity, Bond, Cash, Commodity, Real estate, Alternative or Crypto); Attribution then files that leg's weight in that bucket instead of classifying the symbol itself.

3. Optional: give a blend a **Name** and click **Save** beside **Saved** to reuse it in other books.

4. Click **Save** at the bottom of the dialog.



Figure 23.6 Portfolio settings, with a single-index benchmark.

23.6 Read the KPI ribbon

The ribbon under the header sums up the book. Every money figure is in the base currency.



Figure 23.7 The KPI ribbon.

Tile	Meaning
Net asset value	Holdings plus cash. The line under it splits the two; the small chart is the recent value.
Today	The change since the previous close of every priced line, in money and %.
Unrealised	Market value minus the cost of the lots you still hold.
Realised YTD	Profit or loss of the lots closed this calendar year; dividends this year are shown under it, not in it.
Income yield	Projected annual income as a share of the value (shown when the server's valuation includes projected income).
YTD return (TWR)	The time-weighted return since 1 January; a chip shows the difference from the benchmark.
Vol	Annualised volatility of the book (the EWMA estimate when available).
VaR 95%	Value at risk at 95% confidence, at the risk engine's default horizon: a loss the book should exceed only one time in twenty, as a share of its value; the line under it is the same loss in money.
Beta	How much the book moves with its benchmark.
Tracking error	How far the book's returns stray from the benchmark's, annualised.
Exposure	Gross exposure, then net, long and short. Options count by their delta, futures by their notional.
Positions	The number of lines, asset classes and currencies.

The risk tiles read **computing** for a few seconds while the risk engine runs; they fill in by themselves.

Words used on the ribbon:

- **Time-weighted return (TWR)** — the return of the investments themselves, with the effect of money you added or took out removed. It is the fair way to compare with a benchmark.
- **Volatility** — how much the value swings from day to day, scaled to a year.
- **Value at risk (VaR)** — a loss level that should be exceeded only on 5% of days (at 95%).

23.7 The Overview tab



Figure 23.8 Overview — the limits strip (one breach here), performance against the benchmark and allocation.

- **Limits** — a strip at the top when the book breaks or nears one of its limits (see **§23.17 Set limits and check trades (Limits)** p. 455). Click it to open the Limits tab.

- **Performance** — the book's wealth index (100 at the start of the window) against the benchmark (dashed). Pick a window: **1M**, **3M**, **6M**, **YTD**, **1Y**, **3Y** or **ALL**, and % (indexed) or **CCY** (the value in the base currency). Under the main chart, a second line shows the book relative to the benchmark (above 100 means ahead), and a shaded pane shows the drawdown — how far the book is below its own peak. Point at the chart to read the values of a day.
- **Allocation** — the book's weights by **Asset class**, **Sector**, **Country** or **Currency**, as a donut and a bar list. The thin bar under each row is the benchmark's weight.
- **Top contributors today** — the lines that made and lost the most today, in money.
- **Exposure** — long, short, gross and net exposure, leverage and the number of holdings.
- **Data quality** — how much of the book was priced now: unvalued, stale, at-cost and expired lines, missing exchange rates and the risk-free rate used for ratios.
- **Income**, **Upcoming actions** and **Tax** — three small panels: income received and projected, dividends and splits going ex in the next 30 days, and unrealised profit split into short and long term, with the number of lots you could sell at a loss (**Harvest**). Each has an **Open** button to the matching view in Lots & Income.

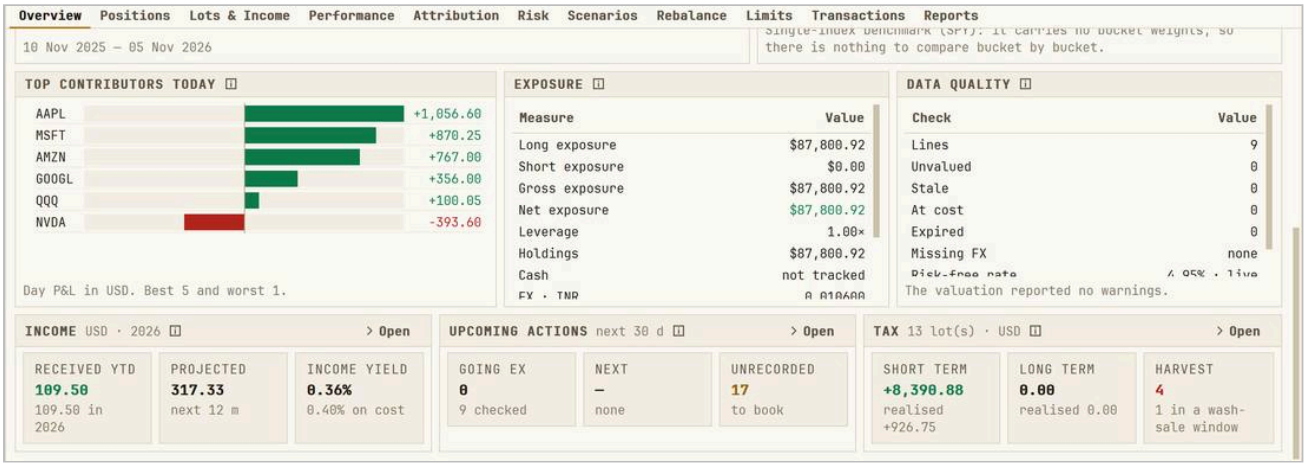


Figure 23.9 Overview, lower half — contributors, exposure, data quality, income, actions and tax.

23.8 Work with positions

The **Positions** tab lists every line the book holds.

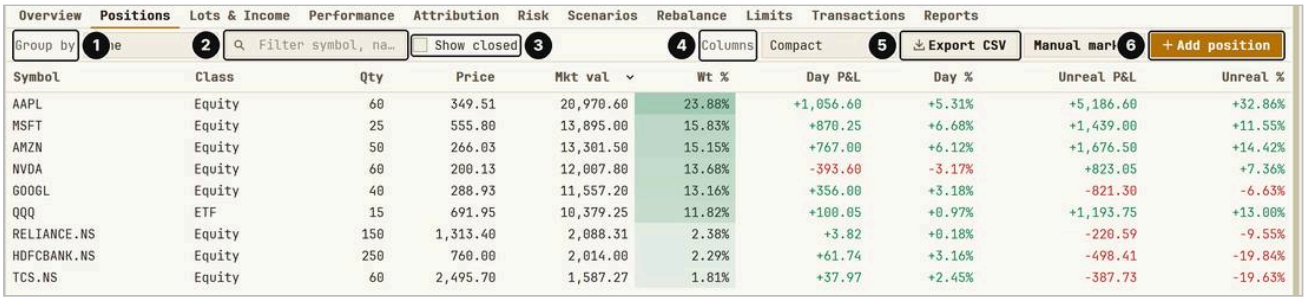
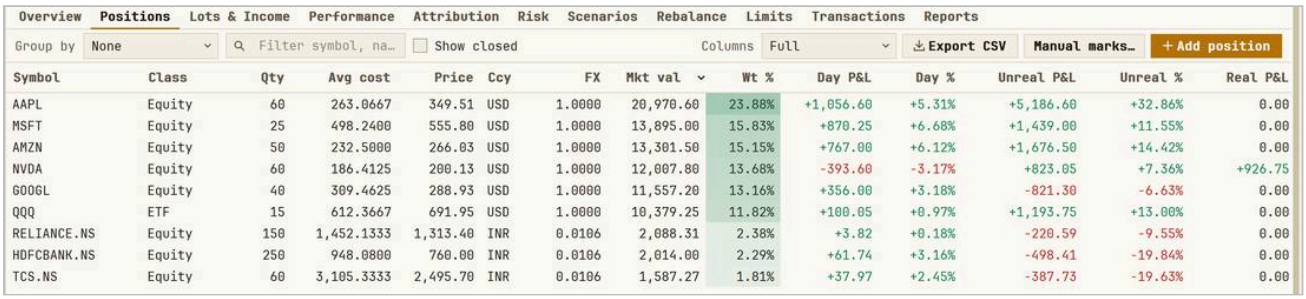


Figure 23.10 Positions, Compact columns.

1. **Group by**: None, Asset class, Sector, Country, Currency, Industry or Exchange.
2. Filter by symbol, name or sector. Press `/` to jump here, `Esc` to clear.
3. **Show closed** adds lines you have sold out of.
4. **Columns** picks a column set: **Compact**, **Full**, **Risk**, **Derivatives**, **Tax lots** or **Income**.
5. **Export CSV** saves the columns in view (also to the File Manager).
6. **Add position** records a trade.

Column sets

Set	Columns
Compact	Symbol, Class, Qty, Price, Mkt val, Wt %, Day P&L, Day %, Unreal P&L, Unreal %
Full	adds Avg cost, Ccy, FX (the rate to the base currency), Real P&L, Div, Total ret %, Cost basis, Exposure, Beta, Div yld, Proj income
Risk	Symbol, Class, Ccy, Mkt val, Wt %, Day P&L, Unreal P&L, Real P&L, Div, Total ret %, Exposure, Beta, Div yld, Proj income
Derivatives	adds Mult (contract multiplier), Delta, Gamma, Vega, Theta, IV, Underlying px, Expiry, Strike
Tax lots	Qty, Avg cost, Cost basis, Mkt val, Unreal P&L, Unreal %, Lots, Term, Harvest, Real YTD, Real P&L, First trade, Last trade
Income	Qty, Mkt val, Wt %, Div yld, Yield on cost, Proj 12 m, Div YTD, Div total, Next ex-date, Next est.



Symbol	Class	Qty	Avg cost	Price	Ccy	FX	Mkt val	Wt %	Day P&L	Day %	Unreal P&L	Unreal %	Real P&L
AAPL	Equity	60	263.0667	349.51	USD	1.0000	20,970.60	23.88%	+1,056.60	+5.31%	+5,186.60	+32.86%	0.00
MSFT	Equity	25	498.2400	555.80	USD	1.0000	13,895.00	15.83%	+870.25	+6.68%	+1,439.00	+11.55%	0.00
AMZN	Equity	50	232.5000	266.03	USD	1.0000	13,301.50	15.15%	+767.00	+6.12%	+1,676.50	+14.42%	0.00
NVDA	Equity	60	186.4125	200.13	USD	1.0000	12,007.80	13.68%	-393.60	-3.17%	+823.05	+7.36%	+926.75
GOOGL	Equity	40	309.4625	288.93	USD	1.0000	11,557.20	13.16%	+356.00	+3.18%	-821.30	-6.63%	0.00
QQQ	ETF	15	612.3667	691.95	USD	1.0000	10,379.25	11.82%	+100.05	+0.97%	+1,193.75	+13.00%	0.00
RELIANCE.NS	Equity	150	1,452.1333	1,313.40	INR	0.0106	2,088.31	2.38%	+3.82	+0.18%	-220.59	-9.55%	0.00
HDFCBANK.NS	Equity	250	948.0800	760.00	INR	0.0106	2,014.00	2.29%	+61.74	+3.16%	-498.41	-19.84%	0.00
TCS.NS	Equity	60	3,105.3333	2,495.70	INR	0.0106	1,587.27	1.81%	+37.97	+2.45%	-387.73	-19.63%	0.00

Figure 23.11 The Full column set — currency, FX rate and cost basis for every line.

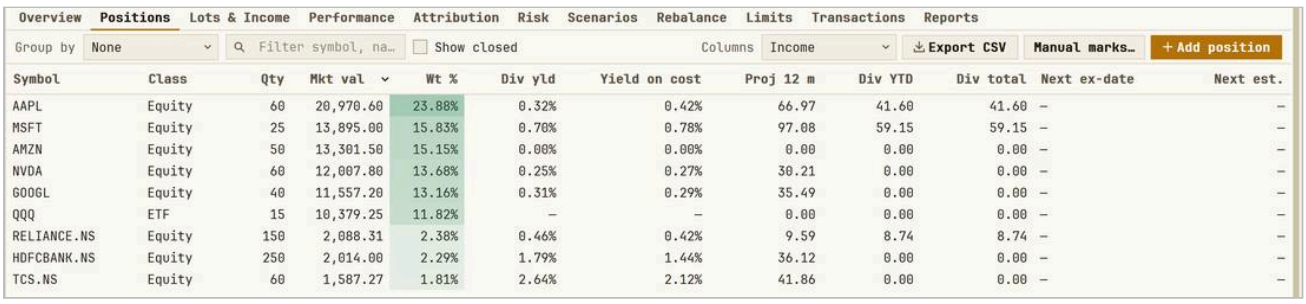
Currencies

A line is priced in its own currency (the **Price** column) and converted into the base currency at the live exchange rate (the **FX** column) for **Mkt val** and every total. In the Core Growth book above, Reliance, TCS and HDFC Bank are priced in rupees and counted in US dollars.



Symbol	Class	Qty	Avg cost	Cost basis	Mkt val	Unreal P&L	Unreal %	Lots	Term	Harvest	Real YTD
AAPL	Equity	60	263.0667	15,784.00	20,970.60	+5,186.60	+32.86%	2	ST	–	0.00
MSFT	Equity	25	498.2400	12,456.00	13,895.00	+1,439.00	+11.55%	2	ST	–	0.00
AMZN	Equity	50	232.5000	11,625.00	13,301.50	+1,676.50	+14.42%	2	ST	–	0.00
NVDA	Equity	60	186.4125	11,184.75	12,007.80	+823.05	+7.36%	1	ST	–	+926.75
GOOGL	Equity	40	309.4625	12,378.50	11,557.20	-821.30	-6.63%	2	ST	1 loss lot(s) · wash sale	0.00
QQQ	ETF	15	612.3667	9,185.50	10,379.25	+1,193.75	+13.00%	1	ST	–	0.00
RELIANCE.NS	Equity	150	1,452.1333	2,308.89	2,088.31	-220.59	-9.55%	1	ST	1 loss lot(s)	0.00
HDFCBANK.NS	Equity	250	948.0800	2,512.41	2,014.00	-498.41	-19.84%	1	ST	1 loss lot(s)	0.00
TCS.NS	Equity	60	3,105.3333	1,974.99	1,587.27	-387.73	-19.63%	1	ST	1 loss lot(s)	0.00

Figure 23.12 The Tax lots column set — cost basis, holding term and harvest flags per line.



Symbol	Class	Qty	Mkt val	Wt %	Div yld	Yield on cost	Proj 12 m	Div YTD	Div total	Next ex-date	Next est.
AAPL	Equity	60	20,970.60	23.88%	0.32%	0.42%	66.97	41.60	41.60	–	–
MSFT	Equity	25	13,895.00	15.83%	0.70%	0.78%	97.08	59.15	59.15	–	–
AMZN	Equity	50	13,301.50	15.15%	0.00%	0.00%	0.00	0.00	0.00	–	–
NVDA	Equity	60	12,007.80	13.68%	0.25%	0.27%	30.21	0.00	0.00	–	–
GOOGL	Equity	40	11,557.20	13.16%	0.31%	0.29%	35.49	0.00	0.00	–	–
QQQ	ETF	15	10,379.25	11.82%	–	–	0.00	0.00	0.00	–	–
RELIANCE.NS	Equity	150	2,088.31	2.38%	0.46%	0.42%	9.59	8.74	8.74	–	–
HDFCBANK.NS	Equity	250	2,014.00	2.29%	1.79%	1.44%	36.12	0.00	0.00	–	–
TCS.NS	Equity	60	1,587.27	1.81%	2.64%	2.12%	41.86	0.00	0.00	–	–

Figure 23.13 The Income column set — yields, projected income and the next ex-date.

Group the lines

Pick a grouping in **Group by** — for example **Sector** — and the table shows a header row per group with the group's totals. Click a header row to fold or unfold it. Pick **None** to go back to a flat list.



Symbol	Class	Qty	Avg cost	Price	Ccy	FX	Mkt val	Wt %	Day P&L	Day %	Unreal P&L	Unreal %
▾ **Information Technology (4)**							**48,460.67**	**55.19%**	**+1,571.22**	–	**+7,060.92**	**+17.06%**
AAPL	Equity	60	263.0667	349.51	USD	1.0000	20,970.60	23.88%	+1,056.60	+5.31%	+5,186.60	+32.86%
MSFT	Equity	25	498.2400	555.80	USD	1.0000	13,895.00	15.83%	+870.25	+6.68%	+1,439.00	+11.55%
NVDA	Equity	60	186.4125	200.13	USD	1.0000	12,007.80	13.68%	-393.60	-3.17%	+823.05	+7.36%
TCS.NS	Equity	60	3,105.3333	2,495.70	INR	0.0106	1,587.27	1.81%	+37.97	+2.45%	-387.73	-19.63%
▾ **Consumer Discretionary (1)**							**13,301.50**	**15.15%**	**+767.00**	–	**+1,676.50**	**+14.42%**
AMZN	Equity	50	232.5000	266.03	USD	1.0000	13,301.50	15.15%	+767.00	+6.12%	+1,676.50	+14.42%
▾ **Communication Services (1)**							**11,557.20**	**13.16%**	**+356.00**	–	**-821.30**	**-6.63%**
GOOGL	Equity	40	309.4625	288.93	USD	1.0000	11,557.20	13.16%	+356.00	+3.18%	-821.30	-6.63%
▾ **Unclassified (1)**							**10,379.25**	**11.82%**	**+100.05**	–	**+1,193.75**	**+13.00%**
QQQ	ETF	15	612.3667	691.95	USD	1.0000	10,379.25	11.82%	+100.05	+0.97%	+1,193.75	+13.00%
▾ **Energy (1)**							**2,088.31**	**2.38%**	**+3.82**	–	**-220.59**	**-9.55%**
RELIANCE.NS	Equity	150	1,452.1333	1,313.40	INR	0.0106	2,088.31	2.38%	+3.82	+0.18%	-220.59	-9.55%
▾ **Financials (1)**							**2,014.00**	**2.29%**	**+61.74**	–	**-498.41**	**-19.84%**
HDFCBANK.NS	Equity	250	948.0800	760.00	INR	0.0106	2,014.00	2.29%	+61.74	+3.16%	-498.41	-19.84%

Figure 23.14 Positions grouped by sector, with a total per group.

Under the table, a strip of totals shows **NAV**, **Holdings**, **Cash**, **Day P&L**, **Unrealised**, **Realised**, **Fees** and **Proj. income**, and how many lines are shown of how many are in the book.

Right-click a line

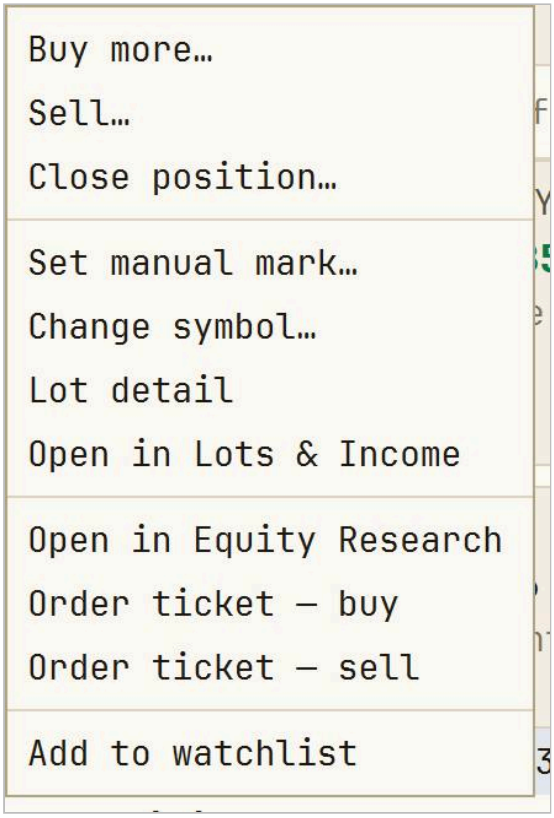


Figure 23.15 The right-click menu of a position.

Item	What it does
Buy more / Sell / Close position	Opens the transaction dialog with this symbol, to record a trade

Item	What it does
Set manual mark	Sets your own price for a line nothing quotes (see below)
Change symbol	Renames the holding everywhere, for example after a ticker change
Lot detail	Opens the lots drawer under the table
Open in Lots & Income	The line's lots in the Lots & Income tab
Open in Equity Research	Researches the symbol (**Chapter 22, Equity Research** p. 392)
Open option chain	For an option line: its chain in F&O
Order ticket AAPL buy / sell (with the line's symbol)	Opens the Equity Trading order ticket (an order, not a record)
Add to watchlist	Adds the symbol to a watchlist

Lot detail shows every open lot of the line: **Lot**, **Acquired**, **Qty**, **Price**, **Cost**, **Mkt value**, **Unreal P&L**, **Unreal %**, **Days**, **Term** (**ST** short term, **LT** long term) and **Notes**. The notes flag *harvest* (selling the lot would realise a loss), *wash-sale window* (bought again in the last 30 days), *statement lot* (stated by a broker statement, purchase date unknown) and *cost unknown* (left out of every total). **Lots & Income** opens the same lots in that tab; **Close** hides the drawer.

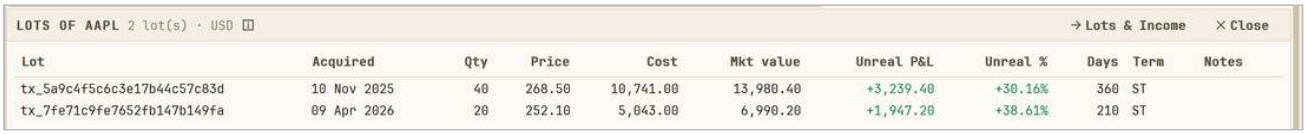


Figure 23.16 The lots drawer for AAPL — each purchase with its own cost and holding period.

Set a manual mark

Some holdings have no market price (a private fund, an unlisted bond). Right-click the line, choose **Set manual mark**, enter the **Mark price**, its **Currency**, the **As of** date and a **Note** (*why this price, and from where*), and click **Save mark**. Until you remove it, the mark replaces the market price for that line: live ticks stop moving it, and the table flags the line with an **M**.

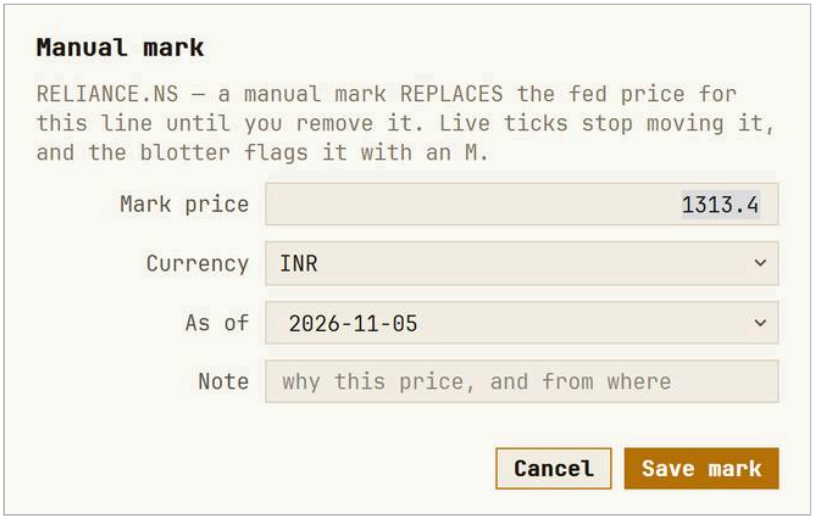


Figure 23.17 The Manual mark dialog for the RELIANCE.NS line, filled in with the current price in rupees.

The **Manual marks…** button above the table lists every mark on the book, each with **Edit the mark…** and **Remove the mark**; removing a mark puts the line back on the market price. On a book with no marks it says *No manual marks on this book. Right-click a line to set one.*

Change a symbol

When a company changes its ticker, right-click the line and choose **Change symbol**. Type the new symbol: every transaction of the old one moves to it in one step. If you already hold the new symbol, the screen asks **Merge into …?** and joins the two holdings.

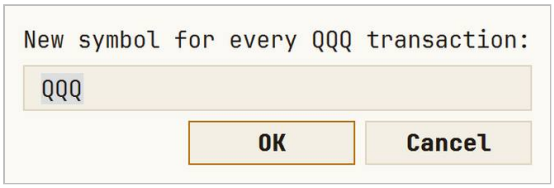


Figure 23.18 Change symbol — the new symbol for every transaction of the line (here QQQ).

23.9 Record transactions

The **Add transaction** dialog records anything that changes the book. Open it from **Add position** (Positions), from a line's right-click menu, or from **+ Add** on the Transactions tab, whose menu lets you pick the kind first: **Trade — buy or sell**, **Cash deposit / withdrawal**, **Dividend / interest**, **Fee**, **Split**, **FX conversion** or **Adjustment**.

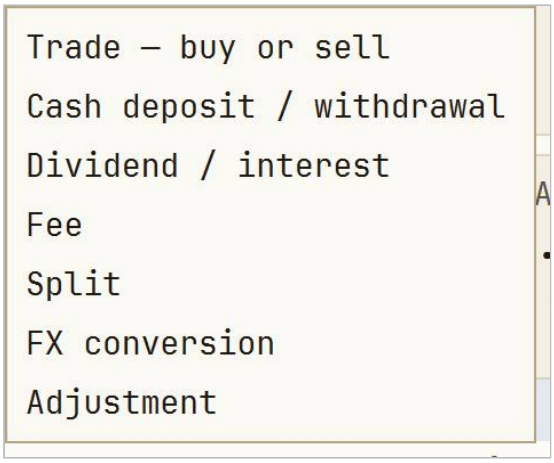


Figure 23.19 The + Add menu on the Transactions tab.

The dialog has seven tabs, one per kind:

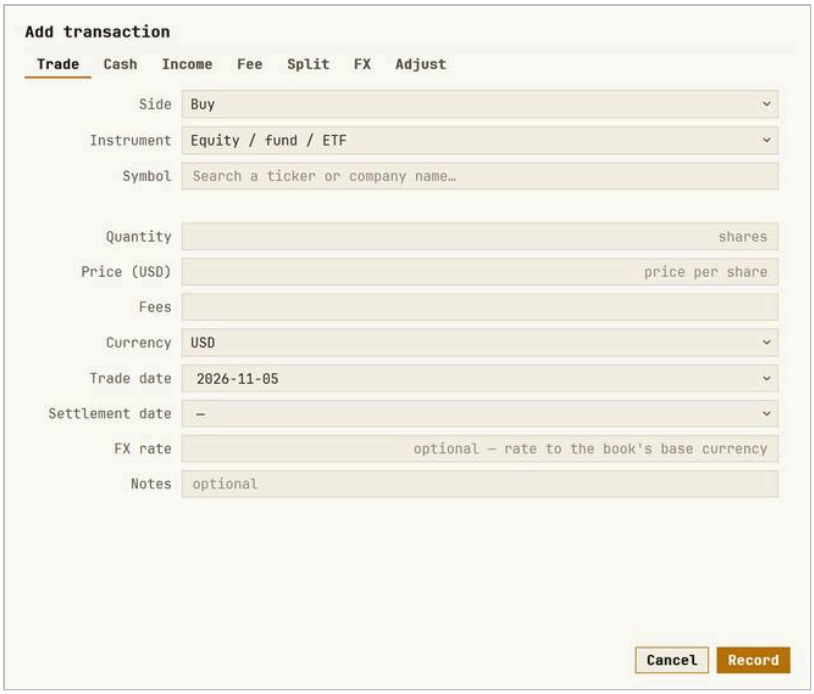


Figure 23.20 Add transaction, Trade tab.

Tab	Fields
Trade	**Side** (**Buy** / **Sell**), **Instrument** (**Equity / fund / ETF**, **Option contract**, **Futures contract**), **Symbol** (search and pick), **Quantity** (shares or contracts), **Multiplier** (for contracts), **Price**, **Fees**, **Currency**, **Trade date**, **Settlement date** (optional), **FX rate**, **Notes**
Cash	**Direction** (**Deposit** / **Withdrawal**), **Amount**, **Currency**, **Date**, **Notes**
Income	**Kind** (**Dividend** / **Interest**), **Symbol** (the holding that paid), **Entered as** (**Total amount** or **Per share × quantity**), then **Amount**, or **Per share** and **Shares held**; **Withholding / fees**, **Currency**, **Pay date**, **Notes**
Fee	**Amount**, **Currency**, **Date**, **Attribute to**, **Notes**
Split	**Symbol**, **Ratio** (2 for a 2-for-1, 0.5 for a 1-for-2 reverse split), **Ex date**, **Notes**
FX	**From currency**, **Amount sold**, **To currency**, **Amount bought**, **Fees**, **Date**, **Notes** — the rate is shown as you type (*Rate: 1 USD = …*)
Adjust	**Symbol**, **Quantity held** (after the adjustment, not the change), **Average cost** (blank = cost unknown), **Currency**, **Date**, **Notes** — to reconcile the book with a statement

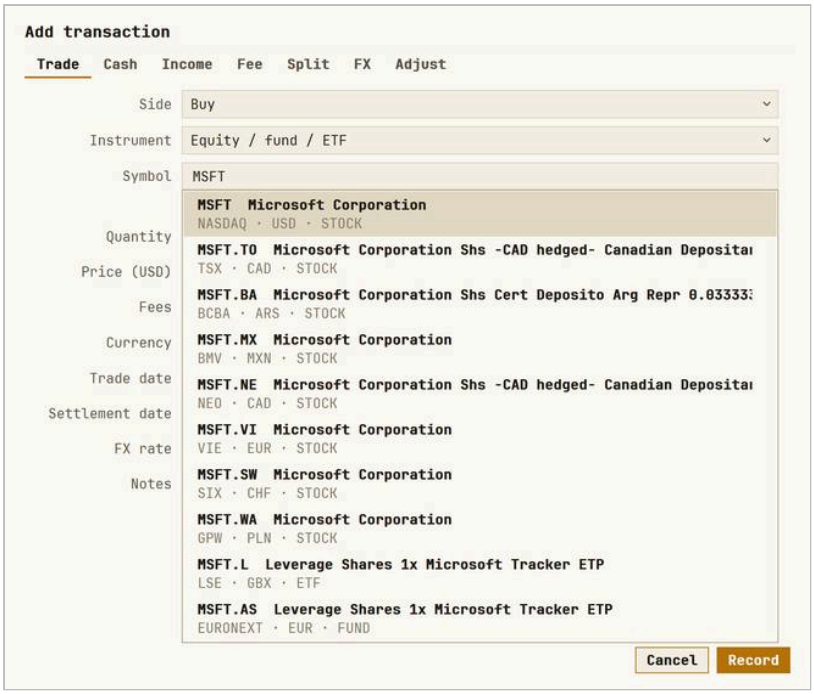


Figure 23.21 Pick the instrument from the search list. A typed symbol alone is not booked.

Click **Record** to save (or **Save** when editing). The dialog checks what you entered:

- *Pick the instrument from the search list: a typed symbol is not booked.*
- *A trade needs a symbol, a non-zero quantity and a price.*
- *A split ratio must be above zero (2 for a 2-for-1, 0.5 for a reverse).*
- *An FX conversion needs two different currencies.*

If a sale is larger than what you hold, the screen asks **Record a short sale?** — click **Record short** only if you really sold short.

Prices in pence

A London share quoted in pence (GBp) is booked in pounds. The dialog says *quoted in GBp (1/100 GBP): enter the price in GBP*.

23.10 Import transactions from a file

To load a broker statement or a spreadsheet, use **Portfolio actions > Import transactions (CSV)...** (or **Import CSV...** on the Transactions tab).

1. Click **Browse...** and pick a CSV file, or paste the rows into **...or paste rows**.
2. Check **Defaults**: the currency to assume when a row has none (the book's base currency to start with), the date format (**Detect dates**, YYYY-MM-DD, DD/MM/YYYY, MM/DD/YYYY or DD-MMM-YYYY) and **Allow short positions**.

3 Click **Preview**. The server reads the file without saving anything and lists every row, with a **Problem** column for rows it cannot read.

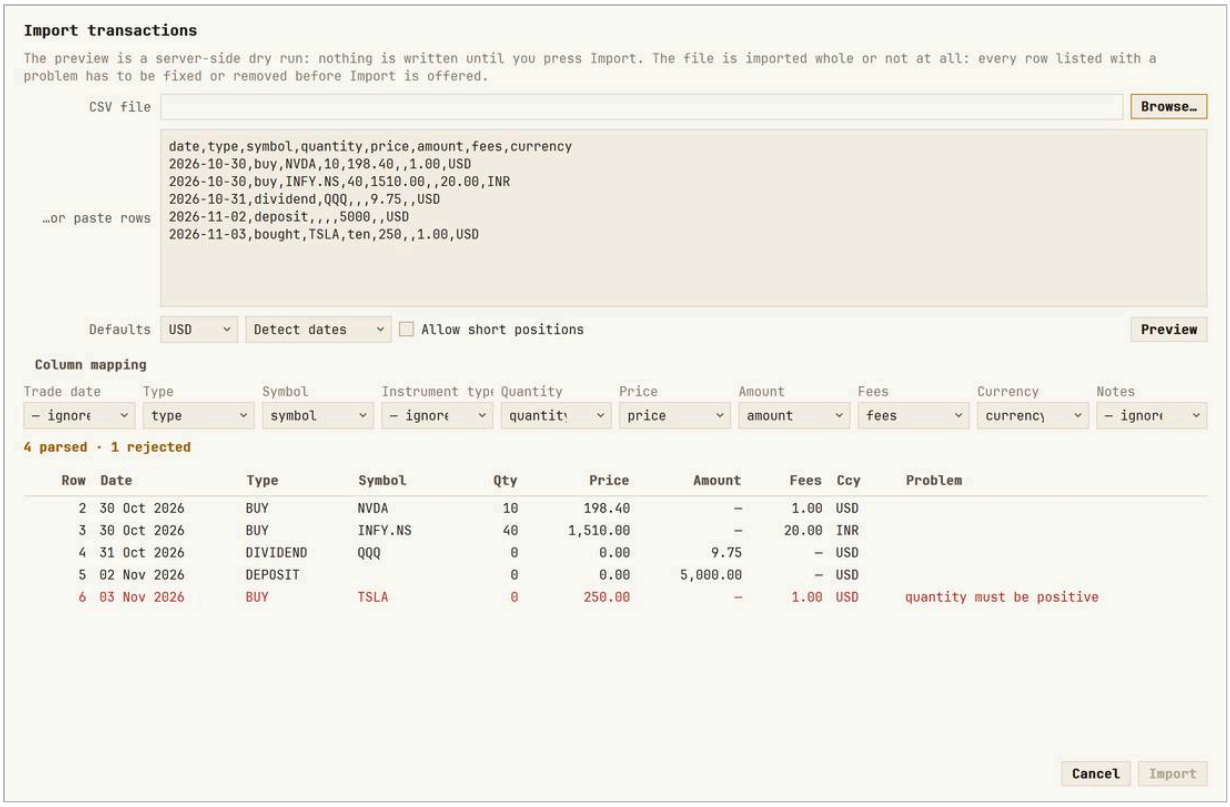


Figure 23.22 Import transactions — the preview lists the rows it read (here 4 parsed, 1 rejected); Import stays off until every problem is fixed.

4 If the columns were not recognised, point them at the right headings under **Column mapping** and preview again.

5 Click **Import**. The message *Imported 21 transaction(s).* confirms it.

The file needs a header row. These headings are recognised (any of the names, in any order):

Field	Accepted headings
Date (required)	date, trade date, tradedate, transaction date, txn date, executed, time
Type (required)	type, action, side, transaction type, txn type, activity
Symbol	symbol, ticker, instrument, security, code, scrip
Instrument type	instrument_type, instrument type, asset type, asset class, product
Quantity	quantity, qty, shares, units, contracts, amount (qty)
Price	price, avg price, average price, unit price, rate, fill price
Amount	amount, net amount, value, total, total value, cash amount, net
Fees	fees, fee, commission, brokerage, charges, total charges
Currency	currency, ccy, cur
Notes	notes, note, description, memo, remarks

Types: **buy** (also b, bot, bought, purchase), **sell** (s, sld, sold, sale), **dividend** (div, dividends, distribution), **interest** (int), **fee** (fees, commission, charge), **deposit** (cash in, contribution, transfer in, credit), **withdrawal** (withdraw, cash out, transfer out, debit), **split**, **adjust** (adjustment) and **fx**. A row typed **trade** is a buy when its quantity is positive and a sell when it is negative. A buy or sell with an amount but no price gets its price from amount ÷ quantity. A file separated by semicolons is read with commas as decimal points; a tab-separated file is read too.

Example:

```
date,type,symbol,quantity,price,amount,fees,currency
2025-11-10,buy,AAPL,40,268.50,,1.00,USD
2026-01-20,buy,RELIANCE.NS,150,1452.00,,20.00,INR
2026-02-13,dividend,AAPL,,,10.40,,USD
```

Important

The file is imported whole or not at all. Every row listed with a problem must be fixed or removed before **Import** is offered.

23.11 Track performance

The **Performance** tab measures how the book has done, and against what.



Figure 23.23 Performance — the notes, the headline tiles and the book against SPY since inception.

- **RETURN**: **TWR** (time-weighted, the default) or **MWR** (money-weighted: the internal rate of return of the money that went in and out). The words beside the switch say which, and the benchmark (*vs SPY*).
- **Chart window**: 1M, 3M, 6M, YTD, 1Y, 3Y, 5Y or ALL, and **Indexed** (growth of 100) or **Currency** (the value in the base currency). The tables below always cover the whole history.
- **Notes** in a tinted box when something limits the figures — for example days with no benchmark price.
- **Headline tiles**: **Since inception**, **YTD**, **1 Year**, **Ann. return**, **Ann. vol** (with the benchmark's), **Sharpe** (with Sortino), **Max drawdown** (with its dates and days to recover), **Beta** (with R^2), **Tracking error** (with the active return) and **Info ratio**.
- **The chart** — the book against its benchmark; point at it to read a day's values.
- **Period returns**: for each period the **Portfolio**, **Benchmark** and **Active** (the difference) return, annualised where marked **Ann.**, and the number of **Days**.

- **Statistics**: **SI** (since inception), **1Y** or **Custom** (pick dates and click **Apply**). Rows: total and annualised return, annualised volatility, Sharpe, Sortino, Calmar, maximum drawdown and its duration, the benchmark's own figures, active return, tracking error, information ratio, beta, alpha, R-squared, correlation, up and down capture, hit rate, best and worst day and month, skewness, excess kurtosis, VaR and CVaR 95% (1 day), and positive months.
- **Calendar years** and **Monthly returns** — a heat table of returns by month; tick **Bench rows** to show the benchmark under each year.
- **Rolling** charts — return, volatility, Sharpe, beta and tracking error over a trailing **3M**, **6M** or **12M** window (63, 126 or 252 trading days; 12M is the default), sampled at month ends. Click a column for its reading.

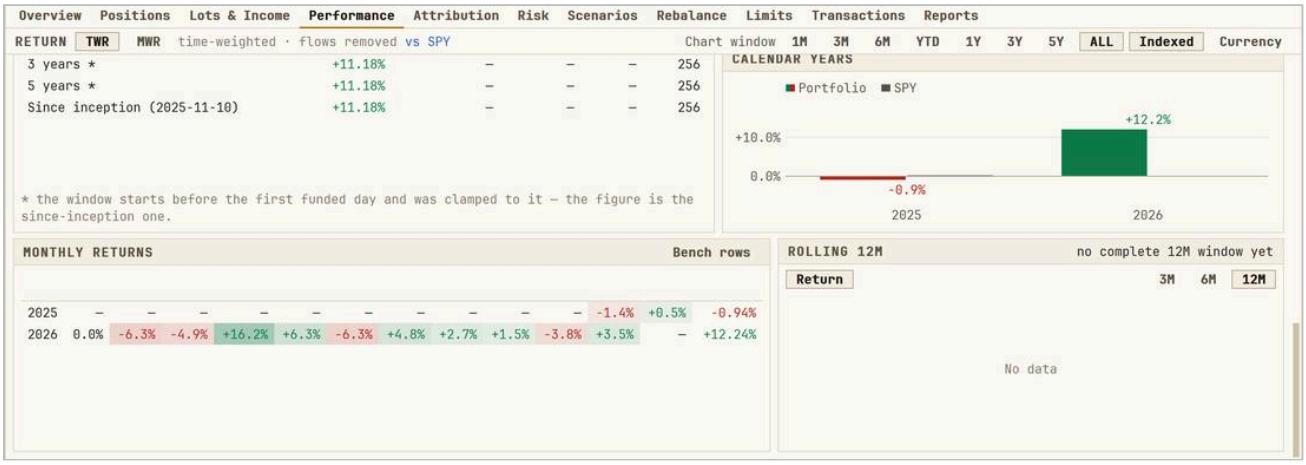


Figure 23.24 Further down — the end of the period table, calendar years, monthly returns and the rolling chart.

The sample book is less than a year old, and the screen says so rather than guessing: periods longer than the book's life carry a star (*the window starts before the first funded day and was clamped to it*) and show the since-inception figure, and the rolling 12-month chart says *no complete 12M window yet*.

Terms:

- **Sharpe ratio** — return above the risk-free rate divided by volatility.
- **Sortino ratio** — the same, counting only the down days as risk.
- **Maximum drawdown** — the largest fall from a peak to a low.
- **Information ratio** — active return divided by tracking error.
- **Up / down capture** — how much of the benchmark's up (down) days the book captured. Below 100% on down days is good.

> **Note**
>
> If cash is not tracked, every trade counts as an external flow, so the money-weighted return describes your trading rather than the investments. The tab says so in a note.

23.12 Explain the return (Attribution)

Attribution splits the book's return against its benchmark into its causes, bucket by bucket (Brinson-Fachler method).

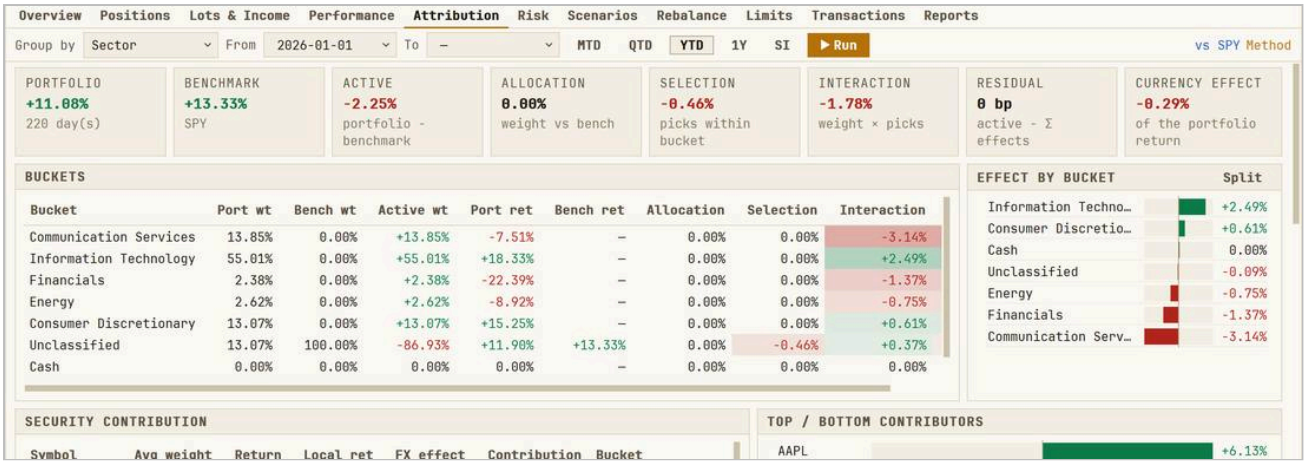


Figure 23.25 Attribution by sector — allocation, selection and interaction effects.

1. Pick **Group by**: **Asset class**, **Sector**, **Industry**, **Country**, **Currency** or **Exchange**.
2. Pick a window: **MTD**, **QTD**, **YTD**, **1Y**, **SI**, or type **From** and **To** dates.
3. Click **Run**.

- **Portfolio** and **Benchmark** return over the window, and their difference.
- **Allocation** — gained or lost by weighting a bucket more or less than the benchmark.
- **Selection** — gained or lost by what you picked inside a bucket.
- **Interaction** — the two together.
- **Residual** — whatever the three effects do not explain (normally 0 bp).
- **Currency effect** — what currency moves added to a foreign holding's return.
- **Buckets** table — **Port wt**, **Bench wt**, **Active wt**, **Port ret**, **Bench ret** and the effects; tick **Split** to show the three effects separately.
- **Security contribution** — each symbol's **Avg weight**, **Return**, **Local ret**, **FX effect** and **Contribution**; and **Top / bottom contributors** and **Daily active return**.

Note

A single index or ETF as benchmark (SPY in the sample book) carries no sector weights: it appears as one **Unclassified** bucket at 100%. **Allocation** then stays at zero and the difference shows up as **Interaction**. The Overview's Allocation panel says the same: *it carries no bucket weights, so there is nothing to compare bucket by bucket*.

23.13 Measure risk

The **Risk** tab shows how much the book could lose and where the risk comes from.



Figure 23.26 Risk — the headline figures, value at risk by method and the risk contributions.

1. **Lookback**: 6M, 1Y (default), 2Y or 3Y of history.
2. **Horizon**: 1D or 10D.
3. **Confidence**: 95% or 99%.
4. **Recompute** runs the risk engine again.

- **The risk ribbon** — **Ann. vol** (with the benchmark's), **EWMA vol** (λ 0.94, which weighs recent days more), **Ex-ante TE** (with the active share), **Beta** (with R^2), **VaR** and **CVaR** for the method in use, **Effective N** and **Coverage** (the share of the book's gross weight with enough price history to enter the risk model).
- **Value at risk** — VaR and CVaR (the average loss beyond the VaR) by five methods: **Parametric** (normal distribution), **Historical** (actual past days), **Monte Carlo**, **Cornish-Fisher** (adjusted for skew and fat tails) and **Monte Carlo t** (Student-t shocks). Click a method to show it in the ribbon.
- **VaR back-test** — how often the realised daily loss went past the one-day VaR, with the Kupiec test and the Basel zone (**Green zone**, **Yellow zone**, **Red zone**).
- **Risk contributions** — each line's share of the book's volatility, **By position**, **By asset class**, **By sector**, **By country** or **By currency**; switch between **Weight** and **Beta-adj.**
- **Correlation** — how the largest holdings move together.
- **Factor exposures** — the book's betas to market factors, measured with ETF proxies (**Factor**, **Proxy**, beta, **t-stat**, **Var. share**).
- **Liquidity** — the share of the book you could sell in 1, 5 and 20 days trading no more than 20% of the 30-day average volume, and the days each line needs (**ADV (30d)**, **Days @20%**).
- **Concentration** — **HHI**, **Effective N** (the number of equal positions with the same concentration), **Top-5 weight**, **Top-10 weight** and the **Largest** line.
- **Greeks** (for options) and **Excluded** (lines left out, with the **Reason**).

Click **Show method notes** for an explanation of every method.

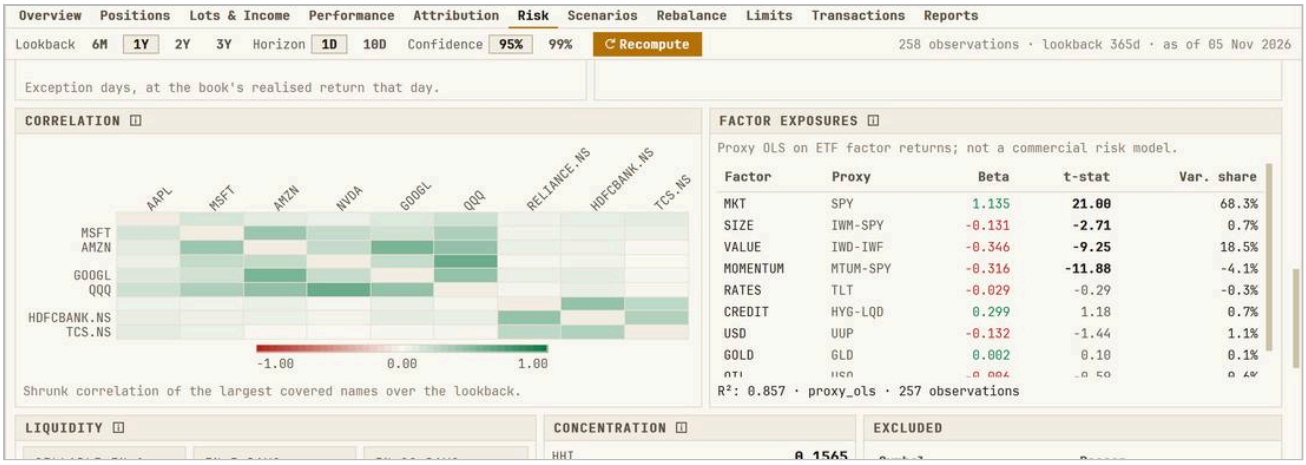


Figure 23.27 Risk, further down — correlation between the holdings and the book's factor exposures.

23.14 Stress-test the book (Scenarios)

Scenarios asks: what would happen to this book in a crash, a rate shock or a thousand random futures?

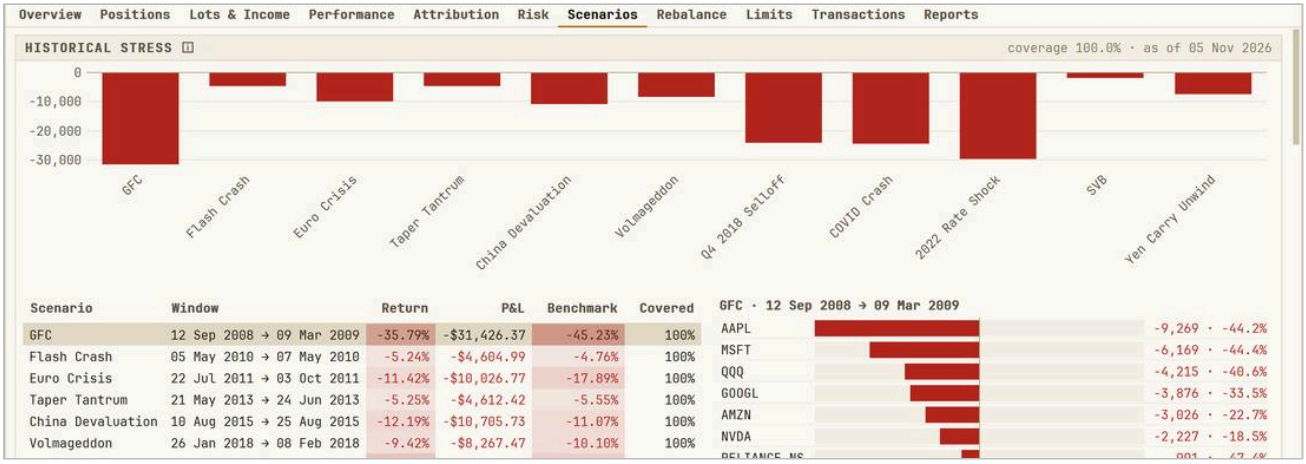


Figure 23.28 Scenarios, Historical stress — past crises replayed on today's weights.

The tab has three panels:

- **Historical stress** — eleven crises replayed at today's weights: **GFC**, **Flash Crash**, **Euro Crisis**, **Taper Tantrum**, **China Devaluation**, **Volmageddon**, **Q4 2018 Selloff**, **COVID Crash**, **2022 Rate Shock**, **SVB** and **Yen Carry Unwind**. A bar chart shows the loss in each; the table lists **Scenario**, **Window** (the dates), **Return**, **P&L**, **Benchmark** (what the benchmark did) and **Covered** (the share of the book with price history for those dates). Select a row to see which lines lost most, and break it down **By asset class**, **By sector**, **By country** or **By currency**. Add your own dates under **Custom window** (**Add** / **Remove**).
- **Factor shocks** — move **Equity**, **Rates**, **USD**, **Credit**, **Oil** and **Gold** with the sliders, or pick a preset (**Risk-off**, **Rate shock**, **Dollar spike**, **Oil shock**; **Clear** resets). Each line moves by its sensitivity to the shocked factor. The result shows **Shock P&L**, **% of NAV**, a breakdown **By position** and the **Assumptions**.
- **Monte Carlo** — thousands of simulated paths: **Horizon** (3M, 6M, 1Y default, 2Y, 3Y), **Paths** (1K or 5K, default 5K) and **Seed** (the same seed on the same book gives the same result). A fan chart and a table of **Percentile** and **Terminal return**.

Set your shocks or window and click **Run**. The presets set these shocks (the sliders run from -50% to +50% for equity and gold, ±300 bp for rates, ±25% for the dollar, ±500 bp for credit and ±80% for oil):

Preset	Equity	Rates	USD	Credit	Oil	Gold
Risk-off	-15%	-50 bp	+3%	+150 bp	-10%	+5%
Rate shock	-5%	+100 bp	+2%	+25 bp	0	-2%
Dollar spike	-4%	+25 bp	+7%	+30 bp	-6%	-5%
Oil shock	-6%	+20 bp	+1%	+50 bp	+40%	+3%

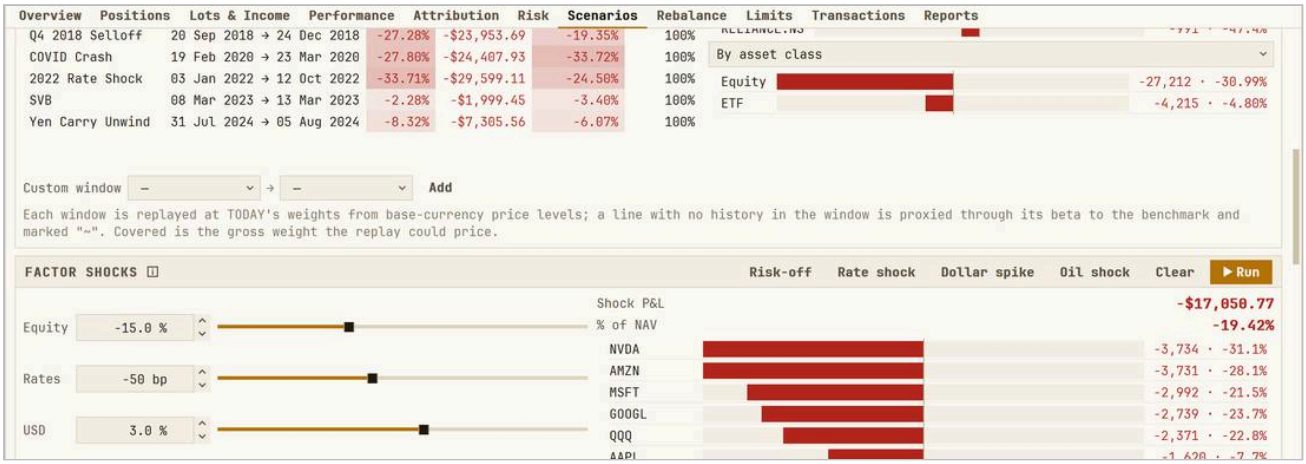


Figure 23.29 Factor shocks with the Risk-off preset — the shock P&L and how much each line moves.

With the **Risk-off** preset (equities -15%, rates -50 bp, the dollar +3%, credit spreads +150 bp, oil -10%, gold +5%) the sample book would lose about 19% of its value, most of it in NVDA, AMZN and MSFT. The **Assumptions** box under the result spells out each shock and the proxy it was applied through.

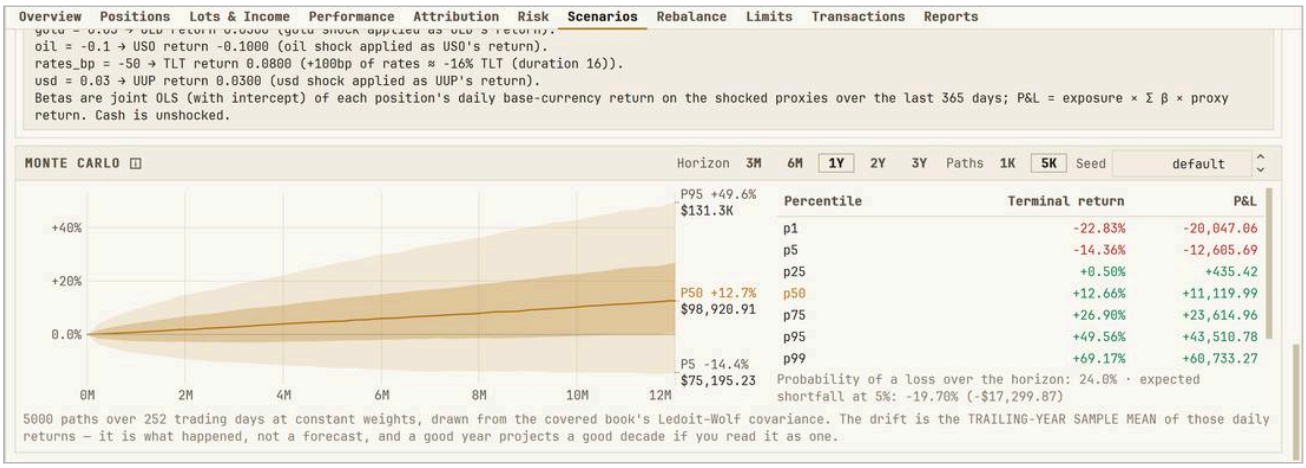


Figure 23.30 Monte Carlo — 5,000 one-year paths, the fan chart and the percentiles of terminal return.

Under the Monte Carlo table, a line gives the probability of a loss over the horizon and the expected shortfall at 5% (the average of the worst 5% of outcomes).

23.15 Rebalance the book

Rebalance helps you decide new target weights and turns them into a trade list.

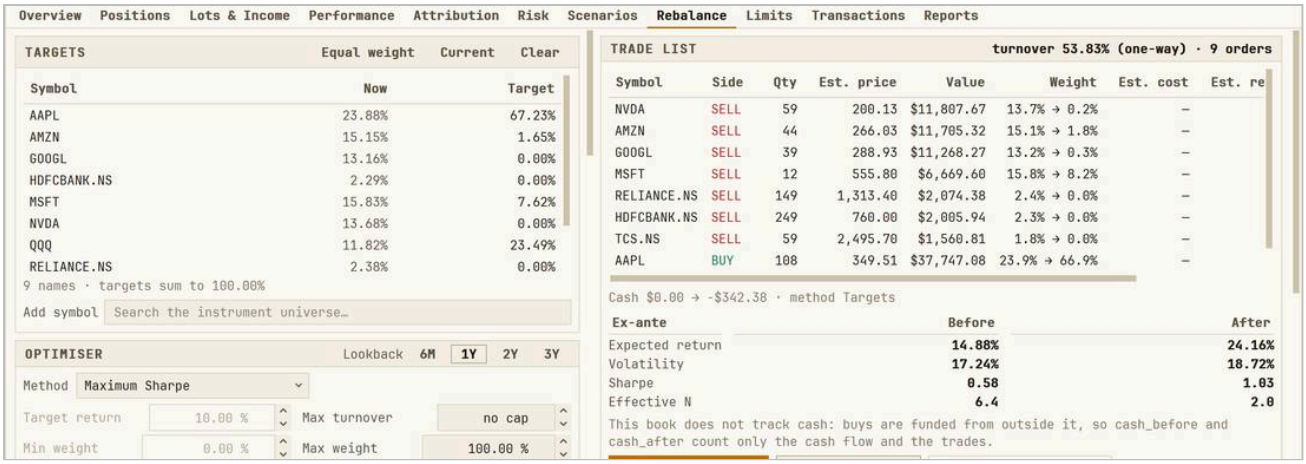


Figure 23.31 Rebalance after Maximum Sharpe and Generate trades — targets on the left, the trade list and its before/after effect on the right.

1. Set targets in **Targets**: type a **Target** % per symbol, or click **Equal weight** or **Current**. Blank keeps a line at its current weight; 0 sells all of it. **Add symbol** adds a new name.
2. Or let the **Optimiser** propose weights: pick a **Method** and click **Optimise**.
3. Check the **Parameters**, then click **Generate trades**.
4. Read the **Trade list** and the **Ex-ante** before/after figures (expected return, volatility, Sharpe, effective number of positions). Click **Simulate (what-if)** to re-price the book with the trades.

> **Tip**
>
> With no weight cap the optimiser can concentrate the book: in the picture above it put two thirds into one stock. Set **Max weight** (for example 25%) before you click **Optimise** to keep the result diversified.

Optimiser methods: **Maximum Sharpe**, **Minimum volatility**, **Risk parity**, **Hierarchical risk parity**, **Equal weight**, **Target return**, **Black-Litterman** (combine market weights with your own **Annual view** per name) and **Maximum return**. Constraints: **Min weight**, **Max weight**, **Max turnover**, **Long only**, the **Risk-free** rate, the **Lookback**, and **Group caps** (a soft cap per bucket, for example Sector:Technology). The **efficient frontier** chart shows volatility against expected return.

Parameters:

Parameter	Meaning
Cash buffer	cash to keep aside
Lot size	round quantities to this size
Min trade value	skip trades smaller than this
Tolerance band	a line within this many points of its target is not traded (**off** by default)
Cash flow	money arriving (+) or leaving (-) with the rebalance
Commission, Spread, Min commission	trading costs in basis points and the minimum per trade
Tax-aware	estimate the short- and long-term gain each sell would realise, from the book's own lots

The **Trade list** has **Side**, **Qty**, **Est. price**, **Value**, **Weight**, **Est. cost**, **Est. realised ST/LT** and **Note**. Then:

- **Send to order ticket** — opens the Equity Trading ticket for each trade (nothing is sent until you confirm there).
- **Record as transactions** — books the trades into this portfolio at the estimated prices, after a confirmation (**Record these trades?**).
- **Backtest these weights** and **Compare current vs proposed (2 runs)** — open Backtesting.
- **Stress this plan** — runs the historical scenarios and the Monte Carlo on the book and the plan side by side (**Stress: book vs plan**).
- **Export CSV** — the trade list with costs and realised P&L.

Plan & credits

Compare current vs proposed (2 runs) runs two backtests and charges both; the button shows the total. Everything else on this tab is free.

23.16 Lots, income and tax (Lots & Income)



Figure 23.32 Lots & Income, Tax lots view.

The tab is one long page of seven panels, top to bottom:

Panel	What it shows
Tax lots	Every open lot: **Symbol**, **Lot**, **Acquired**, **Qty**, **Price**, **Ccy**, **Cost**, **Mkt value**, **Unreal P&L**, **Unreal %**, **Days**, **Term**, **Notes**. Filter **All** / **ST** / **LT** and **Gains** / **Losses**.
Harvest candidates	Lots whose sale would realise a loss, biggest first, with a **Wash sale** flag when the same symbol was bought in the last 30 days.
Realised YTD	This year's closed lots: **Realised ST**, **Realised LT** and lots with unknown cost.
Income calendar	Dividends and interest by month for the chosen year: **Received YTD**, **Projected 12 m**, **Income yield**, **Yield on cost**.
Income by symbol	Per holding: **Held**, received this year and in total, **Proj 12 m**, **Div yield** and **Yield on cost**. Pick the year with the year buttons.
Upcoming actions	Dividends and splits going ex in the next 30, 60 or 90 days (**Ex-date**, **Type**, **Amount**, **Qty held**, **Expected**).
Unrecorded actions	Past dividends and splits on lines you held at the ex-date that the ledger has no row for. **Book** records the suggested row after you confirm.

Short term means held one year or less; **long term** more than one year. A **wash sale** is a loss sale followed or preceded by a purchase of the same security within 30 days; many tax systems do not allow that loss.

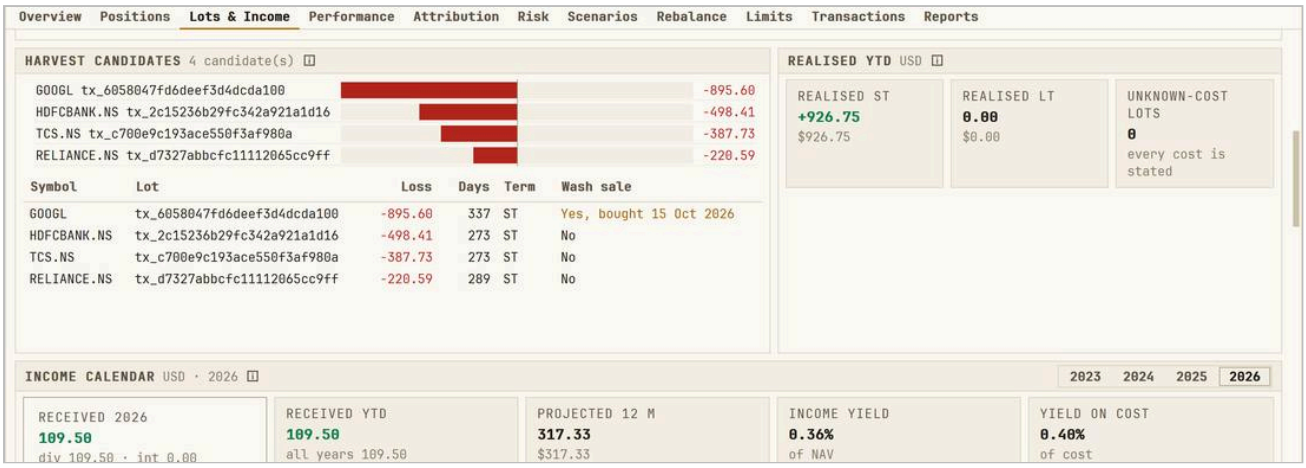


Figure 23.33 Harvest candidates — lots below cost, with the wash-sale flag — and this year's realised gains.

In the sample book the GOOGL lot bought in December is below cost, but more GOOGL was bought on 15 October, so its **Wash sale** column says *Yes, bought 15 Oct 2026*: selling that lot at a loss now could see the loss disallowed.



Figure 23.34 The income calendar by month, and income by symbol.

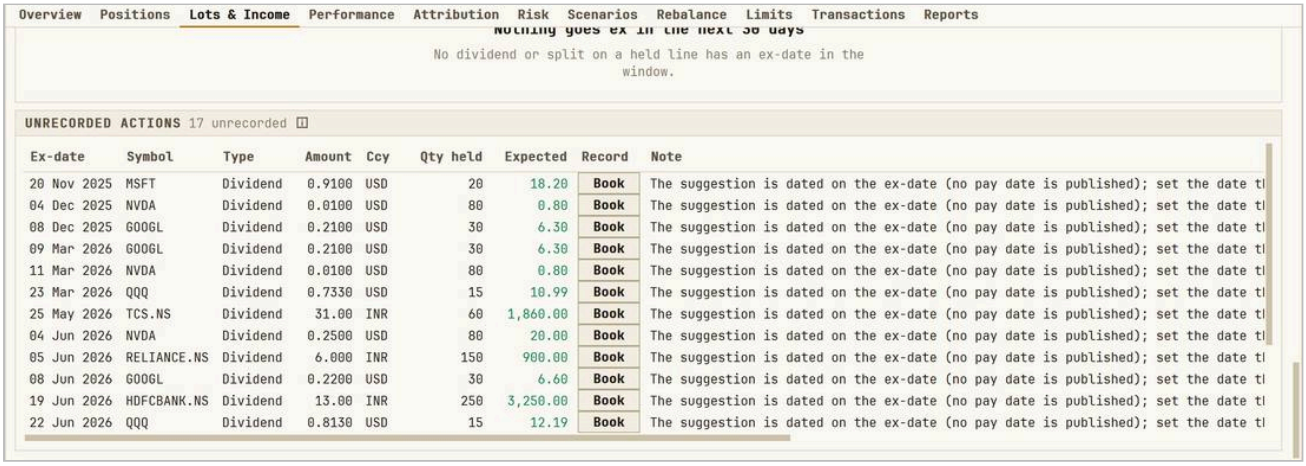


Figure 23.35 Unrecorded actions — dividends paid on lines you held that the ledger has no row for.

The sample book records only some of its dividends, so **Unrecorded actions** lists the rest, each with the amount per share, the quantity held on the ex-date and the **Expected** cash. Click **Book** on a row to record it (you confirm first). The note explains that the suggestion is dated on the ex-date when no pay date is published; set the date you were paid before you book it.

23.17 Set limits and check trades (Limits)

Limits are rules the book should obey — for example "no single stock above 25%". The screen checks them every time the book changes.

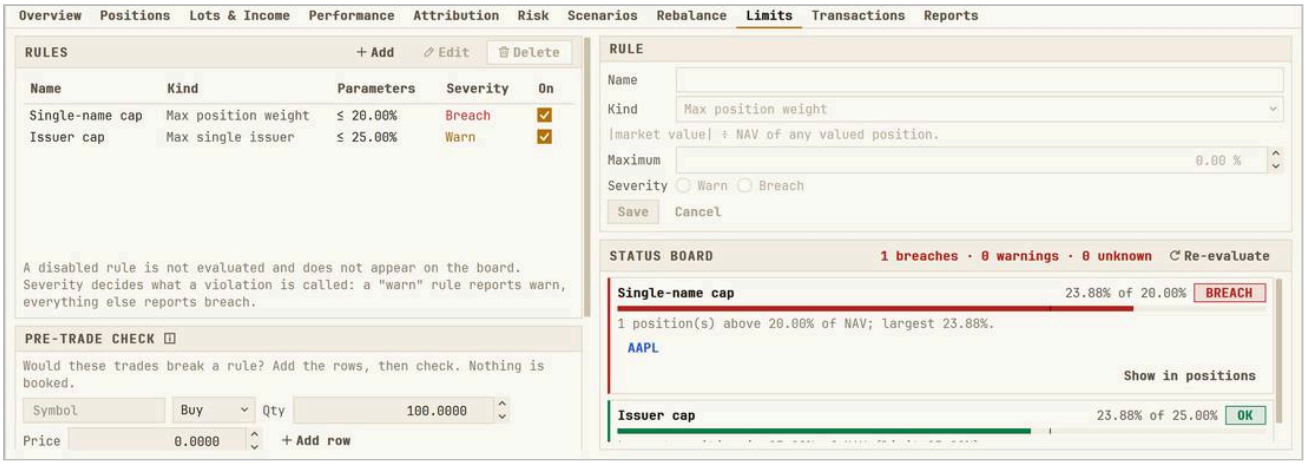


Figure 23.36 Limits — two rules on the sample book, and the status board with one breach.

The sample book has two rules. **Single-name cap** (**Max position weight** at most 20%, severity **Breach**) is broken: Apple is 23.88% of the book, so its card turns red, says *1 position(s) above 20.00% of NAV*, and names **AAPL**. **Issuer cap** (**Max single issuer** at most 25%, severity **Warn**) holds, so its card shows **OK**. The line at the top of the board counts breaches, warnings and rules that could not be measured (**unknown**). **Show in positions** opens the Positions tab on the offending line.

1. Click **Add** in the **Rules** panel. The rule editor opens with the title **New rule**.
2. Type a **Name**, pick the **Kind** (for example **Max position weight**) and set the threshold (**Minimum** or **Maximum**). A line under the kind says what it measures. For a group rule, also set **Grouping** and **Bucket**.
3. Pick the **Severity**: **Warn** or **Breach**.
4. Click **Save**. The rule joins the **Rules** table and the **Status board** shows it as **OK**, warn or **BREACH**, with the current value against the limit.

To change a rule, select it and click **Edit**; untick **On** to stop checking it without deleting it. **Delete** removes the selected rule after you confirm.

Rule kinds: **Max position weight**, **Max single issuer**, **Max group weight**, **Min group weight**, **Max cash weight**, **Min cash weight**, **Max positions**, **Min positions**, **Max gross exposure**, **Max net exposure**, **Min net exposure**, **Max currency weight**, **Restricted symbols**, **Max VaR**, **Max volatility**, **Max unpriced lines**, **Max beta**, **Max tracking error**, **Max drawdown**, **Min 1-day liquidity**, **Max option exposure**, **Max unknown-cost lines**.

The **Pre-trade check** answers *Would these trades break a rule?* Add rows (**Symbol**, **Buy / Sell**, **Qty**, **Price**, **Ccy**; a symbol the book holds fills in its price), click **Check limits**, and read each rule's **Before** and **After** — nothing is booked. A check takes at most 200 rows. **Re-evaluate** runs the board again. When a transaction you record on the Transactions tab leaves the book breaking a rule, a link there reads *Breaks n limit(s)*; point at it for the rule names, click it to open the Limits tab.

23.18 The transaction ledger (Transactions)



Figure 23.37 Transactions — the ledger and the realised P&L of closed lots.

The **Transaction ledger** lists every row: **Date**, **Type**, **Symbol**, **Qty**, **Price**, **Amount**, **Fees**, **Ccy**, **Cash** (the cash the row moved) and **Notes**. Filter by type (**Show**), by **Symbol**, or by **From / to** dates; **Load older rows** fetches more when the ledger is long. **+ Add** opens a menu of kinds (see **§23.9 Record transactions** p. 442); **Import CSV...** and **Export CSV** are beside it.

Right-click a row for **Edit...** or **Delete...**. **Edit...** opens the row in a form of its own kind — a dividend shows **Kind**, **Symbol**, **Entered as**, **Amount**, **Withholding / fees**, **Currency**, **Pay date** and **Notes**; **Save** rebuilds the book with the corrected row. Deleting asks first, then rebuilds the book from the remaining ledger.



Figure 23.38 Editing a dividend row from the ledger.

The **Realised P&L** table lists every closed lot: **Symbol**, **Ccy**, **Opened**, **Closed**, **Qty**, **Open px**, **Close px**, **Proceeds**, **Cost**, **P&L**, **Days** and **Term**, with the total and the year-to-date figure. It has its own symbol filter and **Export CSV** (the closed lots in view). **ST** there means "not provably long term".

23.19 Reports and exports



Figure 23.39 Reports — print and export, and the end-of-day attribution.

Print / export:

- **Portfolio summary (PDF)** — key figures, period returns, allocation, top positions, plus the risk, attribution, limits and tax-lot sections of the tabs you opened this session.
- **Positions (CSV)** — every valued line with price, cost, exposure and weight.
- **Ledger (CSV)** — every transaction as entered, with the cash the ledger booked.
- **AI commentary** — opens the AI insights panel.

Scheduled end-of-day attribution decomposes the period's profit by position and sector. Pick the **Window** (**1mo**, **3mo**, **6mo**, **1y** or **max**) and click **Run now**, or tick **run every evening**: a confirmation (*Run attribution every evening?*) states the price per run and roughly per month before it is switched on. Saved runs are listed with **Run at**, **Trigger**, **Window**, **Benchmark**, **Credits**, **Day**, **Period** and **Active**; select one to see **Report detail By sector** and **By position**.

Plan & credits

Each end-of-day attribution run is charged; the price is on the button (for example **Run now · 1 CR**) and in the line under it. With **run every evening** ticked, it is charged every evening. The exports and the PDF are free (*Exports are written locally and cost nothing*), and so is the Attribution tab.

23.20 Ask the AI analyst (AI insights)

AI insights opens the **Portfolio analyst** panel over the right half of the screen. It gathers the server's own reports on this book — valuation, performance, risk, attribution, limits and scenarios — into a short brief, shows you which blocks it holds (the **CONTEXT** chips, each ticked when it is included), and writes an analysis from them. The picker at the top chooses who answers (**Fincept AI** by default, or one of your own agents); **History** lists earlier answers; the cross (or Esc) closes the panel.

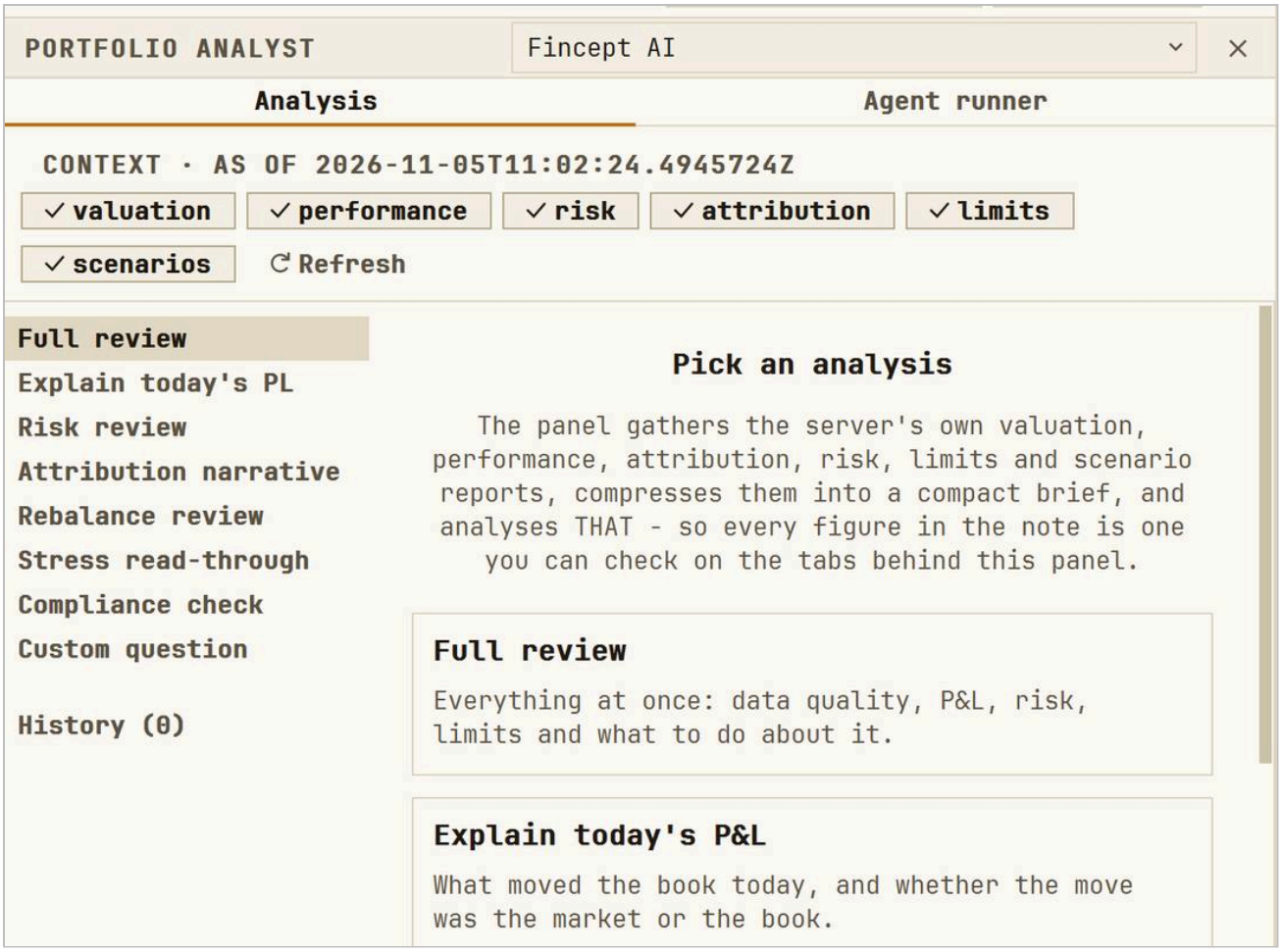


Figure 23.40 The Portfolio analyst panel — who answers, the context chips, the analyses and their descriptions.

1. Click **AI insights**.
2. Pick an analysis: **Full review**, **Explain today's P&L**, **Risk review**, **Attribution narrative**, **Rebalance review**, **Stress read-through**, **Compliance check** or **Custom question**.
3. Wait until the context has been gathered (*Gathering context 5/5*). Optional: click a chip to leave that block out.

4 Click the run button at the bottom, for example **Run full review · 1 CR** (the price is on the button). While it runs, the header reads **analysing full review** with the seconds so far, and the note appears as it is written. A full review can take a couple of minutes.

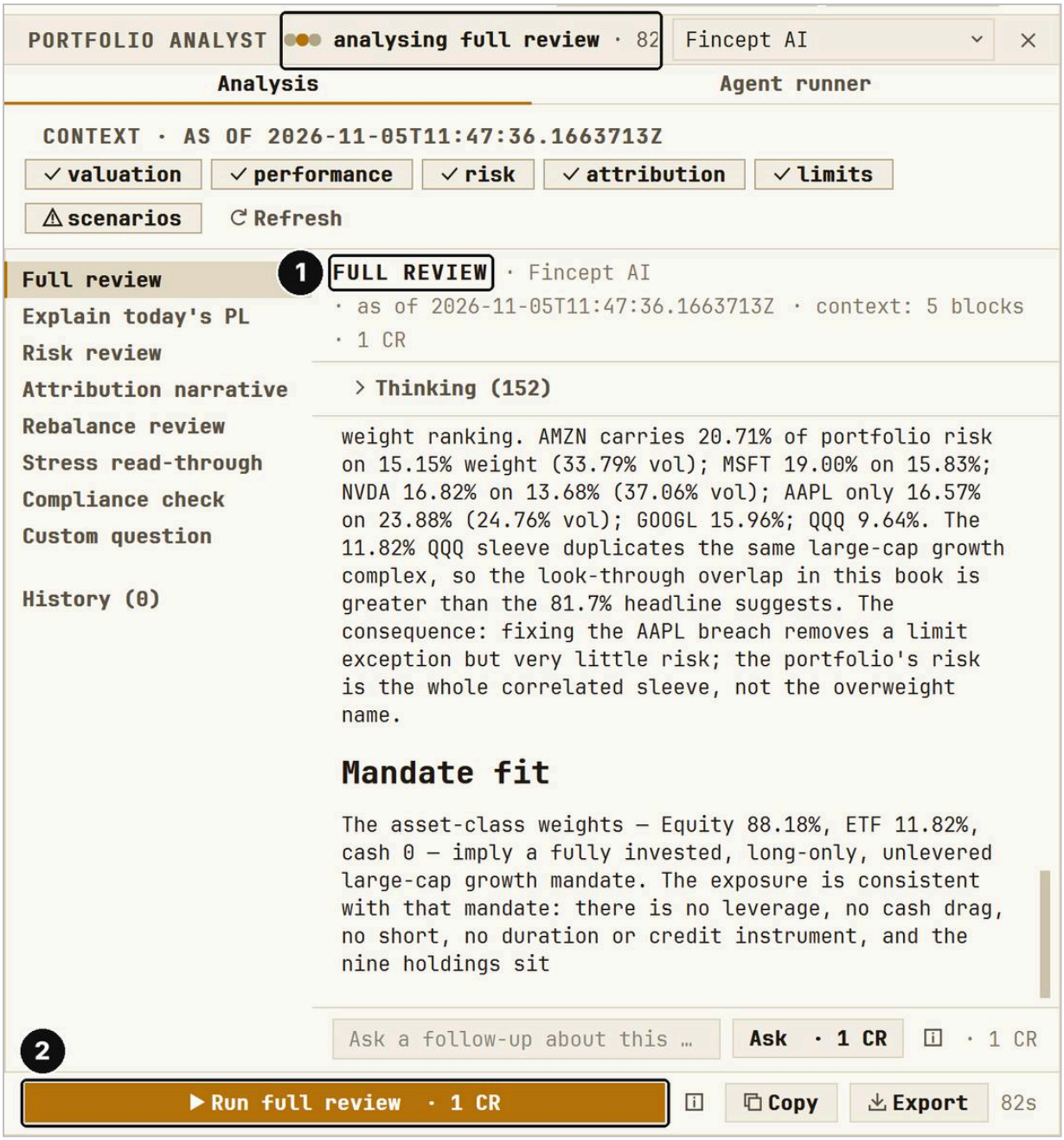
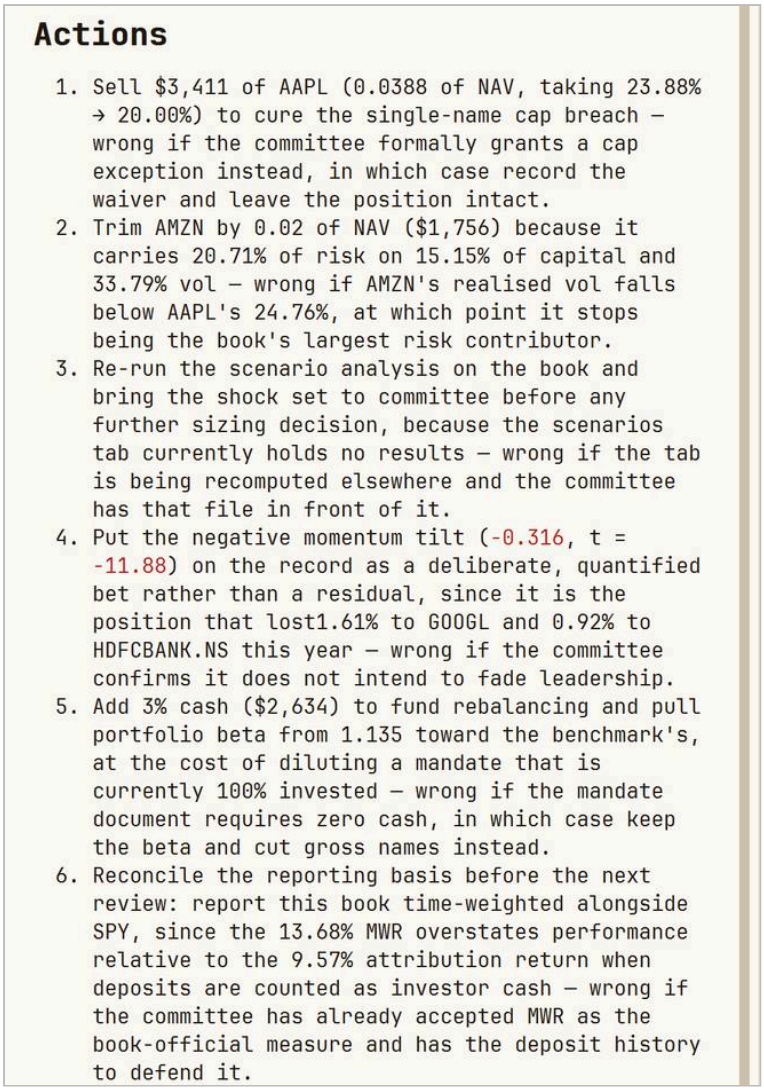


Figure 23.41 A full review of Core Growth while it is being written. The header says it is running and for how long.

1. The analysis, who answers, and the context it read.
2. The price is on the button.

5 Read **Findings**, **Actions** and **Proposed trades**. **Simulate in rebalance** sends a proposal to the Rebalance tab. Ask a follow-up in the box at the bottom, **Copy** the note or **Export** it as Markdown.



Actions

1. Sell $3,411 of AAPL (0.0388 of NAV, taking 23.88% → 20.00%) to cure the single-name cap breach — wrong if the committee formally grants a cap exception instead, in which case record the waiver and leave the position intact.
2. Trim AMZN by 0.02 of NAV ($1,756) because it carries 20.71% of risk on 15.15% of capital and 33.79% vol — wrong if AMZN's realised vol falls below AAPL's 24.76%, at which point it stops being the book's largest risk contributor.
3. Re-run the scenario analysis on the book and bring the shock set to committee before any further sizing decision, because the scenarios tab currently holds no results — wrong if the tab is being recomputed elsewhere and the committee has that file in front of it.
4. Put the negative momentum tilt (-0.316, t = -11.88) on the record as a deliberate, quantified bet rather than a residual, since it is the position that lost1.61% to GOOGL and 0.92% to HDFCBANK.NS this year — wrong if the committee confirms it does not intend to fade leadership.
5. Add 3% cash ($2,634) to fund rebalancing and pull portfolio beta from 1.135 toward the benchmark's, at the cost of diluting a mandate that is currently 100% invested — wrong if the mandate document requires zero cash, in which case keep the beta and cut gross names instead.
6. Reconcile the reporting basis before the next review: report this book time-weighted alongside SPY, since the 13.68% MWR overstates performance relative to the 9.57% attribution return when deposits are counted as investor cash — wrong if the committee has already accepted MWR as the book-official measure and has the deposit history to defend it.

Figure 23.42 Part of the same review — its numbered actions, with amounts taken from the book.

The **Agent runner** page runs one of your own agents (from **Chapter 38, Agent Studio** p. 739) on the book with a **Goal** you type.

Plan & credits

Each run and each follow-up is billed as one AI chat answer. It is free when your own AI harness answers (see **Chapter 42, Use Your Own AI** p. 819).

23.21 View all portfolios together

Pick **All portfolios** in the picker (it appears once you have two or more books). The server values each book in its own base currency, converts it into the base currency of the first book in the picker, and merges them. The view is read-only and has two tabs, **Overview** and **Positions**; the other tabs say they are kept per book. Pick a single book to change anything.

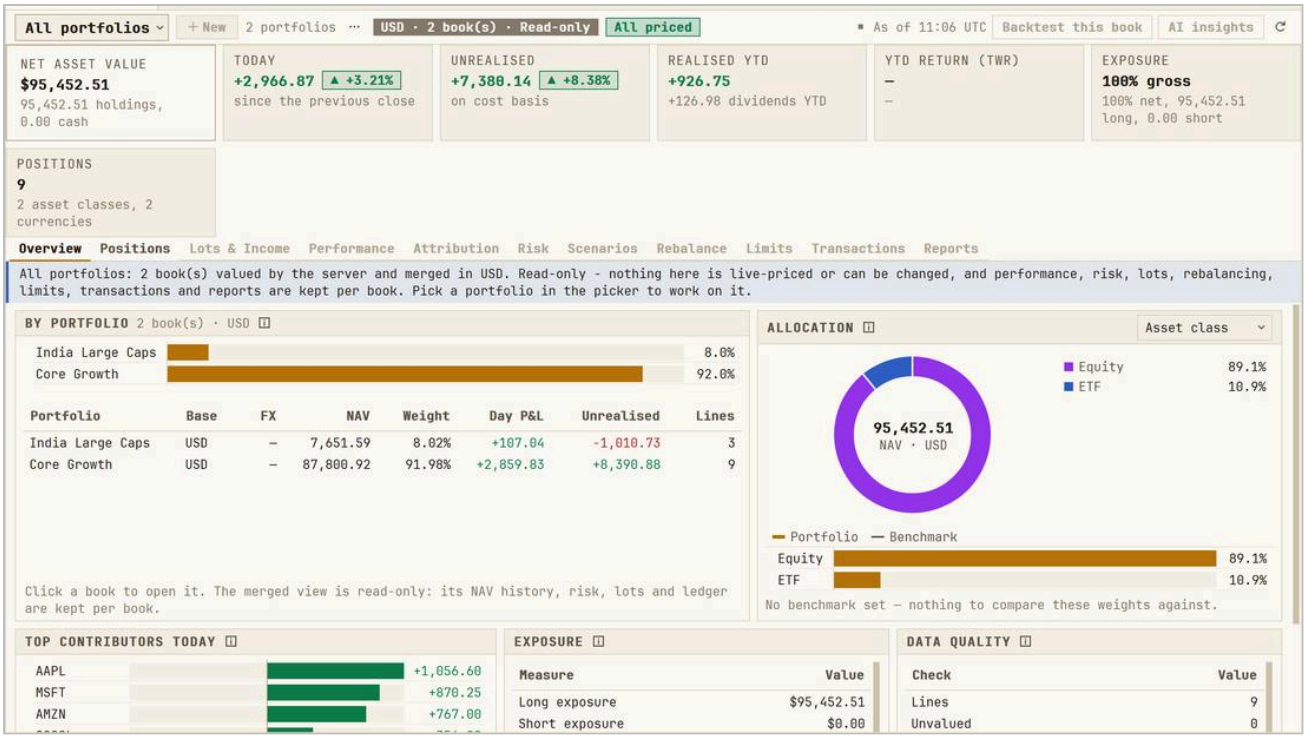


Figure 23.43 All portfolios — both books merged into one read-only view in USD.

The Overview adds a **By portfolio** table: **Portfolio**, **Base**, **FX** (the rate used), **NAV**, **Weight**, **Day P&L**, **Unrealised** and **Lines**. Click a book to open it. In Positions, **Group by** gains a **Portfolio** choice. Live repricing is off in this view: click the refresh button for a new merge.

23.22 Backtest the book

Backtest this book opens **Chapter 24, Backtesting** p. 464 with the book's current weights as a monthly-rebalanced strategy over five years: its benchmark, its base currency, and a starting capital equal to today's NAV. A blended benchmark is not handed over (the test then compares with an equal-weight buy-and-hold of the book). It needs a valued book with priced positions. Nothing runs until you press Run there.

After a run, the Performance tab shows a link with that backtest's CAGR, Sharpe and maximum drawdown; click it to open the run in Backtesting. It is a simulation of today's weights over history, not the book's own return.

23.23 Reference

Header

Control	What it does
Portfolio picker	Switch books; **All portfolios** merges them
New	Create a portfolio (guarded by the plan's portfolio quota)
Counter	*n portfolios* of the plan's allowance
Portfolio actions	**Edit portfolio…**, **Import transactions (CSV)…**, **Sync from a connected broker…**, **Delete portfolio…**
Benchmark chip	*vs SPY* (the benchmark), *No benchmark*, or the blend

Control	What it does
Currency chip	base currency · cost method · **Cash tracked** or **Holdings only**
Health pill	**All priced**, or *n unvalued*, *n stale*, *n at cost*, *n expired* — click to filter Positions
Live dot	*Live quotes are repricing the book* / *Live repricing paused*
As of ... UTC	time of the last server valuation
Backtest this book	Opens Backtesting on the book's weights
AI insights	Opens the Portfolio analyst panel
Refresh	*Re-price the book and refresh every tab*

Tabs and their command words

Tab	Type in the command line
Overview	`PORT OVERVIEW`, `PORT SUMMARY`
Positions	`PORT POSITIONS`, `PORT POS`, `PORT HOLDINGS`
Lots & Income	`PORT LOTS`, `PORT TAX`, `PORT INCOME`, `PORT DIVIDENDS`
Performance	`PORT PERFORMANCE`, `PORT PERF`
Attribution	`PORT ATTRIBUTION`, `PORT ATTRIB`
Risk	`PORT RISK`
Scenarios	`PORT SCENARIOS`, `PORT SCENARIO`, `PORT STRESS`
Rebalance	`PORT REBALANCE`, `PORT REBAL`
Limits	`PORT LIMITS`
Transactions	`PORT TRANSACTIONS`, `PORT TXN`, `PORT TRADES`, `PORT LEDGER`
Reports	`PORT REPORTS`, `PORT REPORT`

`PF` and `PORTFOLIO` work in place of `PORT`.

Keyboard

Key	Where	Action
`/`	Positions, Lots & Income, Transactions	Jump to the filter box
Esc	In a filter box	Clear it; a second press returns to the table
Esc	AI insights panel	Close the panel

What is saved

- Your portfolios and every transaction, rule, mark and saved benchmark: on your Fincept account.
- The last portfolio and tab you opened, and the Positions column set: restored the next time you open the screen.

23.24 For advanced users

Where the numbers come from. The terminal computes no money. Positions, cost, P&L, income, performance, risk and stress results are computed by Fincept's servers from your ledger. Between valuations the terminal re-prices each line on live ticks (quantity x price x multiplier x exchange rate) and the totals follow. Click the refresh button for a fresh server valuation.

Live prices. A line is priced from a connected broker where one streams it, otherwise from Fincept's market feed (live or delayed by market). The status bar and **Details** show each line's source and delay. Indian shares stream live only through a connected broker; without one they are delayed.



Figure 23.44 The live status bar with Details open — which lines are delayed and why.

Currencies. Each line keeps its own currency; totals are converted to the base currency at live rates. If no rate exists for a currency, the line is left out of the totals: the note on the ribbon says *no FX rate for …* and the Data quality panel counts it under **Missing FX**.

Cost unknown. A lot whose cost nobody stated (for example from a broker statement) is valued but left out of every P&L figure: cost columns read *cost unknown*, the note on the ribbon says *P&L excludes n line(s) with unknown cost*, and **Realised YTD** says how many closings it left out.

Do it with AI

The AI chat can work the Portfolio screen. Try:

- *Open my Core Growth portfolio and tell me which three lines carry the most risk.*
- *Which lots in Core Growth could I sell for a tax loss without a wash sale?*
- *Run a Risk-off factor shock on Core Growth and summarise the result.*
- *Add a limit to Core Growth: no position above 25%.*

23.25 Troubleshooting

The risk tiles say "computing" for a long time. The risk engine needs price history for every line. It usually finishes within a few seconds; the tiles update by themselves. A new book with only a few days of history shows little.

A line shows a dash for its value. Nothing quotes it. The health pill counts it as *unvalued*. Set a manual mark, or check that the symbol is right (right-click > **Change symbol**).

Indian shares show DELAYED. Live prices for NSE and BSE shares come through a connected Indian broker. Without one the book uses a delayed price. See **Chapter 15, Brokers & Accounts** p. 248.

The import says rows cannot be read. Read the **Problem** column. The usual causes are an unknown type word, a date in another format (pick it in **Defaults**), or a column that was not recognised (fix it under **Column mapping**).

Cash goes negative. Cash tracking is on but deposits were not recorded. Add a **Cash** transaction, or turn cash tracking off in Edit portfolio.

"All portfolios is a read-only view". Pick a single portfolio in the picker to add, import or edit.

CHAPTER 24

Backtesting BTST

Test a trading strategy on years of real prices before you risk money — with realistic costs, an honest verdict on whether the result could be luck, a parameter optimiser and a permanent history of every run.

At a glance

Open it	• Type `BTST` in the command line and press **Enter** • Type `backtest AAPL` (or `backtest RELIANCE.NS sma_crossover`) in the command line and press **Enter** to open it ready to test • **Screens** › **Backtesting** • Click **Backtest** on a strategy in Algo Trading > Strategies, or **Backtest these** on the Scanner
You need	• Signed in on any paid plan • Credits: each run and each optimisation shows its price on the button • Exclusive+ or higher for parameter sweeps (Optimize)
Best for	• Checking an idea on 5–10 years of history • Comparing strategies side by side • Finding parameters that hold up out of sample • Learning what Sharpe, drawdown and CAGR really mean
Time to learn	30 minutes
Related	**Chapter 19, Algo Trading** p. 331, **Chapter 23, Portfolio** p. 430, **Chapter 31, AI Quant Lab** p. 623, **Chapter 22, Equity Research** p. 392

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24.6	See every trade	472	24.13	For advanced users	490
24.7	See what the portfolio held	475	24.14	Troubleshooting	491

A **backtest** replays a strategy over past prices as if you had traded it then: every signal, every order, every fill, with costs taken off. At the end you see what the strategy would have earned, how much it could have lost along the way, and whether the result is strong enough to trust.

The Backtesting screen runs each test on Fincept's servers. You describe the test on the **Build** page, press **Run backtest**, and the result fills six more pages — each one a different reading of the same run.

24.1 Screen tour

The screen has three bands: a **header** with the strategy's name, a summary of the test and the run buttons; a **strip** of seven page names; and the **page** itself. After a run, a thin status line along the bottom gives the run's id, how long it took and how many warnings it raised (hover it to read them).

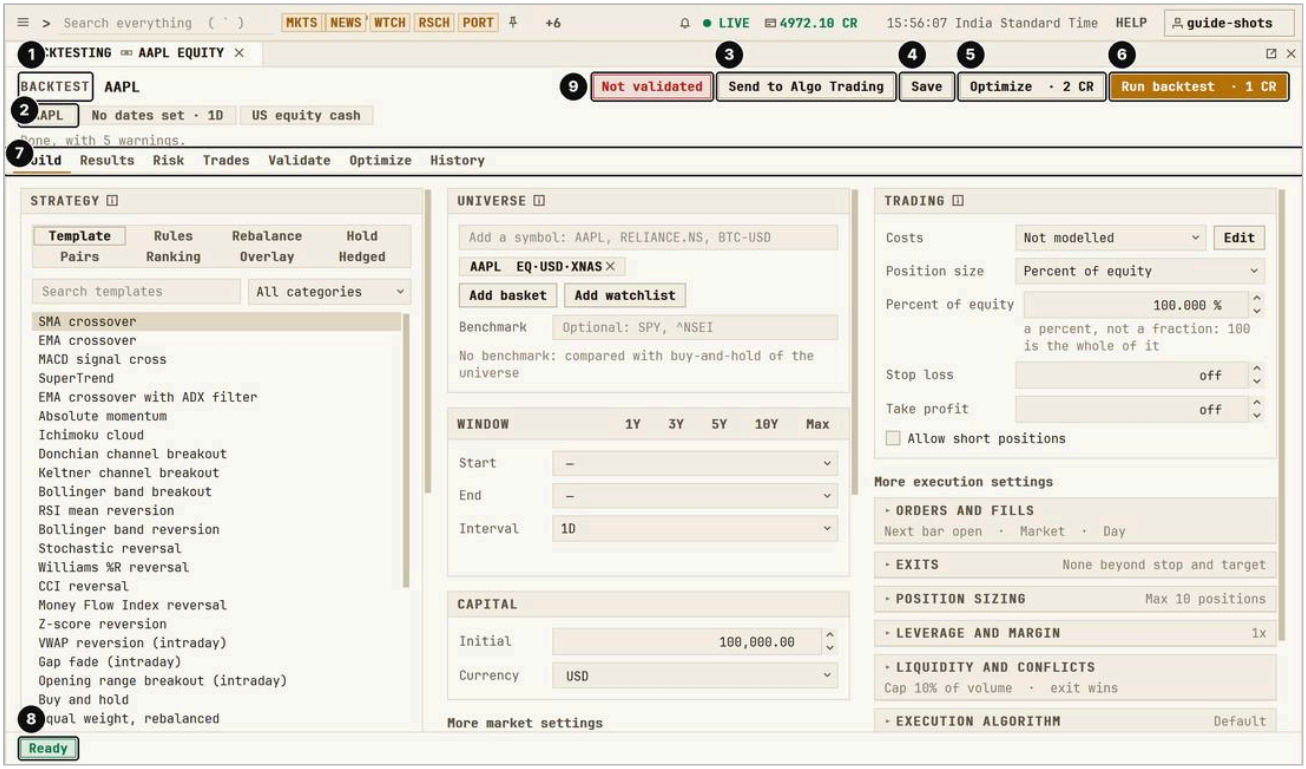


Figure 24.1 The Backtesting screen on its Build page, set up to test an SMA crossover on AAPL.

1. **BACKTEST** and the strategy's name. Click the name to type another.
2. **Summary chips**: the universe, the window and bar size, and the cost model.
3. **Send to Algo Trading** — load a rule strategy into the Algo Trading Builder.
4. **Save** this setup to your saved strategies.
5. **Optimize** — run a parameter sweep; its price is on the button (Exclusive+ or higher).
6. **Run backtest** — run the test; its price is on the button.
7. **The pages**: Build, Results, Risk, Trades, Validate, Optimize, History.
8. **The check**: **Ready** when the setup can run; otherwise how many issues or warnings, with a line for each.
9. **Validated** / **Not validated** — the verdict of the run on screen.

The seven pages

Page	What it shows
Build	Where you describe the test: strategy, symbols, dates, capital, trading rules and costs.
Results	The headline: verdict, key figures, equity curve against the benchmark, drawdowns, monthly returns, the full metric sheet, and actions on the run.

Page	What it shows
Risk	What the portfolio actually held: exposures, allocations, attribution, margin, costs from gross to net, corporate actions and limit breaches.
Trades	Every trade and every fill, on a price chart with the entries and exits marked.
Validate	Whether the result could be luck: probabilistic and deflated Sharpe, bootstrap intervals, Monte Carlo, crisis periods, regimes and capacity.
Optimize	Set up a parameter sweep and read its leaderboard, surfaces, Pareto front and walk-forward.
History	Every run you have made, your saved strategies and your cost profiles.

A run fills **Results**, **Risk**, **Trades** and **Validate** at once; an optimisation fills **Optimize**. The header's badge then says **Validated** or **Not validated** (see **§24.8 Check whether the result is real** p. 476).

24.2 Quick start

Test a classic trend-following idea — buy when a fast moving average crosses above a slow one, sell when it crosses back — on Apple over five years.

1. In the command line at the top, type `backtest AAPL sma_crossover` and press **Enter**. The Backtesting screen opens on **Build** with the **Template** *SMA crossover* (fast average 20, slow average 50) and the symbol **AAPL** filled in. With no dates set, a run covers the five years up to today.

2. Look at the check at the foot of **Build**: **Ready** (green), with how many bars the test covers. If a field needs fixing, it reads **1 issue** (or more) and *Fix the highlighted fields to run.*; the field is outlined and a line names it.

3. Click **Run backtest · 1 CR** at the top right. The price on the button is the whole charge. While it runs, the button reads **Running**, **Cancel run** appears beside it, and the line under the chips says what the run is doing.



Figure 24.2 A run in progress (here on RELIANCE.NS).

1. What the run is doing (fetching data, simulating, validating).
2. **Cancel run** stops it.
3. **Running** — the run button waits until the run is done.

4. When the run is done, the **Results** page opens. Read the verdict, the **CAGR**, the **Sharpe** and the **Max drawdown**, and look at the equity curve against buy-and-hold of AAPL (no **Benchmark** was set).

5. Open **Validate** to see whether the result is strong enough to trust, and **Trades** to see every trade.

Tip

The same command works for any symbol and any template: `backtest RELIANCE.NS sma_crossover`, `backtest MSFT NVDA GOOGL`, `optimize AAPL`. `backtest book` tests your active portfolio, and `backtest watchlist` your default watchlist.

24.3 Set up a test

The **Build** page is three columns: **STRATEGY** on the left, **UNIVERSE**, **WINDOW** and **CAPITAL** in the middle, **TRADING** on the right. Under them, **More market settings** and **More execution settings** hold everything else, folded away.

1. **Strategy.** Pick the kind of strategy at the top of the **STRATEGY** panel (**Template**, **Rules**, **Rebalance**, **Hold**, **Pairs**, **Ranking**, **Overlay**, **Hedged**). For **Template**, search the list or filter it by category and click a template; its description and **Parameters** appear under the list.
2. **Universe.** Type a symbol in **Add a symbol** and pick it from the list (AAPL, RELIANCE.NS, BTC-USD). Add more, or **Add basket** / **Add watchlist**. Type a **Benchmark** if you want one.
3. **Window.** Click **1Y**, **3Y**, **5Y**, **10Y** or **Max**, or set **Start** and **End**. Choose the **Interval** (bar size).
4. **Capital.** Set the **Initial** amount and its **Currency**.
5. **Trading.** Choose **Costs** (a cost profile), **Position size**, and if you like a **Stop loss**, **Take profit** and **Allow short positions**.
6. Read the check at the foot of Build. **Ready** means every field checks out. **1 warning** (or more) still runs (*Ready to run: … bars across … symbols.*). **1 issue** (or more) must be fixed first (*Fix the highlighted fields to run.*): click an issue's line to go to its field.



Figure 24.3 The Build page's three columns.

1. **STRATEGY** — the kind of strategy, here a **Template**.
2. The template list (47 templates), searchable and filtered by category.
3. **UNIVERSE** — the symbols, baskets or watchlists to test.
4. **Benchmark** (optional).
5. **WINDOW** — a preset or your own dates, and the bar size.
6. **CAPITAL** — starting money and currency.
7. **TRADING** — costs, position size, stop, target, shorting.
8. Everything else, folded into sections.

The setup is checked as you type, before anything is charged: a symbol that does not exist, dates in the wrong order, or a missing parameter are outlined in place.

24.4 Run a test and what it costs

Each run and each optimisation runs on Fincept's servers and is priced in credits. The price is never a surprise:

- **Run backtest** and **Optimize** in the header carry their price on the button — for example **Run backtest · 1 CR** and **Optimize · 2 CR**. Pressing a button that shows its price is your agreement to that price.
- Buttons that do not show a price — **Run best** on the Optimize page, the page's own **Optimize** button, and a test another screen asks to run for you — first ask **Run the backtest?** (or **Run the sweep?**): *This backtest costs 1 credit. Your balance is … Run it now?* Choose **No** and nothing runs or is charged: the line under the chips says *Not run: the price was not confirmed. Nothing was charged.*

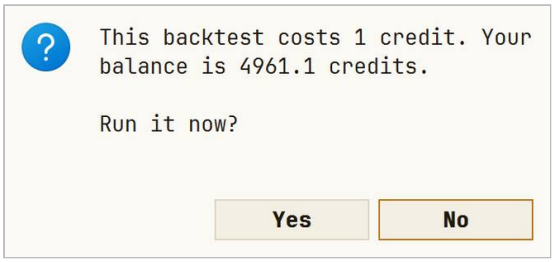


Figure 24.4 The price question asked by Run best on the Optimize page. Yes runs and charges; No does nothing.

- If the price has not loaded yet, your balance is too low, or the setup is invalid, nothing runs and nothing is charged; the line under the chips says why ("The backtest costs 1 credit and your balance is …, so it was not run. Top up, or …").
- One run at a time: while a run is in flight, **Cancel run** appears in the header and the run buttons wait.
- Parameter sweeps need the **Exclusive+** plan or higher. On Exclusive, **Optimize** is locked and says which plan unlocks it.

Credits

Opening an old run from **History**, comparing runs, and every page of a finished result are free. Only starting a run or a sweep is charged.

Test on your broker's own prices

Under **More market settings** > **Data source**, pick **Broker** to test on your connected broker's own history instead of Fincept's market data. The bars are fetched on your computer and sent with the run. If the broker's history has a gap **inside** the test window, the run stops before it is charged; a gap in the warm-up period before the window only adds a warning to the result.

24.5 Read the results

When a run finishes, the **Results** page opens. It reads from the top down: the verdict and the key figures first, the detail further down.

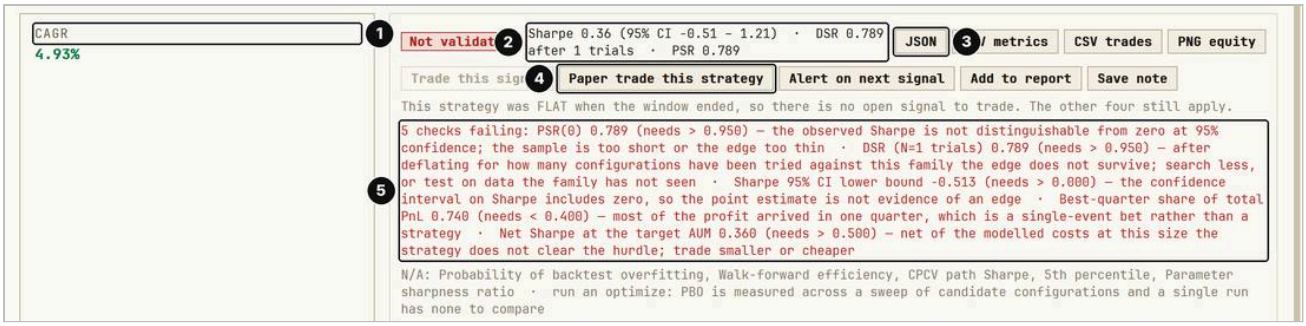


Figure 24.5 The top of the Results page for an SMA crossover on AAPL over five years.

1. **CAGR** — the yearly growth rate, the headline figure.
2. **The verdict line**: Sharpe with its 95% confidence interval, deflated Sharpe (DSR) after N trials, probabilistic Sharpe (PSR).
3. **Exports**: JSON, CSV metrics, CSV trades, PNG equity.
4. **Actions** on this run (see below).
5. Why the run is not validated, check by check, with the number each one needed.

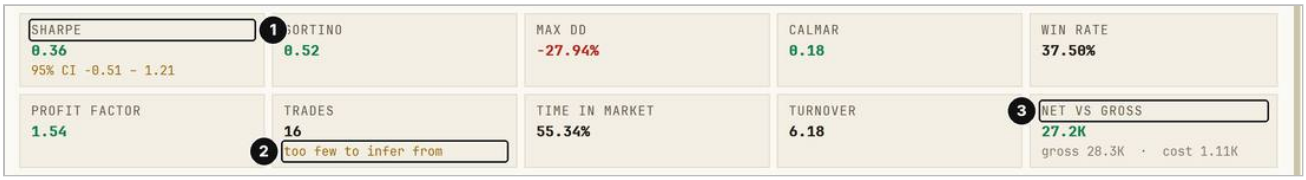


Figure 24.6 The key figure tiles of the same run.

1. **Key figure tiles** — hover one for its definition.
2. A warning under a figure when it cannot be trusted.
3. **Net vs gross** — the net P&L, with the gross P&L and the costs under it.

The **key figures** are tiles: **CAGR**, **Sharpe** (with its 95% confidence interval), **Sortino**, **Max DD**, **Calmar**, **Win rate**, **Profit factor**, **Trades** (with a warning such as *too few to infer from* when there are not enough), **Time in market**, **Turnover** and **Net vs gross** (the net P&L, with the gross P&L and the costs under it). **§24.11 The numbers explained** p. 484 says what each one means.

Beside them, the **verdict** panel says **Validated** or **Not validated** and lists every failing check in red with the value it needed — for example *PSR(0) 0.789 (needs > 0.950) — the observed Sharpe is not distinguishable from zero at 95% confidence*. A grey line lists the checks that could not apply to this run (**N/A**) and why. Under it, a note describes the data: where the prices came from, how they were adjusted, and anything the run assumed (for example the window it used when none was set). Some of its lines still use the engine's short codes.

Further down:



Figure 24.7 Equity against buy-and-hold, the drawdowns, and the exposure, on one time axis.

1. The strategy's value (and the benchmark or buy-and-hold); the shaded bands are its drawdowns.
2. **Log scale**, **Benchmark**, **Trade markers** — switch layers; **Reset zoom** after a drag-zoom.

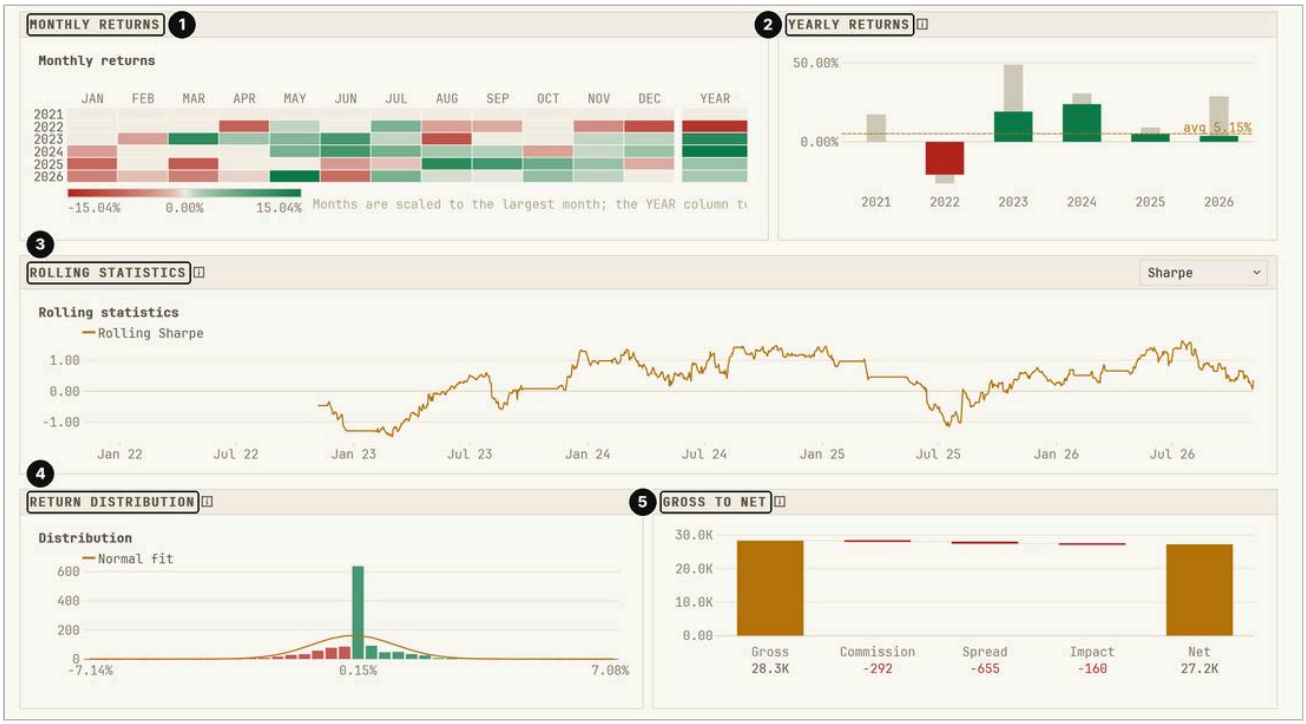


Figure 24.8 Monthly and yearly returns, rolling statistics, the return distribution and gross to net.

1. **Monthly returns** — months × years, coloured by gain or loss.
2. **Yearly returns** against the benchmark.
3. **Rolling statistics** — Sharpe, Volatility or Beta over a moving window.
4. **Return distribution** with a fitted normal curve.
5. **Gross to net** — what each cost took from the raw result.

Section	What it shows
Equity, drawdown and exposure	Three charts on one time axis: the strategy's value (with the benchmark or, without one, equal-weight buy-and-hold of the universe, labelled *EQUAL_WEIGHT*), how far below its last high it was (the **drawdown**), and how much was invested. **Log scale** shows steady growth as a straight line; **Benchmark** and **Trade markers** switch those layers on and off. Drag on a chart to zoom all three; **Reset zoom** goes back.
Monthly returns	A grid of months × years, coloured by gain or loss.

Section	What it shows
Yearly returns	Each year's return against the benchmark's.
Rolling statistics	**Sharpe**, **Volatility** or **Beta** measured over a moving window, to see whether the edge was steady or came in one burst.
Return distribution	A histogram of the per-bar returns with a fitted normal curve. Where the bars stand outside the curve, the Sharpe ratio stops describing the risk.
Gross to net	What each kind of cost took out of the raw result.
Post-entry projections	Where trades stood N bars after entry, as percentiles over every trade.
NAV against contributions	Only for a test with deposits or withdrawals: the money paid in (filled area) under the account's value; the gap is what the strategy earned.
Capacity	How the result changes with account size (when **Capacity curve**, on by default, is ticked under Build > Analysis).
All metrics	The full metric sheet — dozens of figures grouped as returns, risk and risk-adjusted, benchmark-relative, trades, costs and exposure — for **All**, **Long** and **Short** trades. Hover a row for its definition.

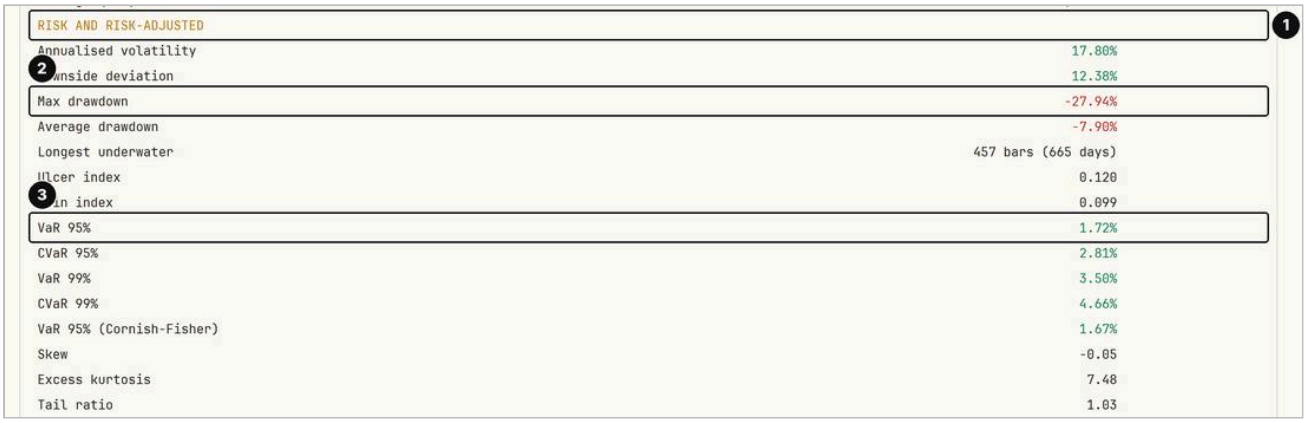


Figure 24.9 Part of the All metrics sheet: the risk figures of the AAPL run.

1. Each group of the sheet starts with a heading: returns, risk and risk-adjusted, relative to the benchmark, trades, costs, exposure.
2. Hover any row for its definition. **§24.11 The numbers explained** p. 484 explains the common ones.
3. **VaR** and **CVaR** — the loss on a bad bar (95th or 99th percentile), and the average loss beyond it.

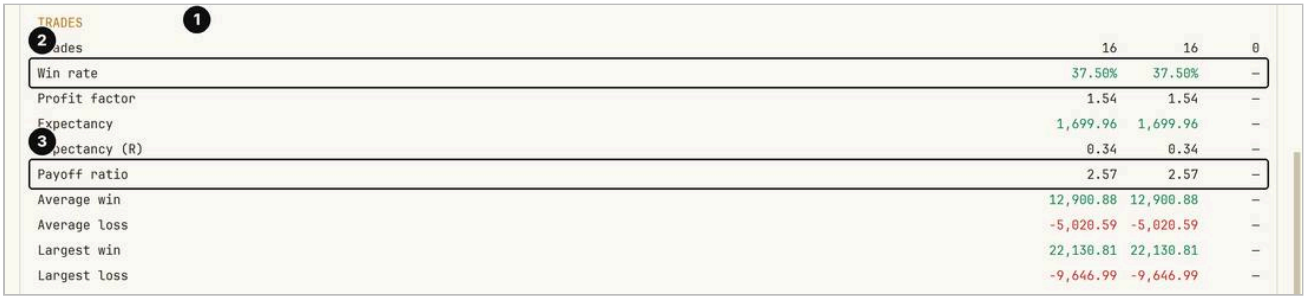


Figure 24.10 The trades group, with separate columns for all, long and short trades.

1. **TRADES** — counts, win rate, payoff, streaks, MAE and MFE, Kelly and the net P&L.
2. Three columns: **All**, **Long** and **Short** trades. A dash means that side had no trades.
3. **Payoff ratio** — the average win divided by the average loss.

Below the trades group, **COSTS** lists each cost in money (commission, spread, market impact, borrow, financing), the total in basis points and as a share of the gross P&L, and the **Break-even cost multiple**: how many times higher the costs could be before the profit disappears. **EXPOSURE** closes the sheet with the time in market, the average and peak exposure and the yearly turnover.

Note

Every number on this page comes from the run itself. Where the run could not produce a figure, the page says why instead of showing a zero — a cost that was not modelled reads *not modelled*, never 0.

Act on a result

The **Results** page has five actions. Each acts on the run on screen — on exactly what was tested — never on whatever Build holds now.

Action	What it does
Trade this signal	Stages an order from the run's last open signal on the trading ticket (the crypto ticket for a crypto pair), on Fincept Paper unless you choose otherwise. Nothing is sent until you submit it there. Greyed out when the strategy was flat at the end of the window.
Paper trade this strategy	Sends the rules to Algo Trading and opens its deploy window with Paper chosen, on the listing and product that were tested. Rule strategies only.
Alert on next signal	Turns the strategy's entry rules into an alert in Algo Trading > **Alerts** that fires on the next match. Rule strategies only.
Add to report	Inserts the key figures, the equity chart and the verdict into the Report Builder's current document.
Save note	Writes a note with the run's id, what was tested and how it scored.

The export buttons at the top of the verdict save the run as **CSV metrics**, **CSV trades**, **PNG equity** (the equity chart) or **JSON** (the whole result document).

24.6 See every trade

The **Trades** page lists what the strategy actually did, trade by trade.

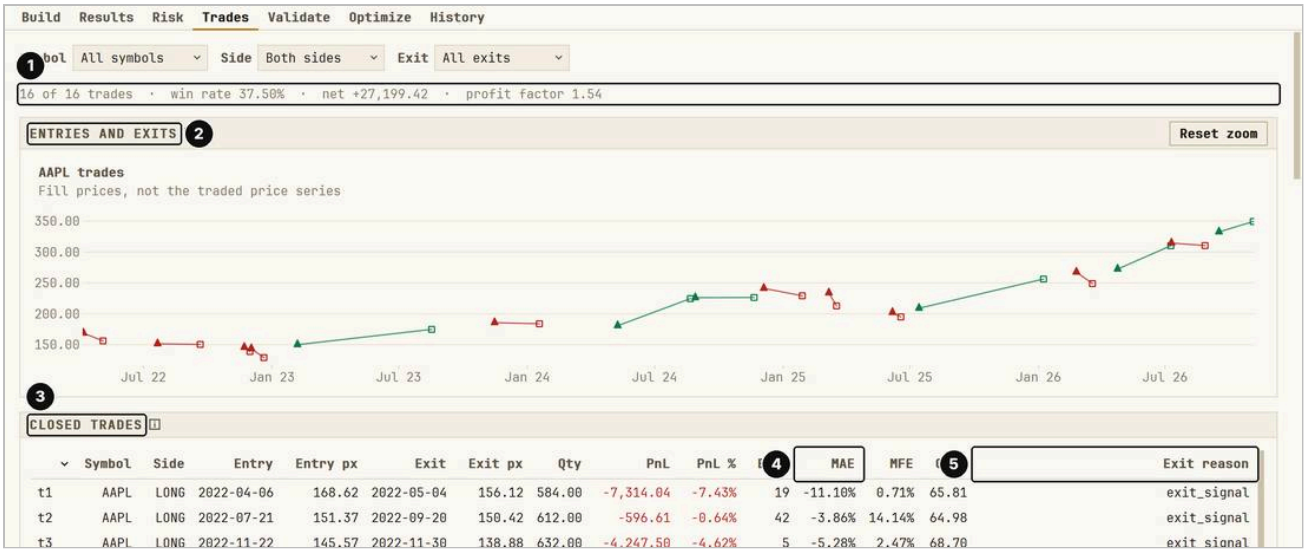


Figure 24.11 The Trades page: every entry and exit on the price chart, then every closed trade.

1. **The summary line**: trades shown, win rate, net P&L, profit factor.
2. **ENTRIES AND EXITS** — the fills on a price chart. Drag to zoom; **Reset zoom** goes back.
3. **CLOSED TRADES** — one row per round trip.
4. **MAE / MFE** — how far each trade went against you, and in your favour, before it closed.
5. **Exit reason** — why it closed, as a short code (*exit_signal*, *stop_loss*, *end_of_data*…).

The filters at the top — **Symbol** (**All symbols** or one), **Side** (**Both sides**, long, short) and **Exit** (**All exits** or one reason) — narrow everything on the page.

Part	What it shows
ENTRIES AND EXITS	The price chart of a symbol with each entry and exit marked at its fill price. Click a trade in the table to jump the chart to it.
CLOSED TRADES	**ID**, **Symbol**, **Side**, **Entry** (time), **Entry px**, **Exit**, **Exit px**, **Qty**, **PnL**, **PnL %**, **Bars** (held), **MAE**, **MFE**, **Cost**, **Exit reason**. Click a header to sort.
Further down	**Excursion development** (one small chart per trade; switch between **Favourable (MFE)** and **Adverse (MAE)**), **Excursion against outcome** (each trade's worst point against its outcome — trades that went far against you and still won tell you about your stop), **PnL distribution**, **Holding period**, **Signal unravel**, **By symbol**, **By exit reason**, then the **Engine records** — **Orders**, **Positions**, **Logs** (filled only when **Per-bar log** is on) and **Round trips**, each with its count — and **Refused orders** (every order the engine refused, with why).



Figure 24.12 Below the trade list: how far each trade ran, and how the results are spread.

1. **EXCURSION DEVELOPMENT** — one small chart per trade, all on the same scale: how far it was ahead (or, switched to MAE, behind) at each bar after entry.
2. **MAE / MFE** — each trade's worst point against its final P&L. Losers far to the left that later won show where a tighter stop would have cut winners.
3. **PNL DISTRIBUTION** — how many trades ended at each profit or loss.
4. **HOLDING PERIOD** — how many bars the trades lasted.

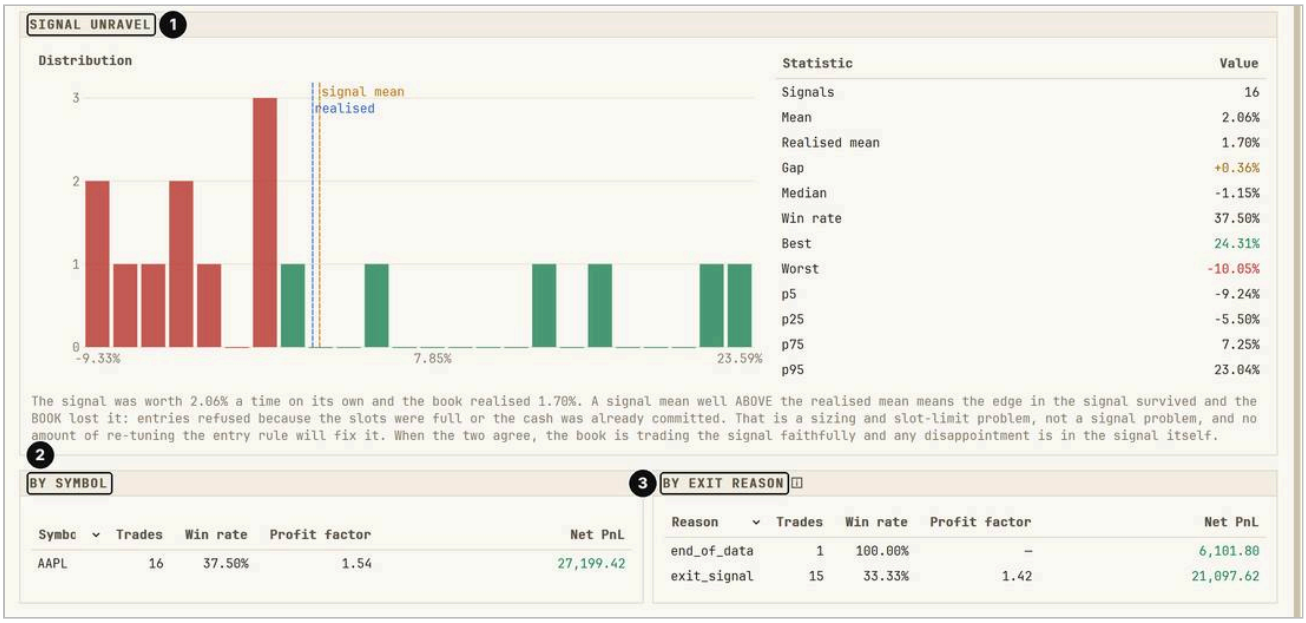


Figure 24.13 Signal unravel, and the results by symbol and by exit reason.

1. **SIGNAL UNRAVEL** — what each signal was worth on its own against what the book actually realised, with a plain-words reading of the gap.
2. **BY SYMBOL** — trades, win rate, profit factor and net P&L per symbol.
3. **BY EXIT REASON** — the same, per reason the trades closed (signal, stop, target, end of data…).

Below them, **ENGINE RECORDS** holds every order, position, log line and round trip the simulation produced, one tab each with its count (**ORDERS 31**, **POSITIONS 16**, **LOGS**, **ROUND TRIPS 16** in this run). Its columns are the engine's own field names.

Tip

Signal unravel is the quickest way to tell a bad idea from a bad set-up. When the signal's own average is well above what the book realised, the signals were good but the book could not take them all (slots full, cash already committed): change the sizing or the position limit, not the entry rule. When the two agree, the result really is the signal's.

24.7 See what the portfolio held

The **Risk** page reads the same run as a portfolio: what was traded, what it cost, and what the data did to it. For a one-symbol test many sections are short; for a basket, a ranking or a rebalanced book it shows the whole picture.

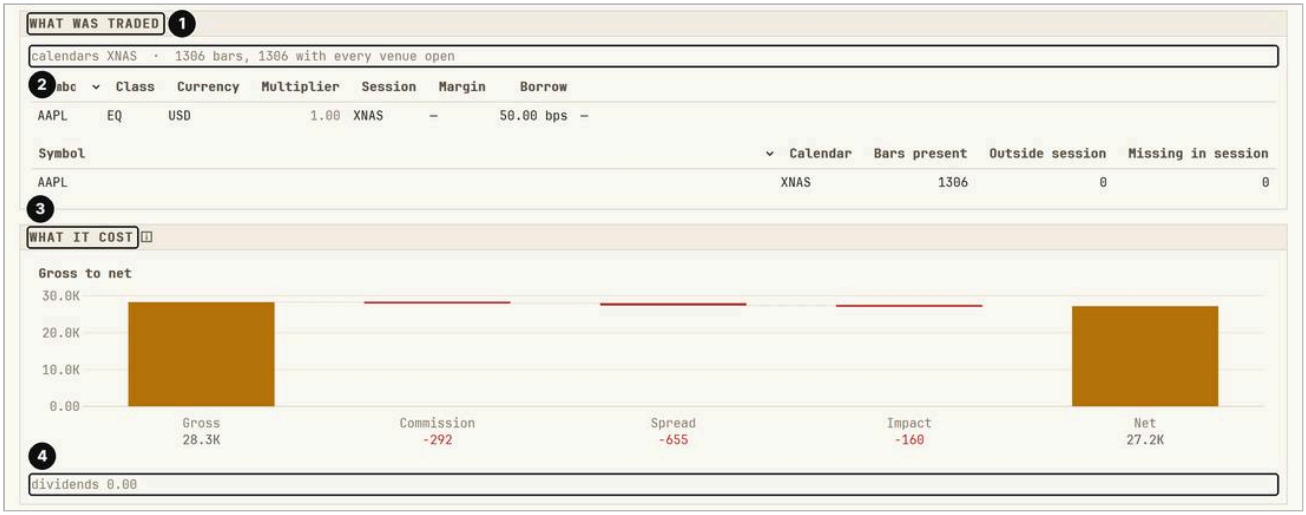


Figure 24.14 The Risk page of the AAPL run.

1. **WHAT WAS TRADED** — each instrument (class, currency, multiplier, session, margin, borrow) and the trading calendar: bars present, outside the session, missing.
2. The exchange calendar used and how many bars it held.
3. **WHAT IT COST** — **Gross to net**: the raw P&L, each cost (commission, spread, market impact), and the net P&L.
4. Dividends received over the run.

Under these, **WHAT THE DATA DID TO IT** lists every split and dividend in the window and how the run treated it (already in the prices, credited, or skipped), and a grey line names each section that does not apply to this run and why — for example *factor exposures (no factor returns were supplied)*. **JSON** and **CSV tables** at the top of the page export everything on it.

Below these, for books that hold several positions, the page adds: gross, net, long and short **exposure** over time; **allocations** over time; each holding's **marginal risk** (MCTR); **factor betas** with their t-statistics (below 2, a loading is not distinguishable from zero); **Brinson attribution** by sector against the benchmark's sector weights; ex-ante against realised **volatility**; **margin usage** and margin calls; **cash by currency** and the **currency decomposition**; and **limit breaches** — every order a risk limit refused, with the number that broke it. Option tests (**Overlay**, **Hedged**) add **WHAT THE OPTIONS DID** (the Greeks over the run and the option P&L by bucket); futures add **WHAT THE CONTRACTS DID** (every roll); an execution algorithm adds **HOW THE ORDERS WERE WORKED** (the implementation shortfall).

24.8 Check whether the result is real

A good-looking backtest can be luck: try enough ideas on the same history and one of them will shine by chance. The **Validate** page runs a **battery** of checks on every run and says plainly whether the result passed.

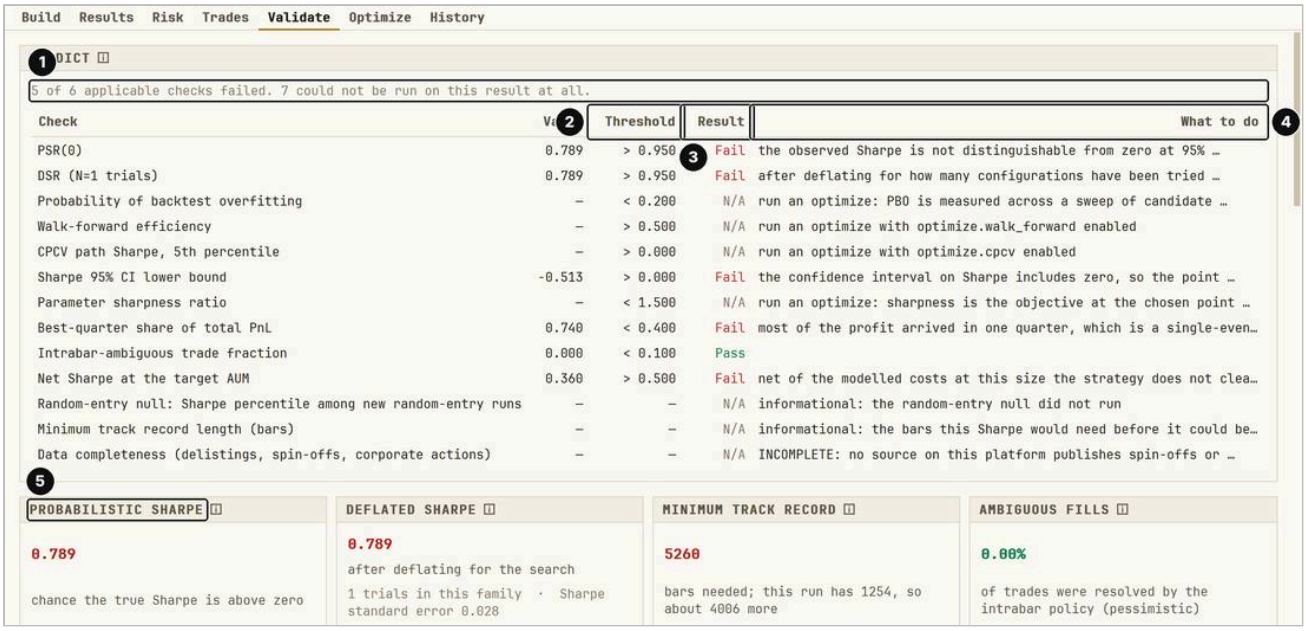


Figure 24.15 The Validate page: every check, the value it needed, and what to do about it.

1. **The verdict line** — how many checks applied, failed, or could not run.
2. **Value** against **Threshold** for each check.
3. **Result**: **Pass**, **Fail** or **N/A** (could not run on this result).
4. **What to do** — the plain reason and the fix.
5. The key numbers as cards: probabilistic and deflated Sharpe, minimum track record, ambiguous fills.

The header's badge reads **Validated** when every required check ran and passed, and **Not validated** otherwise. A check that did not run is never counted as a pass, and *Validated* is a floor, not a promise.

Check	Must be	What it guards against
PSR(0) — probabilistic Sharpe	above 0.950	A Sharpe that could be zero, given how short or lopsided the test was.
DSR — deflated Sharpe (N trials)	above 0.950	The best of many tries: every run and sweep of the same idea counts as a trial.
Probability of backtest overfitting	below 0.200	A setting chosen because it fitted this history. Needs an optimisation.
Walk-forward efficiency	above 0.500	Results that do not survive on data the optimiser never saw. Needs an optimisation with walk-forward on.
CPCV path Sharpe, 5th percentile	above 0	A result that depends on how the history was split. Needs an optimisation with CPCV on.
Sharpe 95% CI lower bound	above 0	A confidence interval that includes zero.
Parameter sharpness ratio	below 1.500	A best setting standing on a sharp peak rather than a plateau. Needs an optimisation.
Best-quarter share of total PnL	below 0.400	Most of the profit arriving in one quarter — one lucky event.

Check	Must be	What it guards against
Intrabar-ambiguous trade fraction	below 0.100	Too many trades whose stop and target were both inside one bar.
Net Sharpe at the target AUM	above 0.500	An edge that costs eat at a realistic account size.
Random-entry null, minimum track record, data completeness	—	Informational: shown, never counted.

Under the table, cards show the **PROBABILISTIC SHARPE** (the chance the true Sharpe is above zero), the **DEFLATED SHARPE** (after deflating for the search, with the number of trials in this family), the **MINIMUM TRACK RECORD** (bars needed; for example *5260 bars needed; this run has 1254, so about 4006 more*) and **AMBIGUOUS FILLS**. Further down: **Bootstrap intervals** (each metric re-sampled thousands of times, with a low and high bound — *Spans zero* means the edge might not exist), the **Monte Carlo** fan of reshuffled trade paths, **Regimes**, **Crisis windows** (named stress periods; *Not covered* when the test does not reach them), and **Capacity** (when **Capacity curve**, on by default, is ticked on Build > Analysis). The risk of ruin is in the **All metrics** sheet on Results.

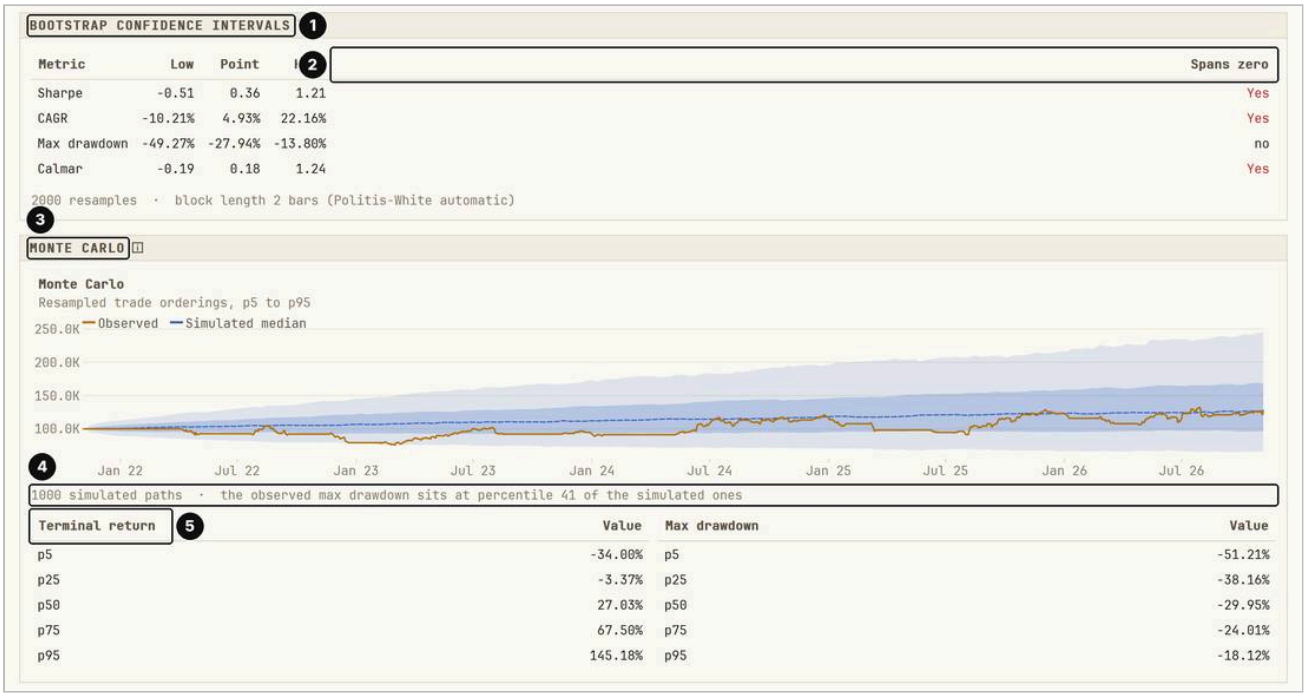


Figure 24.16 Bootstrap intervals and the Monte Carlo fan: the range the result could have had.

1. **BOOTSTRAP CONFIDENCE INTERVALS** — each metric re-sampled 2,000 times: its low, point and high values.
2. **Spans zero** — *Yes* means the true value could be zero or the wrong sign.
3. **MONTE CARLO** — the trades replayed in 1,000 random orders; the bands run from the 5th to the 95th percentile.
4. Where the real drawdown sits among the simulated ones.
5. The final return and the max drawdown at each percentile: p5 is a bad case, p95 a good one.



Figure 24.17 Regimes, crisis windows and capacity.

1. **REGIMES** — the result year by year and in low, mid and high volatility, bull, bear and sideways markets, against the benchmark.
2. **CRISIS WINDOWS** — named stress periods; *Not covered* when the test window does not reach them.
3. **CAPACITY** — the net Sharpe and net P&L at larger account sizes, with costs scaled up.
4. Where the money P&L peaks, and how many times the modelled costs the edge survives.

Why this matters

A Sharpe of 1.5 from the 40th variation you tried is much weaker evidence than a Sharpe of 1.5 from the first idea you tested. The deflated Sharpe ratio is the number that knows the difference.

24.9 Optimise parameters

The **Optimize** page searches for better parameters for a **Template** strategy (only templates expose tunable parameters) and tells you how likely the winner is to be a fluke.

1. Set up a template run on **Build** (for example *SMA crossover* on AAPL) and open **Optimize**.
2. Under **Parameters to sweep**, tick the parameters to vary and set each one's lowest value, highest value and **Step** (zero lets the server choose).
3. Under **Search**, pick the **Method**: **Grid** (every combination, up to **Max evaluations**), **Random** (samples the space with a fixed seed) or **Successive halving** (runs every candidate on a shortened window and keeps the better half, again and again).
4. Under **Objectives**, pick the **Primary** objective — what "better" means (Sharpe, CAGR, Max DD…). Tick a second one to get the trade-off between the two (a Pareto front).
5. Optionally type a **Candidate filter** over the parameters (for example *fast < slow*): settings that fail it are skipped, so the sweep does not spend evaluations on pointless pairs.

6 Optionally switch on **Enable walk-forward** (**Mode Rolling** or **Anchored**, with **Train**, **Test** and **Step** in bars: re-optimise on each training window and score on the next, unseen one) or **Enable CPCV** (combinatorial cross-validation, with **Groups**, **Test groups** and **Embargo**; it is what produces the PBO figure).

7 Click **Optimize** (on the page, or **Optimize · 2 CR** in the header). The page's own button asks you to confirm the price first; choose **Yes**.

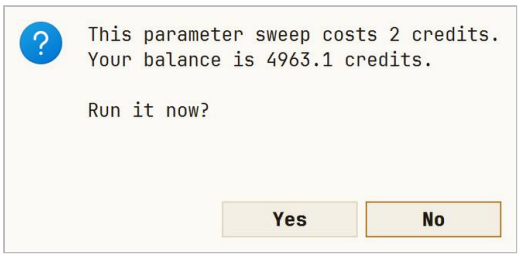


Figure 24.18 The page's Optimize button asks before it charges.

8 A sweep of a few hundred evaluations on daily bars takes seconds. The page fills with the results, and the trials count of this strategy family goes up (see DSR on **§24.8 Check whether the result is real** p. 476).



Figure 24.19 The Optimize page: the SMA crossover's two periods ticked for a sweep.

1. **Parameters to sweep** — tick a parameter and give its range (min, max, step) or an explicit list.
2. How many combinations the ranges make, and the cap on evaluations.
3. **Validation schedule** — the walk-forward and cross-validation folds the sweep will use, drawn on the run's own dates.

When the sweep has run, the page fills with:

Result	What it shows
This sweep	How many evaluations ran, how many *effective* trials they count as, the method and the objective.
Probability of backtest overfitting	**PBO**: how often the best in-sample setting did worse than the median out of sample, with the **Rank logits** and the **CPCV path Sharpe** charts.
Walk-forward	Each fold's in-sample and out-of-sample Sharpe, how many folds were positive out of sample, and the **Stitched out-of-sample equity**.

Result	What it shows
Objective trade-off	With two objectives: the Pareto front — the settings no other setting beats on both. Click a point to apply its parameters to Build.
Parameter importance	How much of the objective's variation each parameter explains. Click a bar to jump to its range.
Leaderboard	Every evaluation, sortable: **Parameters**, **Objective**, **Sharpe**, **CAGR**, **Max DD**, **Trades**. **Apply best to Build** sends the winning parameters to Build with the sweep switched off, so the next run costs one run's price; **Run best** runs them (asks to confirm the price).
Parameter surfaces	A heat map of the objective over each pair of swept parameters, best cell ringed. A broad plateau is robust; a lone bright cell is a coincidence. Needs two swept parameters.

The sweep in the pictures below varied the fast average from 2 to 200 and the slow one from 3 to 400 on AAPL: 13,300 combinations, capped at 500, of which 495 ran.

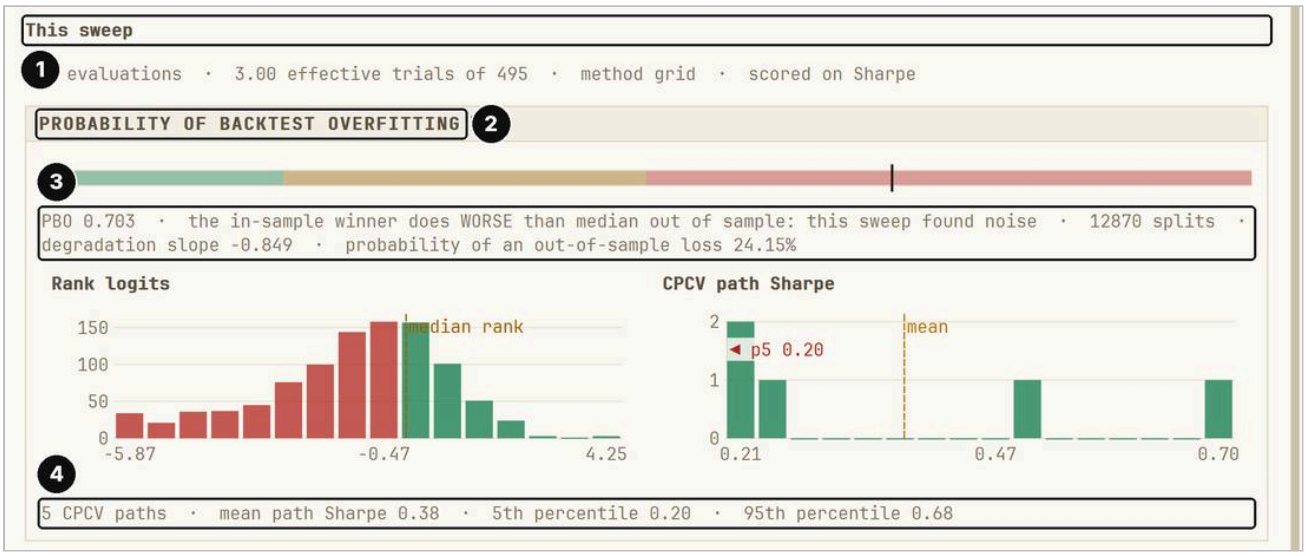


Figure 24.20 The sweep's summary and its overfitting test. This one found noise.

1. **This sweep** — how many evaluations ran, how many *effective* trials they count as (similar settings count as one), the method and the objective.
2. **PROBABILITY OF BACKTEST OVERFITTING** — the bar runs from green (below 0.2) to red; the mark is this sweep's PBO.
3. The reading in words: here the in-sample winner did *worse* than the median out of sample.
4. The cross-validated paths' Sharpe: mean, 5th and 95th percentile.



Figure 24.21 Walk-forward: each fold trained on one window and scored on the next.

1. **Walk-forward efficiency** — out-of-sample return over in-sample return, and how many folds were positive out of sample.
2. Each fold's train and test dates, the parameters it chose, and its in-sample (IS) and out-of-sample (OOS) Sharpe and return.

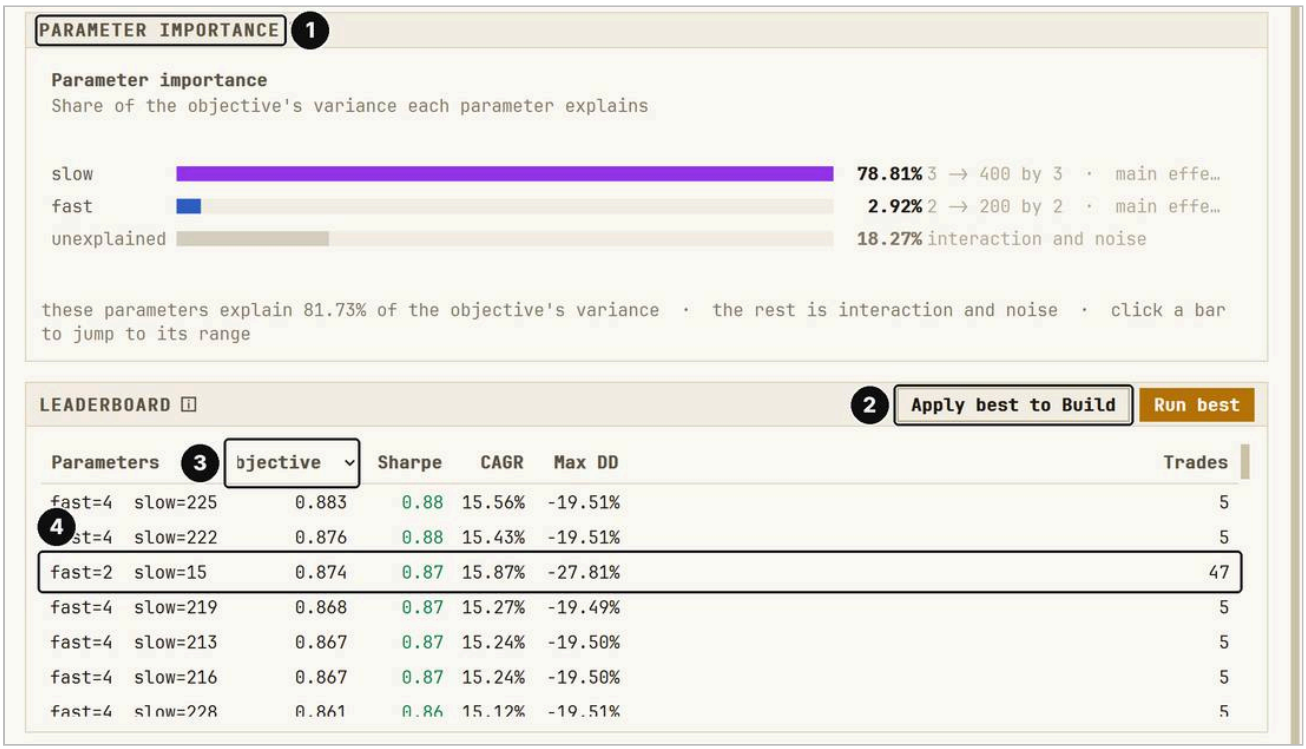


Figure 24.22 Parameter importance and the leaderboard.

1. **PARAMETER IMPORTANCE** — the share of the objective's variation each parameter explains (here the slow average explains most).
2. **Apply best to Build** puts the winning parameters on Build; **Run best** runs them (it asks to confirm the price).
3. Every evaluation, best first: parameters, objective, Sharpe, CAGR, Max DD, trades. Click a header to sort.
4. Look at the trade counts: the top rows made only 5 trades each — weak evidence, however good their Sharpe. This row (fast 2, slow 15) made 47.

Careful

An optimiser always finds a "best" setting. Trust it only when the surface around it is broad, the walk-forward folds are mostly positive out of sample, and the PBO is low.

24.10 Keep, compare and reopen runs

Every run you make is kept on the **History** page, with its verdict. Opening an old run is free: it is read back, not run again.

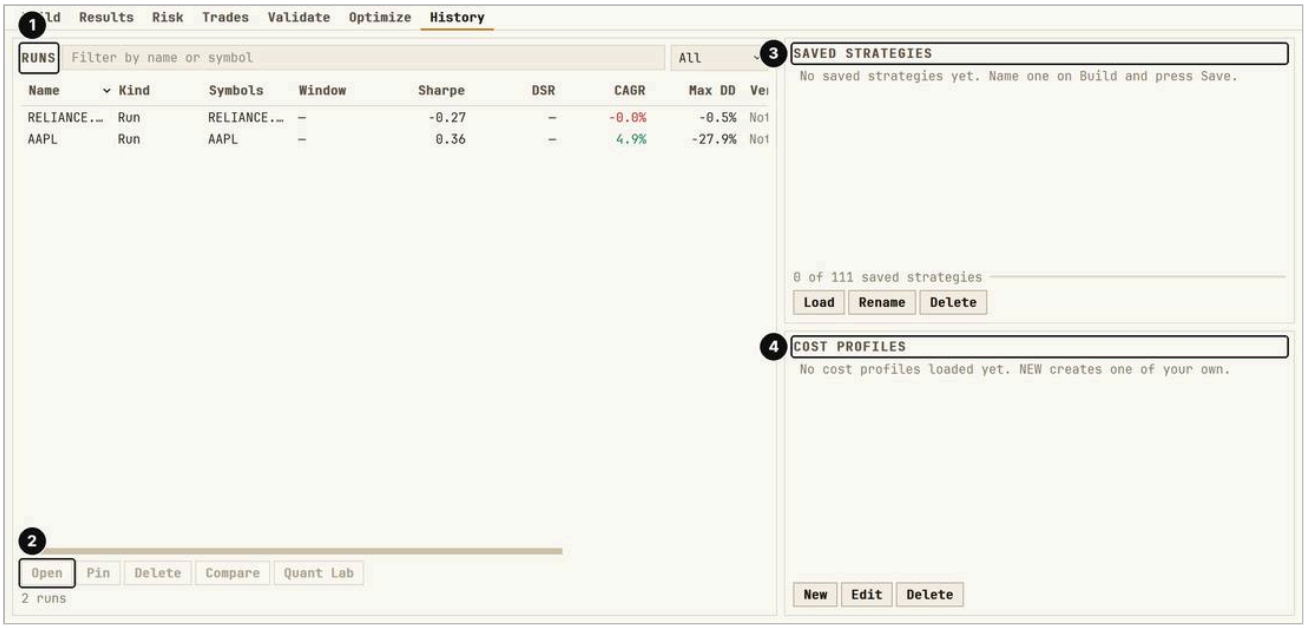


Figure 24.23 The History page with two runs, your saved strategies and your cost profiles.

1. **RUNS** — every run and sweep, with its verdict.
2. **Open** the selected run (free), **Pin**, **Delete**, **Compare** two to four runs.
3. **SAVED STRATEGIES** — **Load**, **Rename**, **Delete**.
4. **COST PROFILES** — **New**, **Edit**, **Delete**.

Part	What it does
RUNS	Every run: **Name**, **Kind** (run or sweep), **Symbols**, **Window**, **Sharpe**, **DSR**, **CAGR**, **Max DD**, **Verdict**, **Date**, **Pin**. Filter by name or symbol, and by kind (**All**, **Runs**, **Sweeps**). A click on a run opens it (free); `Ctrl`-click or `Shift`-click selects several, for **Compare** or **Delete**. Click a header to sort.
Open	Opens the selected run on Results (and the other pages).
Pin	Pins the selected runs: pinned runs stay at the top of the list (then the newest), marked with a dot in the **Pin** column. Press again to unpin.
Delete	Deletes the selected runs, after you confirm (*Delete this run? The report and its place in the trials ledger go with it.*).
Compare	Pick two to four runs and press **Compare**: their equity curves, rebased to 1.0, on one chart, and their metrics side by side.
Quant Lab	Opens the AI Quant Lab experiment a run came from (only for a run started there this session).
SAVED STRATEGIES	Setups you saved with **Save**: **Load** (back onto Build), **Rename**, **Delete** (runs already made from it stay). A line under the list shows how many of your plan's saved-strategy slots you use (*0 of 111 saved strategies*).

Part	What it does
COST PROFILES	Cost models: **New**, **Edit**, **Delete**. Built-in profiles cannot be changed or deleted; **Save as my profile** makes an editable copy.

Cost profiles

A **cost profile** describes what each trade costs: commission, the bid-ask spread, market impact, borrowing for shorts and financing for leverage, and the sell-side regulatory charges. Pick one in **Costs** on the Build page; **Edit** next to it opens the profile.

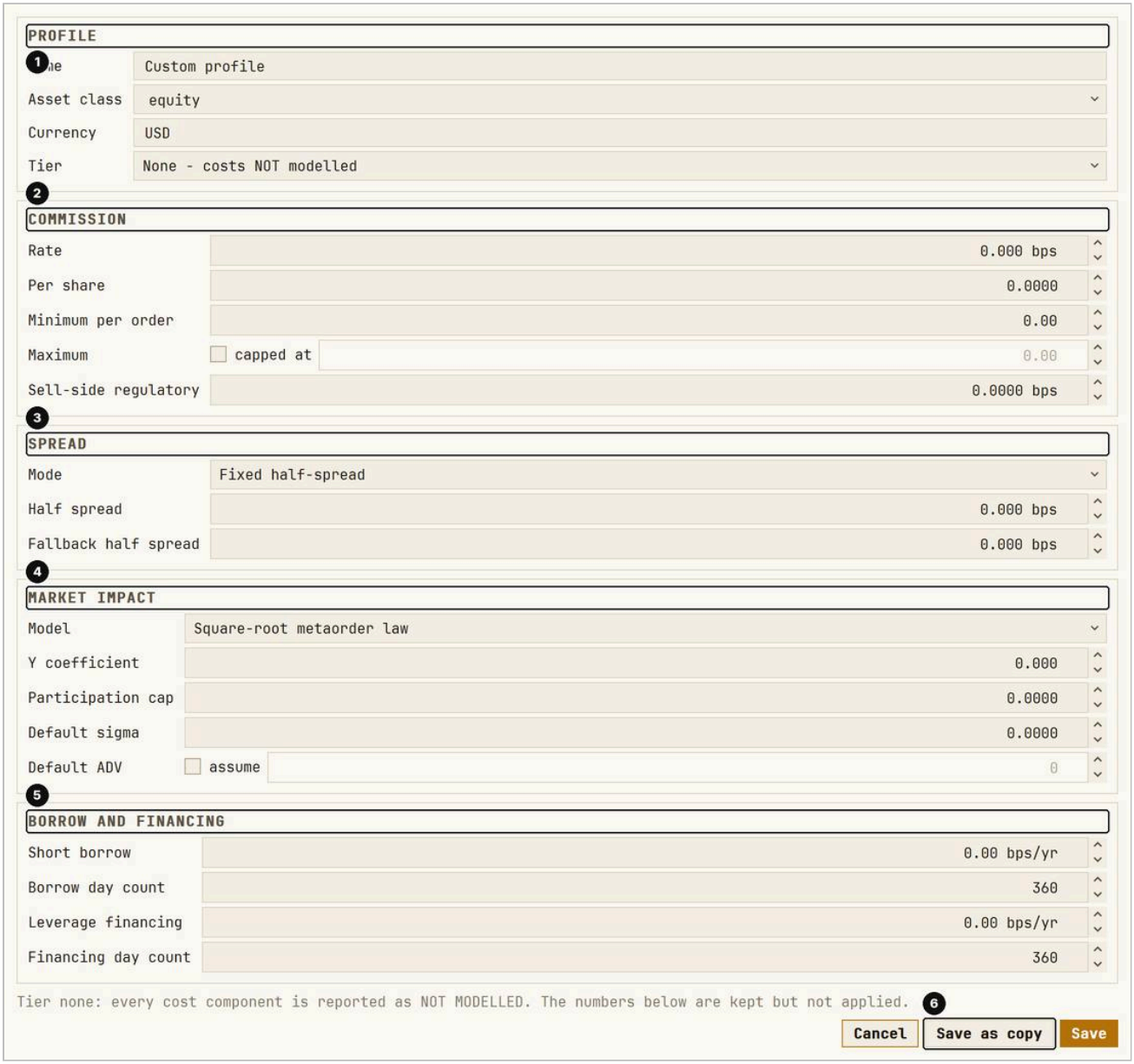


Figure 24.24 The Cost profile window.

1. **PROFILE** — name, asset class, currency and **Tier**.
2. **COMMISSION** — per trade, per share, minimum and maximum, and sell-side charges.
3. **SPREAD** — half the bid-ask spread paid on each fill.
4. **MARKET IMPACT** — how much a large order moves the price.
5. **BORROW AND FINANCING** — the yearly cost of shorting and of leverage.
6. **Save as copy** keeps the original and saves your changes under a new name.

Section	Fields
PROFILE	**Name**, **Asset class**, **Currency**, **Tier** (**Retail (pessimistic)**, **Institutional** or **None - costs NOT modelled**). **None - costs NOT modelled** reports every cost as *not modelled* (not as zero); the numbers below are kept but not applied.
COMMISSION	**Rate** (bps of the trade's value), **Per share**, **Minimum per order**, **Maximum** (tick **capped at** and give the cap), **Sell-side regulatory** (bps taken only on sales: SEC section 31 and FINRA TAF in the US, STT/CTT and stamp duty in India).
SPREAD	**Mode** (**Fixed half-spread** or **Quoted, with fallback**), **Half spread** (bps), **Fallback half spread** (used when no quote is available).
MARKET IMPACT	**Model** (for example the **Square-root metaorder law**: impact grows with the square root of the order's share of daily volume), its **Y coefficient**, **Participation cap**, **Default sigma** (daily volatility used when a symbol has none of its own), **Default ADV** (tick **assume** to give an average daily volume).
BORROW AND FINANCING	**Short borrow** and **Leverage financing** (bps a year), with their day counts (default 360).

Save keeps your changes, **Save as copy** saves them as a new profile, **Cancel** closes without saving. Built-in profiles cannot be changed: **Save as my profile** makes an editable copy. Indian symbols get the Indian cost profile automatically unless you picked another.

24.11 The numbers explained

Every backtest ends in numbers. This section explains the ones you will meet most, in plain words. The **Results** page shows the definition of each figure when you hover its row.

Return

Figure	What it means	How to read it
Total return	How much the money grew (or shrank) from the first day to the last, in %. 100,000 that ends at 135,000 is a total return of 35%.	Says nothing about how long it took, or how bumpy the ride was.
CAGR (compound annual growth rate)	The steady yearly growth that would turn the starting money into the ending money over the same number of years. 35% over 3 years is a CAGR of about 10.5%.	The fair way to compare tests of different lengths.
Excess return	The strategy's return minus the benchmark's over the same window.	Positive = it beat simply holding the benchmark. Needs a benchmark.
Time-weighted return (TWR)	What the *strategy* did, ignoring when money was added or taken out.	Shown when the test has deposits or withdrawals; this is the number to compare with other strategies.
Money-weighted return (MWR)	What the *investor* earned, as an internal rate of return. It depends on when the money went in and out.	Shown with deposits or withdrawals; good timing of the cash raises it.

Risk

Figure	What it means	How to read it
Max drawdown (Max DD)	The deepest fall from a high point to a later low point, in %. A strategy that grew to 150,000 and then fell to 120,000 has a 20% drawdown.	The pain you would have had to sit through. Most people abandon a strategy during its worst drawdown.
Volatility	How much the returns jump around, as a yearly figure.	Higher = a bumpier ride.
Beta	How much the strategy moves when the benchmark moves 1%. A beta of 0.5 moves half as much.	Near 0 = independent of the market; near 1 = moves with it.
Exposure / Time in market	The share of bars on which a position was open.	30% means the money sat in cash 70% of the time.
Turnover	How much was traded in a year, as a multiple of the average account value.	High turnover means costs matter a lot.

Return for the risk taken

Figure	What it means	How to read it
Sharpe ratio	The yearly return above a risk-free rate, divided by the yearly volatility. Return per unit of ups and downs.	Below 0.5 weak, around 1 good, above 2 rare (check for mistakes).
Sortino ratio	Like Sharpe, but only the *downward* moves count as risk.	Higher than Sharpe when the ups are bigger than the downs.
Calmar ratio	CAGR divided by the max drawdown.	Return per unit of worst pain. Above 1 is good.
Profit factor	All money won on winning trades divided by all money lost on losing trades.	Above 1 = profitable overall; 1.5 or more is strong.

Trades

Figure	What it means
Trades	Closed round trips (in and out). Too few — say fewer than 30 — and none of the other figures mean much.
Win rate	The share of closed trades that made money after costs. A low win rate can still make money if the winners are much bigger than the losers.
Average win / average loss	The typical size of a winning and a losing trade.
Expectancy	The average profit or loss per trade: what each new trade is "worth" if the past repeats.
Holding period	How long a trade typically lasted.

Is it luck?

A strategy tested on enough ideas will look good on some of them by chance. These figures, on the **Validate** page, measure that.

Figure	What it means	How to read it
PSR (probabilistic Sharpe ratio)	The probability that the strategy's *true* Sharpe is above zero, given how long the test was and how lopsided the returns were.	Above 95% is the usual bar.
DSR (deflated Sharpe ratio)	The same probability after accounting for how many versions of the idea were tried. Every run and every sweep you make counts as a trial.	The more you tune, the higher the bar. Below 95% = the result may be the best of many lucky draws.
Minimum track record (MinTRL)	How many bars of history a Sharpe this size needs before it can be trusted.	The page says how many more bars this test would need.
Bootstrap confidence interval	The test is re-sampled thousands of times; the interval shows the range the Sharpe (or CAGR, drawdown…) could plausibly have.	An interval that spans zero = the edge might not exist.
PBO (probability of backtest overfitting)	From an optimisation: how often the best setting in one half of the data did worse than the median setting in the other half.	Above 50% = the "best" setting is probably fitted to noise.

24.12 Reference

BUILD: Strategy

Kind	What it tests
Template	A named strategy from the catalogue (SMA crossover, RSI mean reversion, Donchian breakout and many more) with its parameters. Search the list or filter it by category; the template's own description and its **Parameters** appear under the list.
Rules	Your own entry and exit conditions built from indicators, like the Algo Trading Builder. Only a **Rules** strategy can be sent to Algo Trading.
Rebalance	A weighted book of several symbols, rebalanced on a **Schedule** (**Daily**, **Weekly**, **Monthly**, **Quarterly**, **Every N bars**, **On drift**) with a **Weighting** (**Equal weight**, **Inverse volatility**, **Risk parity**, **Momentum top N**, **Minimum variance**, **Custom weights**, **Hierarchical risk parity**, **Maximum Sharpe**, **Minimum CVaR**, **Black-Litterman**), plus **Lookback**, **Top N**, **Max weight**, **Min weight**, **Turnover penalty**, **Drift threshold** and **Long only**.
Hold	Buys the universe equal-weight on the first bar and holds it to the end — the plain baseline every strategy should beat.
Pairs	A spread between two names: **Long leg** and **Short leg**, the **Hedge** (**Rolling OLS residual** or **Price ratio**), **Lookback**, and the **Entry z**, **Exit z** and **Stop z** levels of the spread.
Ranking	**Score by** an expression (for example *ROC(63)*), hold the **Long top N** (and short the **Short bottom N**), **Re-form** the book **Daily**, **Weekly**, **Monthly** or **Quarterly**, with a **Warm-up** and a **Max weight**.
Overlay	An option position on top of the universe: **Overlay Covered call**, **Protective put** or **Collar**; **Strike rule** (**By delta** or **By moneyness**) with the call / put delta or moneyness; **Tenor (bars)**; **Roll at bars left** (or *hold to expiry*) and **Roll at delta**; **Contracts per unit**, **Multiplier**, **Max cover**; **Settlement** (**Cash** or **Deliver**).
Hedged	Option legs (**Right**, **Strike**, **Contracts**, **Multiplier**, **Expiry bar**; **Add leg**, **Remove selected**) held delta-neutral by trading the underlying: **Hedge the delta**, **Hedge Every bar** or **On a delta band** (**Band (shares)**), **Dividend yield**, **Settlement**.

BUILD: Universe, Window, Capital

Field	Meaning
Add a symbol	Type to search the symbol index (AAPL, RELIANCE.NS, BTC-USD). Nothing is fetched until you run. Each symbol becomes a chip naming its kind, currency and exchange (for example *AAPL EQ·USD·XNAS*); its **×** removes it. For a future or option, a **Contract size** row lets you correct the contract's multiplier.
Add basket / Add watchlist	Adds a whole basket or one of your watchlists at once.
Benchmark	Optional (SPY, ^NSEI…). Without one, the run is compared with buy-and-hold of the universe. **Clear** removes it.
Window	**1Y**, **3Y**, **5Y**, **10Y** or **Max** (30 years; your plan's history limit may shorten it, and the result then says so), or a **Start** and **End** date (leave them on — for no bound). With no dates at all, a run covers the five years up to today.
Interval	The bar size: **1D** (default), **1WK**, **1H**, **30M**, **15M**, **5M**, **1M**. Intraday bars shorten the longest window you can ask for.
Initial	The starting capital (100 or more; default 100,000).
Currency	The capital's currency: USD, INR, EUR, GBP, JPY, CAD, AUD or HKD, or type another code.

BUILD: Trading

Field	Meaning
Costs	The cost profile: **Not modelled** or a profile (US equity cash, Indian delivery or intraday, institutional, your own). **Edit** opens it. Indian symbols get the Indian profile automatically unless you picked one.
Position size	How each position is sized: **Percent of equity**, **Risk percent (to stop)**, **Volatility target**, **Fixed amount**, **Fixed shares**, **Kelly fraction**, **Target weight**, **Target percent of equity**, **Target cash amount**, **Target position value** — with its value below (a percent, not a fraction: 100 is the whole of it).
Stop loss / Take profit	Percent from the entry; **off** by default.
Allow short positions	Lets the strategy sell short.

BUILD: More execution settings

Each section is collapsed and summarised in its header (for example *Next bar open · Market · Day*). Click a header to open it.

Section	Fields
Orders and fills	**Fill at** (**Next bar open** or **Next bar close**); **Intrabar** (**Pessimistic**, **Optimistic**, **Adaptive (by gap)** — which of a stop and a target inside one bar counts first); **Entry order** (**Market**, **Limit**, **Stop**, **Stop limit**, **Market on open**, **Market on close**); **Time in force** (**Day**, **Good till cancelled**, **Good till date**, **Fill or kill**); **Order offset**; **Limit past trigger**; **Order good for** (bars); **Call sequence** (**Auto (sells before buys)**, **Default**, **Reversed**).
Exits	**Trailing stop**, **Trailing take**, **ATR stop x** and **ATR period** (a stop at a multiple of the average true range), **Time stop** (bars), **Stop measured from** (**Entry fill price** or **Entry bar close**), **Stop fills at** (**Stop market (or worse)**, **Stop limit (exact)**, **Bar close**), a **Stop ladder** (rungs of **At profit** / **Exit fraction**: take part of the position off at each level; **Add rung**, **Remove selected**), and a **Time-of-day stop** (**Close at** a time; **Max age** in days).
Position sizing	**Risk per trade**, **Target vol**, **Max positions**, **Size step**, **Min size**, **Max size**, **Fractional shares**, **Contract multiplier**, **These symbols are futures or options**.
Leverage and margin	**Leverage**, **Leverage mode** (**Lazy (cash first)** uses margin only after cash runs out; **Eager (every order)** levers every order), **Maint. margin**, **Max entries**, **Scale in**, **Lock short sale proceeds**.

Section	Fields
Liquidity and conflicts	**Participation cap** (largest share of a bar's volume one order may take), **Min notional**, volume-share slippage and price impact, **Entry+exit same bar** (**Exit wins**, **Entry wins**, **Ignore both**, **Adjacent bars**, **Opposite**), **Opposite entry** (**Close the position**, **Reverse**, **Ignore**), **Accumulation** (**Disabled**, **Add only**, **Remove only**, **Both**).
Execution algorithm	How large orders are worked over several bars: **Algorithm** (**None (single fill)**, **TWAP**, **VWAP**, **POV**, **IS (Almgren-Chriss)**), with its **Horizon (bars)**, **Participation** (share of each bar's volume) or **Risk aversion**, and **On incomplete** (**Complete at any price** or **Cancel the residual**). Also the delays — **Signal latency**, **Submit latency**, **Cancel latency** (ms) — and how limit orders fill: **Limit fill probability**, **Queue fraction**, **Spread source** (**None**, **Supplied quotes**, **Corwin-Schultz** estimated from the bar range) with its **Spread window**, and **Session check** (**Warn**, **Off**, **Refuse**) for orders outside trading hours.
Risk limits	**Apply portfolio risk limits** and **Scale an intent to fit rather than rejecting it**, then **Max gross**, **Max net**, **Max per name**, **Max per sector**, **Max leverage**, **Kill switch at DD** (stop at this drawdown) with its **Cooldown (bars)**, and **Vol target** with **Vol lookback** and **Vol scale cap** (each *no limit* until set). A refused order is listed on the Risk page with the number that broke the limit.
Analysis	**Risk-free rate** (yearly; used for Sharpe, Sortino and the deflated Sharpe), **Bootstrap draws** (default 2,000), **Monte Carlo paths** (default 1,000), **Rolling window** (10–2,520 bars, default 252), **Seed** (default 42; same spec + same bars + same seed = identical output), **Per-bar log** (off by default), **Capacity curve** (on by default; re-runs at a grid of account sizes). Factor analysis: **Factor set** (**None**, **Fama-French 3**, **Fama-French 5**, **Market, size, value, momentum, quality**), **Covariance** (**EWMA**, **Ledoit-Wolf shrinkage**, **Sample**) with **EWMA lambda** and **Covariance lookback**, **Factor window**, **Factor step**, and **Fetch benchmark sector weights (Brinson attribution)**.



Figure 24.25 More execution settings, each section summarised in its header.

1. **More execution settings** — orders and fills, exits, sizing, leverage, liquidity, execution algorithm, risk limits, analysis.
2. A closed section shows its current values under its name (*Next bar open · Market · Day*).
3. **Analysis** — risk-free rate, seed and the capacity curve.

BUILD: More market settings

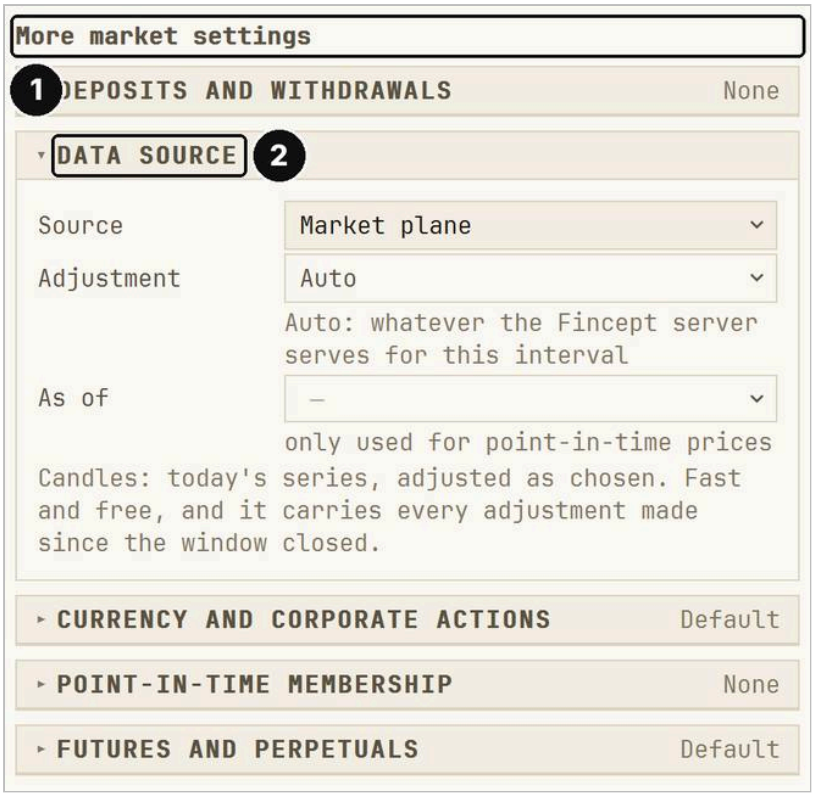


Figure 24.26 More market settings, with Data source open.

1. **More market settings** — deposits and withdrawals, data source, currency and corporate actions, index membership, futures.
2. **Data source**, opened: where the prices come from and how they are adjusted.

Section	Fields
Deposits and withdrawals	Cash added or taken out during the test: **Direction** (**Deposit** or **Withdrawal**), **Schedule** (**Once**, **Daily**, **Weekly**, **Monthly**, **Quarterly**, **Yearly**), **Amount**. With flows, the result reports the time-weighted and the money-weighted return side by side.
Data source	**Source**: **Broker (…)** (your connected broker's own history, with its name in the brackets, fetched on this computer and sent with the run; *Broker (none connected)* without one), **Market plane** (Fincept's market data, the default), **Point-in-time** (prices as they were known on an **As of** date; Exclusive Pro), or a paid market-data account of your own (its key is set in Settings > Data sources; **Cost ceiling** caps what one run may spend on it). **Adjustment**: **Auto**, **None (raw)**, **Splits** or **Total return** (dividends reinvested).
Currency and corporate actions	**FX cash**: **Convert on every fill** — foreign cash is swept to the account currency (holding local cash is listed but not yet accepted); **Sweep cost (bps)**; an optional **Hedge ratio** of the foreign exposure sold forward, with its **Hedge cost (bps)** and **Hedge roll (bars)**. **Dividends**: **Cash**, **Reinvest** (at the ex-date close) or **Ignore** (a price-only comparison). **Spinoffs**: **Cash** or **Ignore**.
Point-in-time membership	Index members as they were on each date, so a test does not "know" which companies later joined.
Futures and perpetuals	**Build a continuous futures series** from the contracts, with its **Roll rule** (**Calendar days before expiry**, **Volume crossover**, **Open-interest crossover**), **Days before**, **Confirm bars**, and the **Adjustment** of old prices (**Panama backward**, **Ratio** or **None**). Without it, each contract is traded as its own symbol. **Perpetual swaps in this universe**: **Accrue funding**, **Taker fee**, **Perp leverage**, **Maintenance rate**, **Liquidate on** (**Bar range (high/low)** or **Close only**) and **Size step**.

24.13 For advanced users

Command-line forms

Type	Opens
`BTST`, `backtest`, `backtesting`, `bt`, `bktest`	The Backtesting screen.
`backtest AAPL`	Build with AAPL in the universe.
`backtest AAPL MSFT NVDA`	Build with several symbols.
`backtest RELIANCE.NS sma_crossover`	Build with that symbol and template.
`optimize AAPL` (or `optimise AAPL`, `sweep AAPL`)	The Optimize page for AAPL.
`backtest book` (or `backtest portfolio`)	Build with your active portfolio: its own weights as a monthly rebalance, its benchmark and its value as the capital. Open and price a portfolio first.
`backtest watchlist <name>` (or `backtest wl <name>`)	Build with that watchlist (your default one without a name) as one ranking strategy (cross-sectional momentum).
`compare <run> <run>` (or `cmp`)	Two to four runs side by side in History.

A page name alone (`bt history`, `bt results`...) stages nothing: it opens the screen as you left it. Every form stages the test on Build; nothing runs until you press a priced button.

Arriving from other screens

"Backtest this" buttons across the terminal open this screen already set up — Equity Research, Equity Trading, Markets, the Watchlist, the Portfolio (Performance and Rebalance), the Derivatives and F&O option chains, Crypto's bots, the dashboard's recent-backtests widget, AI Quant Lab, Algo Trading's **Strategies** (**Backtest**) and **Backtest** page (**Open in Backtesting**), and the Scanner (**Backtest these**). What they send replaces the symbols on Build; nothing runs until you press **Run backtest**, or the screen asks you to confirm the price.

The screen also follows the **link group** of its panel: a symbol chosen in a linked panel is *added* to the universe (never replacing the others).

How a run is reproducible

The same setup, the same bars and the same **Seed** (Build > More execution settings > Analysis) give byte-identical results. Monte Carlo and bootstrap use the seed, so two runs can be compared fairly.

What a run does not model

Read the note at the top of Results: it lists everything the run did *not* do — costs **not modelled** (when the cost profile is None), market impact not modelled, a window **TRUNCATED** because the data did not reach back far enough, gaps in the data. A missing figure is shown as missing, never as zero.

Do it with AI

Ask the AI Chat, for example:

- *Backtest an SMA 20/50 crossover on NVDA over 10 years against SPY and tell me the CAGR, Sharpe and max drawdown.*
- *Optimise the RSI period and thresholds of my RELIANCE strategy with walk-forward on, and tell me if the result is overfitted.*
- *Compare my last three backtests.*

Every run it starts asks you to confirm the price first.

24.14 Troubleshooting

If something goes wrong

Run backtest shows no price, or says "The price of the backtest has not loaded yet". Just after sign-in the price has not arrived. Wait a moment and press it again; nothing was run or charged.

If something goes wrong

"Add at least one symbol to the universe." The universe is empty. Type a symbol in **Add a symbol** and pick it from the list.

If something goes wrong

"Set at least one parameter range before optimising." On the Optimize page, tick at least one parameter under **Parameters to sweep**.

If something goes wrong

"The backtest costs 1 credit and your balance is … so it was not run." Your credits are too low. Top up your credits (see **Chapter 50, Profile, Plan & Billing** p. 920), then run again. Nothing was charged.

If something goes wrong

The template list is empty ("The template catalogue loads when your session is ready"). The catalogue loads after sign-in. Wait a few seconds; if it stays empty, check your connection.

If something goes wrong

Send to Algo Trading says only rule-based strategies can be imported. A **Template** runs as a named strategy on the server; Algo Trading needs rules it can read. Rebuild the idea with **Rules**, then send it.

If something goes wrong

The result says the window was TRUNCATED. The data does not reach back to your start date (often for intraday bars). Use daily bars for long windows, or a later start.

If something goes wrong

Not validated, although the return looks great. Read the failing checks on **Validate**: usually too few trades, a deflated Sharpe below the bar after many tries, or a confidence interval that spans zero. Test a longer window or more symbols before trusting it.

CHAPTER 25

Derivatives DERV

An options workbench. Load any underlying's option chain once, then read its volatility surface, design a strategy, measure its risk, see where dealers are positioned, price an earnings event and run eighteen pricing calculators — all on the same board.

At a glance

Open it	• Type `DERV` in the command line and press **Enter** • Type `options`, `chain`, `greeks` or `vol` in the command line and pick **Derivatives** • **Screens** › **Derivatives**
You need	• Signed in (option chains come from the Fincept server) • Exclusive opens the first two pages (Chain, Vol surface); Exclusive+ and Exclusive Pro open all eight (see Reference, Plans and credits)
Best for	• Reading an option chain with live greeks • Checking whether options are cheap or expensive • Designing and stress-testing an options strategy before you trade it
Time to learn	30 minutes for the basics
Related	**Chapter 17, F&O** p. 284, **Chapter 26, Surface Analytics** p. 543, **Chapter 24, Backtesting** p. 464, **Chapter 16, Equity Trading** p. 264

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25.1 Screen tour

The Derivatives screen is built around one **underlying** — the stock, ETF or index the options are written on. You pick it once in the header. Every one of the eight pages below the header then works on that same option board, so you never type the symbol twice.

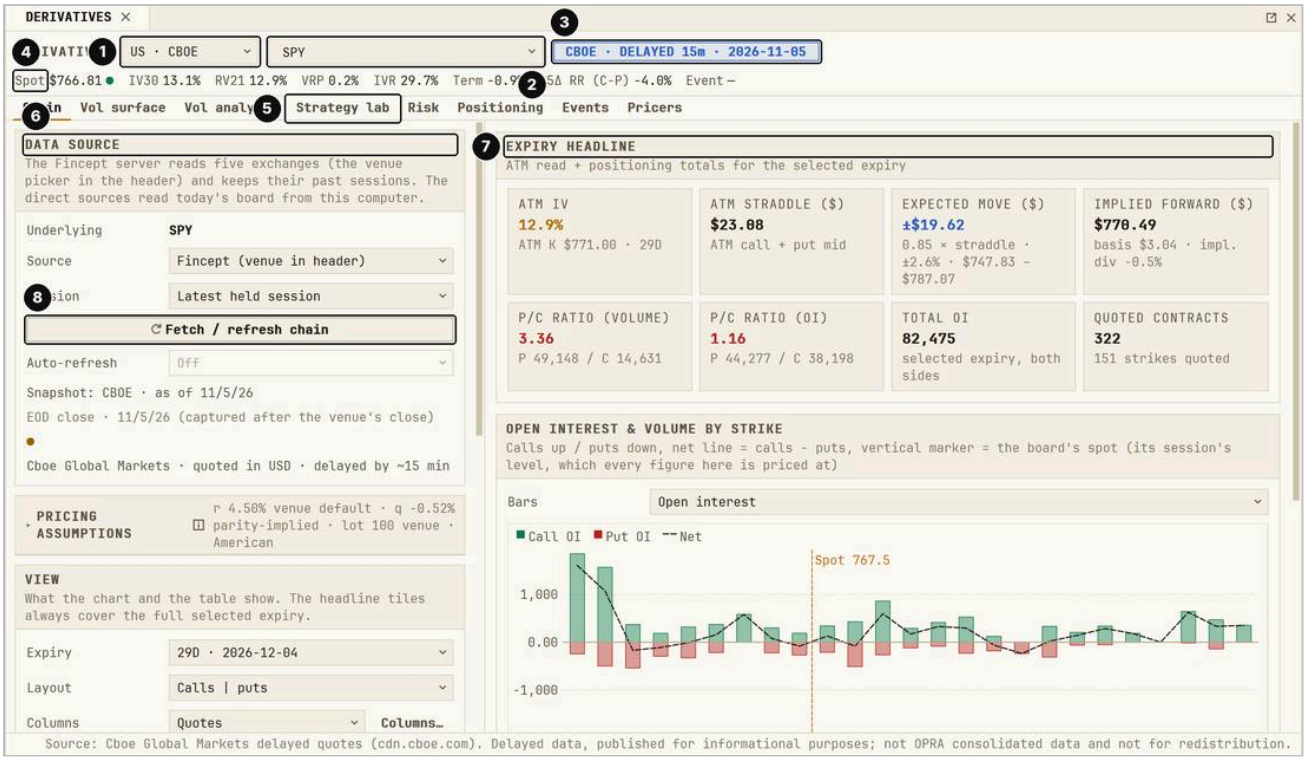


Figure 25.1 The Derivatives screen on the Chain page, with the SPY option board loaded from Cboe.

1. **Venue** — the exchange whose option board you read (US · CBOE, IN · NSE and others).
2. **Underlying** — type a ticker or part of a company name to search the venue's whole list.
3. **Source badge** — the venue, how fresh the board is (here delayed 15 minutes) and its session date.
4. **Header strip** — the key numbers for this underlying: spot, IV30, RV21, VRP, IV rank, term slope, skew and the next event.
5. **Page tabs** — the eight pages. Each one reads the same board.
6. **Rail** — the inputs of the page. Every change re-runs the page at once.
7. **Canvas** — the results: headline tiles, charts and tables.
8. **Fetch / refresh chain** reads the board again.

The screen has four bands.

The header. The venue picker, the underlying search box and the source badge. A thin attribution line at the very bottom of the screen names the exchange whose data you are looking at. Right-click it and choose **Copy the full attribution notice** to copy the whole licence notice.

The header strip. One line of numbers that every page shares. It stays hidden until a board is loaded. Hover any number for a full explanation and its source.

Caption	What it means
Spot	The underlying's live price. A small dot beside it shows how fresh it is. Every page still prices against the board's own level (its session's price); the tooltip says which. A `~` before the number means the venue publishes no underlying price, so the level is the forward worked out from the options themselves.
IV30	30-day implied volatility at the money, read off the fitted surface (or the expiry nearest 30 days until the surface is fitted).

Caption	What it means
RV21	21-session realized volatility — how much the underlying actually moved recently.
VRP	Volatility risk premium: IV30 minus realized vol, in vol points. Positive means options are priced above what the stock has been doing.
IVR	IV rank: where IV30 sits in its own history, 0% = lowest, 100% = highest.
Term	The 30-day minus the 90-day implied vol. Negative is the normal, upward-sloping term structure.
25Δ RR (C−P)	25-delta risk reversal: the vol of a 25-delta call minus a 25-delta put. Negative is the usual equity "put skew".
Event	The next scheduled event for this name (earnings, ex-dividend), from the Events page.

When you have built a position (see **§25.8 Build an options strategy** p. 514), a **position badge** appears beside the source badge: the Risk page's leg set (**SIMULATED**, **BOOK** or **COMBINED**), the number of legs and the position's net dollar delta (Δ$), dollar gamma (Γ$), vega and theta.

The page tabs. Chain, **Vol surface**, **Vol analysis**, **Strategy lab**, **Risk**, **Positioning**, **Events** and **Pricers**. Ctrl + 1 to Ctrl + 8 jump to a page once you have moved the terminal's **Focus Window 1 … 8** keys elsewhere (see **§25.13 Reference** p. 534, Keyboard).

Rail and canvas. Every page has a rail of inputs on the left and a canvas of results on the right. Both scroll on their own. Most rail settings re-run the page as soon as you change them; the large button at the end of each rail is only there to retry after a failure. Two pages wait for their button instead: **Risk** (**Run all**) and **Pricers** (**Price**).

Words you will meet on this screen

An **option** is a contract that gives the right to buy (a **call**) or sell (a **put**) the underlying at a fixed price — the **strike** — until a date — the **expiry**. Its price is the **premium**. The **option chain** (or board) lists every strike and expiry with its prices. **At the money (ATM)** means the strike nearest the current price. **DTE** is days to expiry.

25.2 Quick start

Load a board, read the at-the-money numbers, and see the market's view of volatility — in about two minutes.

1. Type DERV in the command line and press Enter. The screen opens on the **Chain** page.

2 In the venue picker, choose **US · CBOE**. In the box beside it, type `SPY` and pick **SPY** from the list.

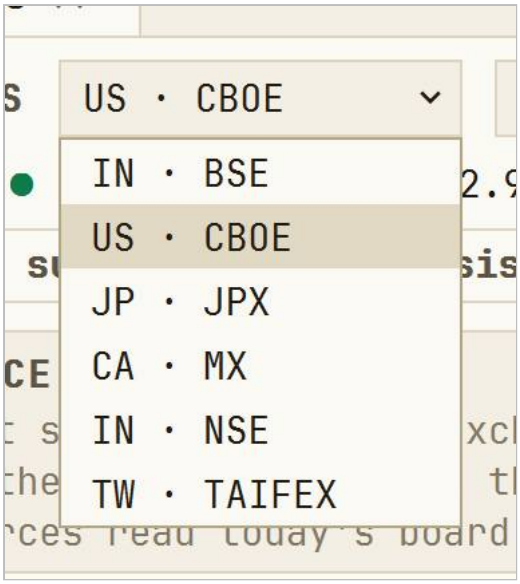


Figure 25.2 The venue picker lists every exchange the Fincept server reads.

3 Wait a few seconds. The source badge fills in, the header strip appears and the **EXPIRY HEADLINE** tiles show the at-the-money numbers for the expiry nearest 30 days.

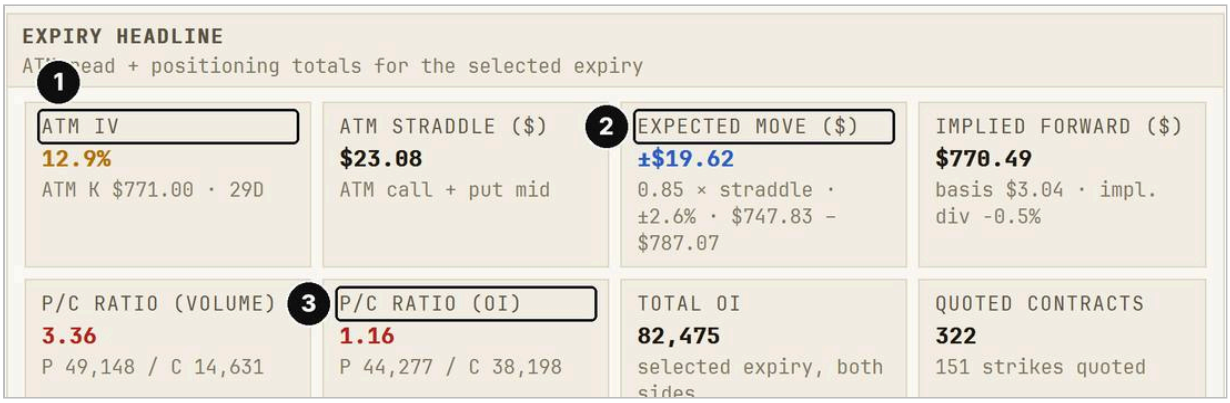


Figure 25.3 The headline tiles for the selected expiry.

1. The implied volatility at the money.
2. How far the market expects the price to move by expiry (about one standard deviation).
3. Puts open divided by calls open.

4 Scroll the canvas down to the **OPTION CHAIN** table: calls on the left, puts on the right, strikes in the middle. The tinted row is the at-the-money strike.

5 Click the **Vol surface** tab. The surface is fitted automatically from the board you loaded — the **VOL SMILE: FITTED VS MARKET** chart shows how implied volatility changes across strikes.

6 Hover any number, column header or tile. Every one has a tooltip that says what it is and where it came from.

Tip

The screen remembers your last venue, underlying and page. The next time you open it, it reopens on them.

25.3 Pick an underlying and an exchange

Do this whenever you want a different name or a different market.

1. Click the **venue picker** (the first box in the header) and choose an exchange. The list shows a country code and the exchange: **IN · BSE**, **US · CBOE**, **JP · JPX**, **CA · MX**, **IN · NSE**, **TW · TAIFEX**.

2. Click the **underlying** box and type part of a ticker or a company name. The list searches the venue's whole universe, not just the names shown when you open it.

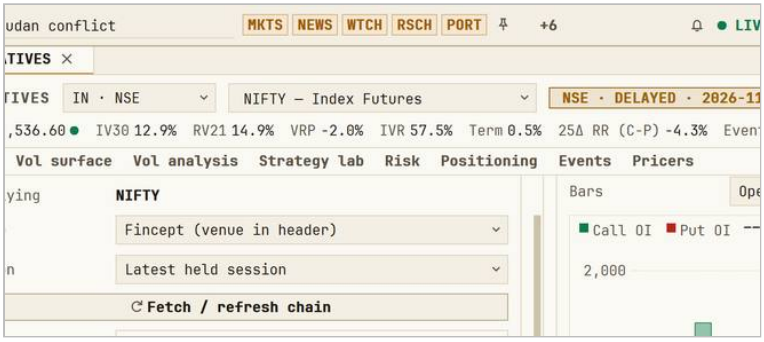


Figure 25.4 The underlying box, here NIFTY on IN · NSE. Type in it to search every name the venue lists.

3. Pick a name. Its latest board is fetched at once.

The same ticker on two venues is two different contracts

About 470 names are listed on both Cboe and MX (many of them Canadian stocks). Always check the venue picker before you trust a board: the currency, contract size and exercise rules follow the venue. Saved strategies remember their venue too, so one saved on CBOE will not load on MX.

Six exchanges, not five

The hint at the top of the Chain page's **DATA SOURCE** card says the Fincept server reads "five exchanges". The venue picker lists six: IN · BSE, US · CBOE, JP · JPX, CA · MX, IN · NSE and TW · TAIFEX. The picker is right.

Where a board comes from

Open the **Source** box at the top of the Chain page's rail to choose where the chain is read from.

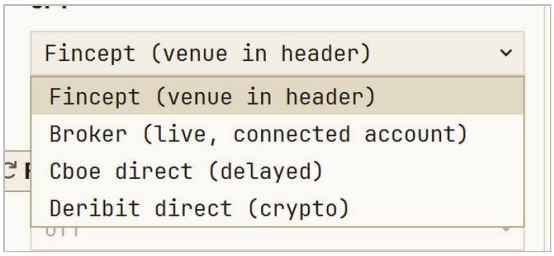


Figure 25.5 The four sources of an option chain.

Source	What it reads	Fresh?	Past sessions
Fincept (venue in header)	The board of the venue picked in the header, from the Fincept server.	End-of-day captures, taken after the venue closes.	Yes — pick one in **Session**.
Broker (live, connected account)	Live option chains for the nearest expiries from your connected Indian broker (NSE / BSE F&O), using the same account as the F&O screen.	Live; press **Fetch / refresh chain** to refresh.	No
Cboe direct (delayed)	Cboe's own delayed quotes (about 15 minutes), read from this computer. Works signed out.	Can refresh itself every 1, 5 or 15 minutes (**Auto-refresh**).	No
Deribit direct (crypto)	The public BTC and ETH option board of the Deribit exchange, read from this computer. Part of Exclusive+ and Exclusive Pro: on Exclusive the entry shows a lock and **Fetch / refresh chain** opens the upgrade sheet.	Can refresh itself every 1, 5 or 15 minutes (**Auto-refresh**).	No

The **Session** box lists the trading days the Fincept server holds for this name, newest first. An option board cannot be rebuilt later for most venues — a day that was not captured is gone — so this list is exactly what was collected. Picking a session fetches it.

Freshness labels

Two places say how fresh a board is. The **source badge** in the header reads venue · quote basis · session date — for example **CBOE · DELAYED 15m · 2026-11-05**. Under **DATA SOURCE** on the Chain page's rail, a second line says how the board was taken:

- **EOD close · date (captured after the venue's close)** — an end-of-day board.
- **Delayed ~15 min · fetched time** — a delayed board read directly from the exchange.
- **Exchange board · fetched time** — a board read directly from an exchange with no delay stated.
- **Live broker quotes · fetched time** — your broker's live chain.
- **· a previous session** is added when you picked an older day; the source badge then adds **STALE**, and its tooltip says "From a previous session, not current".
- **Demo fixture — not market data** replaces the badge on the built-in practice board. Its numbers are generated and describe no market.

Days to expiry on an older board

When a board was captured some days ago, the expiry list shows two numbers, for example **27D today (29D at session)**. The first is what is left from today. The one in brackets is what the prices were struck at — and that is what every implied vol and greek uses.

25.4 Read the option chain

The **Chain** page is the board itself, with headline tiles, a strike map and the full table.

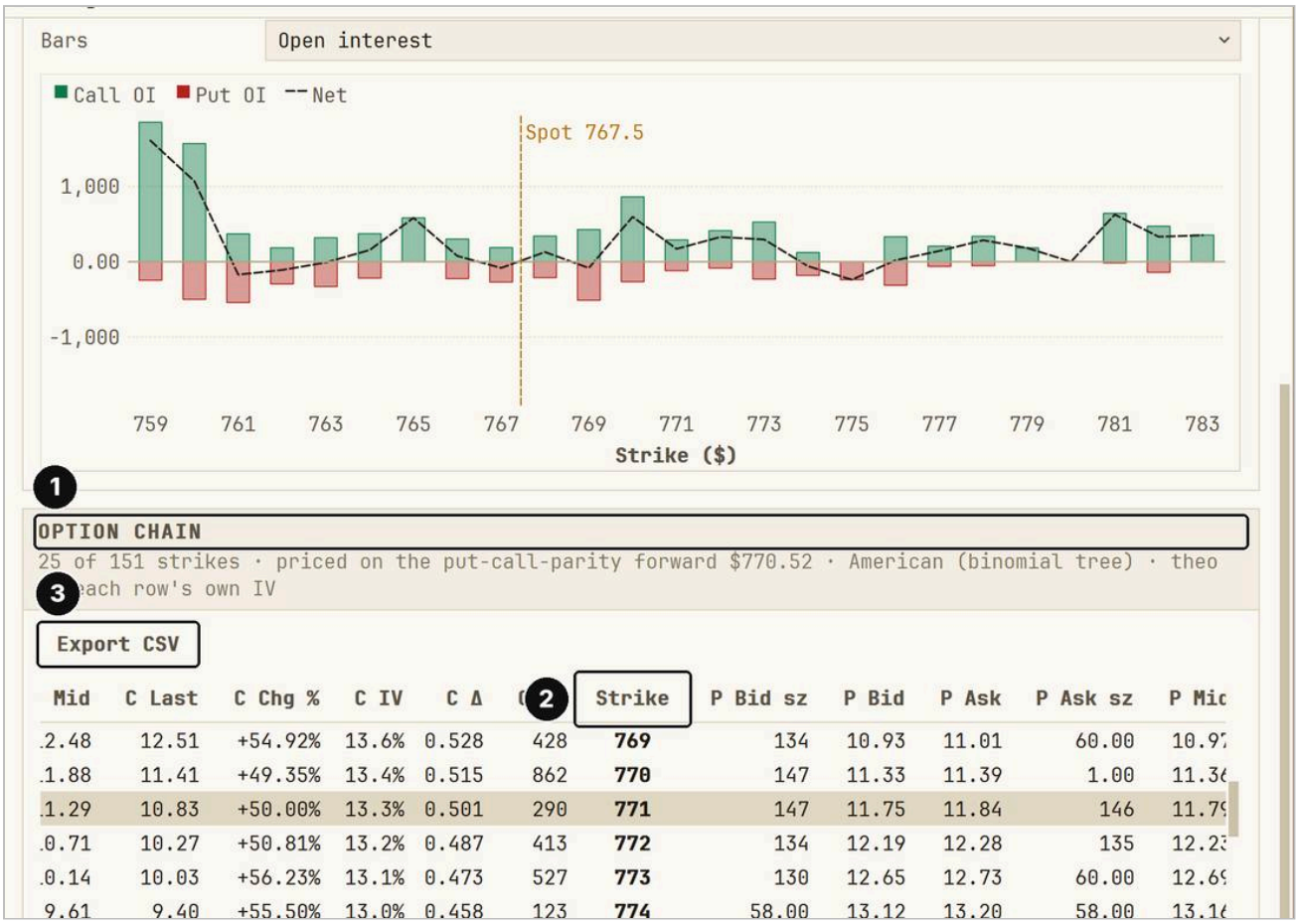


Figure 25.6 The strike map and the option chain: calls on the left, puts on the right, the strike in the middle.

1. **OPTION CHAIN** — the strike window, the forward the board is priced on and the exercise model.
2. **Strike** — the strike price, in the chain's currency. The tinted row is at the money.
3. **Export CSV** writes the table exactly as shown to a file in the File Manager.

Headline tiles

The **EXPIRY HEADLINE** card describes the whole selected expiry (the filters below never change it):

Tile	Meaning
ATM IV	Implied volatility of the at-the-money strike, with its strike and DTE.
ATM STRADDLE	The price of the at-the-money call plus put — what the market charges for a move either way.
EXPECTED MOVE	About one standard deviation of the move to expiry: 0.85 × the straddle, shown with its up and down levels.
IMPLIED FORWARD	The forward price worked out from put-call parity, with the basis and the implied dividend.
P/C RATIO (VOLUME)	Put volume ÷ call volume for the session.
P/C RATIO (OI)	Put open interest ÷ call open interest.
TOTAL OI	All open contracts on the expiry, puts and calls.
QUOTED CONTRACTS	How many strikes have a price.

Open interest & volume by strike

The chart below the tiles shows, for each strike, calls going up and puts going down, with a net line and a marker at the board's spot. **Open interest** is contracts still open (the standing position); **Volume** is contracts traded in the session. Switch between them with **Bars**.

The table

Choose what the table shows on the **VIEW** card of the rail.

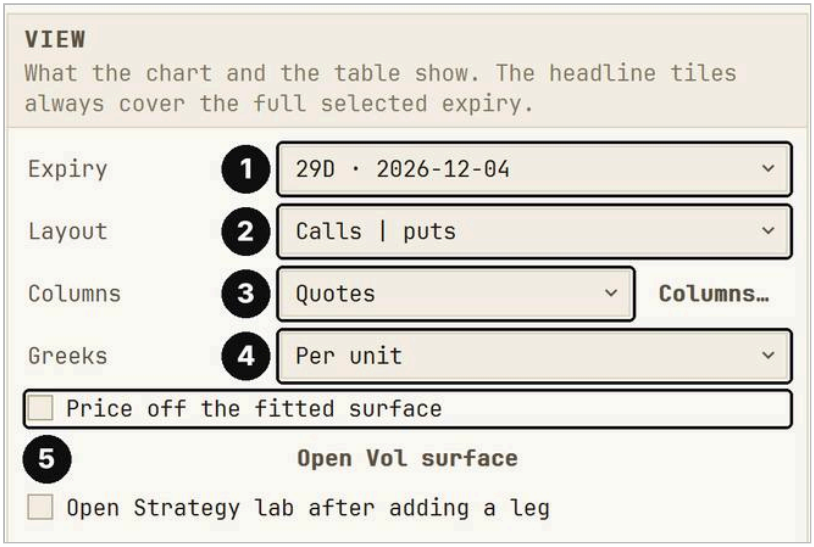
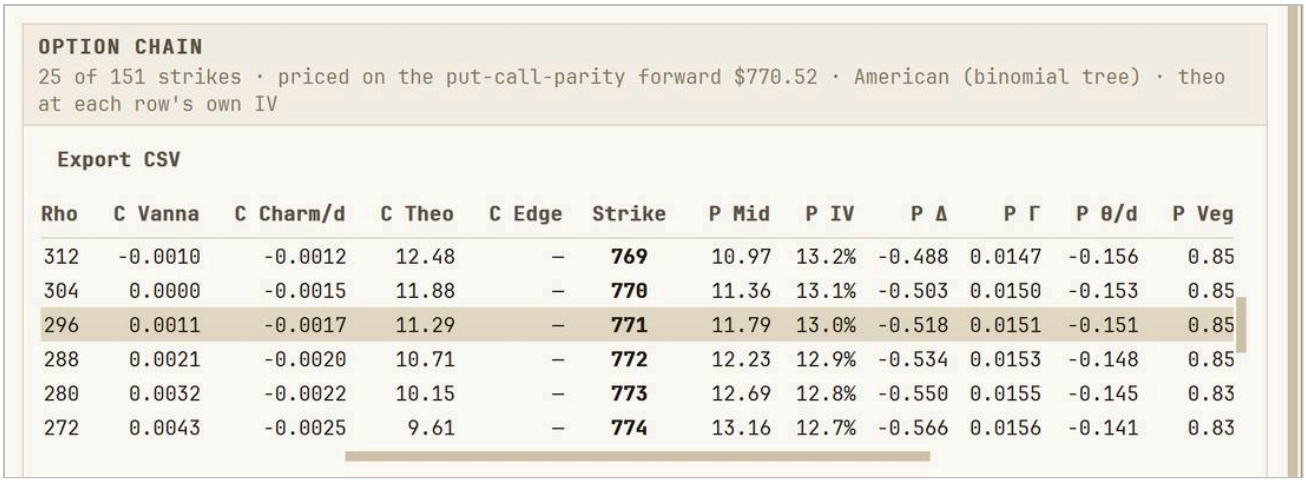


Figure 25.7 The View card decides which expiry, which sides and which columns the table shows.

1. **Expiry** — which expiry the tiles, chart and table describe.
2. **Layout** — both sides (the T-chain), calls only or puts only.
3. **Columns** — a preset; **Columns…** to pick your own.
4. **Greeks** per unit or per contract (× the contract multiplier).
5. Measure every mid against the fitted smile (adds rich/cheap in **Edge**).

The column presets:

Preset	Columns on each side
Quotes (default)	Bid size, bid, ask, ask size, mid, last, % change, IV, delta, open interest
Greeks	Mid, IV, delta, gamma, theta, vega, rho, vanna, charm, theo, edge
Volume & OI	Mid, last, % change, volume, open interest, OI change, IV
Full	Every column (scroll sideways)
Custom	Your own set, ticked with **Columns…**



OPTION CHAIN

25 of 151 strikes · priced on the put-call-parity forward $770.52 · American (binomial tree) · theo at each row's own IV

Export CSV

Rho	C Vanna	C Charm/d	C Theo	C Edge	Strike	P Mid	P IV	P Δ	P Γ	P Θ/d	P Veg
312	-0.0010	-0.0012	12.48	–	**769**	10.97	13.2%	-0.488	0.0147	-0.156	0.85
304	0.0000	-0.0015	11.88	–	**770**	11.36	13.1%	-0.503	0.0150	-0.153	0.85
296	0.0011	-0.0017	11.29	–	**771**	11.79	13.0%	-0.518	0.0151	-0.151	0.85
288	0.0021	-0.0020	10.71	–	**772**	12.23	12.9%	-0.534	0.0153	-0.148	0.85
280	0.0032	-0.0022	10.15	–	**773**	12.69	12.8%	-0.550	0.0155	-0.145	0.83
272	0.0043	-0.0025	9.61	–	**774**	13.16	12.7%	-0.566	0.0156	-0.141	0.83

Figure 25.8 The Greeks preset adds every greek, the model price (Theo) and the Edge against it.

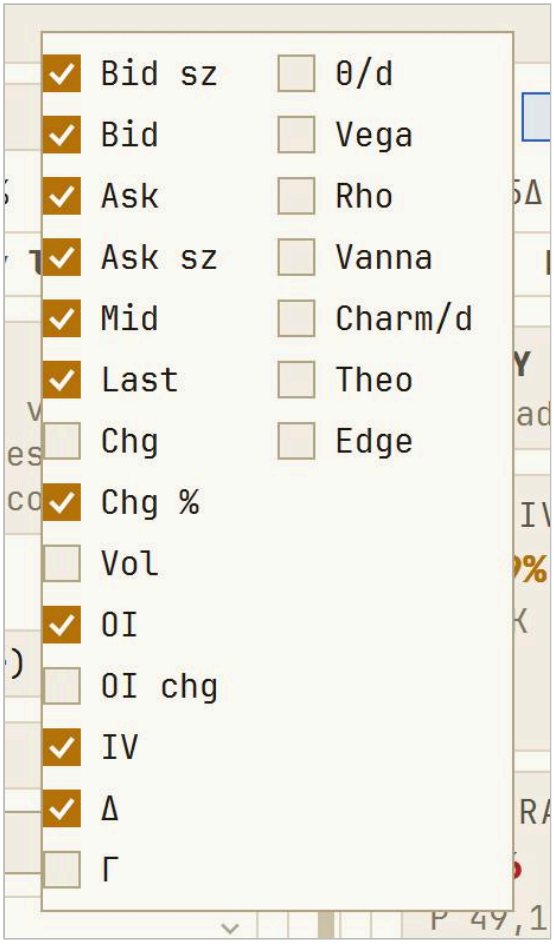


Figure 25.9 Columns… opens a list of every column. Tick the ones you want; the preset switches to Custom.

Why the greeks matter

The **greeks** say how an option's price reacts to change. **Delta (Δ)**: the change in premium for a 1-unit move of the underlying (0.52 means about 52 cents per dollar). **Gamma (Γ)**: how fast delta itself changes. **Theta (Θ/d)**: the premium lost per calendar day if nothing else moves. **Vega**: the change per 1 vol point of implied volatility. **Rho**: per 1 percentage point of interest rate. **Vanna**: how delta changes when volatility moves. **Charm**: how delta drifts per day.

Where each price comes from

Hover a cell in **Mid** or **IV** to see where its number came from. Venues differ:

- **Mid** is the middle of the bid and ask when there is a two-sided book. Where there is none, the row is valued at the exchange's **settlement mark**, the **last traded price** (which may be old) or the venue's **mark price** — the tooltip says which.
- **IV** is solved from that price on the expiry's forward. Where a row has no price, the venue's own published IV is shown instead.
- **Theo** is the model price; **Edge** = mid − theo. Positive edge means the market pays more than the model (rich). Tick **Price off the fitted surface** to measure every strike against the fitted smile.

Narrow the strikes

The **STRIKE FILTERS** card decides which strikes reach the chart and the table. The headline tiles always cover the whole expiry.

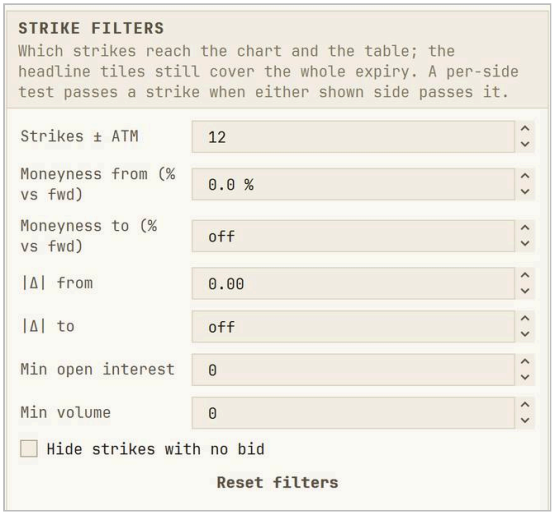


Figure 25.10 Strike filters. By default you see 12 strikes either side of the money.

Filter	What it does	Default
Strikes ± ATM	Strikes either side of the at-the-money strike (0 = every strike).	12
Moneyness from / to (% vs fwd)	Lowest and highest strike, as % below or above the forward (−10 = 10% below). 0 = no bound.	0 (off)
|Δ| from / to	Smallest and largest absolute delta (0.60 drops deep in-the-money rows). Needs IVs: on a venue with no IV it filters nothing.	0.00 / off
Min open interest	Hide strikes where neither side has this much open interest.	0
Min volume	Hide strikes where neither side traded this many contracts.	0
Hide strikes with no bid	Drop the untradeable wings.	off
Reset filters	Back to 12 strikes either side and nothing else.	—

Add a leg from the board

Right-click a row to add that strike to your position, or to send it to the backtester. The first menu that opens is the table's copy menu (**Copy cell**, **Copy row**, **Copy table as CSV**); close it with Esc and the leg menu follows.

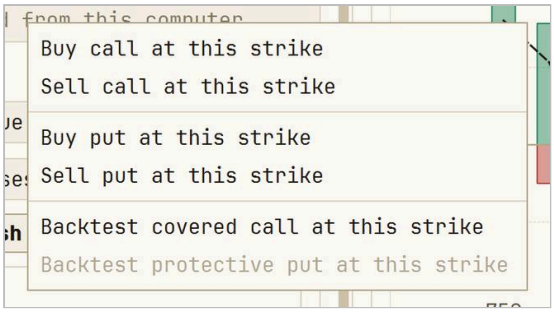


Figure 25.11 The row menu of the chain table.

- **Buy call / Sell call / Buy put / Sell put at this strike** adds a leg at the price you would really pay: the ask to buy, the bid to sell.
- Double-click a cell to buy the side you clicked (a call cell buys the call).
- **Backtest covered call at this strike** and **Backtest protective put at this strike** open the Backtesting screen with that overlay ready to run on the underlying's history (see **Chapter 24, Backtesting** p. 464). **Backtest protective put at this strike** is greyed out on a strike above spot: a protective put is tested below spot.

A message confirms each leg. Tick **Open Strategy lab after adding a leg** to jump to the lab every time; leave it off to add several legs first. An **Open Strategy lab** button then appears beside **Export CSV** on the **OPTION CHAIN** card, one click away from the legs you added.

NSE and other venues

The same page reads Indian index and stock options. Here is NIFTY on NSE:

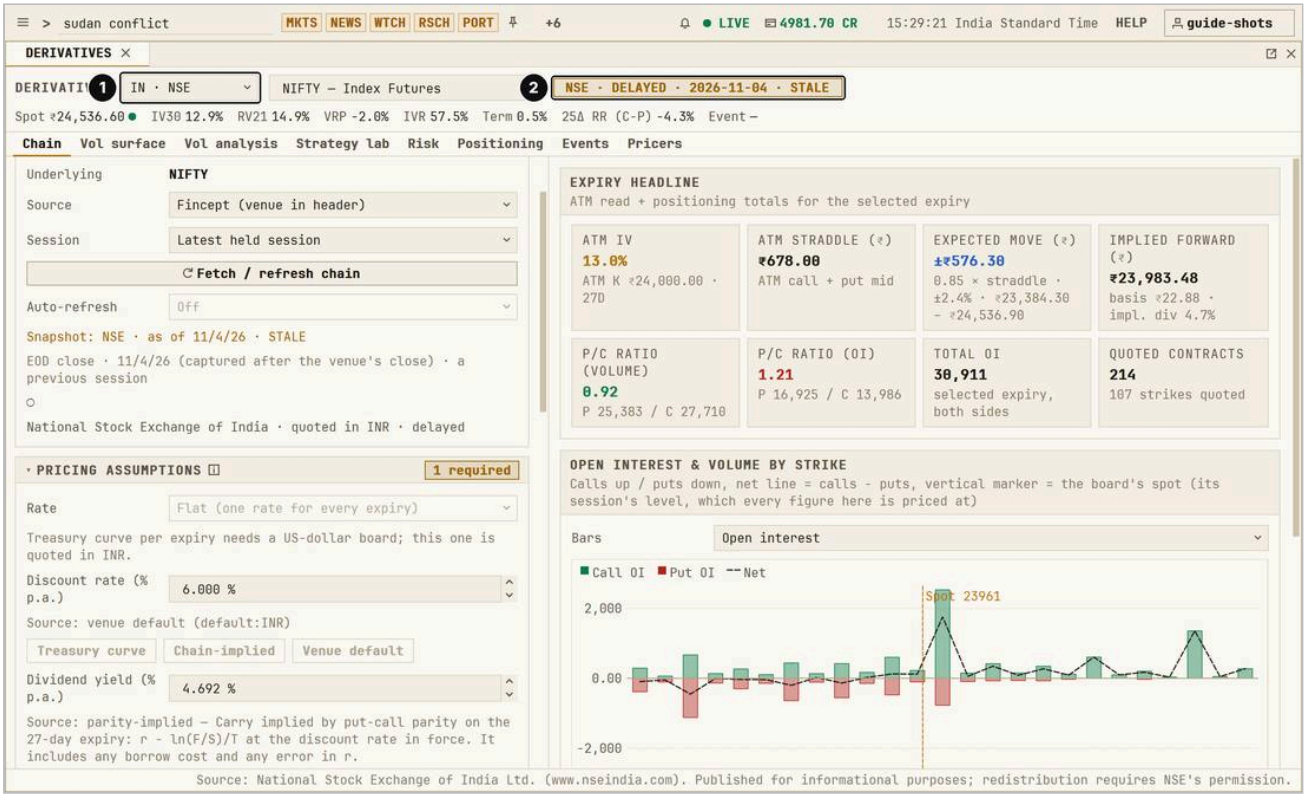


Figure 25.12 NIFTY options on NSE. Here the latest held session is the previous day's, so the badge says STALE; and no lot size is published for this board, so PRICING ASSUMPTIONS shows "1 required".

1. **IN · NSE** selected.
2. The source badge for an NSE board.

NSE publishes the change in open interest, so **OI chg** fills in there. A venue that publishes no open interest leaves those cells empty — an empty cell is never a zero.

25.5 Set the pricing assumptions

Every model on the screen needs a few inputs that do not come from the option prices: the interest rate, the dividend yield, the contract size and the exercise style. They live on the **Pricing assumptions** card, which appears near the top of every page's rail. Set them once per underlying; every page uses the same values.

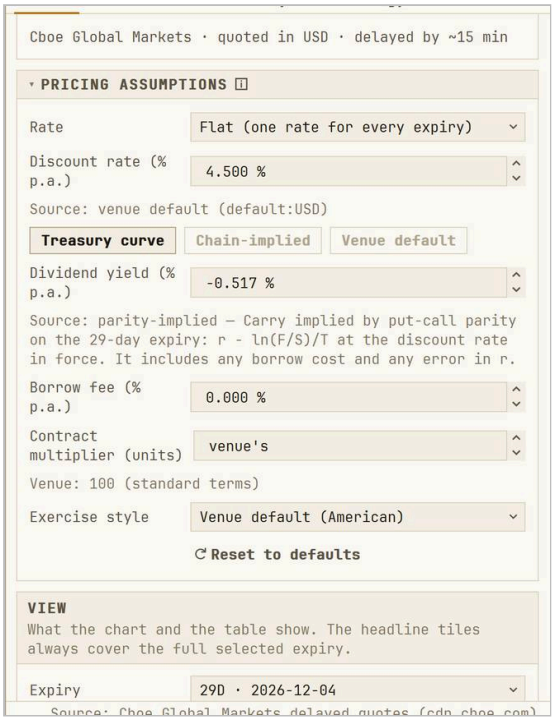


Figure 25.13 The PRICING ASSUMPTIONS card, opened. The line under each field says where the value came from.

Field	What it is	Default
Discount rate (% p.a.)	The continuously compounded rate every price is discounted at. Type a value to use it for this board.	The venue's declared rate
Treasury curve / Chain-implied / Venue default (buttons)	Adopt the US Treasury yield at the expiry's tenor (US-dollar boards only); solve the rate from the chain's own put-call parity at the strikes nearest spot (not available when the venue publishes no spot or the dividend was itself solved from parity); or go back to the venue's rate.	—
Rate	**Flat (one rate for every expiry)** or **Treasury curve per expiry** (each expiry discounted at its own zero rate; US-dollar boards only).	Flat
Dividend yield (% p.a.)	Filled for you: a single name's trailing yield, else the carry the chain implies. Type to override. **Use measured yield** drops your value.	Measured
Borrow fee (% p.a.)	A hard-to-borrow fee. It lowers the forward like a dividend.	0
Contract multiplier (units)	How many units one contract controls: 100 shares on a US equity option, the lot size on NSE. Every money figure is quantity × price × multiplier. 0 uses the venue's value.	The venue's
Exercise style	**Venue default**, **European** (exercise at expiry only, priced with Black-76) or **American** (exercise any day, priced on a binomial tree). US and Canadian single-name options are American.	Venue default

Field	What it is	Default
Reset to defaults	Every field back to the venue's values.	—

When the venue publishes no contract size

Some boards carry no lot size. The card then says **REQUIRED** and no position can be valued until you type the lot (for example NIFTY 75 or BANKNIFTY 30 — check your exchange's current lot).

25.6 Read the volatility surface

Implied volatility (IV) is the volatility that makes a model price equal the market price — the market's forecast of how much the price will move. It is different for every strike and expiry. Plot it across strikes and you get the **smile** (or **skew**); across expiries, the **term structure**; across both, the **surface**. The **Vol surface** page fits a smooth model to the quotes so every other page can read a clean vol at any strike and date.

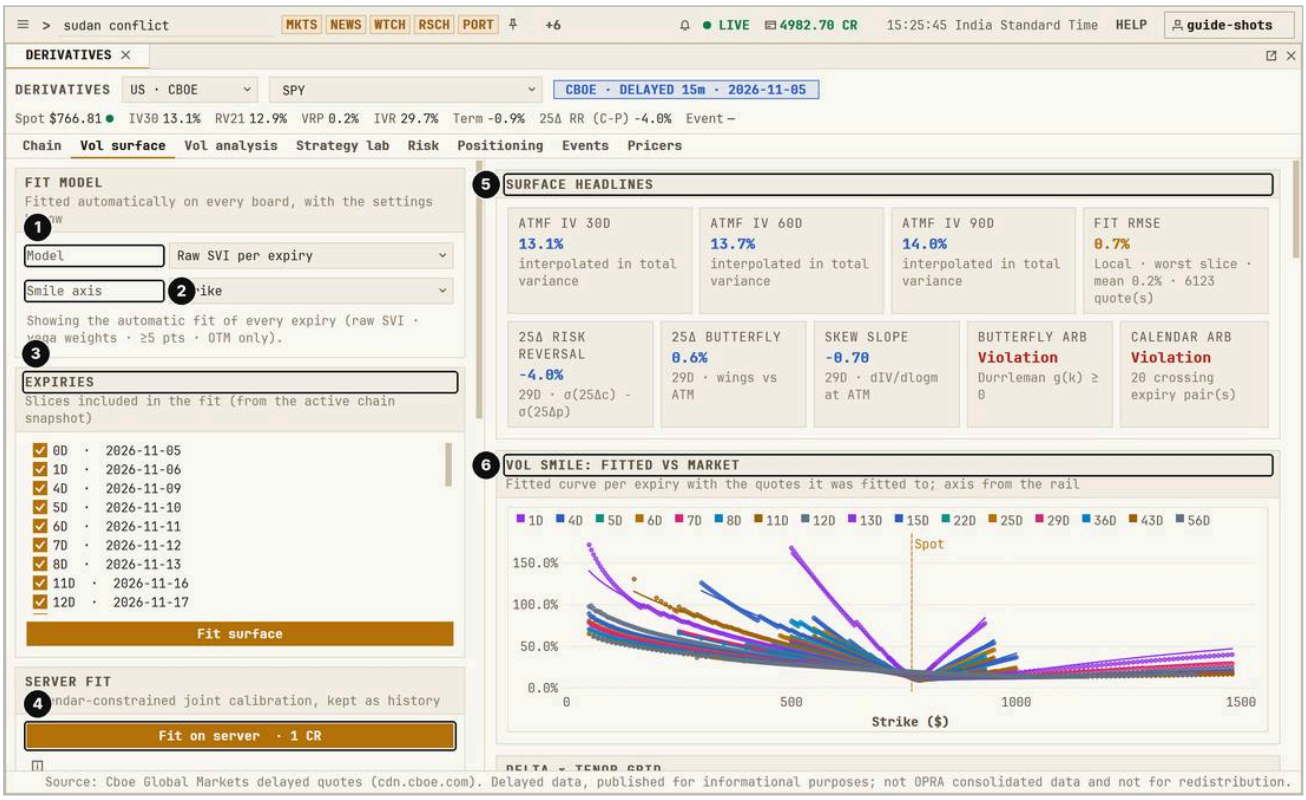


Figure 25.14 The Vol surface page: headline numbers and the fitted smile of every expiry.

1. **Model** — which surface model is fitted and shown.
2. **Smile axis** — draw the smiles against strike, delta or log-moneyness.
3. **Expiries** — tick the expiries to include in the fit.
4. **Fit on server** — a calendar-constrained fit, charged in credits.
5. Headline numbers off the fitted surface.
6. Each expiry's fitted curve (line) with the market quotes (dots).

The surface is fitted automatically every time a board loads, with the settings on the rail, so you never have to press anything. **Fit surface** is only there to retry, or to go back from a server fit.

Surface headlines

Tile	Meaning
ATMF IV 30D / 60D / 90D	At-the-money-forward implied vol at exactly 30, 60 and 90 days. IV30 in the header is the same number.
FIT RMSE	The average gap between fitted and quoted IVs, in vol points. Under 0.5 is tight; over 2.5 means rich/cheap readings mostly measure the fit's own error.
25Δ RISK REVERSAL	25-delta call vol minus 25-delta put vol. Negative is the normal equity put skew — not a warning.
25Δ BUTTERFLY	How much the wings are priced over the money.
SKEW SLOPE	How fast IV changes with log-moneyness at the money; negative = puts richer than calls.
BUTTERFLY ARB / CALENDAR ARB	**OK** or **Violation**: whether the fitted surface allows a riskless profit across strikes (butterfly) or across expiries (calendar). Very short expiries often trip these.

The models

Model	What it does
Raw SVI per expiry (default)	Five parameters per expiry, fitted on its own. The closest fit to the quotes. Calendar problems between expiries are reported, not repaired.
SSVI global	One surface across every ticked expiry with fewer parameters — smoother, a looser fit to any one smile.
SABR per expiry (Hagan)	The rates and FX desk standard: level (α), skew (ρ) and curvature (ν) per expiry, with **SABR β** fixed on the rail (1 = lognormal, the equity default).
Server fit (calendar-constrained)	Every ticked expiry fitted together so the surface has no calendar arbitrage. Run it with **Fit on server**; it stays on screen until you refit.

Credits

Fit on server is charged in credits; the price is printed on the button (1 credit when this guide was written). The local fits — raw SVI, SSVI and SABR — are free and run automatically.

Further down the page

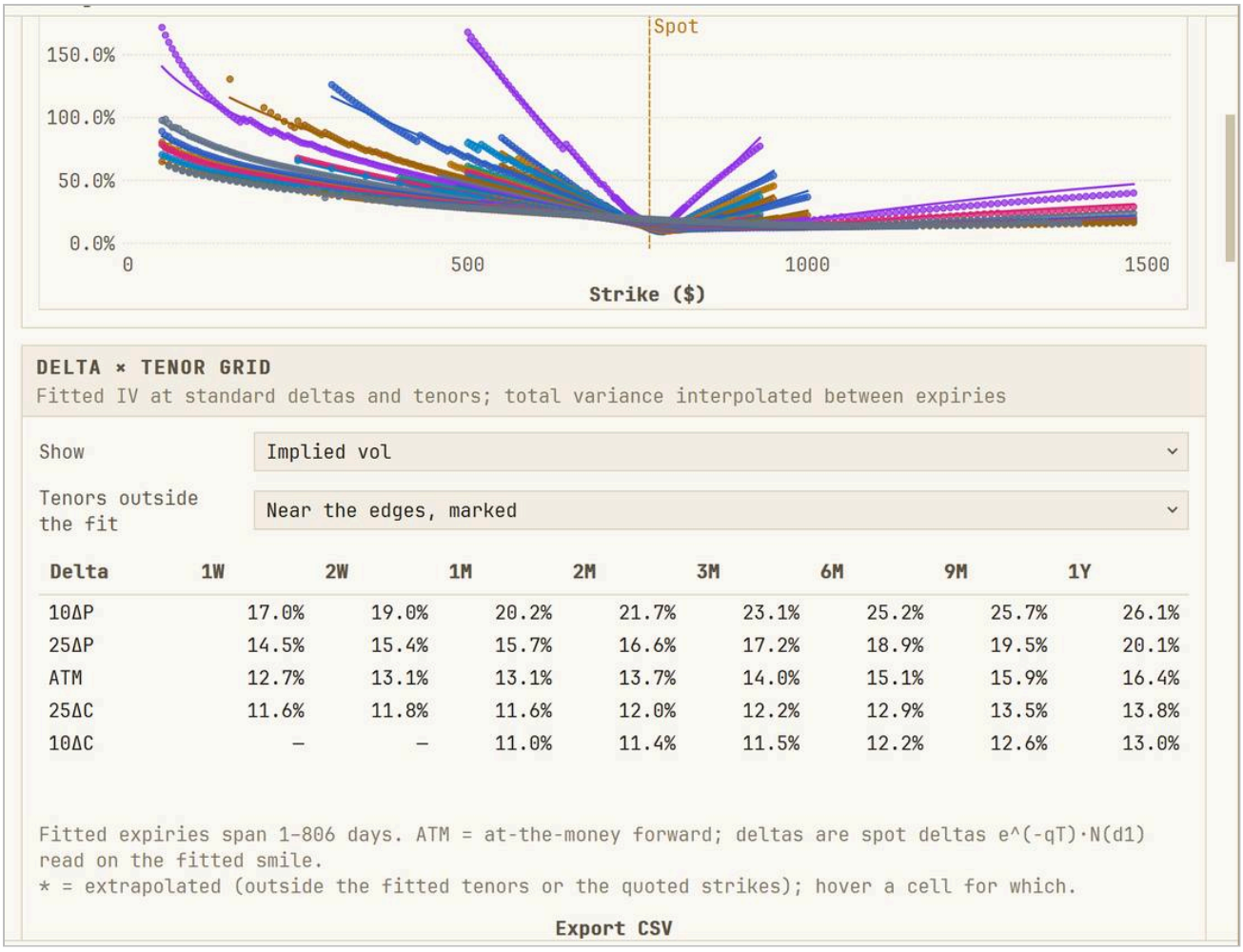


Figure 25.15 The fitted smiles and the DELTA × TENOR GRID.

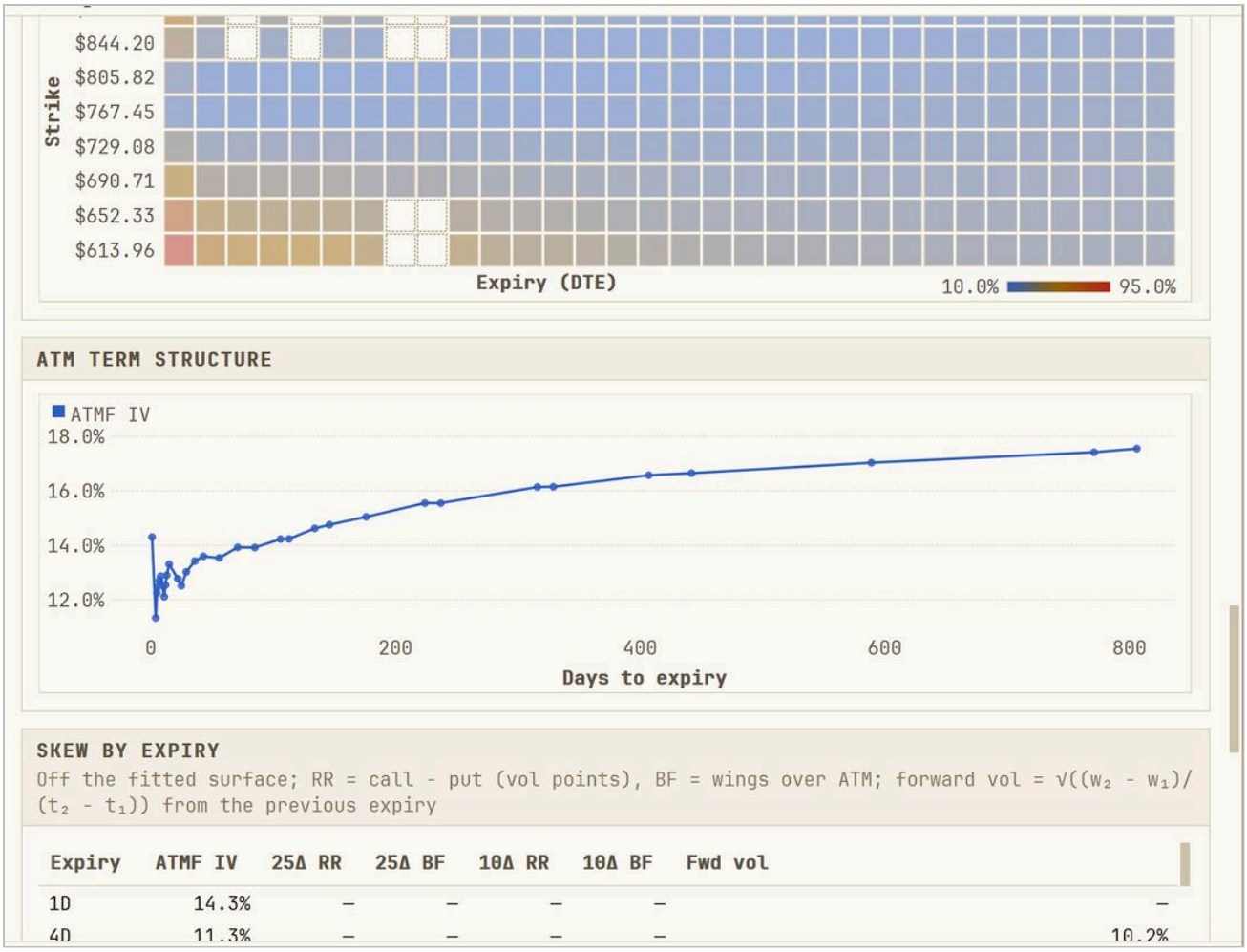
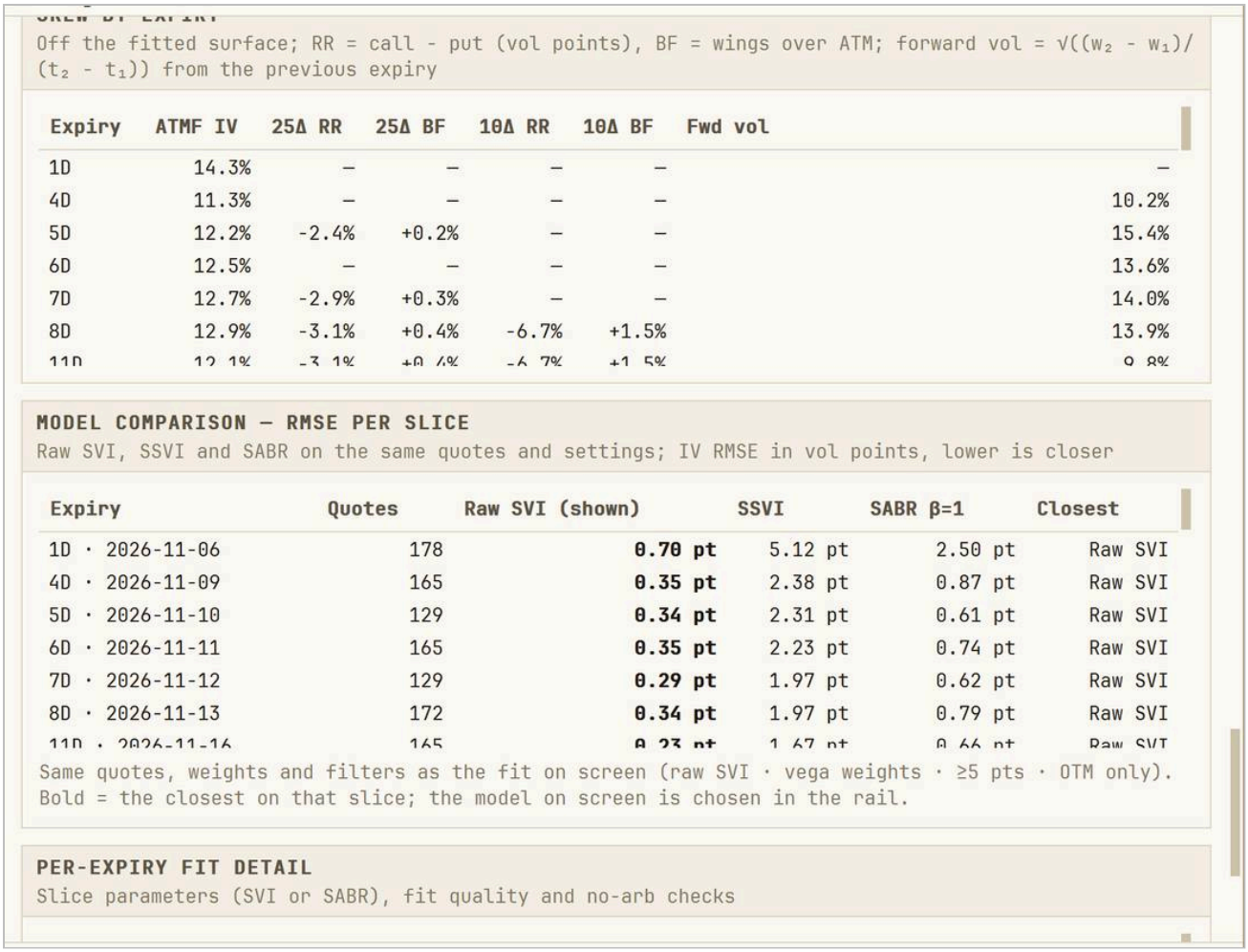


Figure 25.16 Lower on the Vol surface page — the SURFACE — K × T heat map, the ATM term structure and skew by expiry.

Card	What it shows
FIT RESIDUALS (MODEL − QUOTE IV)	The gap of each quote from its fitted smile. Dots above zero are quotes cheaper than the fit. (Raw SVI and SABR only.)
DELTA × TENOR GRID	Fitted IV at standard deltas and tenors (1W, 2W, 1M, 2M, 3M …). **Show**: **Implied vol**, **Change vs compared session** (needs the session compare on) or **Strike** (the strike each delta lands on). **Tenors outside the fit**: **Fitted range only**, **Near the edges, marked** (default; a tenor within 10% past the first or last expiry) or **Every tenor, marked**. Cells marked `*` are extrapolated. **Export CSV**.
SURFACE — K × T	A strike × tenor heat map of fitted IV over each expiry's own quoted strikes; cells outside them stay empty rather than invented.
ATM TERM STRUCTURE	ATM implied vol by expiry.
SKEW BY EXPIRY	Per expiry: ATMF IV, 25Δ and 10Δ risk reversal and butterfly, and the **forward vol** between this expiry and the previous one.
MODEL COMPARISON — RMSE PER SLICE	Raw SVI, SSVI and SABR fitted on the same quotes; the fit error of each per expiry, and which was **Closest**.
PER-EXPIRY FIT DETAIL	The fitted parameters of each expiry, its RMSE, the butterfly check (**BFLY**, **MIN g**), the worst single quote (**Worst res**) and how many quotes it used (**N pts**).



SKEW BY EXPIRY

Off the fitted surface; RR = call - put (vol points), BF = wings over ATM; forward vol = √((w₂ - w₁)/(t₂ - t₁)) from the previous expiry

Expiry	ATMF IV	25Δ RR	25Δ BF	10Δ RR	10Δ BF	Fwd vol
1D	14.3%	–	–	–	–	–
4D	11.3%	–	–	–	–	10.2%
5D	12.2%	-2.4%	+0.2%	–	–	15.4%
6D	12.5%	–	–	–	–	13.6%
7D	12.7%	-2.9%	+0.3%	–	–	14.0%
8D	12.9%	-3.1%	+0.4%	-6.7%	+1.5%	13.9%
11D	13.1%	-3.1%	+0.4%	-6.7%	+1.5%	9.8%

MODEL COMPARISON — RMSE PER SLICE

Raw SVI, SSVI and SABR on the same quotes and settings; IV RMSE in vol points, lower is closer

Expiry	Quotes	Raw SVI (shown)	SSVI	SABR β=1	Closest
1D · 2026-11-06	178	**0.70 pt**	5.12 pt	2.50 pt	Raw SVI
4D · 2026-11-09	165	**0.35 pt**	2.38 pt	0.87 pt	Raw SVI
5D · 2026-11-10	129	**0.34 pt**	2.31 pt	0.61 pt	Raw SVI
6D · 2026-11-11	165	**0.35 pt**	2.23 pt	0.74 pt	Raw SVI
7D · 2026-11-12	129	**0.29 pt**	1.97 pt	0.62 pt	Raw SVI
8D · 2026-11-13	172	**0.34 pt**	1.97 pt	0.79 pt	Raw SVI
11D · 2026-11-16	165	**0.23 pt**	1.67 pt	0.66 pt	Raw SVI

Same quotes, weights and filters as the fit on screen (raw SVI · vega weights · ≥5 pts · OTM only). Bold = the closest on that slice; the model on screen is chosen in the rail.

PER-EXPIRY FIT DETAIL

Slice parameters (SVI or SABR), fit quality and no-arb checks

Figure 25.17 Model comparison and the start of the per-expiry fit detail.

Fit settings

The **FIT SETTINGS** card decides which quotes the smile stands on. The automatic fit uses them too.

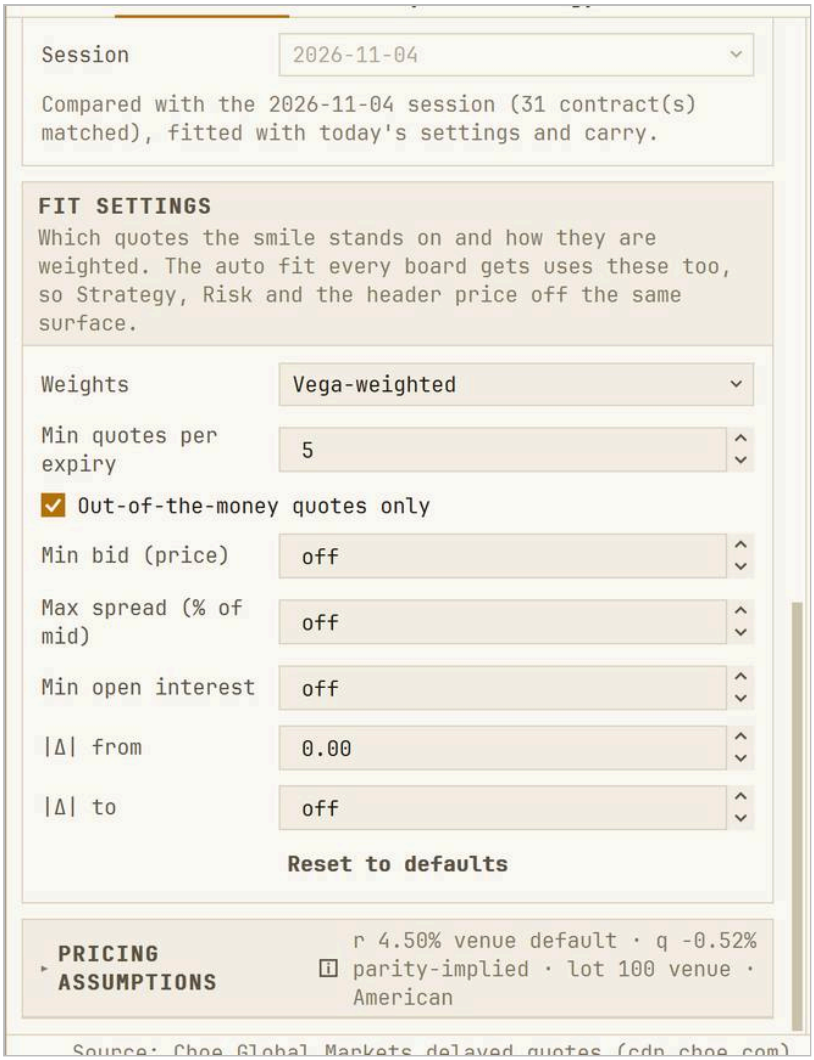


Figure 25.18 FIT SETTINGS on the Vol surface rail.

Setting	Meaning	Default
Weights	**Vega-weighted** (at-the-money quotes count most) or **Uniform**.	Vega-weighted
Min quotes per expiry	Quotes an expiry needs to be fitted.	5
Out-of-the-money quotes only	Calls above the forward, puts below — the liquid side.	On
Min bid (price)	Drop quotes with a bid below this.	off
Max spread (% of mid)	Drop quotes whose bid-ask spread is wider than this.	off
Min open interest	Drop quotes with less open interest.	off
|Δ| from / to	Fit only this delta range (0.05 drops the far wings).	off
Reset to defaults	Raw SVI, vega weights, 5 quotes, OTM only, no filters.	—

Compare with an earlier session

See what moved since yesterday — or any held day.

1. On the rail, find **COMPARE WITH AN EARLIER SESSION** and set **Compare with** to **Previous session** (or **A held session**, then pick a date in **Session**).

2. Wait a few seconds while the earlier board is fitted with the same settings.

3. Read the **SESSION COMPARE — NOW VS THEN** card: the two ATM term structures drawn together, then a table with, per expiry, the change in ATM vol, 25Δ and 10Δ risk reversal and butterfly, in vol points (**Export CSV** saves it). Pick an expiry in **Smile overlay** to draw its smile now and then.

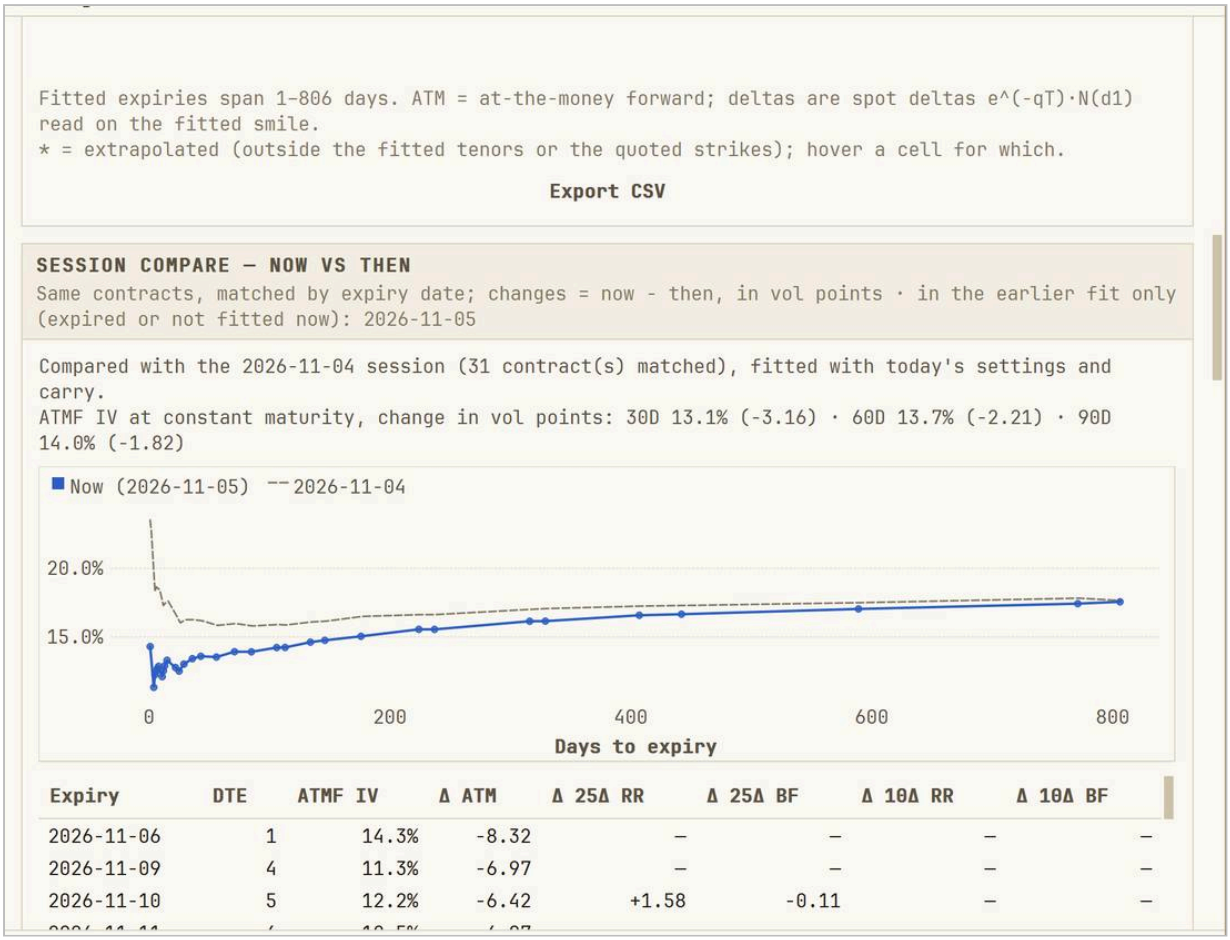


Figure 25.19 Comparing today's surface with the previous session.

A compare needs a board from the Fincept server: the direct sources keep no history.

25.7 Analyse volatility

The **Vol analysis** page compares what options imply with what the underlying actually did. **Realized volatility (RV)** is measured from the underlying's daily price bars.

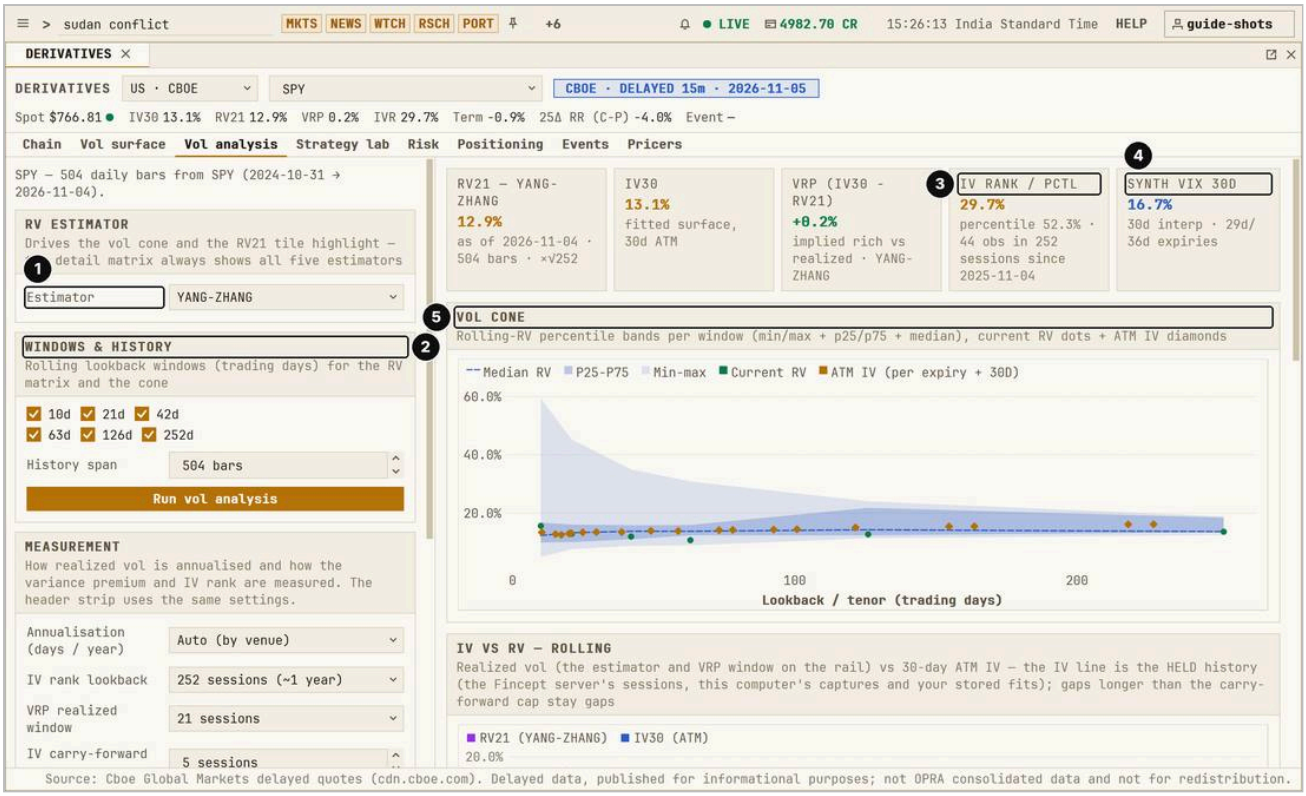


Figure 25.20 Vol analysis: realized vs implied vol, the vol cone and the IV-vs-RV history.

1. **Estimator** — how realized vol is measured.
2. **Windows** — the lookback windows (trading days) in the matrix and the cone.
3. **IV rank / percentile** — where today's IV sits in its own history.
4. A VIX-style 30-day vol built from this chain.
5. **VOL CONE** — the range realized vol has had for each window, with today's RV and IV marked.

Tile	Meaning
RV21 — YANG-ZHANG	21-session realized vol with the estimator chosen on the rail.
IV30	30-day at-the-money implied vol (the same as the header).
VRP (IV30 − RV21)	The volatility risk premium in vol points: "implied rich vs realized" or "implied cheap vs realized".
IV RANK / PCTL	IV rank and IV percentile over the lookback set on the rail. It needs at least 20 sessions of held IV history; until then it says how many it has.
SYNTH VIX 30D	A variance-swap replication from this chain (the VIX method), interpolated to 30 days.

IV rank in plain words

IV rank 80% means today's implied vol is 80% of the way from its lowest to its highest level over the lookback. High rank: options are expensive compared with their own past — sellers like that. Low rank: options are cheap — buyers like that.

Charts and tables

Card	What it shows
VOL CONE	For each window, the minimum, maximum, 25th–75th percentile band and median of rolling realized vol; dots for current RV, diamonds for ATM IV.

Card	What it shows
IV VS RV — ROLLING	Realized vol against 30-day ATM IV over time. The IV line is the held history; gaps longer than the carry-forward cap stay gaps.
RV MATRIX — ESTIMATORS × WINDOWS	All five estimators across all windows.
VIX STRIP — PER EXPIRY	The variance-swap vol of every expiry: DTE, forward, the strike K0 where calls switch to puts, vol, variance and strikes used.
IV TERM STRUCTURE — HISTORY	ATM IV at constant 30, 60, 90 and 180 days over the sessions held, and the 30D − 90D spread. Positive spread = an inverted term structure, the usual sign of stress or an event.

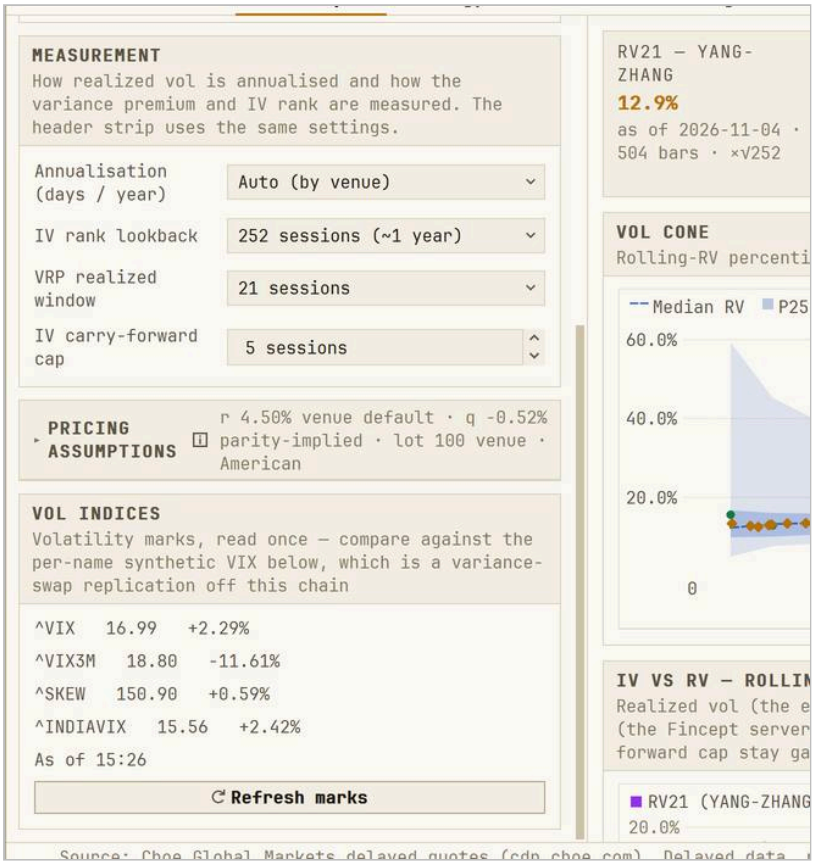


Figure 25.21 The MEASUREMENT and VOL INDICES cards at the bottom of the Vol analysis rail.

Rail settings

Every setting re-runs the page at once; **Run vol analysis** (on the **WINDOWS & HISTORY** card) is there to retry.

Card › setting	Options	Default
RV ESTIMATOR › Estimator	**CLOSE-CLOSE**, **PARKINSON**, **GARMAN-KLASS**, **ROGERS-SATCHELL**, **YANG-ZHANG** — hover each for its strengths. It picks the cone and the RV21 tile; the RV matrix always shows all five.	YANG-ZHANG
WINDOWS & HISTORY › windows	10d, 21d, 42d, 63d, 126d, 252d (tick any)	All
WINDOWS & HISTORY › History span	Daily bars sent to the models, 60 to 504.	504 bars

Card › setting	Options	Default
MEASUREMENT › Annualisation (days / year)	**Auto (by venue)**, **252 trading days**, **365 calendar days** (crypto trades every day).	Auto
MEASUREMENT › IV rank lookback	**63 sessions (~3 months)**, **126 sessions (~6 months)**, **252 sessions (~1 year)**, **504 sessions (~2 years)**.	252 sessions
MEASUREMENT › VRP realized window	10, 21, 42 or 63 sessions.	21 sessions
MEASUREMENT › IV carry-forward cap	How many sessions one IV reading may stand for before it becomes a gap (0 to 30; 0 = same-day readings only).	5 sessions
VOL INDICES	The latest ^VIX, ^VIX3M, ^SKEW and ^INDIAVIX marks (hover each for what it is; SKEW is an index, not a vol). **Refresh marks** reads them again.	—

25.8 Build an options strategy

The **Strategy lab** turns legs into a full analysis: payoff, greeks, probabilities and margin. Start from one of 23 templates or build the legs yourself.

1. Load a board on the Chain page, then click **Strategy lab**.
2. In **STRATEGY TEMPLATE**, open **Template** and pick a shape — for example **IRON CONDOR · INCOME**.

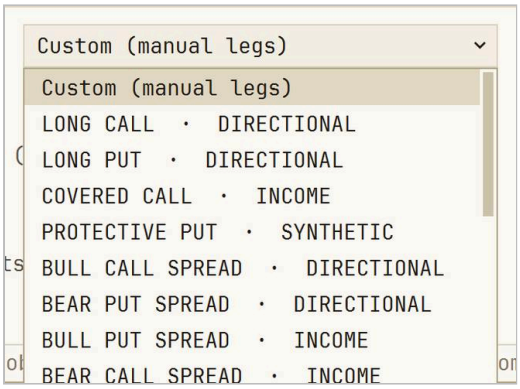


Figure 25.22 The template list — each template with its family. The list scrolls to show all 23.

3. Set **Target DTE (days)** (default 30; the template snaps to the nearest listed expiry), **Side**, **Quantity (contracts)** and, for spreads, **Wing delta (%)** (default 25) and **Wing width**.

4 Click **Apply template**. The legs are built on listed strikes, priced off their own chain rows, and the canvas fills in.

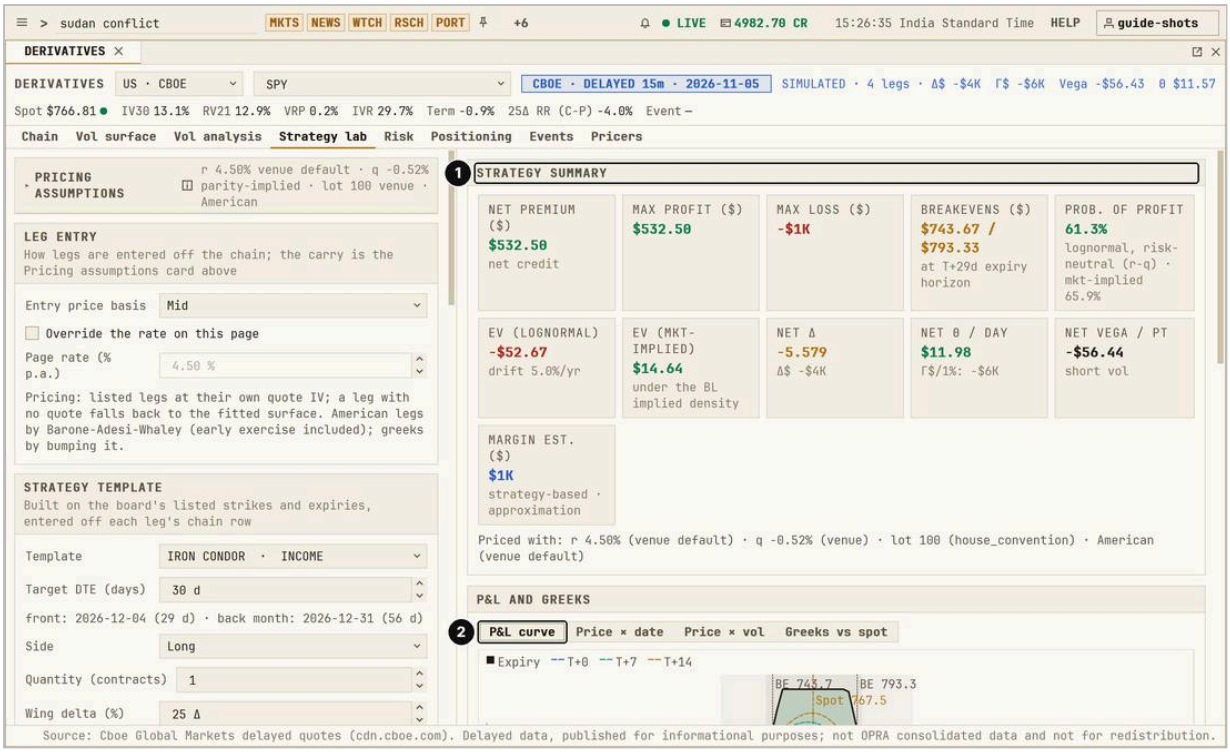


Figure 25.23 An iron condor on SPY: the summary tiles; the P&L chart starts below them.

1. Net premium, max profit and loss, breakevens, probability of profit, expected values, net greeks and a margin estimate.
2. Four views: **P&L curve**, **Price × date**, **Price × vol**, **Greeks vs spot**.

5 Scroll down to **P&L AND GREEKS** and read the curve: the solid line is profit or loss at the horizon (the nearest leg's expiry); the dashed line is today (T+0); one more line is drawn for each day in **Eval days** (T+7, T+14 by default).

> **Tip**
>
> **Side: Short** flips every leg — a long straddle becomes a short straddle.

The 23 templates

The list shows each template in capitals with its family, for example **IRON CONDOR · INCOME**. "25d" means a 25-delta option; "ATM" the strike nearest the money.

Template	Family	Legs it builds (Side: Long)
Long Call	Directional	+1 ATM call
Long Put	Directional	+1 ATM put
Covered Call	Income	+100 shares, −1 out-of-the-money call (~30d)
Protective Put	Synthetic	+100 shares, +1 out-of-the-money put (~30d)
Bull Call Spread	Directional	+1 ATM call, −1 out-of-the-money call
Bear Put Spread	Directional	+1 ATM put, −1 out-of-the-money put

Template	Family	Legs it builds (Side: Long)
Bull Put Spread	Income	−1 out-of-the-money put, +1 lower put
Bear Call Spread	Income	−1 out-of-the-money call, +1 higher call
Long Straddle	Volatility	+1 ATM call, +1 ATM put
Long Strangle	Volatility	+1 25d call, +1 25d put
Call Butterfly	Spread	+1 in-the-money call, −2 ATM calls, +1 out-of-the-money call
Broken-Wing Butterfly	Spread	+1 in-the-money call, −2 ATM calls, +1 far out-of-the-money call
Iron Condor	Income	−1 25d put +1 wing, −1 25d call +1 wing
Iron Butterfly	Income	−1 ATM straddle, +1 put wing, +1 call wing
Call Condor	Spread	+1 / −1 / −1 / +1 calls, equally spaced
Call Ratio Spread	Directional	+1 ATM call, −2 out-of-the-money calls (set by **Ratio (short : 1 long)**)
Calendar Spread	Volatility	−1 front-month ATM call, +1 back-month ATM call (**Back-month offset (days)**)
Diagonal Spread	Directional	+1 back-month 70d call, −1 front-month 30d out-of-the-money call
Collar	Synthetic	+100 shares, +1 25d put, −1 25d call
Risk Reversal	Synthetic	−1 25d put, +1 25d call
Box Spread	Synthetic	+call / −put at one strike, −call / +put at a higher one
Jade Lizard	Income	−1 30d put, −1 25d call, +1 higher call
ZEBRA	Directional	+2 70d calls, −1 ATM call

Custom (manual legs) at the top of the list builds nothing: add the legs yourself.

Template defaults: **Target DTE (days)** 30 (1 to 1095), **Side** Long, **Quantity (contracts)** 1, **Wing delta (%)** 25 (5 to 45), **Wing width** By wing delta (or **Listed strikes** / **% of spot**, then **Width (strikes or %)**, default 2), **Ratio (short : 1 long)** 2, **Back-month offset (days)** 30. **Reset to defaults** puts them back.

Edit the legs

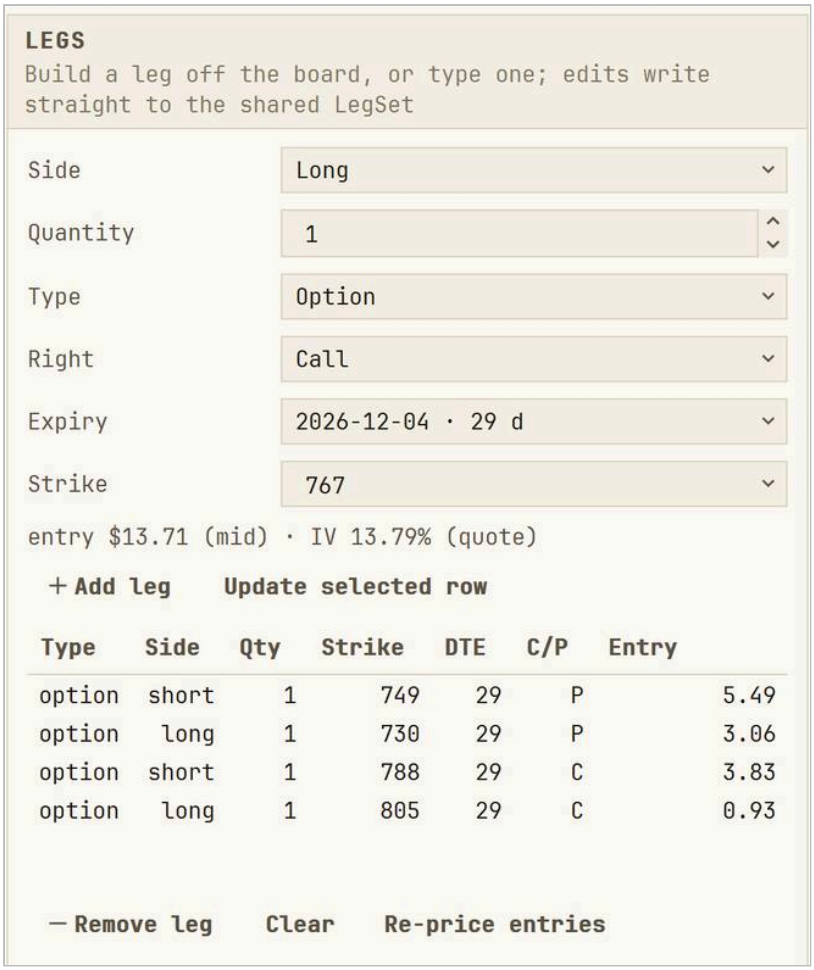


Figure 25.24 The leg builder and the leg editor. Edits write straight to the shared position.

- The **leg builder** (Side, Quantity, Type, Right, Expiry, Strike) adds one leg with **Add leg**, or replaces the selected editor row with **Update selected row**. A strike the board does not list is valued off a model price.
- The **leg editor** table has **Type** (option, stock or future), **Side**, **Qty**, **Strike**, **DTE**, **C/P** and **Entry** (blank = the chain price). Type in a cell to change it.
- **Remove leg** removes the selected row (or the last one). **Clear** removes all; **Undo clear** puts them back. **Re-price entries** re-reads every entry off the current chain.
- **Analyze as book in Risk** opens the Risk page on these legs. **Run strategy lab** retries after a failure.

Analysis settings

Setting	Meaning	Default
Entry price basis	**Mid**, **Natural (pay ask, sell bid)**, **Bid** or **Ask** — the price new legs are entered at.	Mid
Override the rate on this page / Page rate (% p.a.)	Price this page at its own rate.	Off
Vol shift (vol pts)	Add vol points to every leg's IV (+5 takes 20% to 25%).	0
IV dynamics	**Sticky-strike** (each strike keeps its IV) or **Sticky-delta** (the smile moves with spot; needs a fitted surface).	Sticky-strike

Setting	Meaning	Default
Eval days (T+n, days)	Extra P&L curves, comma-separated days forward. Applied when you leave the field.	`0,7,14`
Drift	**Risk-neutral (r−q)** or **Zero drift** — for probabilities and expected values only.	Risk-neutral
Margin rulebook	**Strategy-based (Reg-T style)**, **Max loss** or **SPAN-like scan**.	Strategy-based
SCENARIO GRID	**Spot range (±%)**, **Spot steps**, **Vol range (± vol pts)**, **Vol steps**, **Scenario day (T+n, days)**, **Date steps** — the axes of the two heat maps and the day **Greeks vs spot** is drawn at.	±20%, 21, ±10, 9, 0, 11

Results

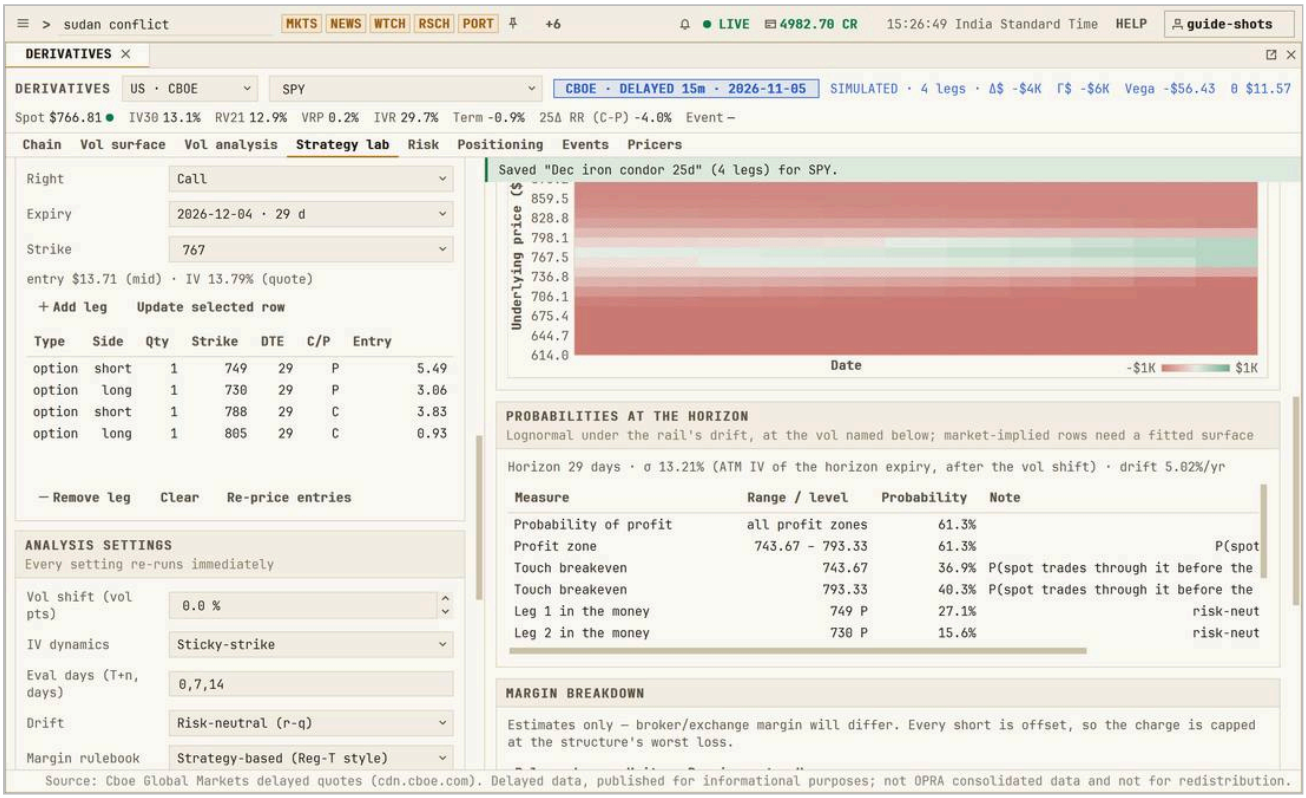


Figure 25.25 The lower part of the Price × date heat map (the position's value across spot levels and days), then the probabilities at the horizon.

Card	What it shows
STRATEGY SUMMARY	**NET PREMIUM** (credit or debit), **MAX PROFIT**, **MAX LOSS** ("Unbounded" when open-ended), **BREAKEVENS**, **PROB. OF PROFIT**, **EV (LOGNORMAL)**, **EV (MKT-IMPLIED)**, **NET Δ**, **NET Θ / DAY**, **NET VEGA / PT**, **MARGIN EST.**
P&L AND GREEKS	**P&L curve**; **Price × date** and **Price × vol** heat maps (full revaluation); **Greeks vs spot** (pick **Delta (units)**, **Gamma (units / 1.0)**, **Vega / vol pt**, **Theta / day**, **Δ$ (delta × S)** or **Γ$ / 1% move**).
PROBABILITIES AT THE HORIZON	Probability of profit, profit zone, chance of touching a breakeven, each leg in the money, expected P&L. Market-implied rows need a fitted surface.
MARGIN BREAKDOWN	Each charge of the estimate and how it was worked out.
PER-LEG DETAIL	Every leg with IV, IV source, entry, entry source, theo and position greeks. **Export CSV** writes summary, legs, probabilities and margin.

Margin is an estimate

The margin tile follows the rulebook on the rail. It is an approximation, not your broker's number. With a connected NSE/BSE broker, the broker's own basket margin is shown beside it.

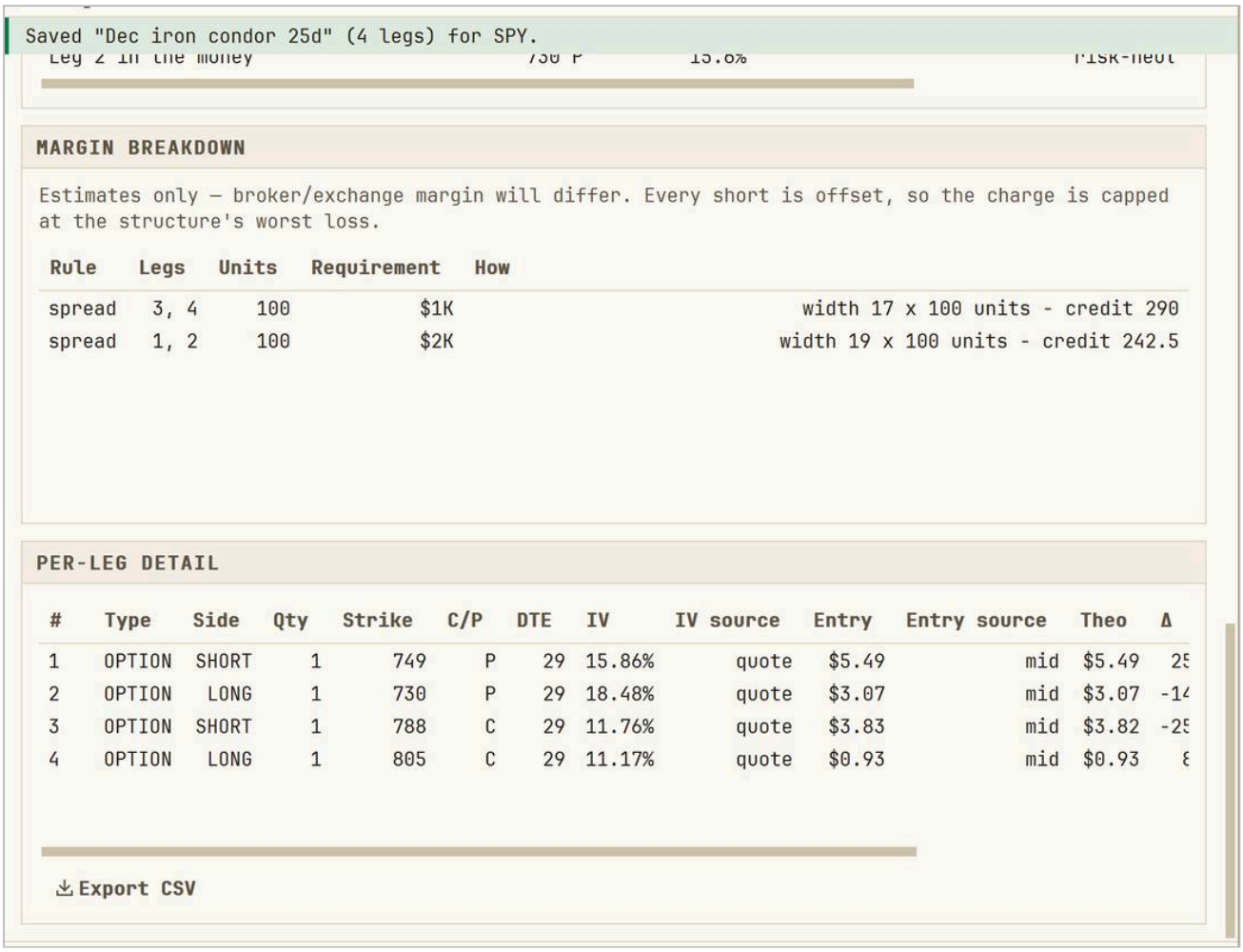


Figure 25.26 The margin breakdown and the per-leg detail of the iron condor.

Save and load strategies

On the **SAVED STRATEGIES** card, type a **Name** (for example `Dec iron condor 25d`) and click **Save**. Strategies are kept on this computer, per underlying, with the template settings; saving under a name that already exists for this underlying replaces it. Pick one in **Saved** (newest first) and click **Load** to bring its legs back (entries as saved, expiries re-dated to today), or **Delete** to remove it. A strategy saved on one venue does not load on another: the same ticker there is another contract.



Figure 25.27 The SAVED STRATEGIES card: a name typed in, ready for Save.

25.9 Measure position risk

The **Risk** page treats your legs as a book: dollar greeks, a spot × vol scenario grid, stress presets, value at risk and a futures hedge.

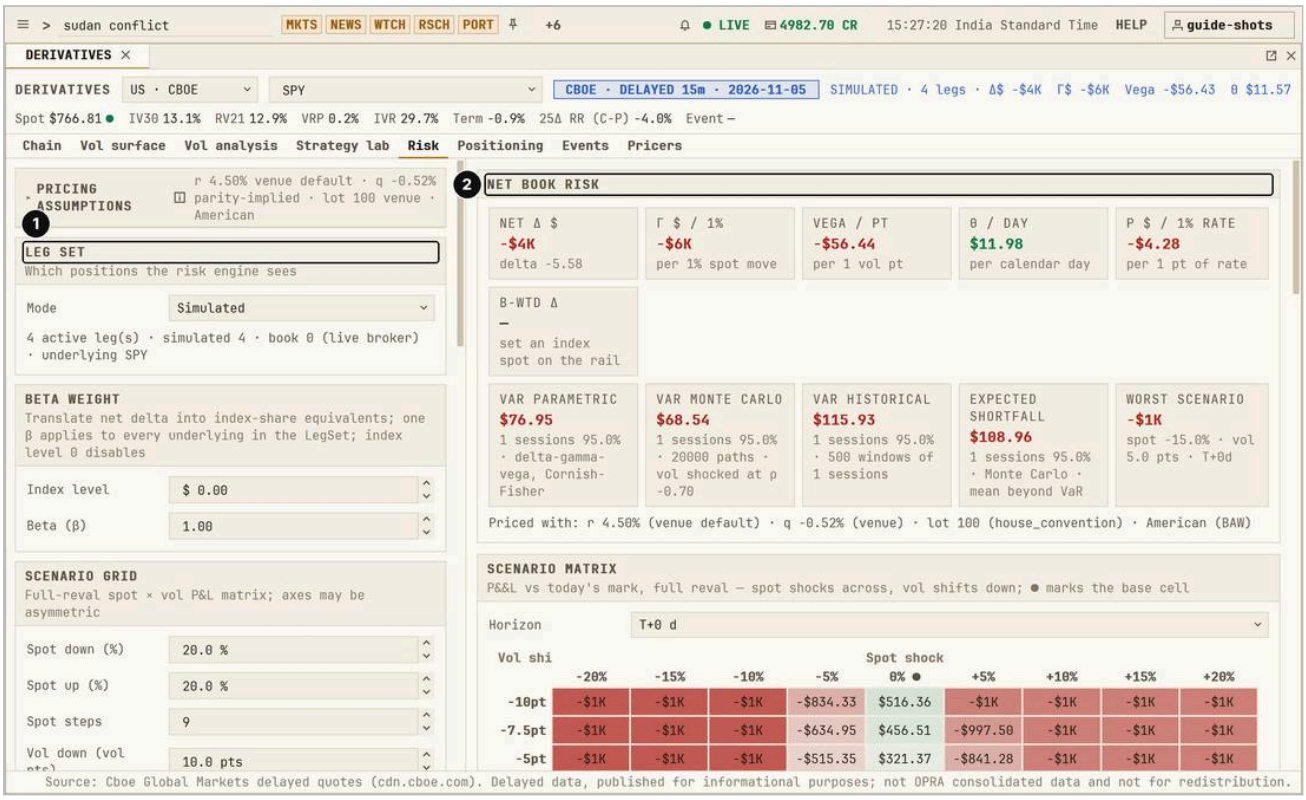


Figure 25.28 The Risk page after Run all.

1. **Mode** — Simulated (the Strategy lab legs), Book (your live broker positions) or Combined.
2. Net delta, gamma, vega, theta and rho, VaR by method, expected shortfall and the worst scenario.

Mode	Positions it uses
Simulated (default)	The legs you built in Strategy lab.
Book (live broker positions)	The F&O positions your connected live Indian broker accounts hold in this underlying. Empty on other venues or with no broker connected.
Combined (book + simulated)	What you hold, with the trade you are considering on top.

With no legs, the canvas offers **Build a position in Strategy lab**. Unlike most pages, the Risk page waits for you: after you change a setting the button reads **Run all — inputs changed**, and nothing is recomputed until you press it. Only **Mode** applies at once.

The scenario grid

The **SCENARIO MATRIX** reprices every leg across spot moves (columns) and vol shifts (rows). The ● cell is today. Set the axes on the **SCENARIO GRID** card: **Spot down (%)** and **Spot up (%)** (20 each), **Spot steps** (9), **Vol down (vol pts)** and **Vol up (vol pts)** (10 each), **Vol steps** (9), **Horizons (days)** (`0`; up to four, e.g. `0, 7, 30`, one grid each, picked in **Horizon** above the matrix), **IV dynamics** (Sticky-strike or Sticky-delta) and **Rate shift (bp)** (0). **Centre the grid on** stresses the whole grid under a preset: **None (today's market)**, **Crash** (spot −20%, vol +150% relative), **Grind** (spot +5%, vol −20%, +21 days), **Event crush** (vol −35%, +1 day), **Rates up** / **Rates down** (±100 bp).

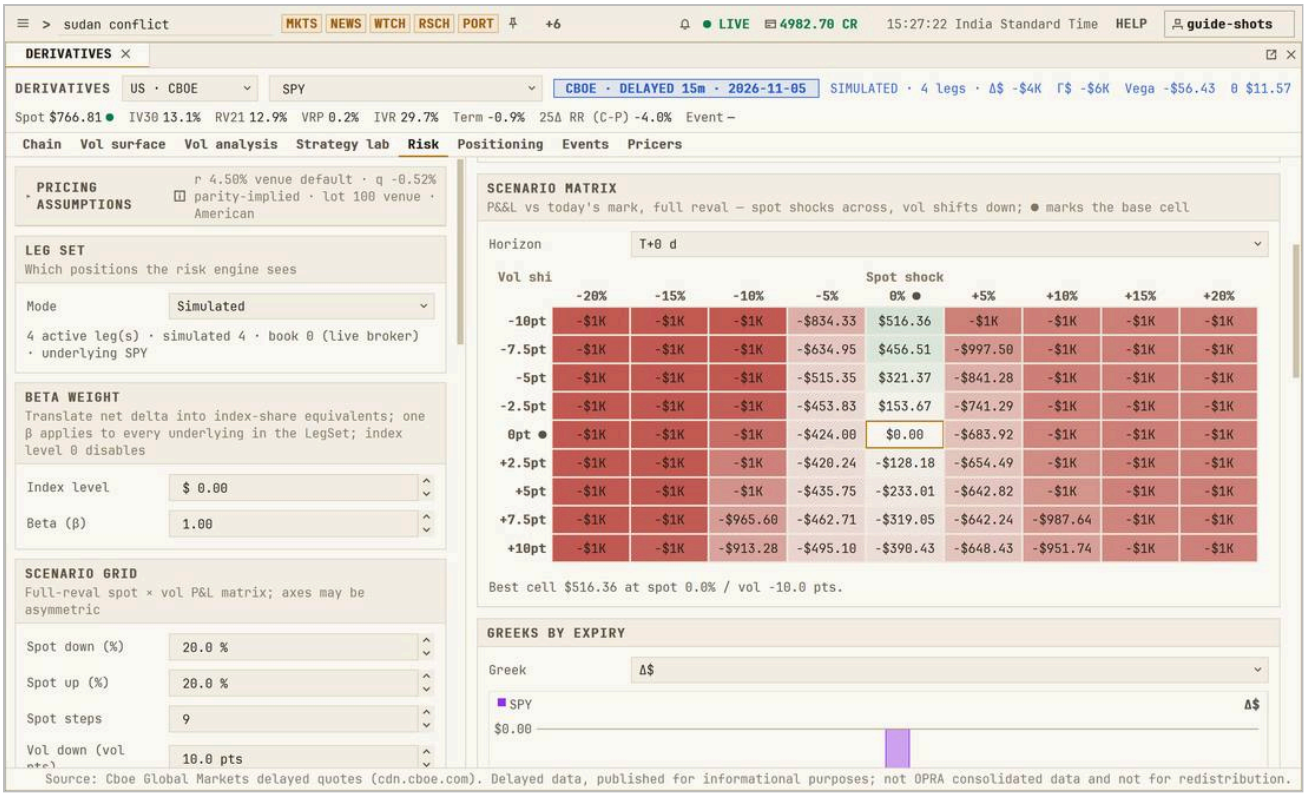


Figure 25.29 The scenario matrix and greeks by expiry.



Figure 25.30 GREEKS BY EXPIRY and GREEKS BY STRIKE × EXPIRY: where the book's risk sits. Pick the greek in each card's Greek box.

Value at risk

Value at risk (VaR) is a loss the book should not exceed at a given confidence over a horizon; **expected shortfall (ES)** is the average loss beyond it. Three methods run side by side — they are three answers, not one:

Method	How it works
Parametric	A delta-gamma-vega formula with a fat-tail (Cornish-Fisher) adjustment. Instant.
Monte Carlo	Full repricing along simulated paths with correlated spot and vol shocks.
Historical	Full repricing at every past move of the underlying over the lookback (default 500 sessions ≈ two years).

Value-at-risk settings (**VALUE AT RISK** card):

Setting	Options	Default
Method	**All three**, **Parametric + Monte Carlo**, **Parametric**, **Monte Carlo**, **Historical**	All three
Horizon (in the unit below)	1, 5, 10 or 21	1
Horizon unit	**Trading sessions** or **Calendar days**	Trading sessions
Headline confidence (%)	80 to 99.9	95
History lookback (sessions)	60 to 1500 (Historical method)	500
Diffusion vol	**Implied (ATM IV30 / surface)** or **Realized (RV21)**	Implied
MC paths	1,000 to 50,000	20,000
Spot-vol ρ	−1 to 1: how spot and vol shocks move together (negative is the equity norm)	−0.70
Vol-of-vol (% p.a.)	0 to 300 (0 freezes vol)	80
Seed	Any number: the same seed gives the same Monte Carlo answer	42

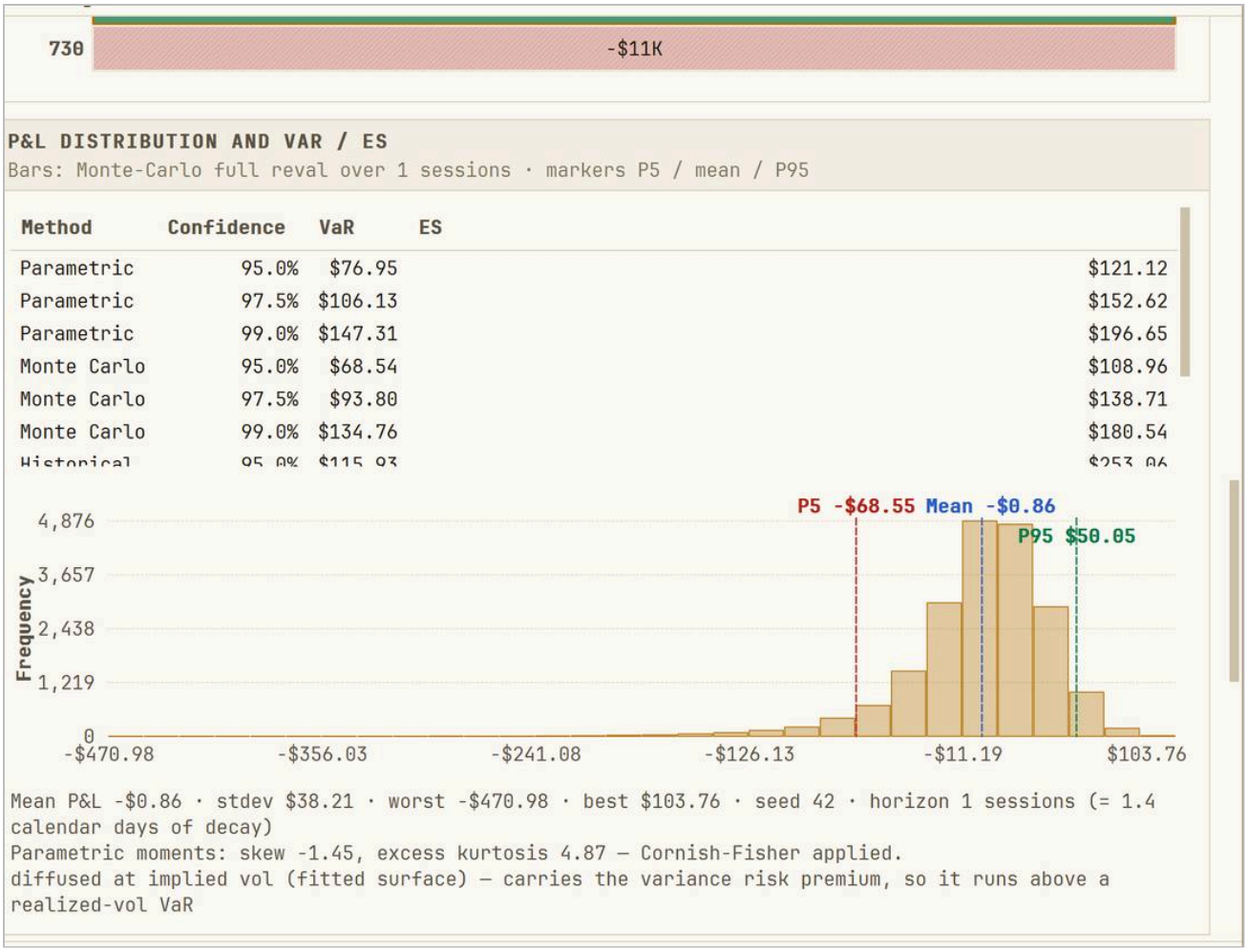


Figure 25.31 P&L DISTRIBUTION AND VAR / ES: VaR and ES for every method and confidence, and the histogram with its P5, mean and P95 markers.

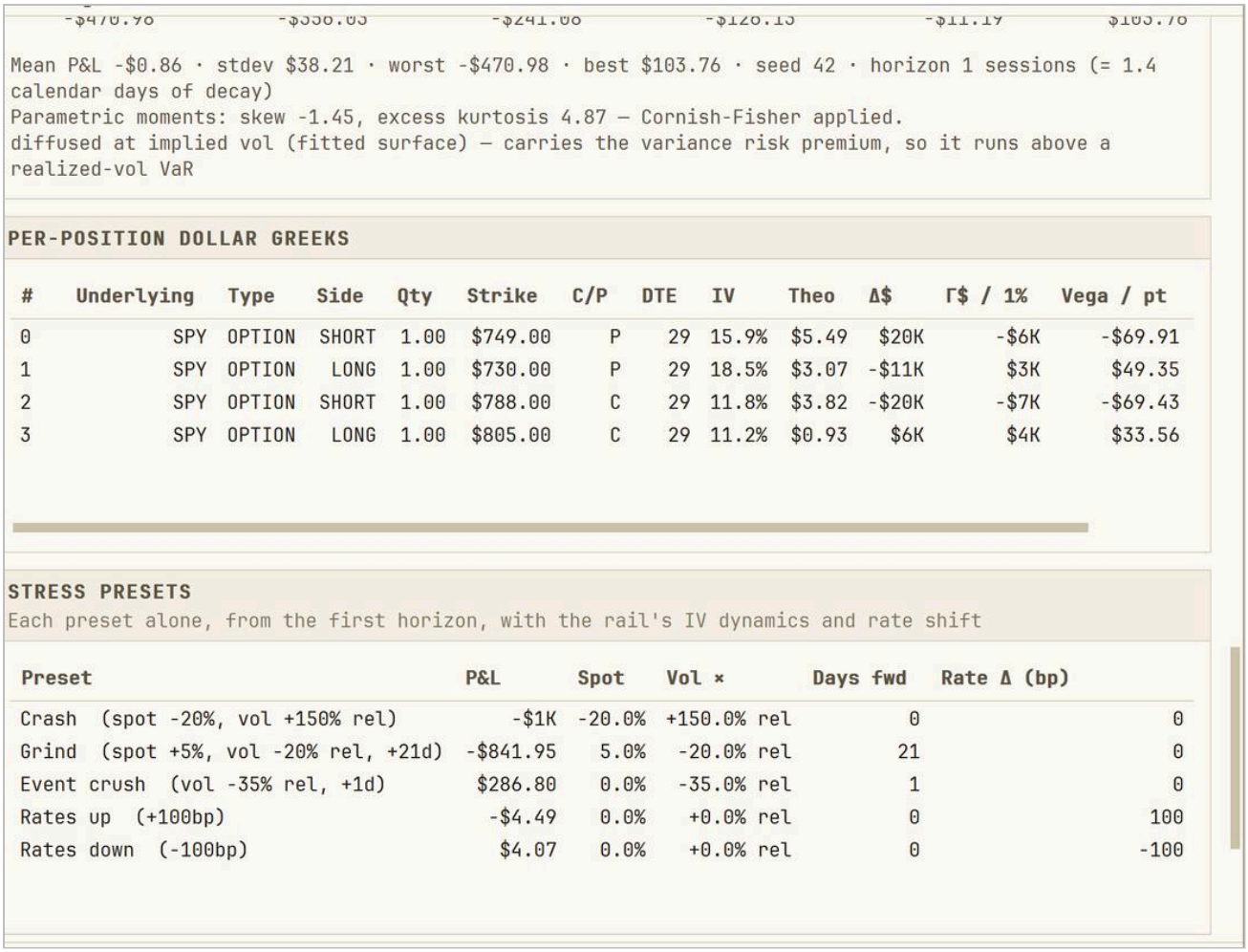


Figure 25.32 Per-position dollar greeks and the five STRESS PRESETS.

Futures and hedge

On the **FUTURES & HEDGE** card you can type up to four futures quotes, **Quote 1 (days / price)** to **Quote 4 (days / price)**: days to delivery (30, 60, 90 and 120 to start) and a price (0 skips the row). The **FUTURES TERM STRUCTURE & HEDGE** card then shows carry against fair value, rich/cheap in basis points, contango or backwardation, roll yield and the minimum-variance hedge ratio. The ratio becomes a number of contracts once you fill **Asset vol σs (%)**, **Futures vol σf (%)**, **Correlation ρ**, **Portfolio value** and **Futures multiplier** (the notional of one futures contract, not the option multiplier). No futures feed reaches this card — the quotes are yours.

BETA WEIGHT: set **Index level** and **Beta (β)** to express the book's delta in index-share equivalents.

25.10 Read dealer positioning

Market makers ("dealers") hedge the options they sell. When they are **long gamma** their hedging dampens moves; when **short gamma**, it amplifies them. The **Positioning** page estimates that from open interest.

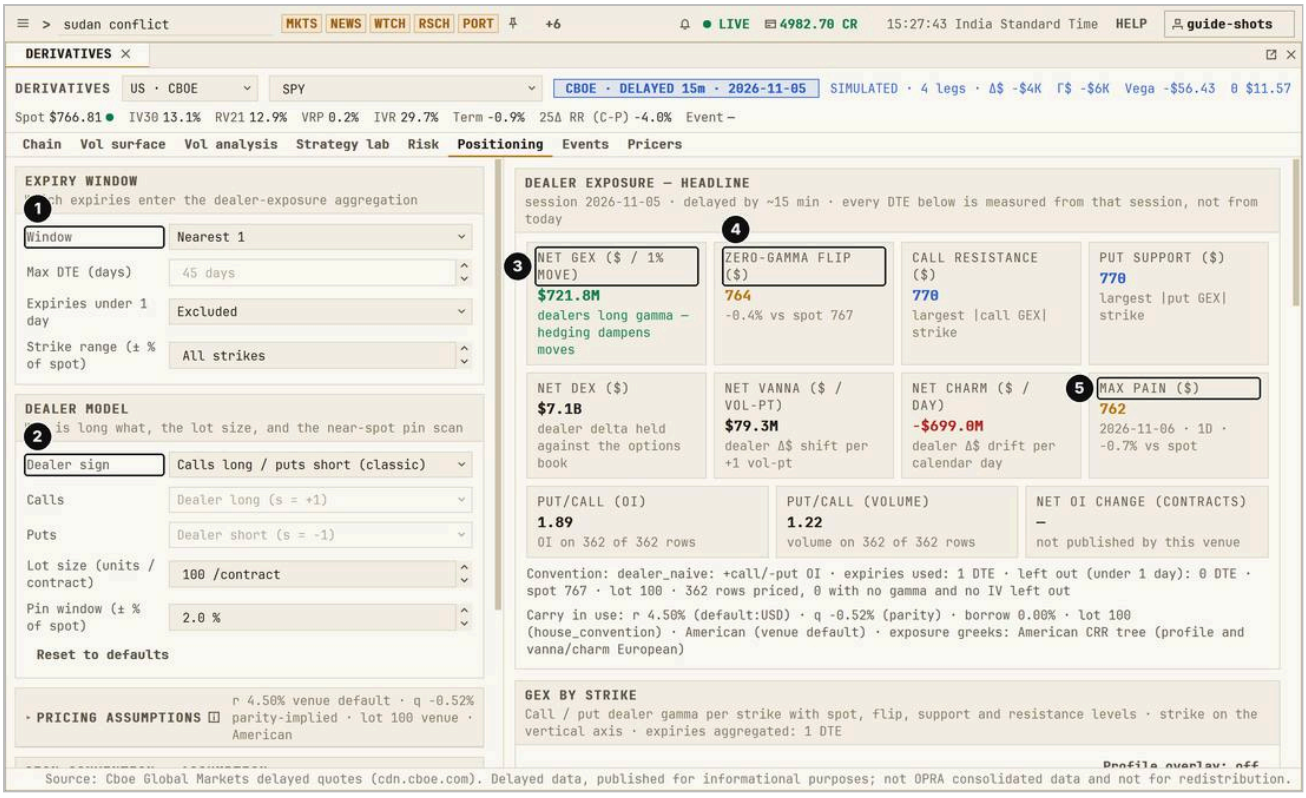


Figure 25.33 Dealer exposure for SPY's nearest expiry.

1. **Window** — which expiries are summed.
2. **Dealer sign** — the assumption about who is long what.
3. **NET GEX** — money dealers must trade per 1% move to stay hedged.
4. **ZERO-GAMMA FLIP** — the spot where dealer gamma changes sign.
5. **MAX PAIN** — the settlement price that pays option holders least.

The tiles sit on the **DEALER EXPOSURE — HEADLINE** card. Their captions carry the unit in the venue's currency, for example **NET GEX ($ / 1% MOVE)**.

Tile	Meaning
NET GEX	Dealer gamma exposure summed over every strike: the money dealers trade per 1% move. Positive: "dealers long gamma — hedging dampens moves".
ZERO-GAMMA FLIP	The spot at which net GEX crosses zero. Above it dealers dampen moves; below it they amplify them.
CALL RESISTANCE / PUT SUPPORT	The strikes with the largest call-side and put-side gamma exposure.
NET DEX	Dealer delta exposure held against the options book.
NET VANNA / NET CHARM	How dealer delta changes per vol point and per calendar day.
MAX PAIN	For the nearest expiry: the settlement price at which option holders collect the least.
PUT/CALL (OI) / PUT/CALL (VOLUME)	Ratios over the window.
NET OI CHANGE (CONTRACTS)	Contracts opened minus closed since the last session (NSE publishes it).

Dealer positioning is inferred, never observed

Nobody publishes dealers' books. The page assumes a side for calls and puts (**Dealer sign** on the **DEALER MODEL** card), and the **SIGN CONVENTION — ASSUMPTION** card at the end of the rail spells out the assumption in force. The classic rule — **Calls long / puts short (classic)** — fits a market where customers sell calls and buy puts. **Dealers short all options** fits a retail call-buying tape. Read the levels as a flow map, not a measurement.

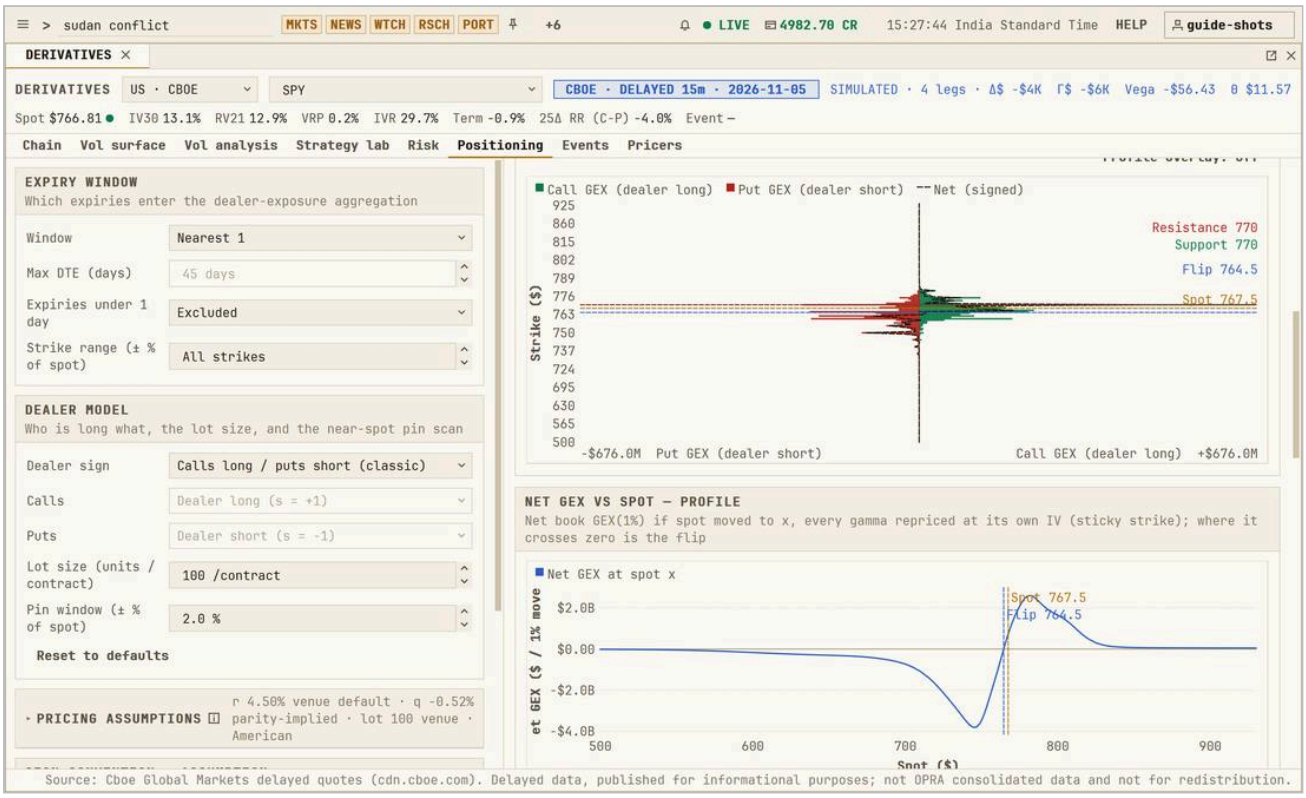


Figure 25.34 GEX by strike: call and put gamma per strike, with spot, flip, support and resistance.



Figure 25.35 MAX PAIN — PAYOUT TO HOLDERS AT EXPIRY: the payout curve is lowest at the max-pain strike.

More cards: **NET GEX VS SPOT — PROFILE** (where net GEX would be if spot moved; **Profile overlay: on** draws it over the bars), **MAX PAIN — PAYOUT TO HOLDERS AT EXPIRY**, **GEX BY EXPIRY**, the **PER-STRIKE DECOMPOSITION** (with a **Pin** flag) and **PIN RISK — NEAREST EXPIRY**: high-open-interest strikes near spot that may act as an expiry magnet. **GEX BY EXPIRY** and the per-strike table have **Export CSV**.

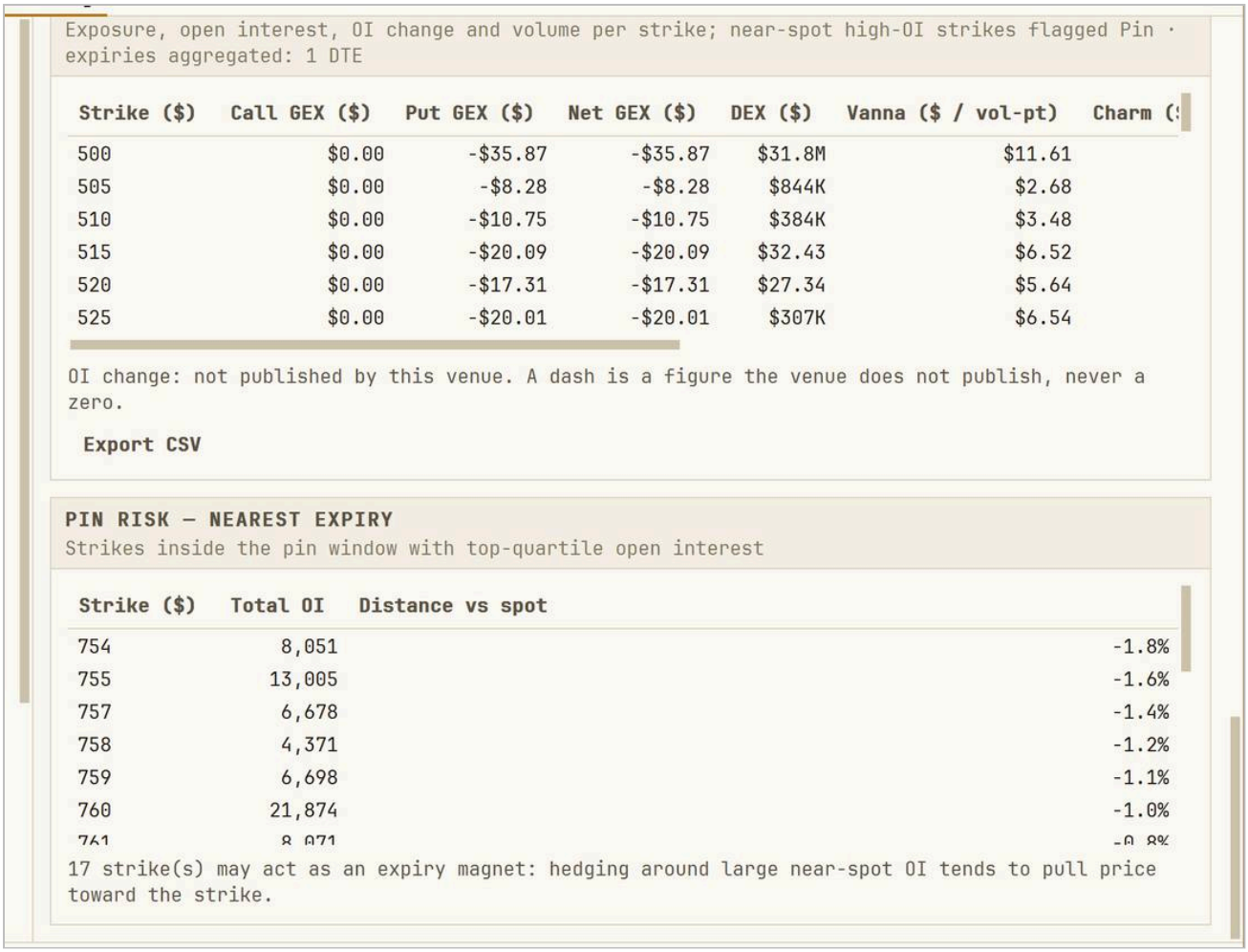


Figure 25.36 The end of the PER-STRIKE DECOMPOSITION and the PIN RISK — NEAREST EXPIRY scan.

Rail settings:

Card › setting	Options	Default
EXPIRY WINDOW › Window	**All expiries**, **Nearest 1**, **Nearest 2**, **Nearest 3**, **Max DTE** — which expiries are summed. The pin scan and max pain use the window's nearest expiry.	Nearest 1
EXPIRY WINDOW › Max DTE (days)	Every expiry out to this many days (only with **Window: Max DTE**).	45 days
EXPIRY WINDOW › Expiries under 1 day	**Excluded** or **Included** (0DTE expiries).	Excluded
EXPIRY WINDOW › Strike range (± % of spot)	Display only: limits the bars, profile, pain curve and per-strike table; the headline tiles still use every strike.	All strikes
DEALER MODEL › Dealer sign	**Calls long / puts short (classic)**, **Dealers short all options**, **Custom per side**	Classic
DEALER MODEL › Calls / Puts	**Dealer long (s = +1)** or **Dealer short (s = −1)** (only with **Custom per side**)	Long / short
DEALER MODEL › Lot size (units / contract)	The lot in force; typing one here sets it for every page. A dash means the venue publishes none.	The venue's
DEALER MODEL › Pin window (± % of spot)	How far from spot the pin-risk scan looks (0.1 to 25).	2%
Reset to defaults	Everything above except the lot size.	—

Card › setting	Options	Default
SIGN CONVENTION — ASSUMPTION › Run GEX & positioning	Retry after a failure (every setting already re-runs the page).	—

25.11 Price an event

Options get more expensive before earnings and cheaper right after ("IV crush"). The **Events** page isolates the move the market prices for one event and shows what happens to your legs when it passes.

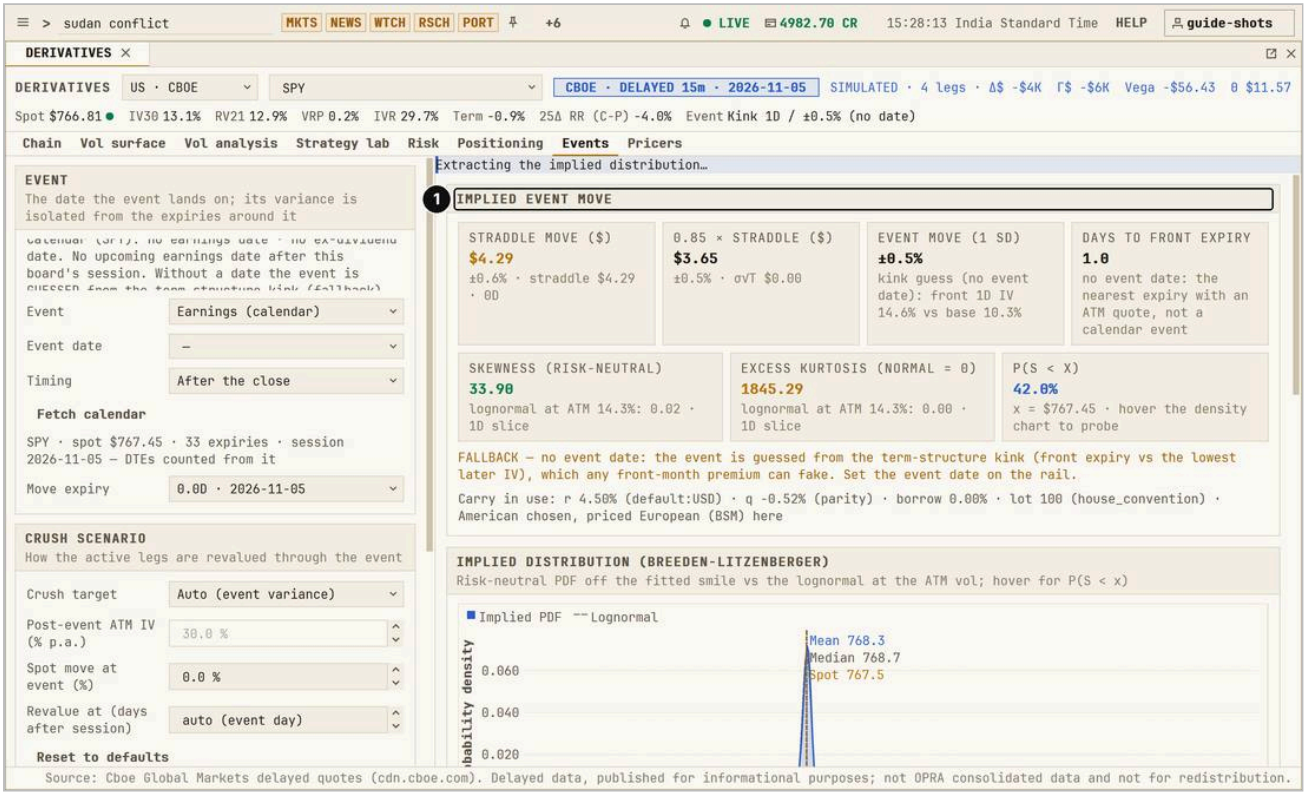


Figure 25.37 The Events page: the implied event move and the risk-neutral distribution.

1. **STRADDLE MOVE**, **0.85 × STRADDLE**, **EVENT MOVE (1 SD)**, days to the event (**DAYS TO FRONT EXPIRY** while no date is set), skewness, excess kurtosis and **P(S < X)**.

1. Under **Event**, choose **Earnings (calendar)**, **Ex-dividend (calendar)** or **Custom date.** For a single stock, the dates fill in from the market calendar; for an index or ETF, type a date (a macro release, a rebalance) in **Event date**.

2. Set **Timing**: **After the close** (the next session prices it) or **Before the open**. Picking **Earnings (calendar)** sets After the close; **Ex-dividend (calendar)** sets Before the open.

3. Read the tiles. **STRADDLE MOVE** is the at-the-money straddle of the **Move expiry**; **EVENT MOVE (1 SD)** is the event day's own move, separated from normal days using the expiries either side.

4. With legs in the Strategy lab, read **IV CRUSH THROUGH THE EVENT — ACTIVE LEGS**: each leg's IV and value before and after. Its **Strategy lab** button takes you to the legs.

Without an event date the page guesses the event from a kink in the term structure and says **FALLBACK** — set the date for a real answer. **Fetch calendar** asks for the earnings and ex-dividend dates again (free).

Card	What it shows
IMPLIED DISTRIBUTION (BREEDEN-LITZENBERGER)	The risk-neutral probability density off the fitted smile against a plain lognormal. Hover for P(S < x). Needs the fitted surface.
ATM TERM STRUCTURE — THE EVENT IN IT	The raw ATM term against the ex-event curve (the event's variance removed).
PROB ITM / PROB TOUCH LADDER	Per strike: moneyness, call and put chance of finishing in the money, and chance of touching the strike.
IV CRUSH THROUGH THE EVENT — ACTIVE LEGS	Each leg's IV and value before and after the event.

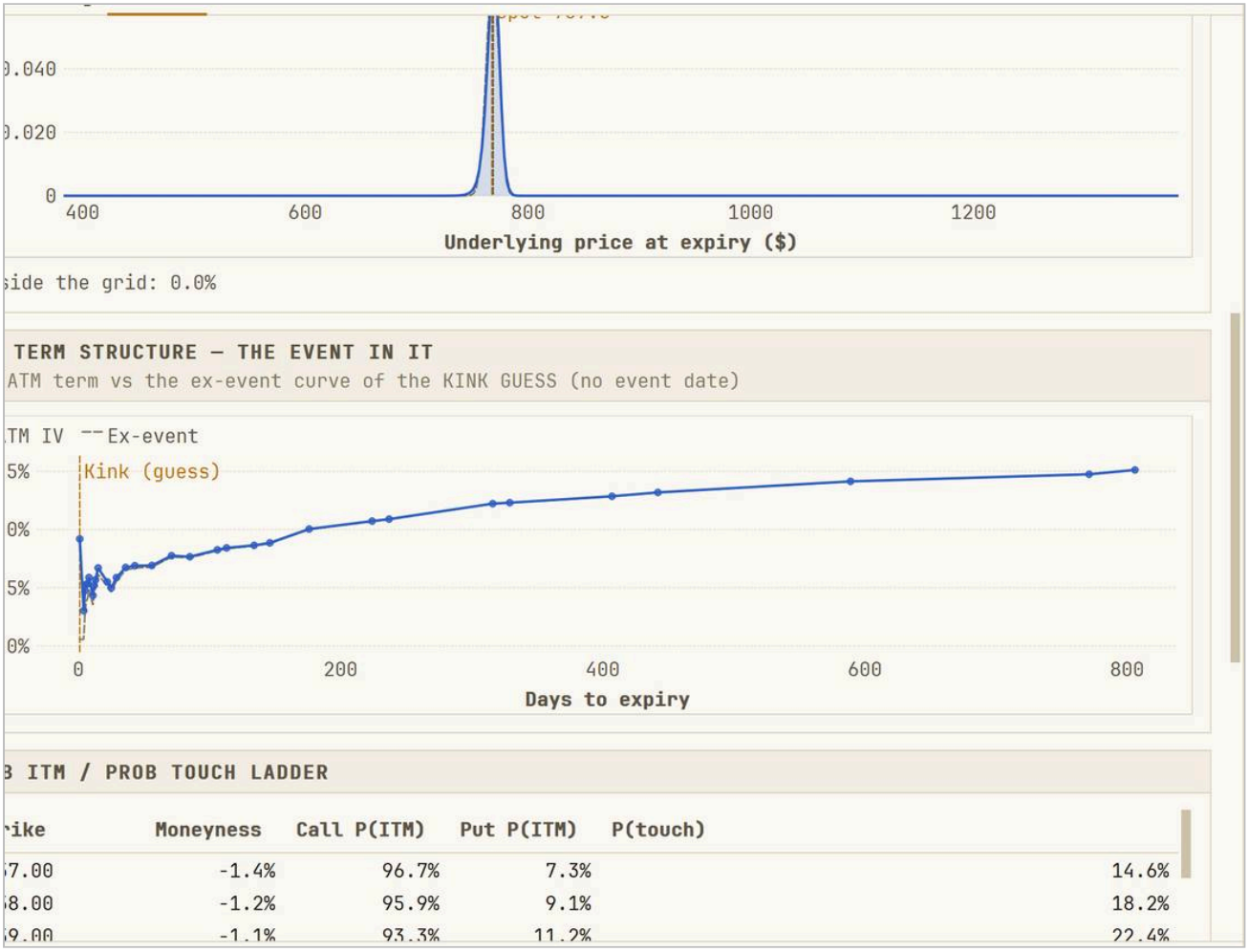


Figure 25.38 The implied distribution's tail, the ATM term structure with the event (here the kink guess, as no event date is set) and the probability ladder.

Crush settings (**CRUSH SCENARIO** card): **Crush target** (**Auto (event variance)** by default, or **Manual post-event ATM IV** with **Post-event ATM IV (% p.a.)**, default 30), **Spot move at event (%)** (0; −50 to 50), **Revalue at (days after session)** (blank = **auto (event day)**, the first day the event is priced; 0 = an instant crush) and **Reset to defaults**. Distribution settings (**DISTRIBUTION SETTINGS** card): **Tenor**, **Strike grid** (**Coarse**, **Normal** (default), **Fine** — 201, 401 or 801 strikes, and 13, 21 or 33 ladder rows) and **P(S < x), x (price)** (the level the **P(S < X)** tile reads; it updates without a re-run). **Run event analysis** at the end of the rail retries.

25.12 Use the pricers

The **Pricers** page holds eighteen calculators. With a board loaded, the option inputs start from it (spot, the expiry nearest 30 days, its ATM strike, mid and IV, and the carry). The line under each input says where its value came from; what you type wins until the underlying changes.

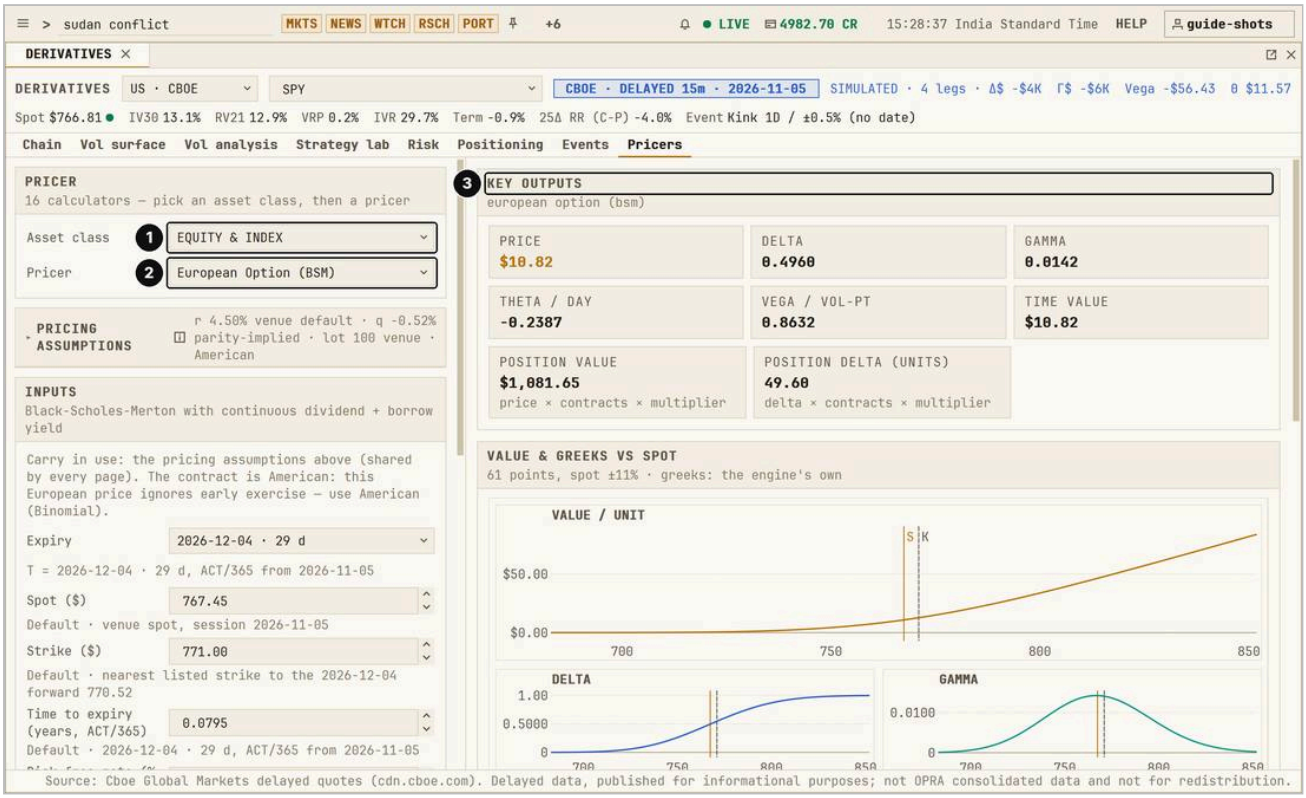


Figure 25.39 The European Option (BSM) pricer, priced off the SPY board.

1. **Asset class** narrows the list.
2. **Pricer** — the calculator.
3. Headline results, then a value-and-greeks chart, a spot × vol grid and a details table.

1. Pick an **Asset class**, then a **Pricer**.
2. Check or change the **Inputs**. Rates and vols are in percent. For an option, **Expiry** lists the board's expiries, plus **Other date...** (any date, typed in **Expiry date**) and **Typed time (years)** (type the time to expiry yourself).
3. Click **Price**. When you change an input afterwards, the button reads **Price — inputs changed**.

Asset class	Pricers
EQUITY & INDEX	European Option (BSM), Greeks Ladder (Full), Implied Volatility, American Option (Binomial), Option on Forward (Black-76), Forward / Futures Price
EXOTICS	Digital (Binary) Option, Barrier Option, Asian (Average-Price) Option
FX	FX Option, FX Forward
RATES & CREDIT	Bond Price, Bond Yield to Maturity, Interest-Rate Swap, Seasoned Swap (dated), Credit Default Swap, Rate Curve, Zero Curve Bootstrap

That is 6 + 3 + 2 + 7 = 18 calculators. The hint on the **PRICER** card still says "16 calculators"; it is out of date. Every input and output of each one is listed in **§25.13 Reference** p. 534 (Pricers — every calculator).

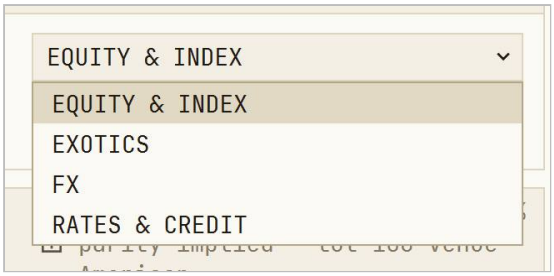


Figure 25.40 The four asset classes of the Pricers page.



Figure 25.41 The Barrier Option pricer: barrier price, probability of touch, the vanilla price and the knock discount.

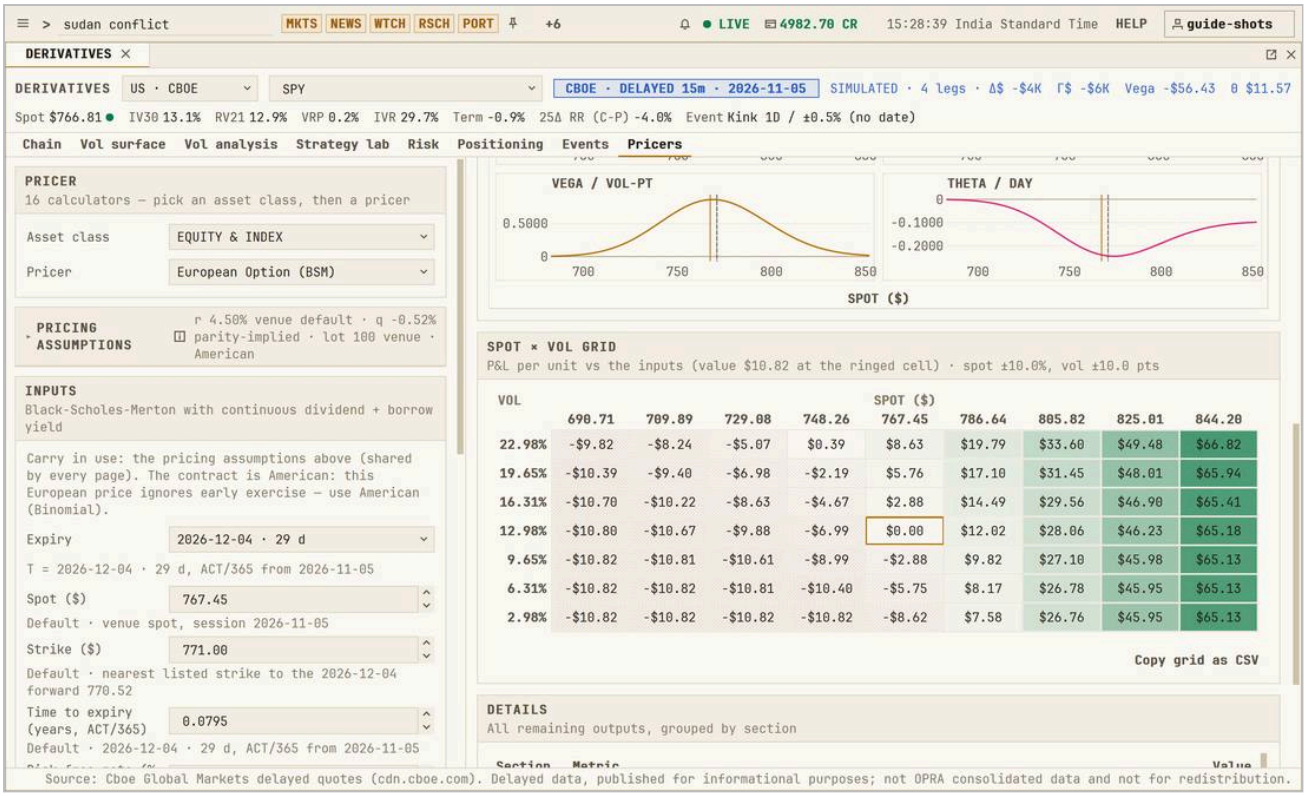


Figure 25.42 Value & greeks vs spot, and the spot × vol grid of the option.

The **PROFILE & GRID** card (option pricers only) sets the grid: **Spot range (± %)** (10; 1 to 50, nine columns), **Vol range (± vol pts)** (10; 1 to 50, seven rows) and **Grid shows** (**P&L vs inputs (per unit)**, the default, or **Option value (per unit)**). The ringed cell is the inputs. **Copy grid as CSV** puts the grid on the clipboard. Below the grid, the pricer's own **CHART** (for example the early-exercise boundary, a payoff or a curve) and **DETAILS**, every remaining output. **Reset inputs to defaults** returns every input of this asset class to the chain's values (or the pricer's own when no chain is loaded). Every run is a stand-alone what-if: nothing here touches your positions.

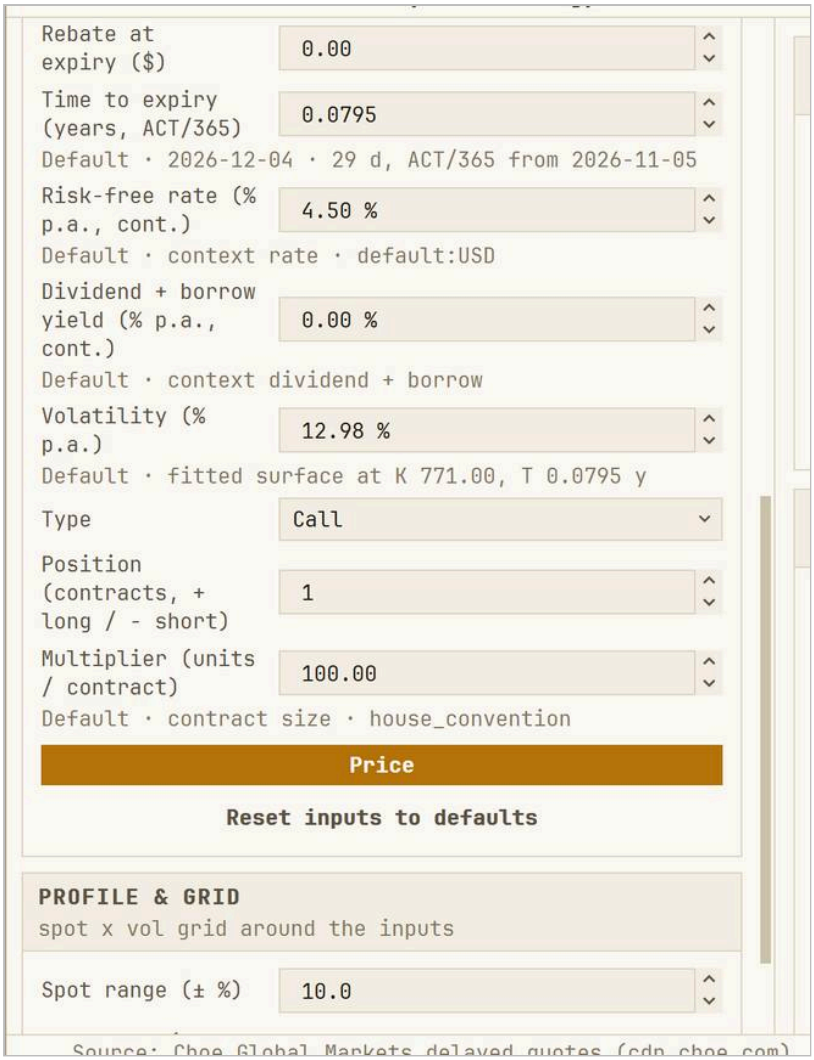


Figure 25.43 Inputs of the Barrier Option pricer. The grey line under each input says where its value came from; then Price, Reset inputs to defaults and the PROFILE & GRID card.

25.13 Reference

Header

Control	What it does
Venue picker	The exchange the board is read from: IN · BSE, US · CBOE, JP · JPX, CA · MX, IN · NSE, TW · TAIFEX. Remembered on this computer.
Underlying box	Search the venue's whole universe by ticker or name.
Source badge	Venue · freshness · session date.
Position badge	Leg-set mode · legs · net Δ$, Γ$, vega and theta (only while a position exists).
Header strip	Spot, IV30, RV21, VRP, IVR, Term, 25Δ RR (C−P), Event. Hidden until a board is loaded.
Attribution line (bottom)	The exchange's data notice. Right-click › **Copy the full attribution notice** copies the whole text.

Chain page — rail

Card / control	Options	Default
DATA SOURCE › Underlying	Shows the header's underlying.	—
Source	Fincept (venue in header), Broker (live, connected account), Cboe direct (delayed), Deribit direct (crypto)	Fincept
Session	Latest held session, or a held date	Latest
Fetch / refresh chain	Read the board again and publish it to every page.	—
Auto-refresh	Off, Every 1 min, Every 5 min, Every 15 min (direct sources only)	Off
PRICING ASSUMPTIONS	See **§25.5 Set the pricing assumptions** p. 504.	—
VIEW › Expiry, Layout, Columns, Columns…, Greeks, Price off the fitted surface, Open Vol surface, Open Strategy lab after adding a leg	See **§25.4 Read the option chain** p. 499.	Nearest 30 days; Calls | puts; Quotes; Per unit
STRIKE FILTERS	See the filter table above.	12 strikes ± ATM

Chain canvas: **EXPIRY HEADLINE** (eight tiles), **OPEN INTEREST & VOLUME BY STRIKE** (**Bars: Open interest** or **Volume**), **OPTION CHAIN** (the table, **Export CSV**, and **Open Strategy lab** after a leg is added). Right-click a row for the leg menu; double-click a cell to buy that side.

Chain table columns

Column	Meaning
Bid sz / Ask sz	Contracts at the best bid / ask.
Bid / Ask	Best bid and ask, per unit of the underlying.
Mid	The price the row is valued at (mid, else settlement or last print).
Last, Chg, Chg %	Last trade and its change against the previous close.
Vol	Contracts traded this session.
OI, OI chg	Open interest and its change since the last session.
IV	Implied volatility, % a year.
Δ, Γ, Θ/d, Vega, Rho, Vanna, Charm/d	The greeks (theta and charm per calendar day; vega, vanna per vol point; rho per percentage point).
Theo, Edge	Model price and mid − model.
Strike	The strike (centre column).

Vol surface page — rail

Card	Controls
FIT MODEL	**Model** (Raw SVI per expiry, SSVI global, SABR per expiry (Hagan), Server fit (calendar-constrained)), **SABR β**, **Smile axis** (Strike, Delta, Log-moneyness)

Card	Controls
Expiries	A tick per expiry; **Fit surface**
SERVER FIT	**Fit on server** (credits)
FIT SETTINGS	See the table above
COMPARE WITH AN EARLIER SESSION	**Compare with** (Off, Previous session, A held session), **Session**

Vol surface canvas, top to bottom: **SURFACE HEADLINES**, **VOL SMILE: FITTED VS MARKET**, **DELTA × TENOR GRID** (**Show**, **Tenors outside the fit**, **Export CSV**), **SESSION COMPARE — NOW VS THEN** (only with a compare on: **Export CSV**, **Smile overlay**), **FIT RESIDUALS (MODEL − QUOTE IV)**, **SURFACE — K × T**, **ATM TERM STRUCTURE**, **SKEW BY EXPIRY**, **MODEL COMPARISON — RMSE PER SLICE**, **PER-EXPIRY FIT DETAIL**.

Vol analysis — rail

Card	Controls
RV ESTIMATOR	**Estimator**
WINDOWS & HISTORY	10d, 21d, 42d, 63d, 126d, 252d, **History span**, **Run vol analysis**
MEASUREMENT	**Annualisation (days / year)**, **IV rank lookback**, **VRP realized window**, **IV carry-forward cap**
PRICING ASSUMPTIONS	Shared carry
VOL INDICES	^VIX, ^VIX3M, ^SKEW, ^INDIAVIX, **Refresh marks**

Defaults and options: **§25.7 Analyse volatility** p. 511 (Rail settings).

Strategy lab — rail

Card	Controls
PRICING ASSUMPTIONS	Shared carry
LEG ENTRY	**Entry price basis**, **Override the rate on this page**, **Page rate (% p.a.)**
STRATEGY TEMPLATE	**Template**, **Target DTE (days)**, **Side**, **Quantity (contracts)**, **Wing delta (%)**, **Wing width** (By wing delta, Listed strikes, % of spot), **Width (strikes or %)**, **Ratio (short : 1 long)**, **Back-month offset (days)**, **Apply template**, **Reset to defaults**
Legs	Builder (**Side**, **Quantity**, **Type**, **Right**, **Expiry**, **Strike**, **Add leg**, **Update selected row**), editor table, **Remove leg**, **Clear**, **Undo clear**, **Re-price entries**
ANALYSIS SETTINGS	**Vol shift (vol pts)**, **IV dynamics**, **Eval days (T+n, days)**, **Drift**, **Margin rulebook**
SCENARIO GRID	**Spot range (±%)**, **Spot steps**, **Vol range (± vol pts)**, **Vol steps**, **Scenario day (T+n, days)**, **Date steps**, **Reset to defaults**
SAVED STRATEGIES	**Name**, **Saved**, **Save**, **Load**, **Delete**
Buttons	**Run strategy lab**, **Analyze as book in Risk**

Risk — rail

Card	Controls
LEG SET	**Mode** (Simulated, Book (live broker positions), Combined (book + simulated))
BETA WEIGHT	**Index level**, **Beta (β)**
SCENARIO GRID	**Spot down (%)**, **Spot up (%)**, **Spot steps**, **Vol down (vol pts)**, **Vol up (vol pts)**, **Vol steps**, **Horizons (days)**, **IV dynamics**, **Rate shift (bp)**, **Centre the grid on**, **Reset to defaults**
VALUE AT RISK	**Method**, **Horizon (in the unit below)**, **Horizon unit**, **Headline confidence (%)**, **History lookback (sessions)**, **Diffusion vol**, **MC paths**, **Spot-vol ρ**, **Vol-of-vol (% p.a.)**, **Seed**
FUTURES & HEDGE	**Quote 1 (days / price)** … **Quote 4 (days / price)**, **Asset vol σs (%)**, **Futures vol σf (%)**, **Correlation ρ**, **Portfolio value**, **Futures multiplier**
Button	**Run all** (reads **Run all — inputs changed** when the rail has moved since the last run)

Risk canvas: **NET BOOK RISK** (**NET Δ $**, **Γ $ / 1%**, **VEGA / PT**, **Θ / DAY**, **ρ $ / 1% RATE**, **β-WTD Δ**, **VAR PARAMETRIC**, **VAR MONTE CARLO**, **VAR HISTORICAL**, **EXPECTED SHORTFALL**, **WORST SCENARIO**), **SCENARIO MATRIX** (with **Horizon**), **GREEKS BY EXPIRY** and **GREEKS BY STRIKE × EXPIRY** (each with **Greek**), **P&L DISTRIBUTION AND VAR / ES**, **PER-POSITION DOLLAR GREEKS**, **STRESS PRESETS** (Crash, Grind, Event crush, Rates up, Rates down), **FUTURES TERM STRUCTURE & HEDGE**.

Positioning — rail

Card	Controls
EXPIRY WINDOW	**Window**, **Max DTE (days)**, **Expiries under 1 day**, **Strike range (± % of spot)**
DEALER MODEL	**Dealer sign**, **Calls**, **Puts**, **Lot size (units / contract)**, **Pin window (± % of spot)**, **Reset to defaults**
PRICING ASSUMPTIONS	Shared carry
SIGN CONVENTION — ASSUMPTION	The assumption in force, **Run GEX & positioning**

Positioning canvas: **DEALER EXPOSURE — HEADLINE** (eleven tiles), **GEX BY STRIKE** (**Profile overlay: off / on**), **NET GEX VS SPOT — PROFILE**, **MAX PAIN — PAYOUT TO HOLDERS AT EXPIRY**, **GEX BY EXPIRY** (**Export CSV**), **PER-STRIKE DECOMPOSITION** (**Export CSV**), **PIN RISK — NEAREST EXPIRY**.

Events — rail

Card	Controls
Event	**Event** (Earnings (calendar), Ex-dividend (calendar), Custom date), **Event date**, **Timing** (After the close, Before the open), **Fetch calendar**, **Move expiry**
CRUSH SCENARIO	**Crush target**, **Post-event ATM IV (% p.a.)** (default 30), **Spot move at event (%)**, **Revalue at (days after session)**, **Reset to defaults**
DISTRIBUTION SETTINGS	**Tenor**, **Strike grid** (Coarse 201 / Normal 401 / Fine 801 strikes), **P(S < x), x (price)**
PRICING ASSUMPTIONS	Shared carry

Card	Controls
Button	**Run event analysis**

Events canvas: **IMPLIED EVENT MOVE** (seven tiles), **IMPLIED DISTRIBUTION (BREEDEN-LITZENBERGER)**, **ATM TERM STRUCTURE — THE EVENT IN IT**, **PROB ITM / PROB TOUCH LADDER**, **IV CRUSH THROUGH THE EVENT — ACTIVE LEGS** (with a **Strategy lab** button).

Pricers — rail and canvas

Card	Controls
PRICER	**Asset class** (EQUITY & INDEX, EXOTICS, FX, RATES & CREDIT), **Pricer**
PRICING ASSUMPTIONS	Shared carry (the option inputs start from it)
INPUTS	The pricer's inputs (below); for options also **Expiry** (the board's expiries, **Other date…**, **Typed time (years)**) and **Expiry date**; **Price**, **Reset inputs to defaults**
PROFILE & GRID	**Spot range (± %)**, **Vol range (± vol pts)**, **Grid shows** (option pricers only)

Canvas: **KEY OUTPUTS** (the tiles below), **VALUE & GREEKS VS SPOT** and **SPOT × VOL GRID** (option pricers; **Copy grid as CSV**), **CHART** (pricers that have one) and **DETAILS** (every other output, by section). Inputs you type are remembered per asset class until the underlying changes.

Pricers — every calculator

"From the board" means: with a board loaded, the input starts from it (spot, the expiry nearest 30 days, its nearest listed ATM strike, that strike's mid and IV or the fitted surface's vol there, and the carry on **Pricing assumptions**). The value in brackets is the start value with no board loaded. Rates, yields and vols are in % a year, continuously compounded unless the label says otherwise. Option pricers with a position also show **POSITION VALUE** (price × contracts × multiplier) and **POSITION DELTA (UNITS)**, from **Position (contracts, + long / - short)** (1) and **Multiplier (units / contract)** (the board's, else 100). Money labels carry the board's currency, for example **Spot ($)**.

EQUITY & INDEX

Pricer	Inputs (start value)	Key outputs
European Option (BSM) — Black-Scholes-Merton with a continuous dividend and borrow yield	**Spot** (105), **Strike** (100), **Time to expiry (years, ACT/365)** (1.0), **Risk-free rate (% p.a., cont.)** (5), **Dividend + borrow yield (% p.a., cont.)** (2), **Volatility (% p.a.)** (25) — all from the board; **Type** (Call / Put); **Discrete dividends (years:amount)** (empty), position	PRICE, DELTA, GAMMA, THETA / DAY, VEGA / VOL-PT, TIME VALUE
Greeks Ladder (Full) — first- and higher-order European greeks	Spot, Strike, Time, Rate, Dividend, Volatility (from the board), **Type**	PRICE, DELTA, GAMMA, THETA / DAY, VEGA / VOL-PT, VANNA / VOL-PT
Implied Volatility — the vol that matches a market price	**Market price** (the strike's mid; 15), Spot, Strike, Time, Rate, Dividend (from the board), **Type**, **Exercise style** (European / American, from the board), **Tree steps (American, count)** (200; 50 to 1000)	IMPLIED VOL, VEGA AT IV, REPRICE CHECK, METHOD, CONVERGED

Pricer	Inputs (start value)	Key outputs
American Option (Binomial) — a CRR tree with early exercise	Spot, Strike, Time, Rate, Dividend, Volatility (from the board), **Type** (Put), **Tree steps (count)** (300; 50 to 1000), position	AMERICAN PRICE, EUROPEAN PRICE, EARLY-EX PREMIUM, DELTA, GAMMA, THETA / DAY; chart: the early-exercise boundary (critical spot over time)
Option on Forward (Black-76) — an option on a future or forward	**Forward** (105), Strike, Time, **Discount rate (% p.a., cont.)** (5), Volatility (from the board), **Type**, position	PRICE (DISCOUNTED), UNDISCOUNTED, DELTA (FWD), VEGA / VOL-PT, THETA / DAY
Forward / Futures Price — cost-of-carry fair value	Spot, Rate, Time, Dividend (0) (from the board), **Storage cost (% p.a.)** (0), **Convenience yield (% p.a.)** (0)	FORWARD PRICE, CARRY RATE, BASIS (F − S), ANNUALIZED BASIS

EXOTICS

Pricer	Inputs (start value)	Key outputs
Digital (Binary) Option — pays a fixed amount (or the asset) if it ends in the money	Spot, Strike, Time, Rate, Dividend, Volatility (from the board), **Type**, **Payout style** (Cash-or-Nothing / Asset-or-Nothing), **Cash payout** (1.00), position	PRICE, PROB ITM (RN), DELTA, VEGA / VOL-PT; chart: the step payoff at expiry
Barrier Option — a single barrier watched continuously, rebate paid at expiry	Spot, Strike, **Barrier** (120), **Barrier type** (Up-and-Out, Up-and-In, Down-and-Out, Down-and-In), **Rebate at expiry** (0), Time, Rate, Dividend, Volatility (from the board), **Type**, position	BARRIER PRICE, PROB TOUCH, VANILLA PRICE, KNOCK DISCOUNT, DELTA, ALREADY KNOCKED
Asian (Average-Price) Option — pays on the average price	Spot, Strike, Time, Rate, Dividend, Volatility (from the board), **Type**, **Averaging** (Arithmetic / Geometric), **Fixings (count, 0 = continuous)** (0; up to 5000), **Averaging start (years from now)** (0), position	ASIAN PRICE, VANILLA PRICE, DISCOUNT VS VANILLA, EFFECTIVE VOL, GEOMETRIC, ARITHMETIC (TW) — the arithmetic price runs a few % rich on deep out-of-the-money strikes

FX (spot and strike in domestic currency per one unit of foreign)

Pricer	Inputs (start value)	Key outputs
FX Option — Garman-Kohlhagen	**Spot (domestic per 1 foreign)** (1.08), **Strike (domestic per 1 foreign)** (1.10), **Time to expiry (years, ACT/365)** (1.0), **Domestic rate (% p.a., cont.)** (2.0), **Foreign rate (% p.a., cont.)** (1.5), **Volatility (% p.a.)** (12), **Type**, **Notional (foreign units)** (1,000,000)	PRICE (TOTAL), PRICE / UNIT, CIP FORWARD, DELTA, VEGA / VOL-PT, RHO (DOM) / PT; chart: intrinsic payoff
FX Forward — covered interest parity	Spot (1.08), Domestic rate (2.0), Foreign rate (1.5), **Time to delivery (years, ACT/365)** (1.0), **Points scale (1 / pip size)** (10000)	FORWARD, FORWARD POINTS, ANNUALIZED PREMIUM; chart: the forward from spot to delivery

RATES & CREDIT (a start value of "today+5y" means five years from today)

Pricer	Inputs (start value)	Key outputs
Bond Price — clean and dirty price on the bond's own coupon dates	**Issue date** (2023-01-01), **Settlement date** (today), **Maturity date** (2029-01-01), **Coupon rate (% p.a.)** (5), **Yield to maturity (% p.a.)** (4.5), **Coupon frequency** (Annual / Semi-Annual / Quarterly; Semi-Annual), **Face (price quoted per)** (100)	CLEAN PRICE, DIRTY PRICE, ACCRUED, YTM, MOD DURATION, NEXT COUPON; chart: clean price vs yield (±300 bp)

Pricer	Inputs (start value)	Key outputs
Bond Yield to Maturity — the yield from a price (shares the bond above: edits carry over)	Issue, Settlement, Maturity, Coupon rate, **Clean price (per face)** (102), Coupon frequency, Face	YTM, CURRENT YIELD, DIRTY PRICE, ACCRUED, PRICE CHECK, CONVERGED
Interest-Rate Swap — a vanilla swap at inception on a flat curve	**Effective date** (today), **Maturity date** (today+5y), **Fixed rate (% p.a.)** (3), **Payment frequency** (Semi-Annual), **Notional** (1,000,000), **Discount rate (% p.a., cont.)** (3.5), **Value from** (Receive Floating / Receive Fixed)	SWAP VALUE, PAR SWAP RATE, DV01 (PER 1BP), FIXED LEG PV, FLOATING LEG PV; chart: fixed-leg cash flows
Seasoned Swap (dated) — a swap mid-life, with accrued interest	**Valuation date** (today), **Effective date** (today−1y), **Maturity date** (today+4y), **Fixed rate** (4), **Notional** (10,000,000), **Value from** (Receive Fixed / Pay Fixed), **Fixed leg frequency** (Semi-Annual), **Fixed leg day count** (30/360, ACT/360, ACT/365), **Floating leg frequency** (Quarterly), **Floating leg day count** (ACT/360, ACT/365, 30/360), **Current period's fixing (% p.a.)** (4.3), **Zero curve (tenor:rate% CSV, cont.; empty = flat)**, **Flat rate when no curve** (4)	DIRTY VALUE, CLEAN VALUE, NET ACCRUED, PAR RATE (REMAINING), DV01 (PER 1BP), FIXED LEG PV, FLOATING LEG PV, DISCOUNTING; chart: the PV of each remaining fixed coupon
Credit Default Swap — standard coupon and upfront from the par spread	**Valuation date** (today), **Maturity date** (today+5y), **Par spread (bp)** (150), **Contract coupon (bp)** (100, 500, 25, 300, 750, 1000 or Custom; 100), **Custom coupon (bp)** (only with Custom; 100), **Recovery rate (% of par)** (40), **Notional** (10,000,000), **Discount rate** (5)	UPFRONT (POINTS), UPFRONT AMOUNT, RISKY ANNUITY (RPV01), MODEL PAR SPREAD (BP), HAZARD RATE, SURVIVAL AT MAT.; chart: survival to maturity
Rate Curve — interpolates tenor:rate points into a curve (no bootstrap)	**Curve (tenor:rate% CSV)** (a sample curve from 0.25 to 30 years), **Query tenors (years CSV)** (0.25 … 30)	1Y RATE, 10Y RATE, 30Y RATE, CURVE POINTS, SOURCE; chart: the zero curve; discount factors and forwards in DETAILS
Zero Curve Bootstrap — deposits and par swaps into zero rates	**Deposits (tenor:rate% CSV, simple)**, **Par swaps (tenor:rate% CSV)** (sample values), **Swap fixed-leg frequency** (Semi-Annual), **Read at tenors (years CSV)** (1,2,5,10,30)	1Y, 2Y, 5Y, 10Y and 30Y ZERO, 10Y DISCOUNT FACTOR; chart: the bootstrapped zero curve

Keyboard

Keys	Action
Ctrl + 1 … Ctrl + 8	Open page 1 (Chain) … 8 (Pricers). A page your plan does not include opens the upgrade sheet. These keys are also the terminal's **Focus Window 1 … 8**: while both are set the key does nothing here. Give Focus Window 1 … 8 other keys (or none) in **Settings** › **Keybindings** to use them (**§53.4 Reference** p. 986).
Ctrl + R	Recompute every page on the current board.

Plans and credits

Your plan decides how many of the eight pages you can open, counted from the left (Chain first). When this guide was written, **Exclusive** opened the first two pages (**Chain** and **Vol surface**), and **Exclusive+** and **Exclusive Pro** opened all eight. A page beyond your plan shows a lock; clicking it explains the limit and offers an upgrade. A locked page does not run in the background either — for example, without **Vol analysis** the header's RV21, VRP and IVR stay blank.

The **Deribit direct (crypto)** source of the Chain page is part of Exclusive+ and Exclusive Pro. Everything else on the screen is free to use except **Fit on server** on the Vol surface page, which is charged in credits (the price is on the button).

25.14 For advanced users

How the numbers are worked out

- **Forward.** Where an expiry has no quoted forward, F = S·e^((r − q − b)·T), with r the rate, q the dividend yield and b the borrow fee. Where the venue publishes no spot, the level is solved from put-call parity at the strike where call and put are worth the same.
- **Implied vol** is solved on each expiry's forward: Black-76 for European exercise, a binomial (CRR) tree for American. Strategy and Risk price American legs with Barone-Adesi-Whaley.
- **IV30** is total variance ($IV^2 \times T$) interpolated linearly in time to exactly 30 days.
- **EXPECTED MOVE** = 0.85 × the ATM straddle — the desk rule of thumb for one standard deviation.
- **MAX PAIN** = the settlement price x minimising lot × [Σ call OI × $(x - K)^+$ + Σ put OI × $(K - x)^+$].
- **GEX** per strike = gamma × open interest × lot × S^2 × 1% × the dealer sign.
- **Event move:** the event-day variance v = $\sigma_post^2 \cdot T_post - \sigma_base^2 \cdot (T_post - 1/365)$, event move = √v.
- **Probability ITM** = N(±d2) at each strike's own IV; **P(touch)** ≈ 2 × the out-of-the-money P(ITM).

Hand-offs

- Chain row menu → **Backtest covered call / protective put at this strike** opens **Chapter 24, Backtesting** p. 464 with the overlay staged.
- **Analyze as book in Risk** shares the legs — nothing is copied, so edits in either page show in both.
- Search results in the command line for a contract open this screen on that contract's board and expiry.
- To trade, use **Chapter 17, F&O** p. 284 (India) or your broker screens; this screen never places orders.

Exports

Export CSV on the chain table, the delta × tenor grid, the session-compare table, the Strategy lab (summary, legs, probabilities and margin in one file), **GEX BY EXPIRY** and the **PER-STRIKE DECOMPOSITION** writes a CSV file into the File Manager (**Chapter 47, File Manager** p. 882). **Copy grid as CSV** on the Pricers page and the chain table's right-click **Copy table as CSV** put the CSV on the clipboard instead.

Do it with AI

The AI chat can drive this screen. Try:

- "Open DERV on SPY at Cboe and tell me the ATM IV, the expected move and the put/call ratio for the December expiry."
- "Build a 25-delta iron condor on SPY about 45 days out and give me max profit, max loss and the probability of profit."
- "Where is the zero-gamma flip and max pain on NIFTY's nearest expiry?"
- "Is SPY's implied vol rich or cheap against realized? Show IV rank and VRP."

25.15 Troubleshooting

The header strip and tiles show dashes

No board is loaded yet. Pick an underlying, then press **Fetch / refresh chain** on the Chain page. If the rail says "Sign in to load option chains", sign in, or switch **Source** to **Cboe direct (delayed)**, which works signed out.

"The list of held sessions could not be read"

The list failed to load — this is not the same as "no sessions". **Fetch** still pulls the latest board; switching underlying and back retries the list.

Butterfly arb or Calendar arb says Violation

Very short expiries and illiquid wings often break the no-arbitrage checks. Untick the 0–1 day expiries on the Vol surface rail, try **SSVI global**, or raise **Min quotes per expiry**.

IV rank shows "needs more history"

IV rank needs at least 20 held sessions of IV for this name. It fills in as sessions are captured.

Positioning or the Strategy lab say a lot size is needed

The venue publishes no contract size for this board. Type the lot in **Pricing assumptions › Contract multiplier (units)**.

Risk is empty in Book mode

Book mode reads live F&O positions from a connected Indian broker account (NSE / BSE). With no broker, or on another venue, use **Simulated**.

A page shows a lock

Your plan does not include that page. Click it to see the limit and the upgrade options (**Chapter 50, Profile, Plan & Billing** p. 920).

The Risk numbers did not change after I edited the rail

The Risk page waits for **Run all**. When its label reads **Run all — inputs changed**, the tiles and grids still show the previous settings: press it.

Ctrl+1 … Ctrl+8 do nothing

They clash with the terminal's **Focus Window 1 … 8** keys. Move those in `Settings › Keybindings`, or click the page tabs.

CHAPTER 26

Surface Analytics SURF

Thirty-five market surfaces in one place — option volatility and greeks, yield and futures curves, FX, credit, risk and macro — drawn in 3D, as a table or as a line, with the raw numbers and their source underneath.



At a glance

Open it	• Type `SURF` in the command line and press `Enter` • Type `surface`, `volsurface` or `3d` in the command line and pick **Surface Analytics** • **Screens › Surface Analytics**
You need	• Signed in, to fetch surfaces from the Fincept server
Best for	• Seeing a whole volatility surface at a glance • Comparing curve shapes across markets • Exporting a surface's raw numbers
Time to learn	10 minutes
Related	**Chapter 25, Derivatives** p. 493, **Chapter 32, Global Data** p. 648, **Chapter 33, Sovereign Bonds** p. 660

In this chapter

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26.1 Screen tour

A **surface** is a grid of numbers that depends on two things at once — for example implied volatility by strike and by days to expiry. Surface Analytics draws such grids in 3D so you can see their shape, and keeps the raw rows and their source right below the picture.

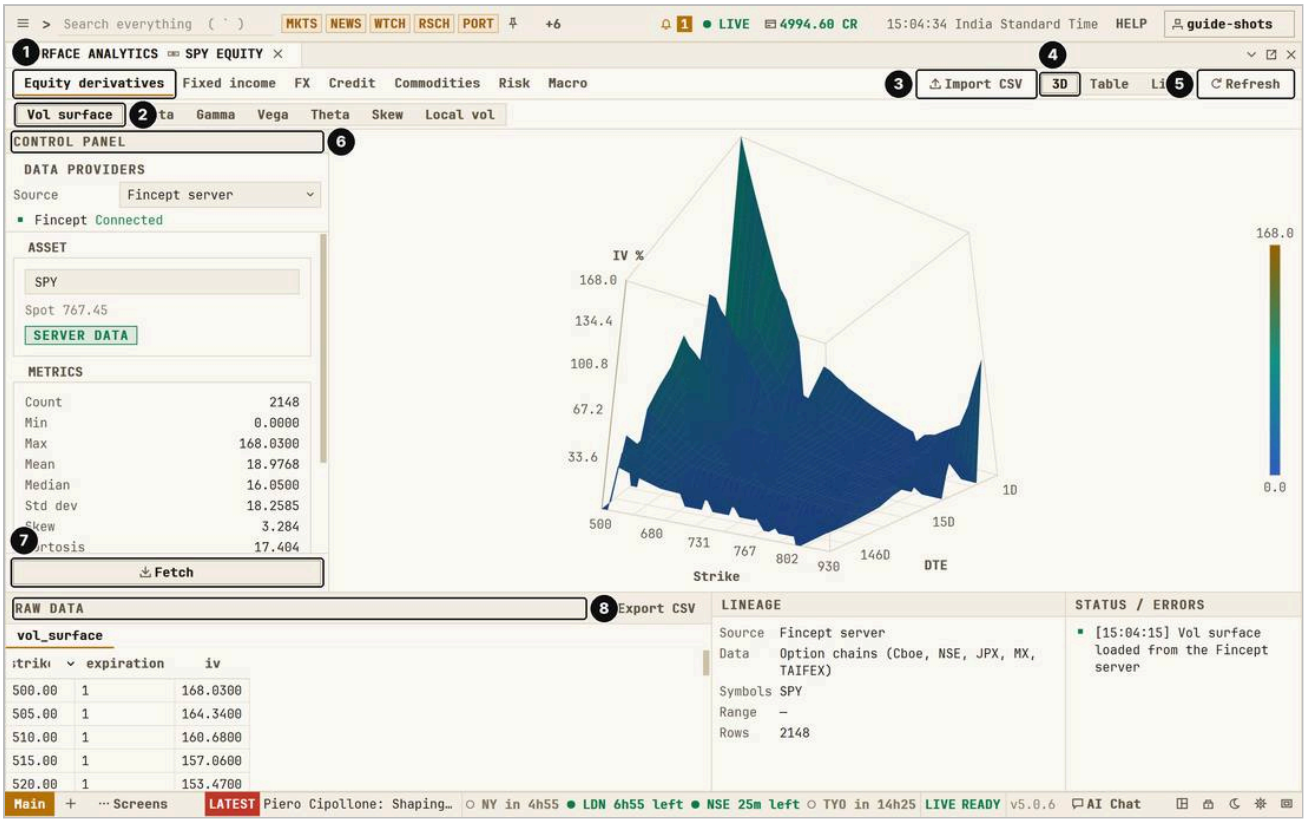


Figure 26.1 Surface Analytics with SPY's volatility surface fetched from the Fincept server.

1. **Categories** — seven groups of surfaces.
2. **Surfaces** — the surfaces of the chosen category.
3. **Import CSV** — load your own numbers into the surface on screen.
4. **3D / Table / Line** — three views of the same numbers.
5. **Refresh** — redraw every surface with fresh sample data (fetched and imported numbers are dropped).
6. **CONTROL PANEL** — source, symbol, dates, basket, statistics and lineage.
7. **Fetch** — load real numbers for this surface.
8. **Data inspector** — the raw rows, their lineage and the status log.

The screen has five areas:

1. **The category bar** across the top: **Equity derivatives**, **Fixed income**, **FX**, **Credit**, **Commodities**, **Risk**, **Macro**. On the right: **Import CSV**, the view switch (**3D**, **Table**, **Line**) and **Refresh**.
2. **The surface bar** below it: one button per surface of the chosen category.
3. **The control panel** on the left (see **§26.8 Reference** p. 553).
4. **The view** in the middle: the 3D chart, the table or the line chart, with a colour scale on the right.
5. **The data inspector** at the bottom: **RAW DATA** (with **Export CSV**), **LINEAGE** and **STATUS / ERRORS**.

The panel's tab shows the symbol and its class, for example **SPY EQUITY**.

> **Refresh is not a fetch**
>
> **Refresh** throws away every fetched and imported surface and redraws all of them with new sample data. To get market numbers again, press **Fetch**.

Sample data is always labelled

Every surface opens with generated **sample data** so you can see its shape before you fetch anything. A **SAMPLE DATA** banner sits above the view whenever the numbers are not market data, and the **LINEAGE** box says **Sample data (generated)**. The banner disappears as soon as real numbers land. Changing the symbol in **ASSET** puts the surfaces that depend on it (the seven Equity derivatives surfaces, Liquidity, Impl div, Cmdty fwd, Cmdty vol and Contango) back to sample data for the new symbol: press **Fetch** again.



Figure 26.2 Before a fetch, the surface shows sample data and says so.

26.2 Quick start

1. Type `SURF` in the command line and press **Enter**.
2. Click **Equity derivatives**, then **Vol surface**.
3. In **ASSET** on the control panel, type an option underlying such as `SPY` (it is filled in for you the first time).
4. Click **Fetch**. After a few seconds the sample banner disappears and the real surface is drawn.

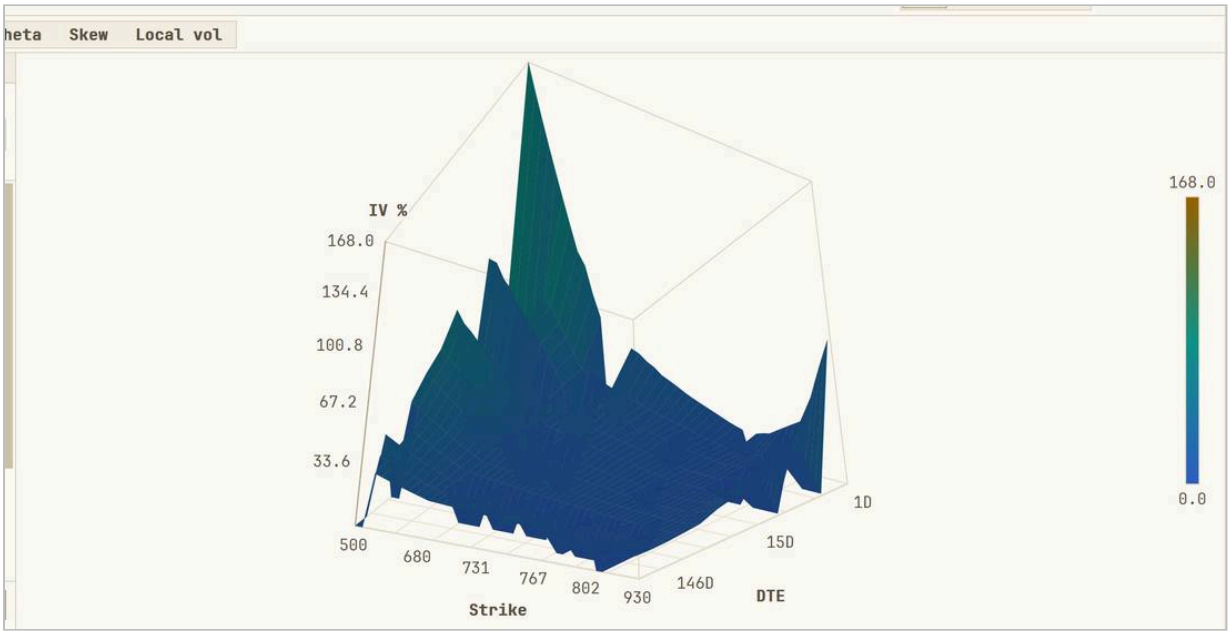


Figure 26.3 SPY implied volatility by strike and days to expiry.

5. Drag the chart with the mouse to turn it; scroll the mouse wheel to zoom.
6. Click **Table** to see the same numbers as a grid.

26.3 Turn, zoom and read the 3D view

- **Drag** with the mouse to rotate the surface left and right and tilt it up and down.

- **Scroll** the mouse wheel to zoom in and out.
- The **colour scale** on the right maps colour to value; its top and bottom numbers are the surface's highest and lowest values.
- The axis titles say what each direction is (for the vol surface: **Strike**, **DTE** and **IV %**).

The value axis and the colour scale print one decimal, so a surface of small numbers (Gamma, for example) reads 0.0 at every tick. Use **Table** to read the exact values.

Every surface has a 3D view and a table. **Line** exists only for the curve surfaces (see **§26.5 Curves in the Line view** p. 549); on any other surface, **Line** shows the table.

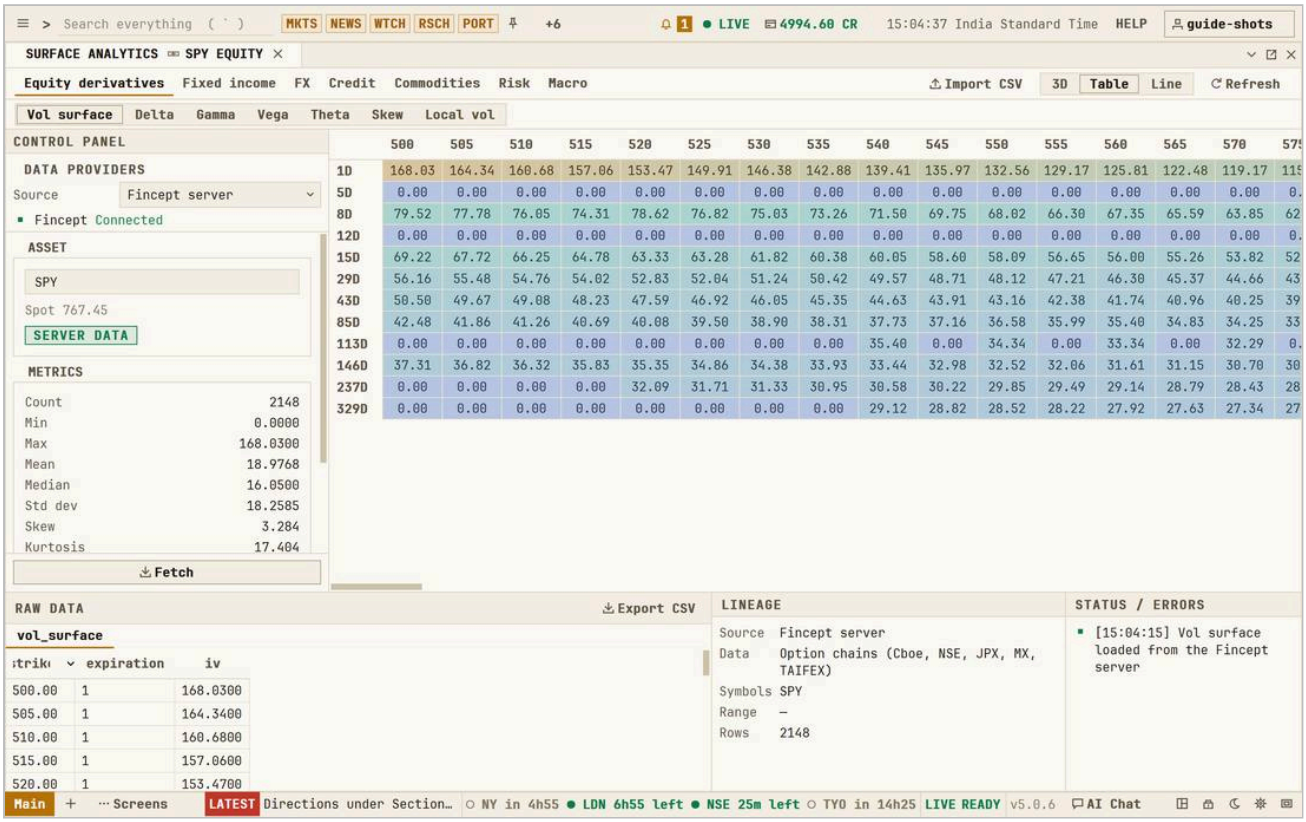


Figure 26.4 The Table view shows every cell of the grid.

26.4 Choose a surface

Click a category, then a surface. The surface bar changes with the category.

Category	Surfaces
Equity derivatives	Vol surface, Delta, Gamma, Vega, Theta, Skew, Local vol
Fixed income	Yield curve, Swaption vol, Cap/floor, Bond spread, OIS basis, Real yield, Fwd rate
FX	FX vol, FX forward, XCCY basis
Credit	CDS spread, Transition, Recovery
Commodities	Cmdty fwd, Cmdty vol, Crack/crush, Contango
Risk	Correlation, PCA, VaR, Stress test, Factor exp, Liquidity, Drawdown, Beta, Impl div
Macro	Inflation, Rate path

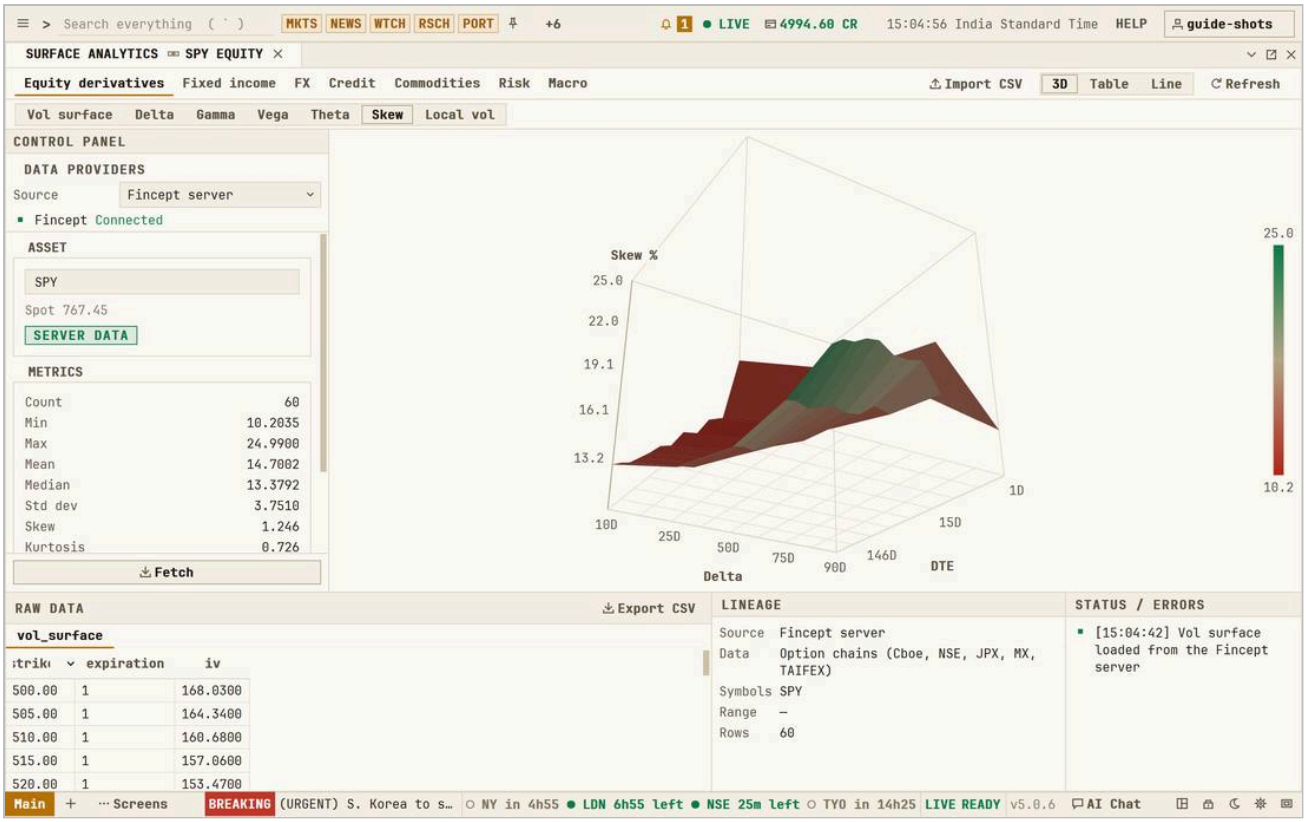


Figure 26.5 The Skew surface — implied vol skew across delta buckets and tenors.

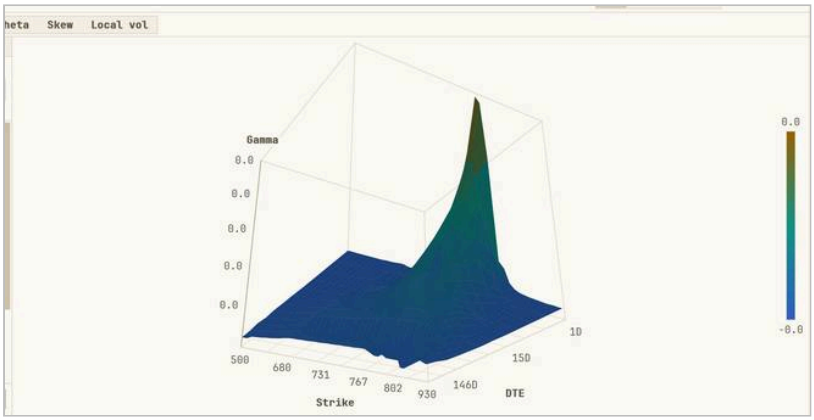


Figure 26.6 The Gamma surface of SPY options by strike and days to expiry — gamma peaks at the money on the shortest expiries.

Which surfaces load real data

Not every surface has a market source yet. The table shows what **Fetch** does for each one.

Real data from the Fincept server	What it is built from
Vol surface	The underlying's option chain: implied vol as the exchange publishes it (the out-of-the-money side). TAIFEX publishes no IV.
Delta, Gamma, Vega, Theta	The exchange's own greeks. Only Cboe publishes them: an NSE, JPX or MX underlying gives no greek grid.
Skew	IV at call deltas 10, 25, 50, 75 and 90, read from the exchange's deltas (Cboe).

Real data from the Fincept server	What it is built from
Local vol	Dupire local volatility worked out from the exchange's IV grid; cells that break no-arbitrage are left empty.
Liquidity	Open interest and volume by strike and expiry.
Impl div	Put-call parity per expiry: the implied rate, forward, dividend and dividend yield.
Yield curve	US Treasury yields from 1 month to 30 years, over recent dates.
Cmdty fwd, Contango	Every priced contract month of each futures root, with % versus the front month.
Crack/crush	Gasoline, heating-oil and 3-2-1 crack spreads from the CL, RB and HO curves, per barrel.
Cmdty vol (partial)	Realized volatility of each contract month's daily closes. There is no implied commodity vol.
Fwd rate	Forward Fed funds rates from the Fed funds futures strip (100 − price of each monthly contract).
Rate path	The market-implied policy path: Fed funds (monthly) and 3-month SOFR (quarterly) futures ahead.
FX forward	Forward points of EUR/USD, USD/JPY and GBP/USD from currency futures against the daily spot close.
Stress test	For each ticker of the basket, from its daily closes: the worst 1-, 5- and 20-day moves, 1% VaR, 5% expected shortfall and the maximum drawdown.

Sample data only (for now)	
Swaption vol, Cap/floor, Bond spread, OIS basis, Real yield, FX vol, XCCY basis, CDS spread, Transition, Recovery, Inflation	No source holds these yet. **Fetch** is off and the banner says so. You can still load your own numbers with **Import CSV**.
Correlation, PCA, VaR, Factor exp, Drawdown, Beta	These are not yet computed from fetched data on this screen: they show sample data and **Fetch** is off.



Figure 26.7 A sample-only surface. The banner explains why there is no Fetch.

The basket surfaces of **Risk** (Correlation, PCA, VaR, Stress test, Factor exp, Drawdown and Beta) work on a **BASKET** of tickers instead of one symbol; all but Stress test also show a **DATE RANGE**. **Stress test** is the one built from fetched data: the basket's daily closes on the Fincept server.

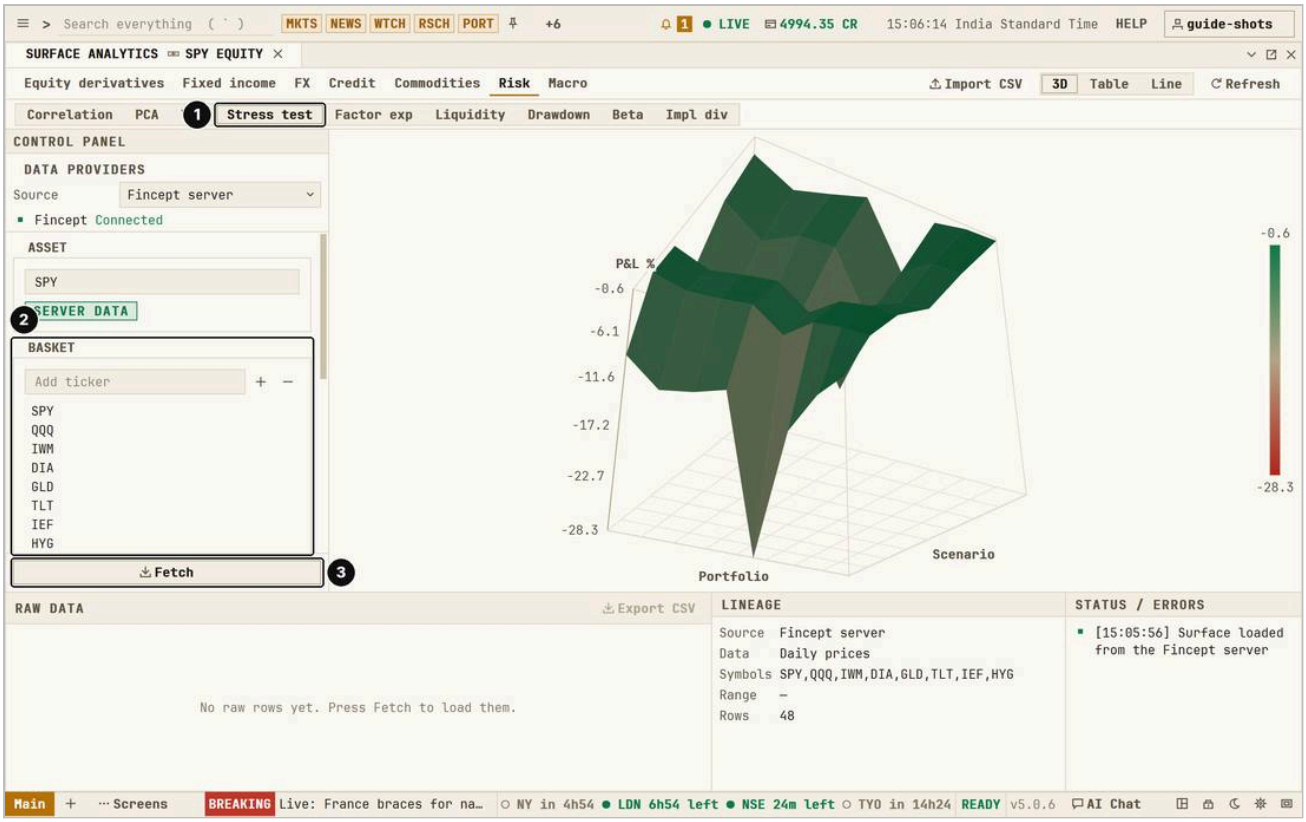


Figure 26.8 Stress test: per ticker of the basket, its worst 1-, 5- and 20-day moves, 1% VaR, 5% ES and maximum drawdown.

1. The **Stress test** surface of the **Risk** category.
2. **BASKET** — type a ticker and press **Add ticker**; select one and remove it with the minus button.
3. **Fetch** builds it from the basket's daily closes.

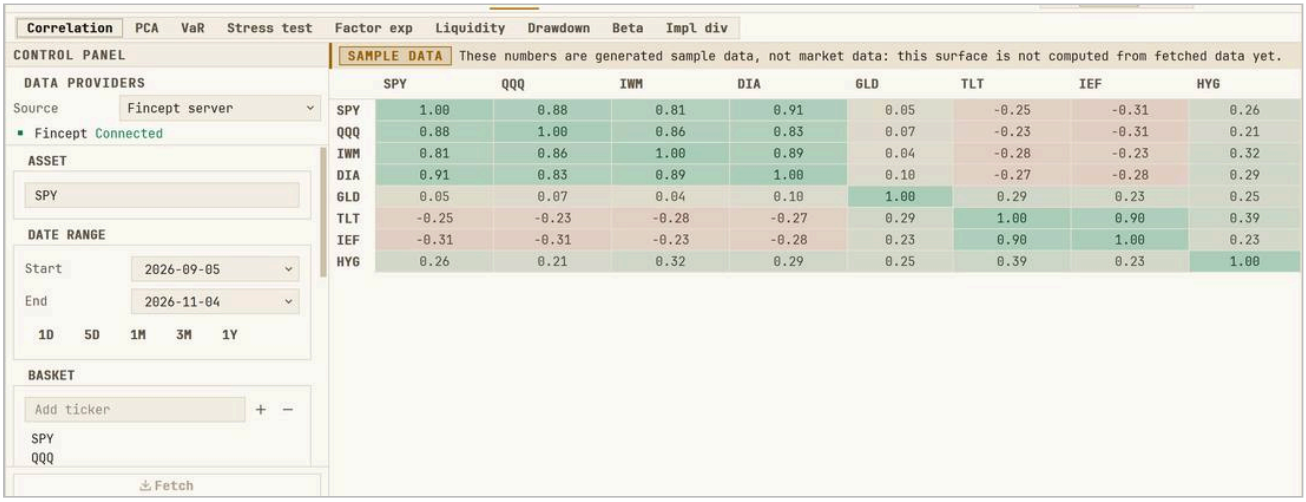


Figure 26.9 The Correlation surface in the Table view. It still shows sample data, and the banner says so.

26.5 Curves in the Line view

Surfaces that are really a set of curves also have a **Line** view, which is often easier to read than 3D.

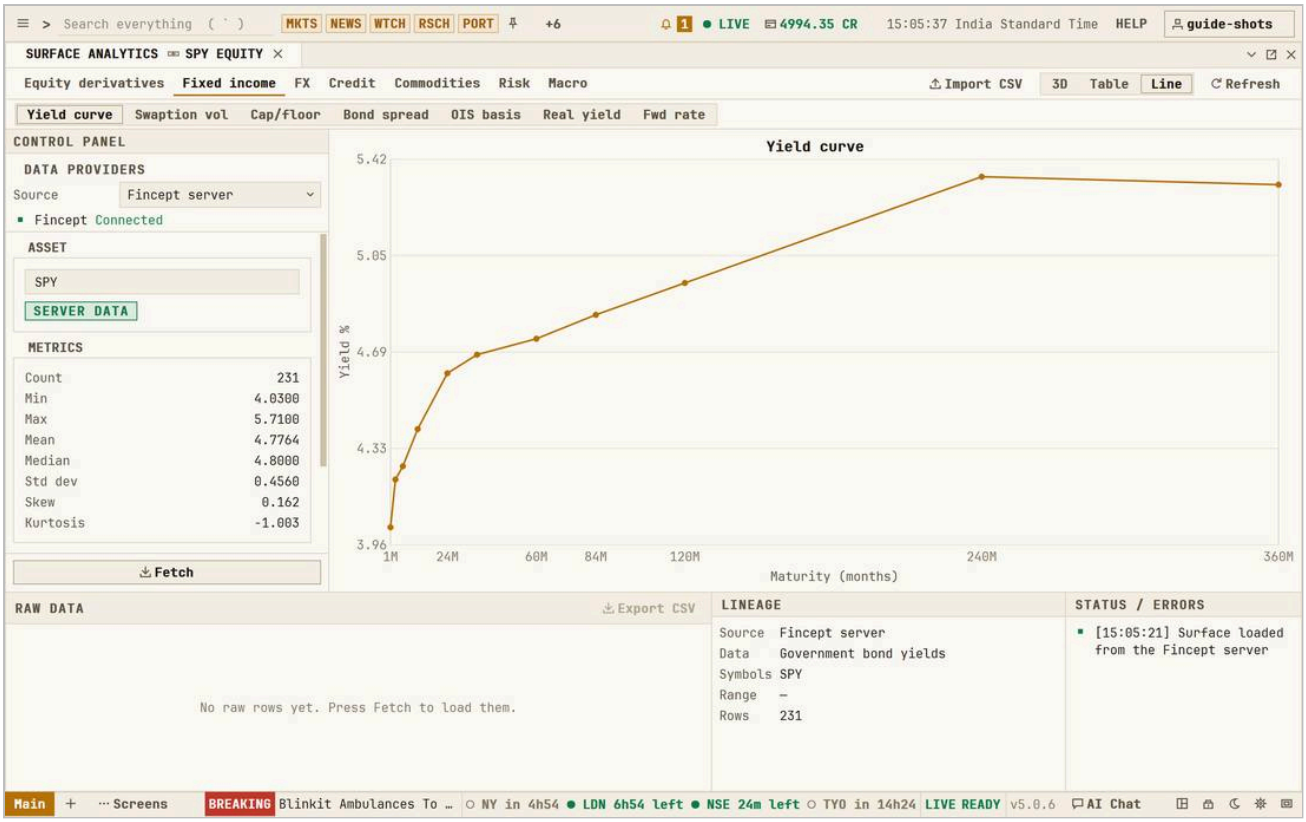


Figure 26.10 The yield curve as a line: yield by maturity.

Surface	Line chart
Yield curve	Yield % by maturity (months)
Cmdty fwd	Futures term structure: price by contract month
Contango	Contango / backwardation: roll % by contract month
Crack/crush	Spread per barrel by contract month
FX forward	Forward points by tenor (days)
Inflation	Breakeven % by horizon (years)
Rate path	Rate % by meetings or contracts ahead

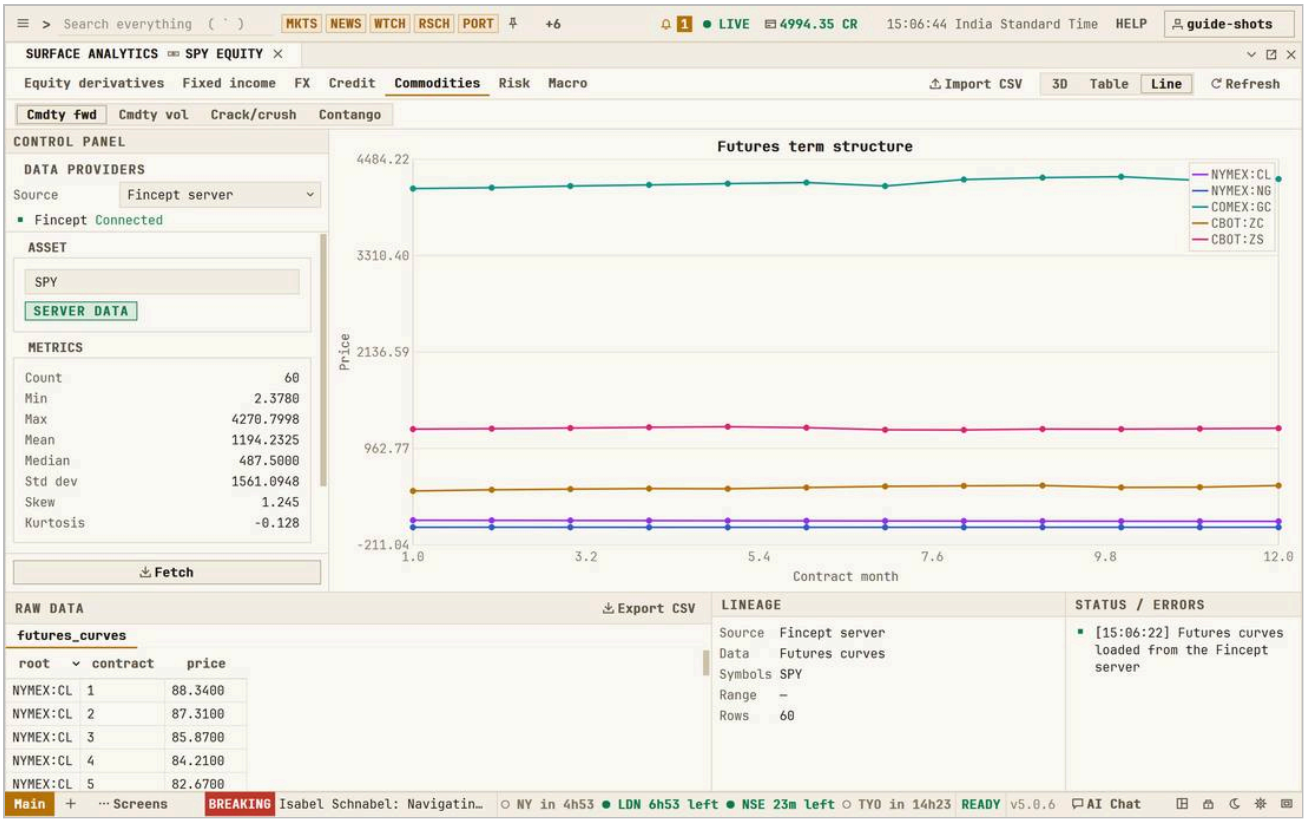


Figure 26.11 A commodity futures curve in the Line view.

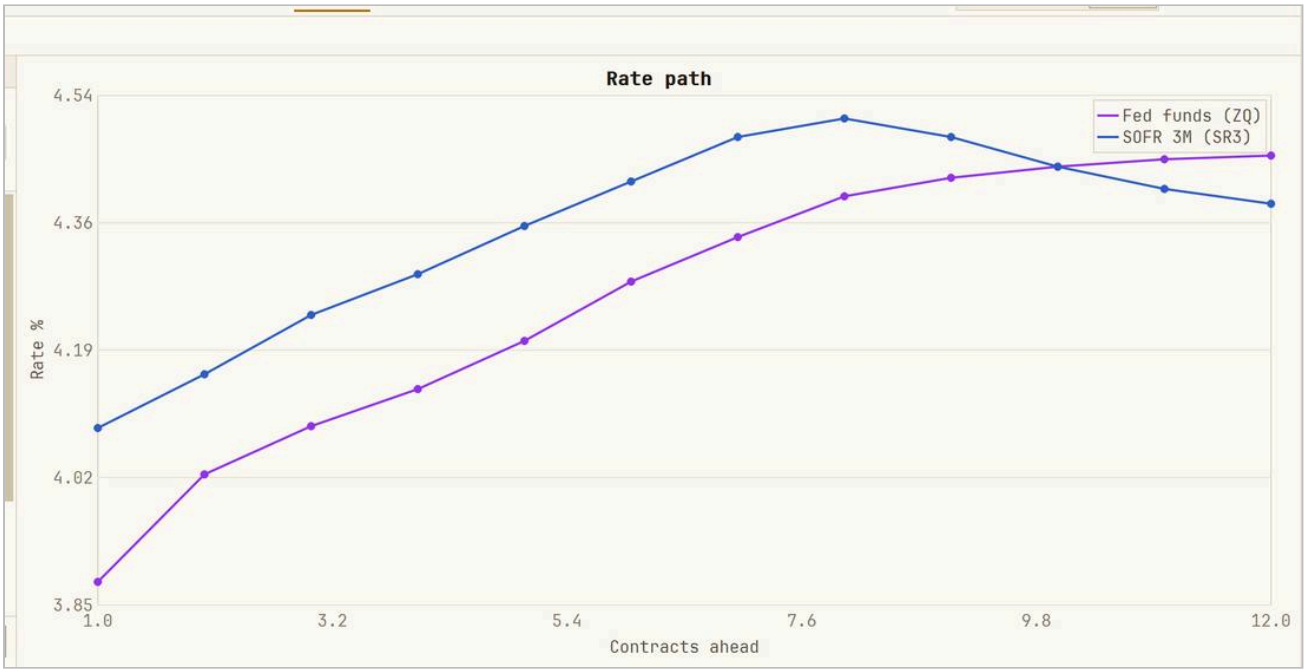


Figure 26.12 Rate path: the policy-rate path the futures market implies, one line per contract strip.

26.6 Inspect and export the raw numbers

The **data inspector** at the bottom of the screen has three parts.



Figure 26.13 The data inspector after a fetch — raw rows, lineage and the status log.

1. **Export CSV** saves the raw rows.
2. **LINEAGE** — where the numbers came from.
3. **STATUS / ERRORS** — a time-stamped log.

- **RAW DATA** — the rows the surface was built from, in a named table (for example **vol_surface**). **Export CSV** saves them (it is greyed out until rows have loaded). Before a fetch it says "No raw rows yet. Press Fetch to load them."
- **LINEAGE** — **Source**, **Data**, **Symbology**, **Symbols**, **Range**, **Rows** and **Cost** of what is on screen. **Rows** counts the grid cells drawn. "no new charge (served from memory)" means the numbers came from a recent fetch.
- **STATUS / ERRORS** — a time-stamped log: connected, fetching, loaded, failed.

Raw rows arrive only for some surfaces: the option surfaces Vol surface, Delta, Gamma, Vega, Theta and Skew (one **vol_surface** table, shared by all six, because one fetch fills them all), Cmdty fwd and Contango, Fwd rate, Rate path and FX forward. After a fetch of Local vol, Liquidity, Impl div, Cmdty vol, Crack/crush, Yield curve or Stress test, the surface and its lineage are real but **RAW DATA** still says "No raw rows yet", and **Export CSV** stays off.

The **METRICS** card on the control panel summarises the values on screen: **Count**, **Min**, **Max**, **Mean**, **Median**, **Std dev**, **Skew**, **Kurtosis**.

26.7 Import your own data

Use **Import CSV** when you have a surface from another system — a swaption grid from your bank, a correlation matrix you computed.

1. Choose the category and surface the file is for.
2. Click **Import CSV** and pick a `.csv` file.
3. If the file is valid, the surface is drawn and the status says **CSV imported**; the lineage says **Imported CSV**. If not, you see **CSV import failed** with the row and column at fault.

The file's first line must be a header. Columns are matched by name (in any order; extra columns are ignored):

Surface	Columns
Vol surface, Local vol, Cmdty vol, Liquidity, Impl div	`strike`, `dte`, `iv`
Delta, Gamma, Vega, Theta	`strike`, `dte` and the greek's name (or `iv`)
Skew	`delta`, `dte`, `skew`
Cap/floor	`maturity`, `strike`, `vol`
FX vol	`tenor`, `delta`, `vol`

Surface	Columns
VaR	`confidence`, `horizon`, `var`
Correlation	`asset_i`, `asset_j`, `corr`
Every other surface	`row_key`, `col_key`, `value`

A file is accepted whole or not at all: an empty or non-numeric cell, a repeated grid point or a missing one fails the import (a missing value is never drawn as zero). The largest file is 20 MB.

26.8 Reference

Top bar

Control	What it does
Category buttons	Equity derivatives, Fixed income, FX, Credit, Commodities, Risk, Macro
Surface buttons	The surfaces of the category (see **§26.4 Choose a surface** p. 546)
Import CSV	Load a CSV file into the current surface
3D / Table / Line	The view. Every surface has 3D and Table; Line exists only for the seven curve surfaces (elsewhere it shows the table). The view is remembered.
Refresh	Redraw every surface with new sample data, dropping fetched and imported numbers. It does not fetch.

Control panel

The panel shows only the sections the chosen surface needs.

Section	Controls	Notes
DATA PROVIDERS	**Source** (Fincept server, or a market-data account of your own with your API key) and a status line (**Connected**, **Disconnected**, **Signed out**, **Not configured**, **Error**)	The Fincept server is free. An account of your own is set up in **Settings** › **Data sources**, is called directly from this computer and is billed by that provider; each request is priced first.
ASSET	**Underlying / parent symbol**, the spot, and a badge for what is on screen: **SAMPLE DATA**, **SERVER DATA**, **SERVER DATA, PARTIAL**, **CSV IMPORT** or the badge of your own data account. With your own account as **Source**, a **Dataset** picker too.	For the option surfaces, the option underlying (SPY, QQQ, IWM, AAPL, TSLA, NVDA, AMZN are suggested; SPY to start). For Cmdty fwd and Contango, one or more futures roots separated by commas (CL, NG, GC …, or exchange-qualified like NYMEX:CL); anything else fetches the default set CL, NG, GC, ZC, ZS. Cmdty vol reads the first root (default CL).
DATE RANGE	**Start**, **End**, and the quick ranges **1D**, **5D**, **1M**, **3M**, **1Y**	Shown only for Correlation, PCA, VaR, Factor exp, Drawdown and Beta. Default: the last 60 days.
BASKET	A ticker list, **Add ticker** (+), **Remove selected ticker** (−)	The seven basket surfaces of Risk. Default basket: SPY, QQQ, IWM, DIA, GLD, TLT, IEF, HYG.
METRICS	Count, Min, Max, Mean, Median, Std dev, Skew, Kurtosis	Of the values on screen.
LINEAGE	One line describing how the numbers were built	

Section	Controls	Notes
Fetch	Load the surface from the source; it reads **Fetching...** while a fetch is out	Off for sample-only surfaces and when signed out; its tooltip says why.

Data inspector

Part	Contents
RAW DATA	The raw rows (only for the surfaces listed in **§26.6 Inspect and export the raw numbers** p. 551); **Export CSV** to a file you choose
LINEAGE	Source, Data, Symbology, Symbols, Range, Rows, Cost
STATUS / ERRORS	Time-stamped messages

Source labels

Lineage Source	Meaning
Fincept server / Fincept server (partial)	Fetched from the Fincept server (partial: it holds part of this surface)
Imported CSV	Your file
Sample data (generated)	Illustration only — not market numbers
Your own data account	Fetched with your own key; the cost is shown under **Cost** (**no new charge (served from memory)** for a repeat)

26.9 For advanced users

- **Same surface, two screens.** The Vol surface here is a quick visual. For fitting models (SVI, SSVI, SABR), arbitrage checks and session-to-session comparison, use the Vol surface page of **Chapter 25, Derivatives** p. 493.
- **Your own market-data account.** With your own API key added under **Settings** › **Data sources**, choose it as the **Source**. Each request is priced first and refused above your cost limit; repeating the same request within 10 minutes costs nothing ("no new charge"). A **Dataset** picker appears for this source only.
- **Symbol changes.** If you change the symbol while a fetch is in flight, the late answer is not applied ("The data fetched for ... was not applied: the symbol is now ..."). Press **Fetch** again.
- **Exports** go wherever you choose in the save dialog.

Do it with AI

- "Open Surface Analytics on QQQ and fetch its vol surface. Which expiry has the steepest skew?"
- "Show me the current yield curve as a line and tell me whether it is inverted between 2 and 10 years."
- "What does the crude oil futures curve look like — contango or backwardation?"

26.10 Troubleshooting

The SAMPLE DATA banner will not go away

Either you have not pressed **Fetch** yet, or this surface has no source yet (the banner says which). Sample-only surfaces can still show your own numbers through **Import CSV**.

Fetch is greyed out

You are signed out, or the surface is sample-only. Sign in, or pick a surface from the "real data" table above.

"Fetch failed" in the status log

The server did not answer or holds nothing for that symbol. Check the symbol (an option underlying for equity surfaces, a futures root for commodity surfaces) and press **Fetch** again. (**Refresh** does not fetch: it brings back sample data.)

My fetched surface turned back into sample data

You pressed **Refresh**, or changed the symbol in **ASSET**. Both bring back sample data. Press **Fetch**.

A fetched surface shows zeros, or METRICS says Min 0

Strikes and expiries the exchange did not quote are drawn as 0 on a fetched grid, and they count in **METRICS**. Read the zeros as "no quote", not as a value. (An imported CSV refuses missing cells instead.)

The Gamma surface's axis says 0.0 everywhere

The 3D axis and colour scale print one decimal, and gamma values are so small that they round to 0.0. Switch to **Table** to read them.

RAW DATA stays empty after a successful fetch

For Local vol, Liquidity, Impl div, Cmdty vol, Crack/crush, Yield curve and Stress test the screen keeps no raw rows, so **RAW DATA** keeps saying "No raw rows yet" and **Export CSV** stays off. The surface and its **LINEAGE** are real.

"CSV import failed"

Read the message: it names the row and column. The header must use the column names in the import table, every cell must be a number, and every grid point must appear exactly once.

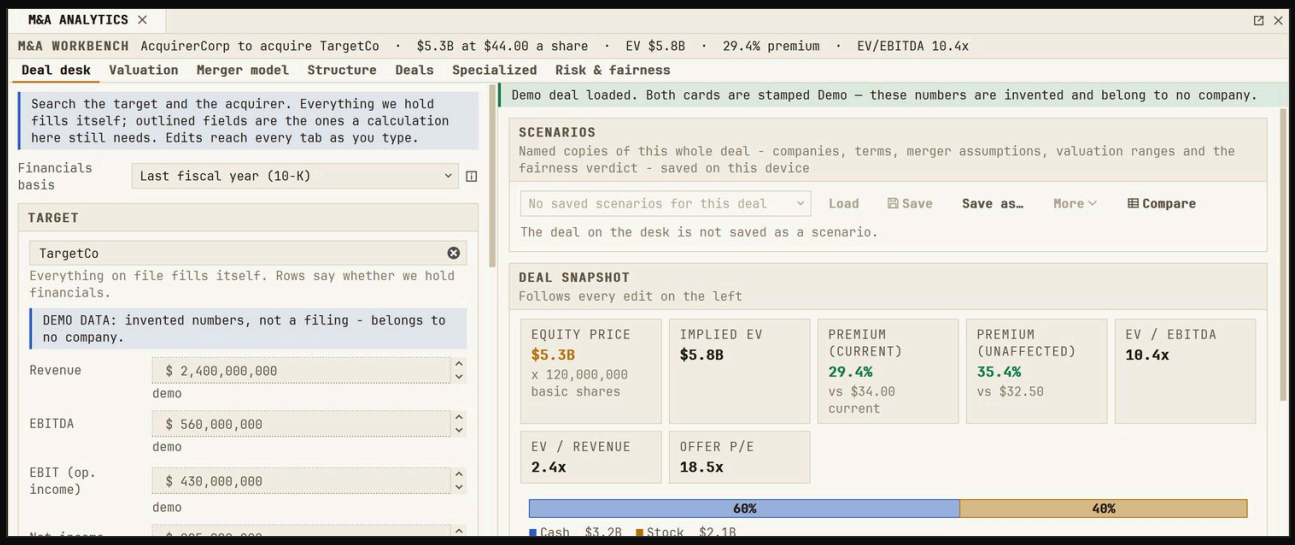
Line shows a table

Line exists only for the seven curve surfaces (Yield curve, FX forward, Cmdty fwd, Crack/crush, Contango, Inflation, Rate path). On any other surface it shows the table; use **3D** or **Table**.

CHAPTER 27

M&A Analytics MERG

A mergers-and-acquisitions workbench. Set up a deal once — target, acquirer and offer — then value the target five ways, build the merger model, structure the payment, screen thousands of real deals, and test the price for fairness.



At a glance

Open it	• Type `MERG` in the command line and press **Enter** • Type `ma`, `mna`, `mergers` or `acquisitions` in the command line and pick **M&A Analytics** • **Screens** › **Research & Intelligence** › **M&A Analytics**
You need	• Signed in (company filings, quotes and the deal database come from the Fincept server) • Exclusive opens the first three tabs (Deal desk, Valuation, Merger model); Exclusive+ and Exclusive Pro open all seven
Best for	• Checking whether a takeover adds to or takes from the buyer's earnings • Valuing a target with DCF, comps, precedents and an LBO • Finding precedent deals and their premiums
Time to learn	30 minutes for the basics
Related	**Chapter 22, Equity Research** p. 392, **Chapter 29, Relationship Map** p. 603, **Chapter 44, Excel** p. 844, **Chapter 45, Report Builder** p. 858

In this chapter

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27.3	Set up a deal	558	27.10	Test the price: risk and fairness	575
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27.1 Screen tour

The screen's title bar reads **M&A WORKBENCH**. Everything works on one **deal**: a **target** (the company being bought), an **acquirer** (the buyer) and the **offer** (the price per target share). You set the deal up on the first tab; every other tab reads it, so you never type it twice.

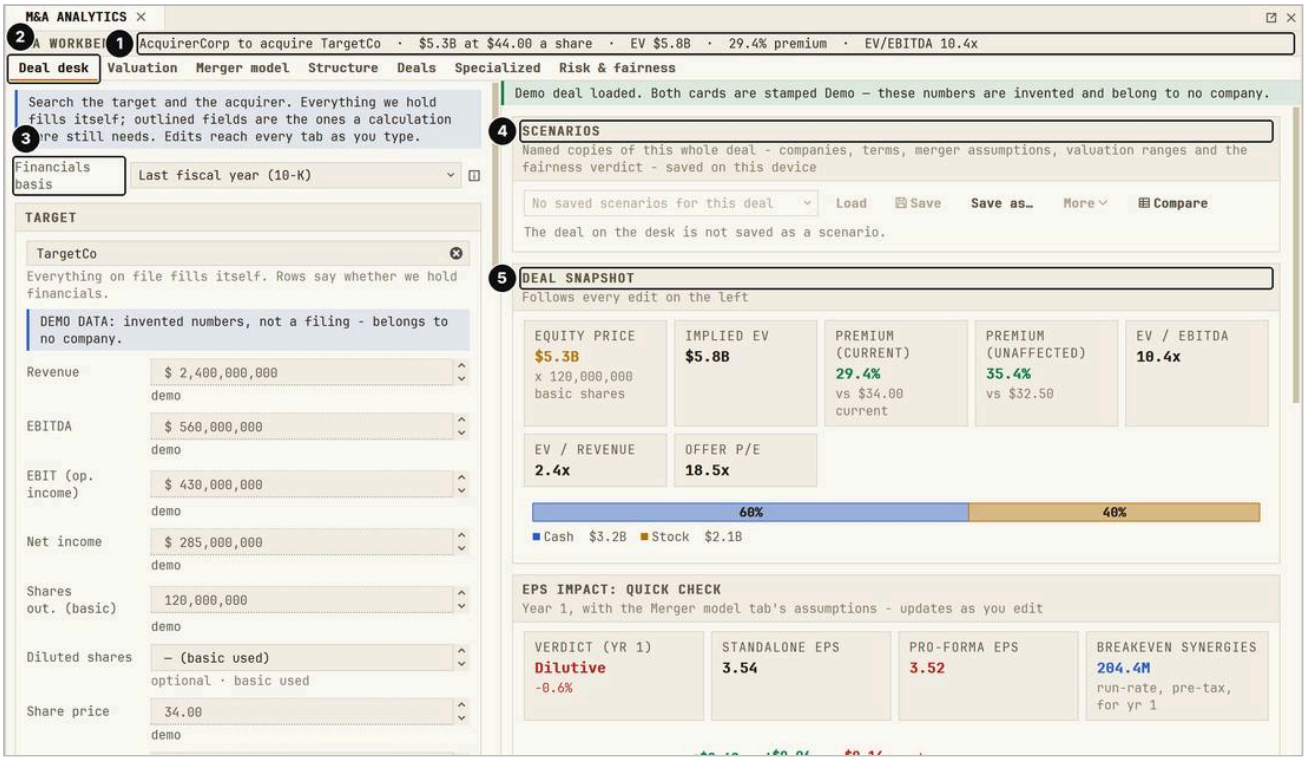


Figure 27.1 The Deal desk with the built-in sample deal: AcquirerCorp buying TargetCo for $44 a share.

1. **Deal summary** — the deal in one line: who buys whom, the price, the enterprise value, the premium and the multiple.
2. **Tabs** — seven tabs, all on the same deal.
3. **Rail** — the inputs of the tab (here the two company cards and the deal terms).
4. **SCENARIOS** — save named copies of the whole deal and compare them.
5. **Canvas** — the results, updating as you type.

Tab	What it does
Deal desk	Set up the target, the acquirer and the deal terms; see the deal snapshot and a quick EPS check.
Valuation	Value the target: DCF, trading comparables, precedent transactions and an LBO, side by side on a football field.
Merger model	The full accretion/dilution model: sources and uses, goodwill, pro-forma earnings, debt paydown, sensitivity.
Structure	Payment mix, exchange ratio, collar, earnout and contingent value rights.
Deals	Search a database of real announced deals; league tables; merger arbitrage; build your precedent set.
Specialized	Value a start-up or private target five ways; an industry lens for sector KPIs.
Risk & fairness	Monte Carlo value range, a fairness opinion, premiums paid, ownership and insiders, process quality.

Words used in this chapter

Enterprise value (EV): what the whole business is worth to all its investors — equity value plus debt minus cash. **EBITDA**: earnings before interest, tax, depreciation and amortisation, a rough measure of operating cash. **Premium**: how much the offer is above the share price. **Synergies**: savings or extra revenue the combination is expected to create. **EPS**: earnings per share. **Accretive** means the deal raises the buyer's EPS; **dilutive** means it lowers it.

27.2 Quick start

Try the whole workbench in two minutes with the built-in sample deal. Its numbers are invented and belong to no company — every card it fills is stamped **Demo**.

1. Type `MERG` in the command line and press `Enter`. The **Deal desk** opens.
2. At the bottom of the left rail, click the ⋯ button (*Demo data, clear the desk, delete My comps*) and choose **Load a sample deal (demo data)**.

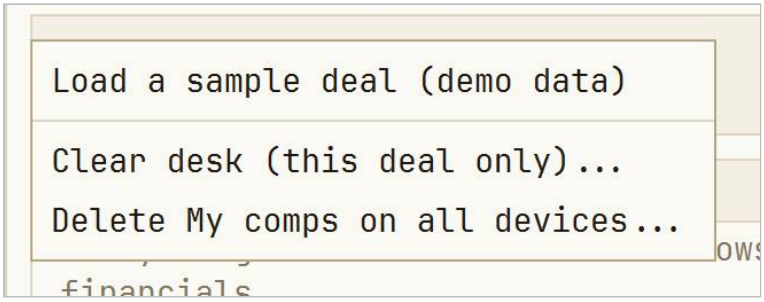


Figure 27.2 The desk's menu: load the sample deal, clear the desk, or delete your saved comps.

3. Both company cards fill in, the **DEAL SNAPSHOT** shows the equity price, enterprise value, premiums and multiples, and **EPS IMPACT: QUICK CHECK** says whether the deal is accretive in year 1.
4. Click **Merger model**, then **Build merger model** below the **BREAKEVEN & SENSITIVITY** card on the rail. The full model appears.
5. Click **Valuation** and press **Run DCF**. Two bars (**DCF — perpetuity growth** and **DCF — exit multiple**) appear on the **FOOTBALL FIELD — VALUE PER SHARE**, with the offer marked against them.

27.3 Set up a deal

Do this for a real deal — one you are analysing, or a historical one you want to study.

1. On the **Deal desk**, choose the **Financials basis**: **Last fiscal year (10-K)** or **LTM - trailing 12 months (10-Qs)** (the sum of the last four quarters).
2. In the **TARGET** card, type a company name or ticker in **Company or ticker** and pick it. Its financials and share price fill in from its filings and the market quote. Rows say where each number came from (filed, derived, market quote, or yours).

3. Do the same in the **ACQUIRER** card.
4. Under **DEAL TERMS**, type the **Offer / share** and the **Cash (% of price)** (the rest is paid in acquirer stock). Add the synergies and financing terms you expect.
5. Read the **DEAL SNAPSHOT** on the right. It follows every edit.
6. Press **Run EPS quick check** at the end of the rail for a first accretion/dilution answer. After the first run it re-runs by itself whenever you edit the deal.

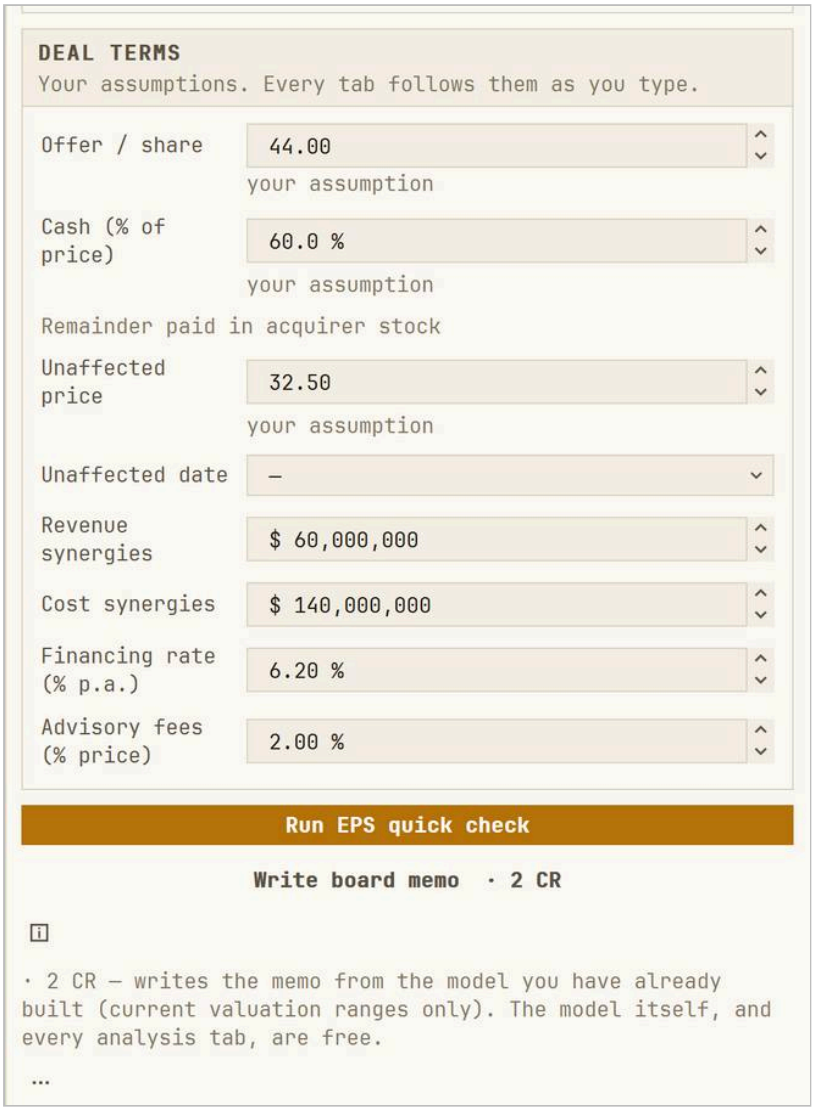


Figure 27.3 The DEAL TERMS card, the Run EPS quick check button and Write board memo.

Load a real deal in one click

On the **Deals** tab, select an announced deal and choose **Use ▸ Load into Deal desk**: both companies are filled from their filings and the terms from the deal record.

The company cards

Field	What it is
Revenue	Total revenue for the basis shown (fiscal year or LTM).
EBITDA	Operating income + depreciation and amortisation. Banks and insurers usually have none.
EBIT (op. income)	Operating income — where the merger model's income build starts.
Net income	Reported net income.
Shares out. (basic) / Diluted shares	Share counts. When diluted shares are entered, per-share figures use them.
Share price	The live quote when one is on file.
Total debt / Cash	Needed for enterprise value.
Beta	Equity beta for the cost of equity. Filings carry none, so the card shows 1.10 as a placeholder. The Valuation tab's DCF uses the market beta instead when the target's market profile has one.
Tax rate (%)	From the filing (tax expense ÷ pre-tax income), else 21%.
More financials	D&A, capex, interest expense, book equity, total assets, total liabilities.

Outlined fields are the ones a calculation still needs. Every field can be overwritten; it is then marked as yours.

Deal terms

Field	Meaning	Default
Offer / share	The price per target share (cash and stock together).	none — you type it
Cash (% of price)	The cash part; the rest is acquirer stock.	50%
Unaffected price / Unaffected date	The target's price before the deal (or its rumour) moved it. Without it, the premium reads against the current price only.	not set
Revenue synergies / Cost synergies	Run-rate annual amounts, before tax.	0
Financing rate (% p.a.)	Interest on new acquisition debt.	6%
Advisory fees (% price)	Advisory and transaction fees as a % of the equity price.	2%

Deal snapshot

Equity price (offer × target shares), **Implied EV** (equity price + debt − cash), **Premium (current)**, **Premium (unaffected)**, **EV / EBITDA**, **EV / revenue**, **Offer P/E**, and the consideration mix.

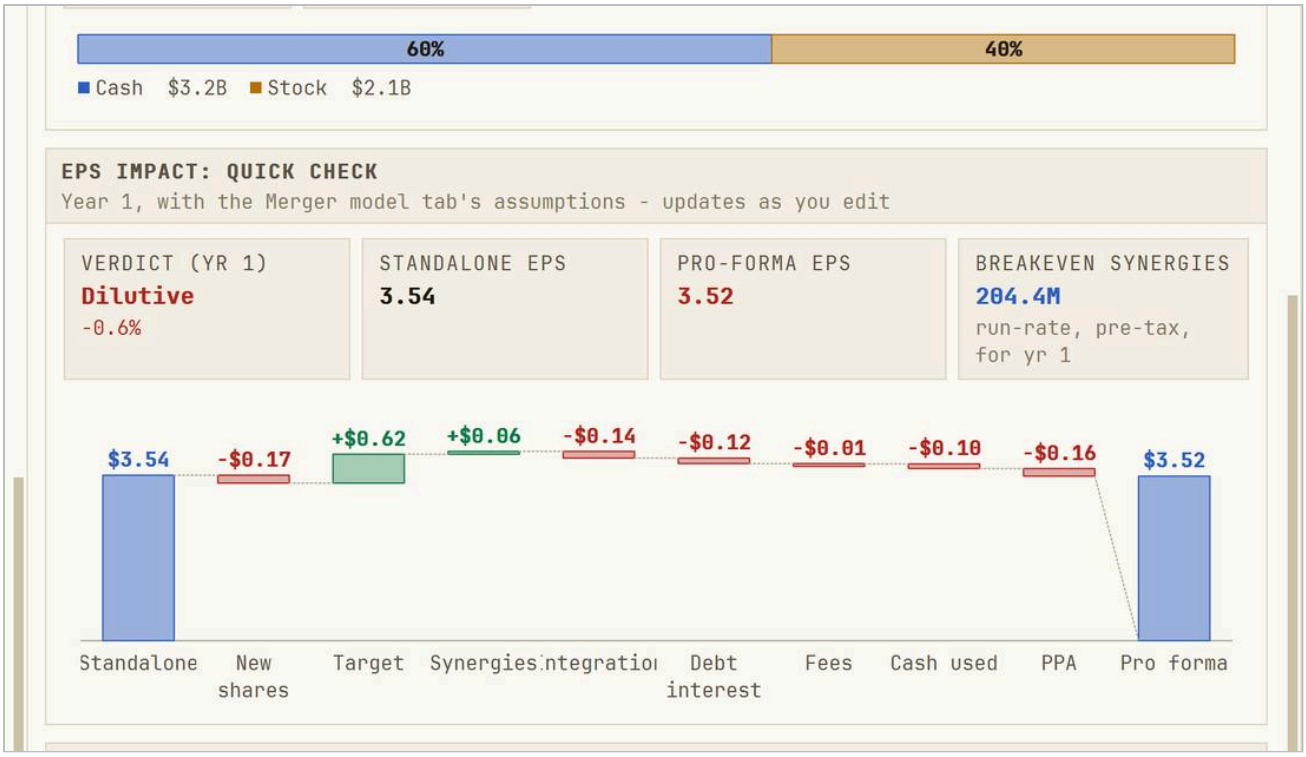


Figure 27.4 The EPS quick check: verdict, standalone and pro-forma EPS, and the breakeven synergies.

Credits

Everything on this screen is free except two buttons, each showing its price: **Write board memo** on the Deal desk (writes a board memo from the model you have built) and **Build SEC peer set** on the Valuation tab. Each cost 2 credits when this guide was written. A peer set you already built today, or one picked from **Recent comp sets...**, loads again without a charge.

27.4 Save and compare scenarios

A **scenario** is a named copy of the whole deal — companies, terms, merger assumptions, valuation ranges and the fairness verdict. Scenarios are saved on this computer. The list shows the scenarios of the deal on the desk (the same target and acquirer), most recently saved first.

- **Save as...** keeps the desk under a new name. **Save** overwrites the selected scenario.
- **Load** replaces the desk with the selected scenario (it asks first).
- **More** › **Duplicate...**, **Rename...**, **Delete scenario...**
- **Compare** puts up to three columns side by side — the desk as it stands or any saved scenario — and highlights the rows that differ. **Export CSV** writes the comparison.

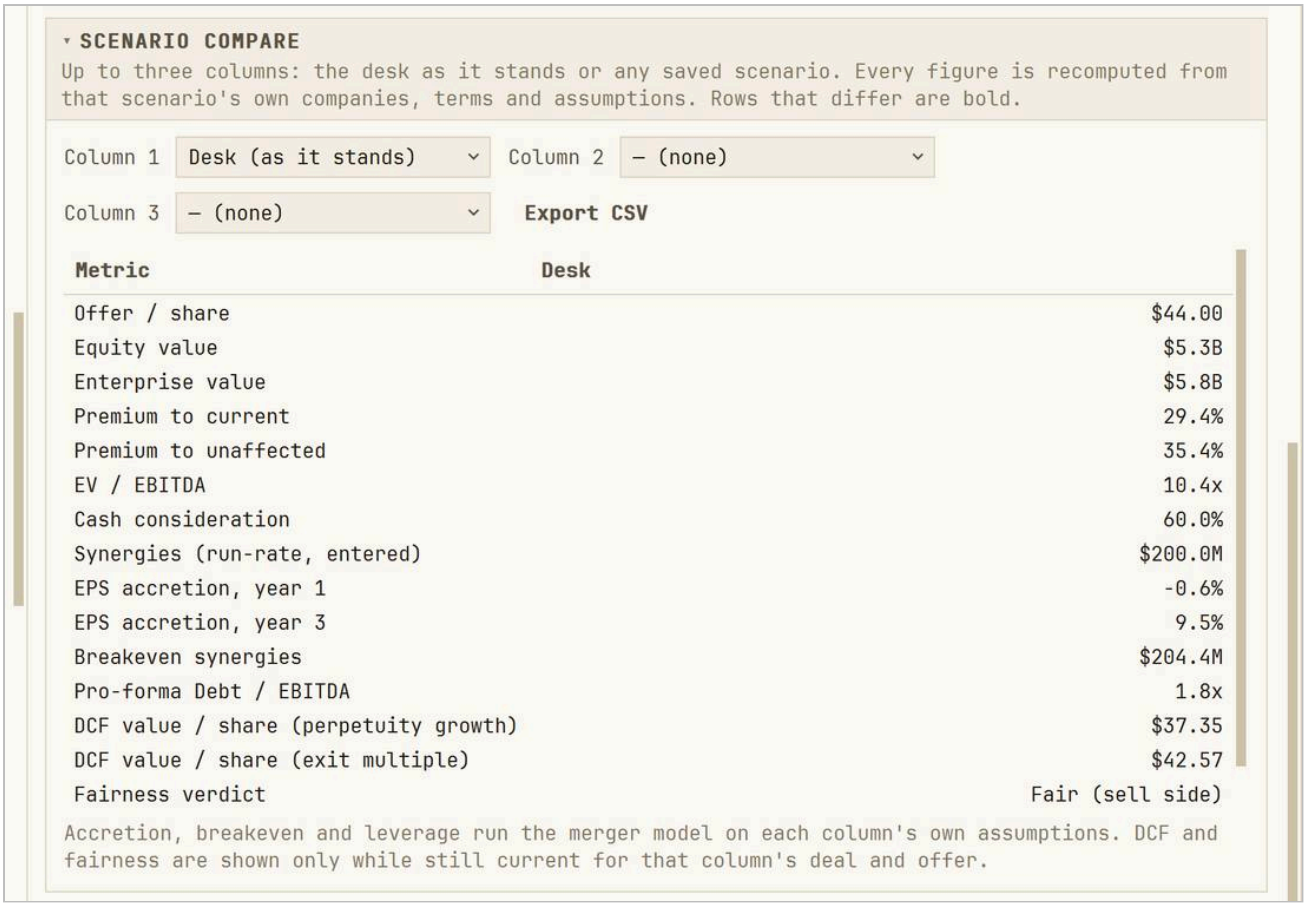


Figure 27.5 SCENARIO COMPARE: the desk and saved scenarios side by side.

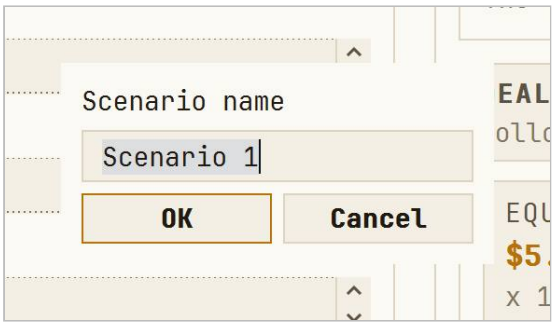


Figure 27.6 Save as… asks for the scenario's name.

27.5 Value the target

The **Valuation** tab runs four methods. Each one adds one or more bars to the **football field** — a chart of value-per-share ranges with the offer, the market price and the unaffected price drawn across it.

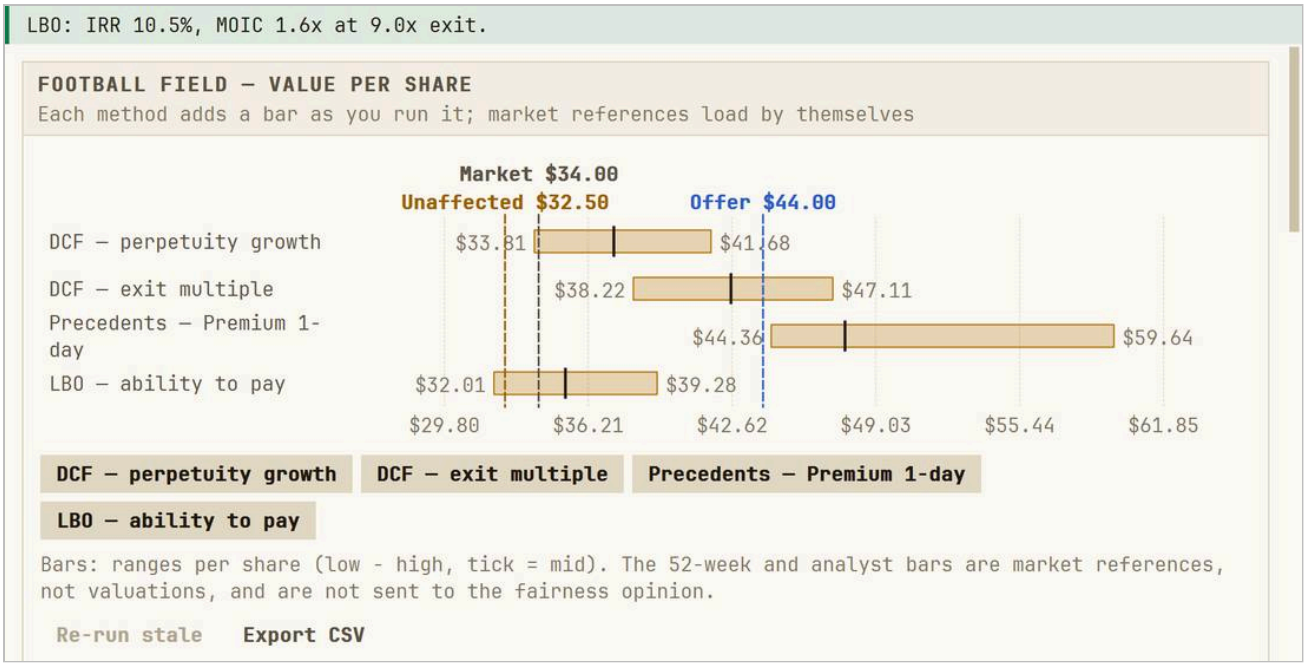
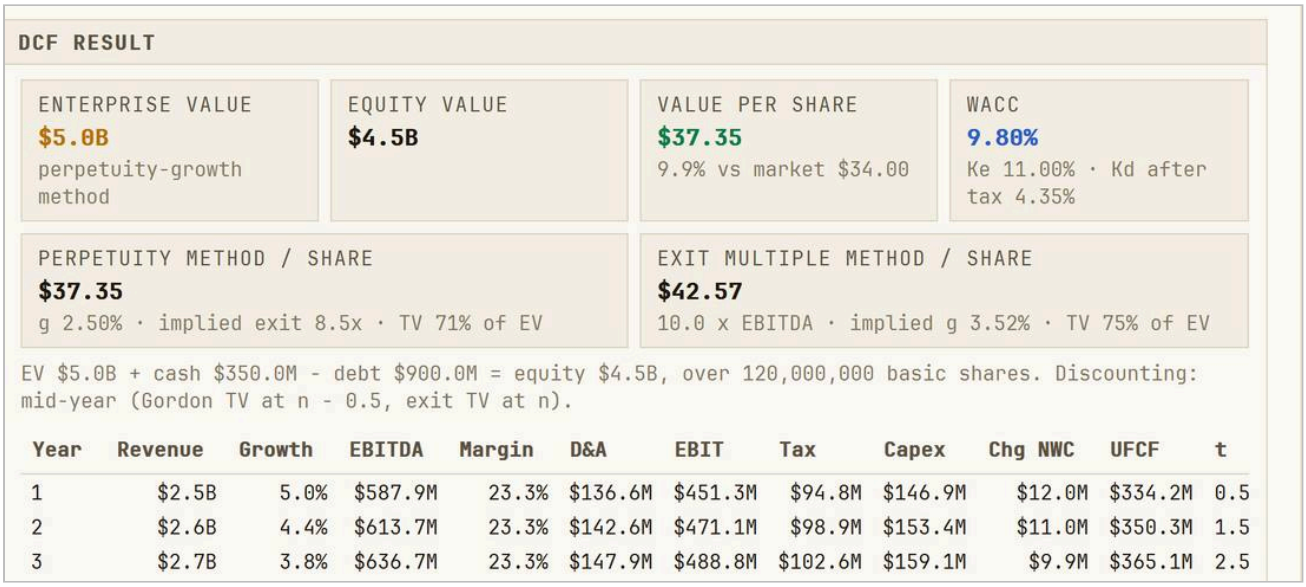


Figure 27.7 The football field after Run DCF, a precedent analysis and Build LBO model: two DCF bars, a precedents bar and the LBO bar, with the offer, market and unaffected prices drawn across.



Year	Revenue	Growth	EBITDA	Margin	D&A	EBIT	Tax	Capex	Chg NWC	UFCF	t
1	$2.5B	5.0%	$587.9M	23.3%	$136.6M	$451.3M	$94.8M	$146.9M	$12.0M	$334.2M	0.5
2	$2.6B	4.4%	$613.7M	23.3%	$142.6M	$471.1M	$98.9M	$153.4M	$11.0M	$350.3M	1.5
3	$2.7B	3.8%	$636.7M	23.3%	$147.9M	$488.8M	$102.6M	$159.1M	$9.9M	$365.1M	2.5

Figure 27.8 DCF RESULT: enterprise value, equity value, value per share and WACC, with both terminal methods.



Figure 27.9 LBO RESULT: sponsor IRR, MOIC, equity check, the maximum price at the target IRR, and the IRR at each exit multiple.

DCF — intrinsic value

A **discounted cash flow (DCF)** values the business as the present value of its future free cash flow, discounted at the **WACC** (weighted average cost of capital).

1. In the **DCF — INTRINSIC VALUE** card, check the **Cost of equity** inputs: **Risk-free rate (%)** (loads from the market when you are signed in), **Equity risk premium (%)**, **Observed beta (levered)** (the market beta when the target's market profile has one) and **Beta treatment** (**Use as observed** or **Unlever, relever at target D/E**), **Size premium (%)**, **Country risk premium (%)**. **Current D/E (%)** and **Target D/E (%)** appear when you relever or use target weights.

2. Check **Cost of debt and weights: Kd basis** (**Pre-tax cost of debt** or **Risk-free + credit spread**), then **Pre-tax Kd (%)** or **Credit spread (%)**, **Marginal tax rate (%)** and **WACC weights** (**Market (current)** or **Target (target D/E)**). The WACC build is printed under these inputs.

3. Set **Forecast and terminal value: Projection years** (3–15), **Headline method** (**Perpetuity growth (Gordon)**, **Exit multiple (EV/EBITDA)** or **Average of both**), **Terminal growth (%)**, **Exit multiple (x EBITDA)**, **Mid-year discounting**.

4. Edit the **DCF PROJECTION DRIVERS** table if you like (growth, margin, D&A, capex, working capital and tax per year; double-click a cell). **Seed from history** refills them from the filings; **Fade growth to terminal** keeps year 1's growth and fades it linearly to the terminal growth by the last year.

5. Press **Run DCF**. **Reset to defaults** puts every DCF input back (the market rate and beta reload).

The **DCF RESULT** card shows **ENTERPRISE VALUE**, **EQUITY VALUE**, **VALUE PER SHARE**, **WACC**, both terminal methods per share (**PERPETUITY METHOD / SHARE**, **EXIT MULTIPLE METHOD / SHARE**), the year-by-year projection and a **Sensitivity grid: Grid** (**WACC x terminal growth**, **WACC x exit multiple** or **Revenue growth x EBITDA margin**), **Size** (**3 x 3**, **5 x 5** or **7 x 7**) and the step between rows and columns. The ringed cell is the base case. **Export CSV** saves the projection, the terminal values and the grid.

Trading comparables

Trading comps value the target at the multiples similar listed companies trade at.

- **Suggest peers** finds same-industry companies and puts them in **Find peers** (candidate tickers, comma separated; free). **Fill from market profiles** loads their LTM market cap, debt, cash, revenue, EBITDA, EBIT and net income (free).
- **Build SEC peer set** screens each candidate against the filings (charged; the price is on the button). **Recent comp sets...** reloads a set you already built, free.
- **Demo peers** loads four invented peers for practice.
- **Add row** / **Remove row** to edit by hand. Money can be typed as `8.2e9`, `8,200,000,000` or `8.2B`.
- Settings: **Peer basis** (**All rows**, **LTM rows only**, **Fiscal-year rows only**), **Target metrics** (**Deal desk figures** or **LTM (market profile)**), **Outlier rule** (**Keep every peer**, **Drop outliers (1.5 x IQR)**, **Drop extremes (3 x IQR)**), **Implied range** (**25th - 75th percentile**, **10th - 90th percentile** or **Low - high**) and **Football bars** (which multiples — EV/EBITDA, EV/Revenue, EV/EBIT, P/E — become bars).
- **Run trading comps** → **TRADING COMPS RESULT:** implied value per share, median EV/EBITDA and P/E, peers used, and per-multiple statistics. Untick **Use** to leave a peer out.

Precedent transactions

Precedents value the target at the multiples and premiums paid in past deals. The set comes from the **Deals** tab (your screen or your selection) plus **MY COMPS**. **Include demo precedents** adds a curated sample of well-known deals (off by default; when on, every demo row is marked **DEMO** and the result names them). Filter by **Target sector**, set the **Outlier rule** (**Keep every deal** or one of the two IQR rules) and **Implied range**, pick the **Football bars** (EV/EBITDA, EV/Revenue, Premium 1-day, Premium 4-week), then **Run precedent analysis**. **PRECEDENT TRANSACTIONS RESULT** shows the implied value per share, the median EV/EBITDA and 1-day premium, the deals used and a table you can untick (**Use**).

LBO — ability to pay

A **leveraged buyout (LBO)** asks what a financial buyer could pay with mostly borrowed money and still earn its required return.

The inputs sit in four groups of the **LBO — ABILITY TO PAY** card (defaults in brackets):

Group	Inputs
Entry and exit	**Entry price** (**Offer (Deal desk implied EV)** or **EBITDA x entry multiple**), **Entry multiple (x EBITDA)** (9.0x), **Exit multiple (x EBITDA)** (9.0x), **Exit scenario step (x)** (1.0x), **Holding period (years)** (5)
Operations	**Revenue growth (% p.a.)** (5%), **EBITDA margin (%)** (the target's own, else 20%), **D&A (% revenue)** (3%), **Capex (% revenue)** (3%), **NWC (% of revenue change)** (5%), **Tax rate (%)**
Financing	**Total debt (x EBITDA)** (5.0x), **Leverage cap (x EBITDA)** (7.0x), **Senior share of debt (%)** (90%), **Senior rate (% p.a.)** (5.5%), **Senior amortisation (% of face p.a.)** (1%), **Subordinated rate (% p.a.)** (8.5%), **Cash sweep (% of excess cash)** (50%), **Minimum cash**, **Transaction fees (% EV)** (2%), **Financing fees (% debt)** (1.5%)
Returns	**Target IRR (%)** (20%), **Football band (+/- IRR pp)** (5), **Grid rows** (**Entry multiple**, **Leverage** or **Revenue growth**) and **Grid row step**, **Grid shows** (**IRR** or **MOIC**)

Build LBO model → **LBO RESULT: SPONSOR IRR**, **MOIC** (money multiple), **EQUITY CHECK**, **MAX PRICE AT TARGET IRR**, **LEVERAGE**, the exit scenarios, a returns grid and the debt schedule. **Reset to defaults** puts the inputs back; **Export CSV** saves the projections, the debt schedule and the grid. The LBO bar on the football field

runs from the price at the target IRR plus the band (low) to the target IRR minus the band (high).

The football field

Bars show low–high ranges per share with a tick at the mid. **Offer**, **Market** and **Unaffected** lines cross the chart. Besides the methods you run, two market references load by themselves when the target has a ticker: its 52-week trading range and the analysts' price targets. They are context, not valuations, and never feed the fairness opinion.

When the deal changes, bars built for the old deal turn grey and say **stale — re-run**; **Re-run stale** runs this tab's stale methods again. Under the chart, one toggle chip per bar shows or hides it (a hidden bar still feeds the fairness opinion). **Export CSV** saves every bar and the markers. The line under the buttons names the market inputs in use (risk-free rate, beta, analyst targets, 52-week range).

27.6 Build the merger model

The **Merger model** tab answers the core question: does the deal add to or take from the acquirer's earnings per share, year by year?

1. Set up the deal on the Deal desk (target with its share count, acquirer, offer).
2. On the **Merger model** rail, review **FINANCING**, **SYNERGIES**, **PURCHASE PRICE ALLOCATION**, **STANDALONE PROJECTIONS** and **BREAKEVEN & SENSITIVITY**. These assumptions are saved with the deal, and the desk's EPS quick check uses them too.
3. Press **Build merger model**.



Figure 27.10 EPS ACCRETION / DILUTION: year-1 and year-3 impact, standalone and pro-forma EPS, breakeven synergies and the EPS bridge.



Figure 27.11 SOURCES & USES of the sample deal, with the funding gap, new shares and leverage at close.

Card	What it shows
EPS ACCRETION / DILUTION	Year-1 (or selected year) impact, standalone and pro-forma EPS, breakeven synergies, and the EPS bridge step by step.
SOURCES & USES	Where the money comes from (cash, new debt, new shares) and where it goes (equity price, refinancing, fees). Balanced by construction; a shortfall shows as **Funding gap**.
PURCHASE PRICE ALLOCATION	Equity price − book equity − intangible write-up + deferred tax = **Goodwill created**, and the yearly amortisation.
PRO-FORMA P&L, DEBT AND CREDIT	Every line per year: combined revenue and EBITDA with phased synergies, interest, tax, pro-forma EPS, accretion, free cash flow, debt paydown, debt/EBITDA, interest cover. **Export CSV**.
EARNINGS RECONCILIATION	The model's rebuilt net income against what was reported.
CONTRIBUTION vs OWNERSHIP	Each side's share of revenue, EBITDA and net income against its share of the combined company.
SENSITIVITY: OFFER PER SHARE	EPS accretion across offer prices and synergy realisation (or % paid in stock).
SYNERGY PROGRAMME: DCF VALUE	The present value of the synergy plan after phase-in, cost to achieve and tax: **Total synergy value**, **Explicit-period PV**, **Terminal value share** and a year-by-year table. Fills in when you press **Value synergies (DCF)** on the rail's **SYNERGY PROGRAMME VALUE** card (**Discount rate (% p.a.)**, 10% by default; **Terminal growth (% p.a.)**, 2%). It needs synergies on the Deal desk.

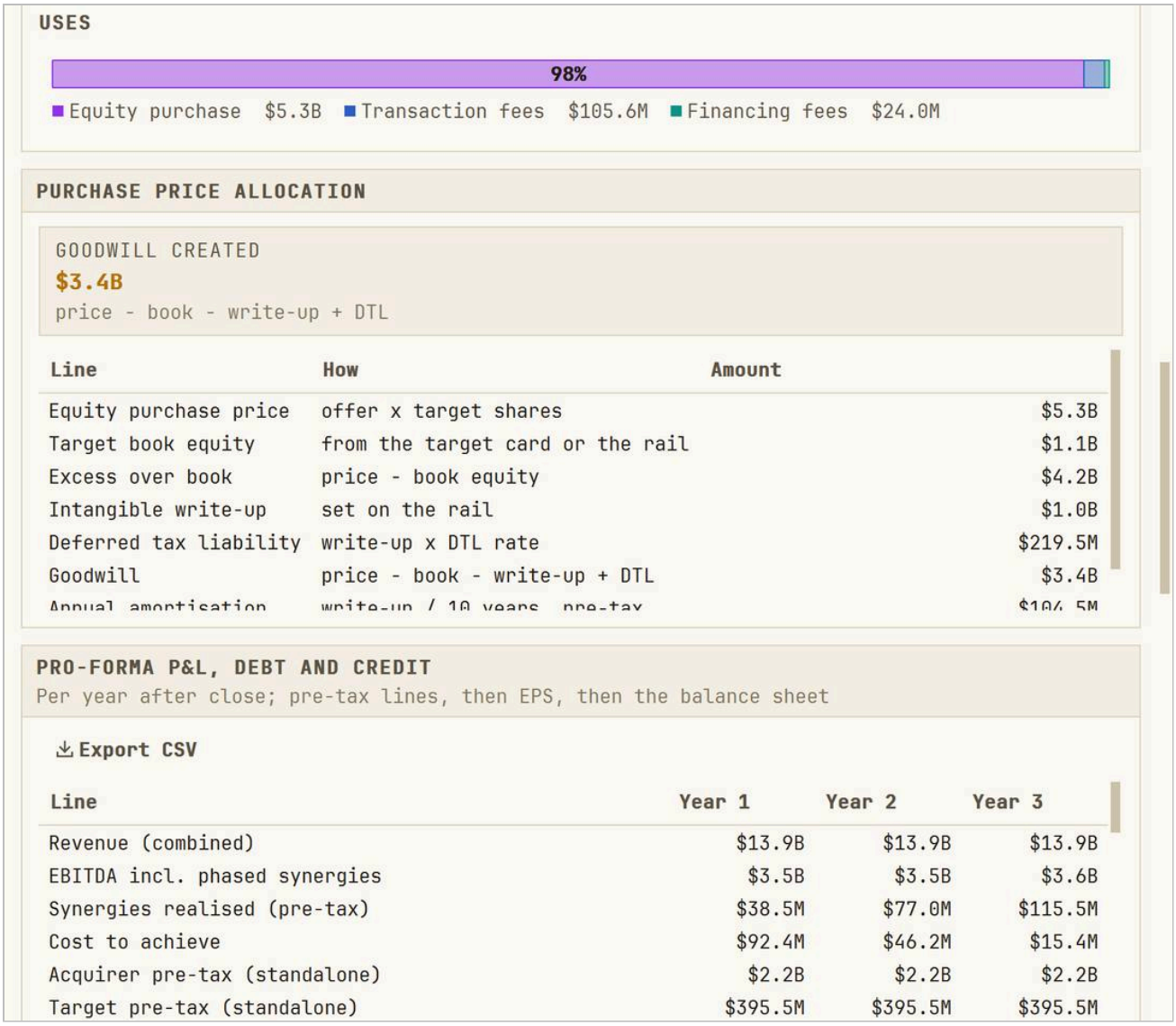


Figure 27.12 The purchase price allocation and the start of the pro-forma P&L, debt and credit table.



Figure 27.13 The sensitivity grid (offer per share × synergy realisation). The SYNERGY PROGRAMME card below it fills in when you press Value synergies (DCF).

The rail's settings, card by card:

Card	Settings
FINANCING	**Acquirer cash used** (**All cash above the minimum**, with **Minimum cash kept**, or **A fixed amount**), **New debt sizing** (**Plug: borrow what cash does not cover**, **Fixed amount**, **% of equity price**), **Debt structure** (**Single facility** or **Tranches (up to 3)**, each with a name, sizing, rate, fee, amortisation and **Sweep priority**), **New debt rate (% p.a.)**, **Financing fee (% of debt)**, **Fee amortisation**, **Mandatory amortisation (% p.a.)**, **Cash sweep (% of FCF)**, **Stock issue discount**, **Refinance the target's debt** (with its **Refinancing rate (% p.a.)**), **Interest on cash (% p.a.)**, **Deal tax rate**, **Change in NWC (% of revenue change)**, **Dividend payout (% of NI)**
SYNERGIES	**Phase-in** and **Cost to achieve** for each year, **Revenue-synergy margin** (blank = the target's EBITDA margin). The run-rate amounts are on the Deal desk.
PURCHASE PRICE ALLOCATION	**Target book equity** (blank = the target card), **Intangible write-up** (**% of the excess over book** or **A fixed amount**), **Amortisation life**, **DTL tax rate**
STANDALONE PROJECTIONS	**Projection years**, **Income basis** (**Automatic**, **Operating build**, **Reported net income, grown**), and for the **ACQUIRER** and the **TARGET**: **Revenue growth (% p.a.)**, **EBITDA margin, final yr**, **NI growth (% p.a.)**, **Capex (% revenue)**
BREAKEVEN & SENSITIVITY	**Breakeven / grid year**, **Offer from (per share)** / **Offer to (per share)** (blank = offer −20% / +20%), **Offer steps**, **Columns** (**Synergy realisation** or **% of price in stock**), **Columns from** / **Columns to**, **Column steps**

Reset assumptions to defaults puts them all back (the debt rate stays the deal's financing rate).

27.7 Structure the payment

The **Structure** tab designs how the price is paid.

Card	Inputs	Result
PAYMENT MIX	**Cash (% of price)** (the deal's own cash split: changing it here changes the deal), **Acquirer cash available** (blank = its balance-sheet cash), **Leverage ceiling (x EBITDA)**, **Debt capacity (override)** → **Analyze payment mix**	Cash and new debt required, debt capacity, whether the debt is feasible, shareholder dilution, post-deal ownership.
EXCHANGE RATIO	→ **Calculate exchange ratio**	Acquirer shares per target share for the stock leg, cash and stock value per share, total premium.
COLLAR	**Structure** (**Fixed exchange ratio** or **Fixed value**), **Floor (% below)**, **Cap (% above)**, **Scenarios span (+/- %)**, **Scenario steps**, **Max shares issued** → **Run collar scenarios**	What each target share receives as the acquirer's price moves, and the protection each side gets.
EARNOUT	A table of tranches (**Metric**, **Thresh.**, **Pay**, **Yrs**, **Prob %**, **Proj.**), **Add row** / **Remove row**, **Discount rate** → **Value earnout**	Face value, PV if all paid, expected PV, share of the total deal.
CONTINGENT VALUE RIGHT	**CVR type** (regulatory, milestone, earnout, litigation), **Payment if triggered**, **Success probability**, **Years to resolution**, **Discount rate** → **Value CVR**	Expected CVR value and probability of a payment.

A **collar** limits how far the deal value or the share count can move with the acquirer's share price. An **earnout** pays more later if the target hits targets. A **CVR** pays holders if a future event happens (a drug approval, a lawsuit won).



Figure 27.14 The Structure tab after running the payment mix, exchange ratio and collar.



Figure 27.15 The earnout result (on the sample tranches) and the CVR result.

27.8 Search the deal database

The **Deals** tab searches an index of real announced deals read from public filings.

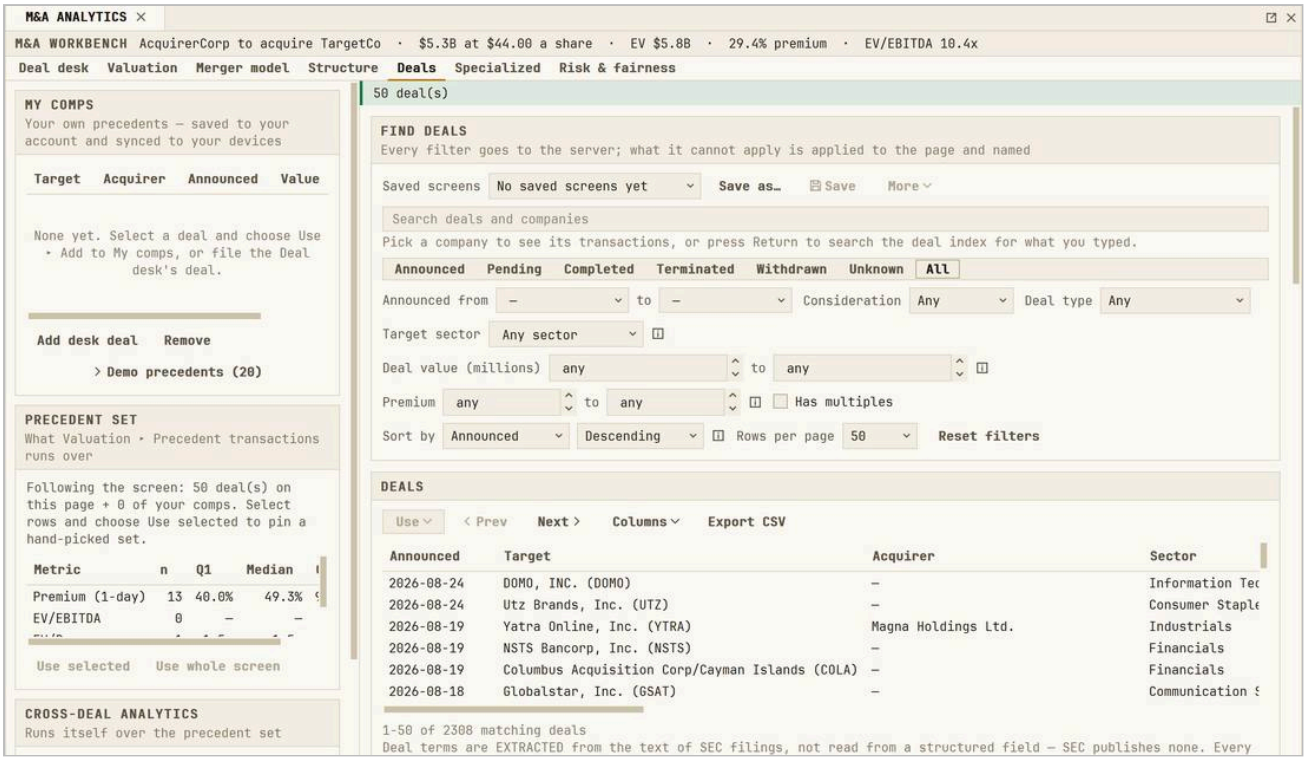


Figure 27.16 The Deals tab: filters on the left, the deal table on the right.



Figure 27.17 CROSS-DEAL ANALYTICS: deal rankings over the precedent set.

(1) Under **FIND DEALS**, type a company in **Search deals and companies** and pick it to see its transactions — or press **Enter** to search the whole index for your words.

2. Narrow the screen: statuses (**Announced**, **Pending**, **Completed**, **Terminated**, **Withdrawn**, **Unknown**, **All**), **Announced from … to**, **Consideration** (**Any**, **Cash**, **Stock**, **Mixed**, **Unknown**), **Deal type** (**Any**, **Merger**, **Tender offer**, **Going private**, **Asset sale**, **Unknown**), **Target sector**, **Deal value (millions)**, **Premium** and **Has multiples**. **Reset filters** clears them.

3. Choose **Sort by** (**Announced**, **Deal value**, **Premium**, **Target** or **Acquirer**; **Descending** or **Ascending**) and **Rows per page** (25, 50, 100 or 200). **Prev** / **Next** page through results. Clicking a column header sorts only the page on screen.

4. Select a deal to read its **DEAL TEAR SHEET:** terms, parties, multiples at announcement, the filings timeline and the passage the terms were read from. Double-click a deal to open its filing.

The table's columns: **Announced**, **Target**, **Acquirer**, **Sector**, **Type**, **Consideration**, **Offer/sh**, **Cash/sh**, **Exch. ratio**, **Equity value**, **EV**, **EV/Rev**, **EV/EBITDA**, **Premium**, **Unaffected**, **Unaffected date**, **Term. fee**, **Status**, **Closed**, **Expected close**, **Advisers**, **Source**. Show or hide them with **Columns**; **Export CSV** saves the deals on screen.

Use on a selected deal: **Load into Deal desk**, **Add to My comps**, or **Use selected as precedents**. **Saved screens** keeps named filter sets (**Save as…**, **Save**, **More** › make it the default or delete it).

More cards on the tab:

Card	What it does
MY COMPS	Your own precedents, saved to your account and synced to your devices. **Add desk deal**, **Remove**.
Demo precedents	A sample of well-known deals for trying the models. Never counted in real averages.
PRECEDENT SET	What Valuation › Precedent transactions runs over: quartiles of premium, EV/EBITDA and EV/Revenue. **Use selected** pins the rows you picked; **Use whole screen** follows the screen.
CROSS-DEAL ANALYTICS	Runs by itself over the precedent set: **DEAL RANKINGS** (choose **Rank by**; the list shows the raw names premium, deal_value, ev_revenue, ev_ebitda and synergies), your premium against the set (**PREMIUM BENCHMARK**), the **CONSIDERATION MIX** and an **INDUSTRY BREAKDOWN**.
MERGER ARBITRAGE	For an announced or pending deal: **TARGET PRICE**, **OFFER VALUE**, **GROSS SPREAD**, **ANNUALISED** return (simple, with the compounded figure under it), **IMPLIED COMPLETION** probability (needs your **Downside (per share)**) and **DAYS TO CLOSE** (to the **Expected close** date you can edit). **Refresh quotes** is free.
ADVISERS LEAGUE TABLE	Financial advisers named in the filings (advised either side), ranked by **Deal count** or **Aggregate equity value**, **Top** 10, 25, 50 or 100, sums in a currency you choose (**Sums in**). It loads when you open the card; **Refresh** asks again with the current filters. **Export CSV**.
FILING SIGNALS	The 8-K / S-4 / SC TO filings trail behind the selected deal's target.

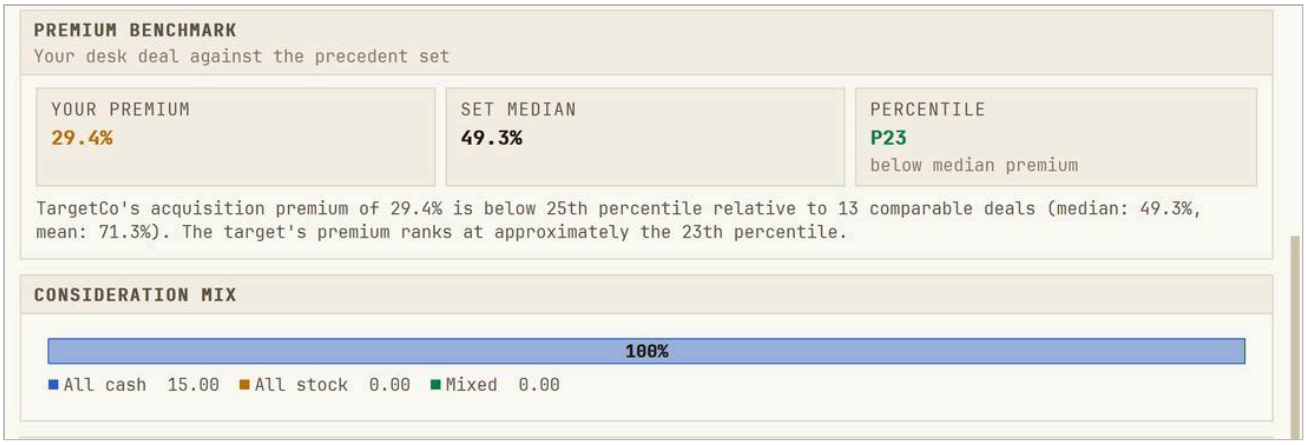


Figure 27.18 PREMIUM BENCHMARK and CONSIDERATION MIX: the sample deal's 29.4% premium ranked against the precedent set.

Merger arbitrage in plain words

After a deal is announced the target usually trades a little below the offer. That gap — the **spread** — is what an investor earns if the deal closes. Annualised = spread % × 365 ÷ days to close. The implied completion probability compares the spread with how far the stock would fall if the deal broke (your **Downside**).

27.9 Value a start-up or private company

The **Specialized** tab has two tools.

STARTUP / PRIVATE TARGET values a young company five ways and blends them. Pick the **Stage** (**Pre-seed** to **Late stage**) and **Region** (**US**, **Europe**, **Asia**), then fill the methods:

Method	Inputs	Idea
VC METHOD	**Investment**, **Exit-year revenue**, **Exit multiple (x revenue)**, **Years to exit**, **Required return (% p.a.)**	Exit value ÷ (1 + required return)^years.
BERKUS (SCORES 0-100)	**Max value per factor**; scores for **Sound idea**, **Prototype**, **Team quality**, **Relationships**, **Product rollout**	Up to the maximum value for each of the five qualities.
SCORECARD (1.00 = AVERAGE COMPANY)	**Scorecard baseline**; **Team (30%)**, **Market size (25%)**, **Product (15%)**, **Competition (10%)**, **Marketing (10%)**, **Funding need (5%)**, **Other (5%)**	The average company at this stage and region, scaled by how this one compares.
FIRST CHICAGO	**Discount rate (% p.a.)**; exit value and probability for **Best case**, **Base case**, **Worst case** (the probabilities must add up to 100%)	A probability-weighted present value of three cases.
RISK FACTOR SUMMATION (-2 TO +2)	**Base valuation**, **Value per step**; **Management**, **Stage**, **Competition**, **Technology**, **Market risk**, **Exit risk**	The base value plus or minus one step for each point of each risk.

Set **BLEND WEIGHTS (%)** (**Berkus**, **Scorecard**, **VC method**, **First Chicago**, **Risk factor**) and press **Value startup (all methods)**. **STARTUP VALUATION: BLENDED** shows the **Suggested valuation**, the **Range across methods**, the value **Per target share** and **Methods agree?** (how far apart the methods are). Tick **Feed the blended value to the fairness opinion (per share)** to use it on the Risk & fairness tab. **Reset to defaults** puts the startup inputs back.

INDUSTRY LENS scores sector KPIs and suggests a multiple range (**SECTOR ANALYSIS**: **Multiple: low**, **Multiple: mid**, **Multiple: high**). **Sector: SaaS (technology)**, **Marketplace (technology)**, **Semiconductor (technology)**, **Pharma (healthcare)**, **Biotech (healthcare)**, **Medical devices (healthcare)**, **Bank (financials)**, **Insurance**

(financials), **Asset management (financials)**. **Fill from the deal's target** takes what it can from the target card; press **Run sector analysis**.



Figure 27.19 The startup blend and the sector analysis.

27.10 Test the price: risk and fairness

The **Risk & fairness** tab asks whether the price is fair and how uncertain the value is.

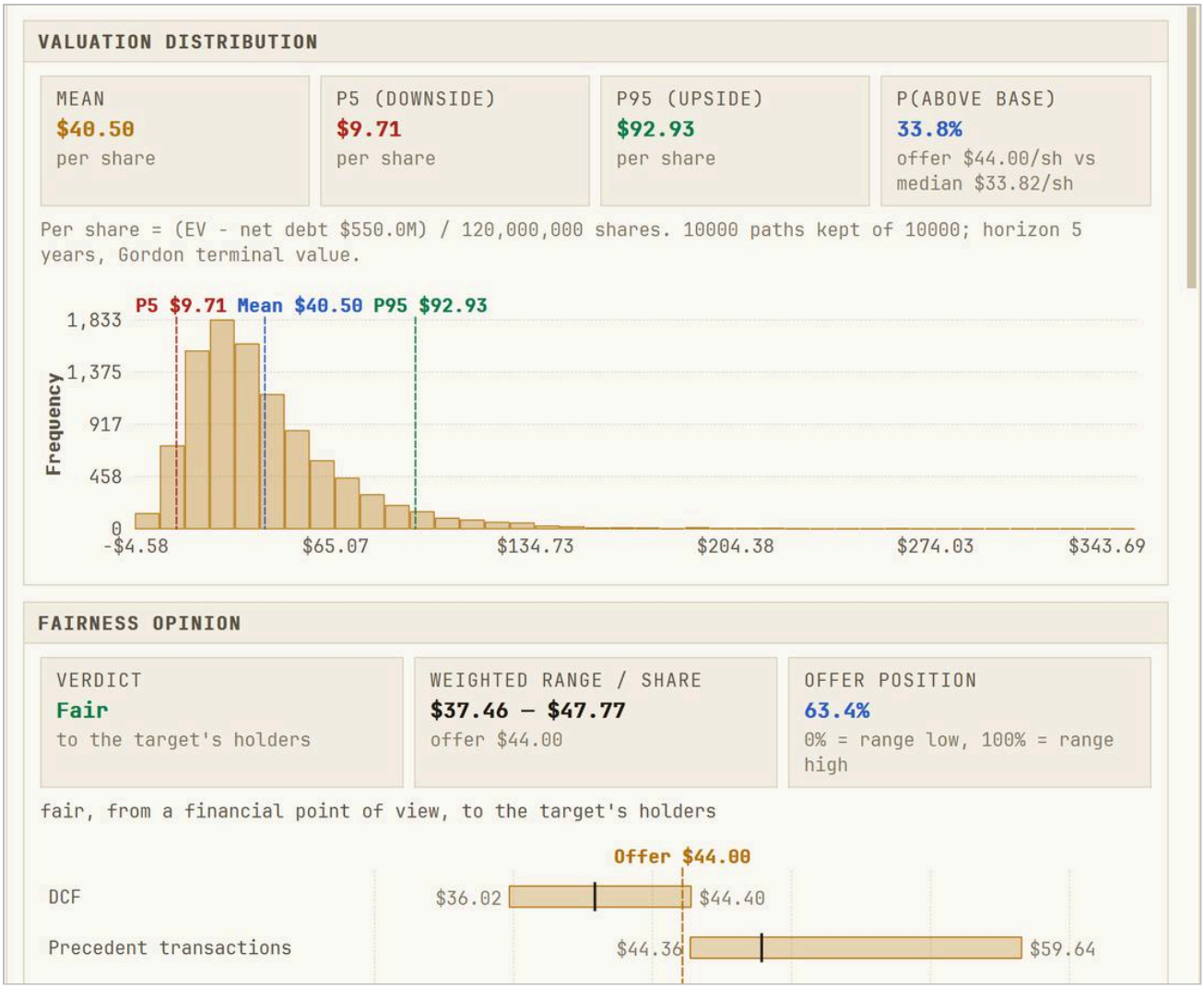


Figure 27.20 Risk & fairness: the Monte Carlo value distribution and the fairness opinion.

- **MONTE CARLO SIMULATION** draws thousands of possible futures for free-cash-flow growth, margin, WACC and the terminal value. **Base EV from**: **Implied EV at the offer**, **DCF mid-point (Valuation tab)** or **Manual**. Set the means and spreads, **Horizon (years)**, **Terminal value** (Gordon growth or exit multiple), **Random seed** (same seed and inputs, same answer) and **Paths** (10,000 by default, up to 200,000), then **Run simulation** (it runs in the background; **Cancel** stops it). Result: **VALUATION DISTRIBUTION** — mean, **P5 (downside)**, **P95 (upside)**, **P(above base)**, per share.
- **FAIRNESS OPINION** combines the valuation ranges you have run. **Opinion for**: **Sell side: the target's board** (is the price received fair?) or **Buy side: the acquirer's board** (is the price paid fair?). Set **WEIGHTS BY METHOD FAMILY**, then **Assess offer fairness**: **Fair**, **Borderline** or **Not fair**, with the weighted range and where the offer sits in it.
- **PREMIUMS PAID**: the offer against the target's price 1 day, 1 week, 4 weeks and 1 month before the unaffected date, the 52-week high and low and the 30-day VWAP. **Load daily prices and compute**, or paste closes and **Analyze pasted closes**. **Use as the deal's unaffected price** writes it to the deal.
- **OWNERSHIP & INSIDERS**: the target's largest institutional holders and recent insider filings — who has to be persuaded.
- **PROCESS QUALITY (1-5)**: score **Board independence**, **Special committee**, **Independent advisor**, **Market check**, **Negotiation**, **Due diligence**, **Disclosure**, **Timing**, then **Score process**.

27.11 Reference

Shell

Item	What it does
M&A WORKBENCH line	The deal in one line, or "No active deal. Set one up on the Deal desk tab."
Tabs	Deal desk, Valuation, Merger model, Structure, Deals, Specialized, Risk & fairness
Plan limits	Your plan decides how many tabs open, counted from the left: the first three (**Deal desk**, **Valuation**, **Merger model**) on **Exclusive**, all seven on **Exclusive+** and **Exclusive Pro**. A tab beyond your plan keeps its name, shows a lock and opens the upgrade sheet.

Deal desk — rail

Financials basis; **TARGET** and **ACQUIRER** cards (see the field table); **DEAL TERMS**; **Run EPS quick check**; **Write board memo** (credits); ⋯ menu: **Load a sample deal (demo data)**, **Clear desk (this deal only)...**, **Delete My comps on all devices...**

Deal desk — canvas

SCENARIOS bar (scenario list, **Load**, **Save**, **Save as...**, **More**, **Compare**); **DEAL SNAPSHOT**; **EPS IMPACT: QUICK CHECK** (**Verdict (yr 1)**, **Standalone EPS**, **Pro-forma EPS**, **Breakeven synergies**).

Tables everywhere

Right-click any table for **Copy cell**, **Copy row** and **Copy table as CSV**; Ctrl + C copies the selected rows. **Export CSV** buttons save a file to the File Manager (**Chapter 47, File Manager** p. 882).

Valuation defaults

Input	Default
Risk-free rate (%)	The 10-year Treasury yield when signed in; 4.5% until it loads
Equity risk premium (%)	5.5%
Observed beta (levered)	The market beta; else the Deal desk value (1.10)
Size premium (%) / Country risk premium (%)	0%
Pre-tax Kd (%) / Credit spread (%)	5.5% / 2.0%
Marginal tax rate (%)	The Deal desk tax rate (21% if none)
Projection years	5
Headline method	**Perpetuity growth (Gordon)**
Terminal growth (%) / Exit multiple (x EBITDA)	2.5% / 10.0x
Mid-year discounting	On
Sensitivity grid	**WACC x terminal growth**, **5 x 5**; steps 0.5 pp WACC, 0.25 pp growth, 1.0x multiple

Input	Default
DCF drivers with no filing	Growth 5%, D&A 3%, capex 3%, NWC 10% of the revenue change

Limits

Item	Limit
Scenario name	80 characters, unique per deal
Scenarios	50 per deal, 500 in all
Monte Carlo Paths	1,000 to 200,000
Projection years (DCF)	3 to 15

Where things are stored

Item	Stored
The deal on the desk, scenarios, saved screens	On this computer
MY COMPS	Your account — synced to all your devices

27.12 For advanced users

- **Staleness.** Every valuation range remembers the deal it was built for. When the target's figures or the offer change, the range is marked stale (with the reason) and is left out of the fairness opinion until you re-run it.
- **Breakeven synergies** = the run-rate pre-tax synergies at which pro-forma EPS equals standalone EPS in the chosen year.
- **WACC** = E/(D+E) × Ke + D/(D+E) × Kd × (1 − tax), with Ke = risk-free + beta × equity risk premium (+ size and country premiums). Relevering uses Hamada: unlevered beta = observed ÷ (1 + (1 − t) × D/E current); relevered beta = unlevered × (1 + (1 − t) × D/E target).
- **Terminal value.** Perpetuity: TV = free cash flow in the last year × (1 + g) ÷ (WACC − g). Exit multiple: TV = last-year EBITDA × the multiple, a sale at the end of the last year. With mid-year discounting, year t is discounted at t − 0.5 and the perpetuity value at n − 0.5.
- **Merger arbitrage.** Implied completion = (target price − downside) ÷ (offer value − downside): the chance of closing the market is pricing in.
- **Hand-offs. Load into Deal desk** from the Deals tab; the startup blend can feed the fairness opinion; **Use as the deal's unaffected price** writes back to the desk.
- **Reports.** Export the tables to CSV and assemble them in **Chapter 45, Report Builder** p. 858 or **Chapter 44, Excel** p. 844.

Do it with AI

- "Load the sample deal on MERG, change the offer to $46 a share and tell me whether it is still accretive in year 1."
- "Find completed software deals over $1 billion since 2022 and give me the median premium."
- "Run the DCF and the LBO for the target on my desk and tell me where the offer sits on the football field."

27.13 Troubleshooting

"No SEC XBRL figures … Enter them by hand"

The company files no machine-readable financials (a private company, a foreign filer, a fund). Type the figures into the card.

EV/EBITDA shows a dash

The target has no EBITDA on file (usual for banks and insurers). Use P/E-based methods, or enter EBITDA.

A bar on the football field is grey and says "stale"

The deal changed after the method ran. Press **Re-run stale** (or that method's run button).

"Set up the deal on the Deal desk first"

The merger model needs the target with its share count, the acquirer, and an offer per share. If part of the price is stock, it also needs the acquirer's share price.

The Deals table says "Sign in to search the deal database" or "not available on this server yet"

Signed out: sign in — the deals load as soon as your session is ready. "Not available on this server yet" means the deal index cannot be reached; try again later. **MY COMPS** and the Deal desk keep working in both cases.

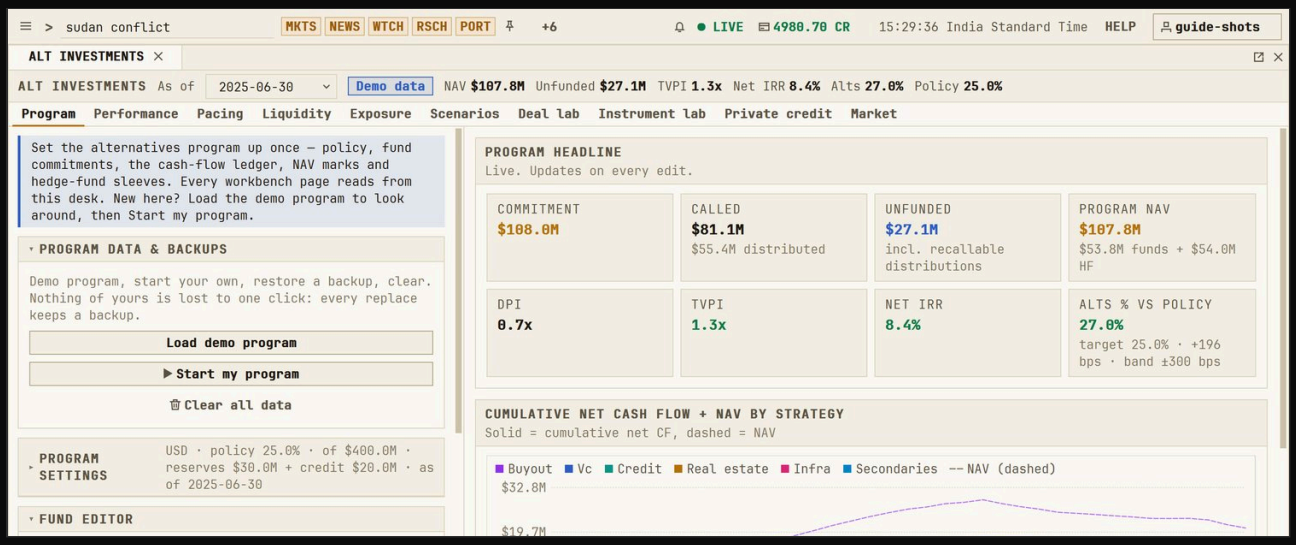
"Enter revenue or cost synergies on the Deal desk first"

Value synergies (DCF) needs run-rate synergies. Type them under **DEAL TERMS** on the Deal desk.

CHAPTER 28

Alternative Investments ALTS

A workbench for a program of private-market funds and hedge funds — commitments, capital calls, distributions and NAV — with performance against public markets, pacing, liquidity, exposure, stress tests, deal calculators and market benchmarks.



At a glance

Open it	• Type `ALTS` in the command line and press `Enter` • Type `alt`, `altinv` or `alternatives` in the command line and pick **Alt. Investments** • **Screens** › **Research & Intelligence** › **Alt. Investments**
You need	• Signed in for market prices, filings and benchmarks • Exclusive opens the first five tabs (Program to Exposure); Exclusive+ and Exclusive Pro open all ten
Best for	• Tracking a private equity, credit, real estate and hedge fund program • Planning next year's commitments • Checking whether the program can meet its capital calls
Time to learn	30 minutes for the basics
Related	**Chapter 23, Portfolio** p. 430, **Chapter 27, M&A Analytics** p. 556, **Chapter 32, Global Data** p. 648

In this chapter

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28.1 Screen tour

Alternative investments — private equity, venture, private credit, real estate, infrastructure, secondaries and hedge funds — do not trade on an exchange. You **commit** money to a fund; the fund **calls** it over a few years, invests it, and **distributes** cash back as it sells. In between, the manager reports a **NAV** (net asset value). This screen keeps that whole program in one place and analyses it.

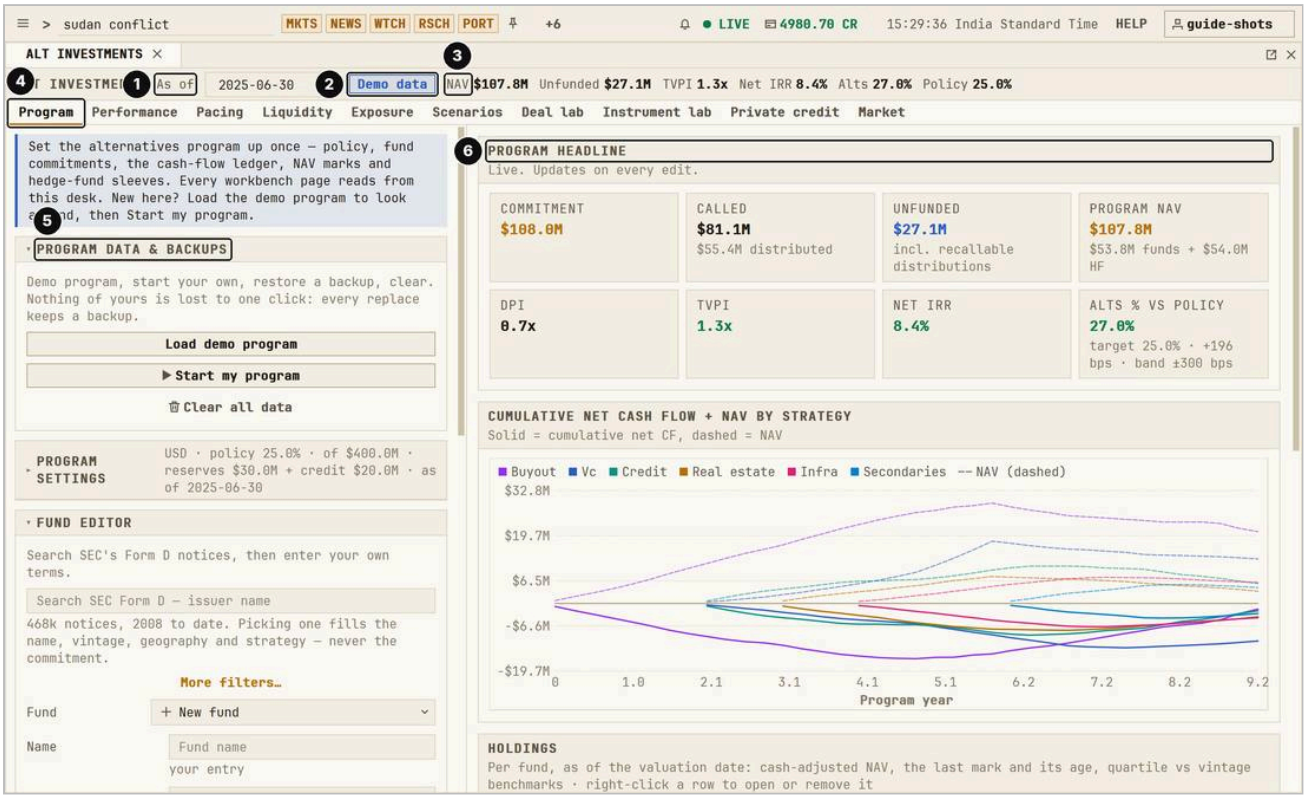


Figure 28.1 The Alt. Investments screen on the Program tab, with the bundled demo program.

1. **As of** — the valuation date every figure is measured at.
2. **Demo data** — shown while part of the program is the bundled sample.
3. **Header strip** — NAV, unfunded commitments, TVPI, net IRR, alternatives as % of the portfolio, and the policy target.
4. **Tabs** — ten tabs, all reading the same program.
5. **Rail** — the inputs of the tab.
6. **Canvas** — the results.

Tab	What it does
Program	Set up the program: policy, funds, commitments, the cash-flow ledger, NAV marks, hedge funds.
Performance	IRR, TVPI, DPI and public-market comparisons (PME); J-curves; quartiles against peers.
Pacing	Project calls, distributions and NAV forward; solve how much to commit each year.
Liquidity	Will reserves cover the next calls? Stress tests and redemption ladders.
Exposure	Concentration, an exposure matrix, hedge-fund de-smoothing, fund look-through.
Scenarios	Historical and custom stress scenarios, including the denominator effect.
Deal lab	Fund waterfalls and fees, secondary pricing, real estate underwriting.
Instrument lab	24 calculators, from high-yield bonds to annuities.
Private credit	The loan books of listed private-credit lenders (BDCs), and who lends to whom.

Tab	What it does
Market	Listed proxies for alternatives and built-in benchmarks.

The header strip

Item	Meaning
As of	The program valuation date. NAV, DPI, TVPI, quartiles and every model are measured at it.
Demo data	Part of the program is the bundled sample (hover for details).
NAV	The program's net asset value: funds' cash-adjusted NAV plus hedge-fund positions.
Unfunded	Commitments not yet called (plus recallable distributions).
TVPI	Total value to paid-in: (distributions + NAV) ÷ capital paid in.
Net IRR	The program's pooled internal rate of return, after fees.
Alts	Alternatives as a share of the whole portfolio.
Policy	Your target for that share ("not set" until you enter it).
FX	When funds are in other currencies: which currencies are converted into the program currency.

Words used in this chapter

Commitment: the amount you promised the fund. **Capital call**: the fund asks for part of it. **Distribution**: cash the fund pays back. **Paid-in**: what has been called so far. **IRR**: the annual return that makes all the dated cash flows add up to zero. **DPI** = distributions ÷ paid-in (cash back). **RVPI** = NAV ÷ paid-in (value still in the fund). **TVPI** = DPI + RVPI. **Vintage**: the year a fund started investing. **GP**: the manager; **LP**: you, the investor.

28.2 Quick start

The screen opens with a **demo program** — ten sample funds and three hedge-fund sleeves — so every tab has something to show.

1. Type `ALTS` in the command line and press **Enter**. The **Program** tab opens with the demo program.
2. Read the **PROGRAM HEADLINE:** commitment, called, unfunded, program NAV, DPI, TVPI, net IRR and alternatives against policy.

3. Click **Performance.** The program's IRR and TVPI are compared with a public index.

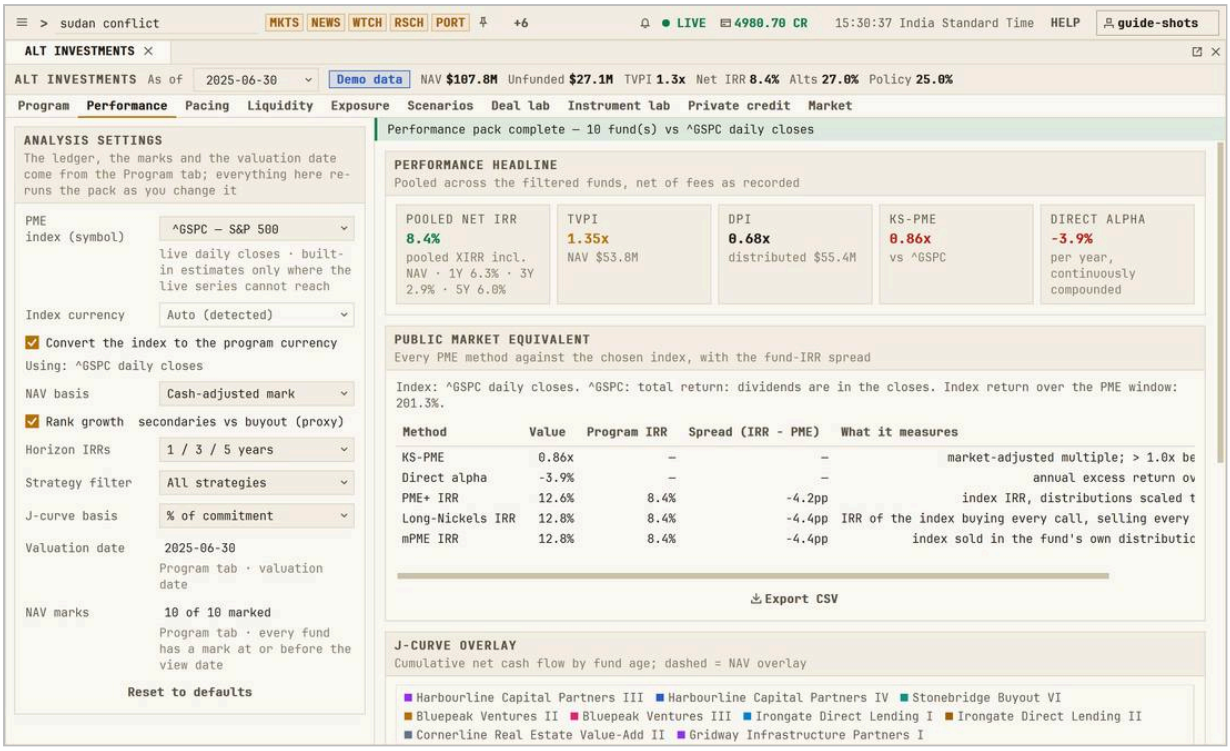


Figure 28.2 The Performance tab: pooled net IRR, TVPI, DPI and public-market equivalents.

4. Click **Pacing** and press **Project program** to see calls, distributions and NAV over the next years.

5. When you are ready for your own funds, go back to **Program** and press **Start my program**.

28.3 Set up your program

Start from scratch

1. On the **Program** tab, open **PROGRAM DATA & BACKUPS** and click **Start my program.** It removes the demo rows and starts an empty program valued at the latest quarter end. (Your previous program is kept as a backup.)

2. Open **PROGRAM SETTINGS** and fill in **Policy target %**, **Total portfolio**, **Liquid reserves**, **Credit line**, **Currency**, **Stale mark after** (days) and **As-of date.** Each is saved as you leave the field. Money fields are in the program currency.

3. In the **FUND EDITOR**, add your first fund (below).

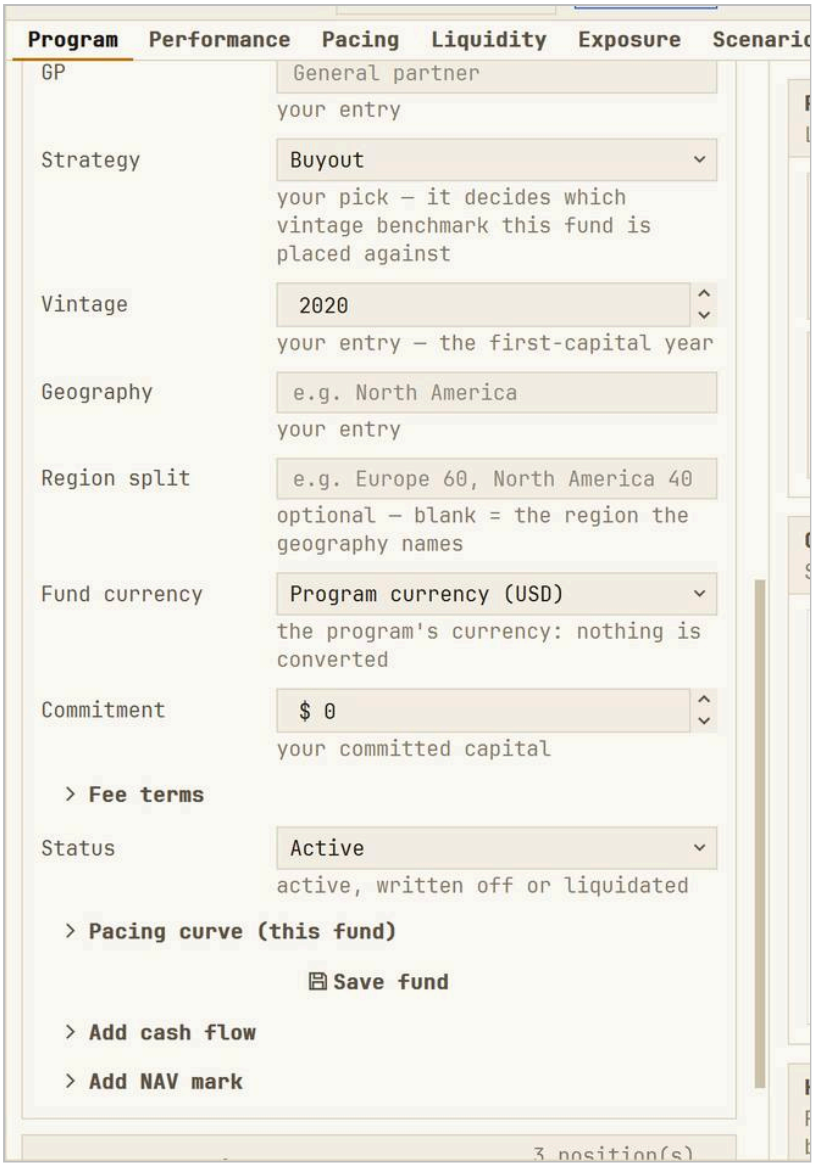


Figure 28.3 The FUND EDITOR on the Program rail.

The **PROGRAM DATA & BACKUPS** card:

Button	What it does
Load demo program	Ten sample funds and three hedge-fund sleeves to look around with. Asks first; your program is backed up.
Start my program	Remove the demo rows and start empty.
Restore previous program...	Put back a program saved before a demo load, a clear or a restore.
Clear all data	Empty the program (backed up first).

The program is saved on this computer and copied to your account, so it follows you to another computer where you sign in. The bundled demo program is never uploaded. Backups (from **Load demo program**, **Clear all data** or a restore) stay on this computer.

Add a fund

1. In the **FUND EDITOR**, leave **Fund** on **New fund**.
2. Optional: type the fund or manager in **Search SEC Form D — issuer name** and pick a notice. This fills the name, manager, vintage, geography and strategy from the fund's public filing — never the commitment, which is yours. **More filters...** opens a full Form D search.
3. Fill in **Name**, **GP**, **Strategy** (it decides which vintage benchmark the fund is ranked against), **Vintage**, **Geography** (and an optional **Region split**), **Fund currency** and **Commitment** (your committed capital, not the fund's total raise).
4. Optional: **Fee terms** (**Mgmt fee**, **Carry**, **Hurdle**, **Waterfall**, **Step-down year**), **Status** (active, written off or liquidated) and the fund's own **Pacing curve**.
5. Click **Save fund**.
6. Record the fund's history: **Add cash flow** (**Date**, **Type** — call, distribution or recallable distribution — and **Amount**, always positive because the type carries the direction; then **Add flow**) for every call and distribution, and **Add NAV mark** (**Date** — the GP's reporting date — and **NAV**) for every report. A NAV of zero records a write-off (you are asked first).

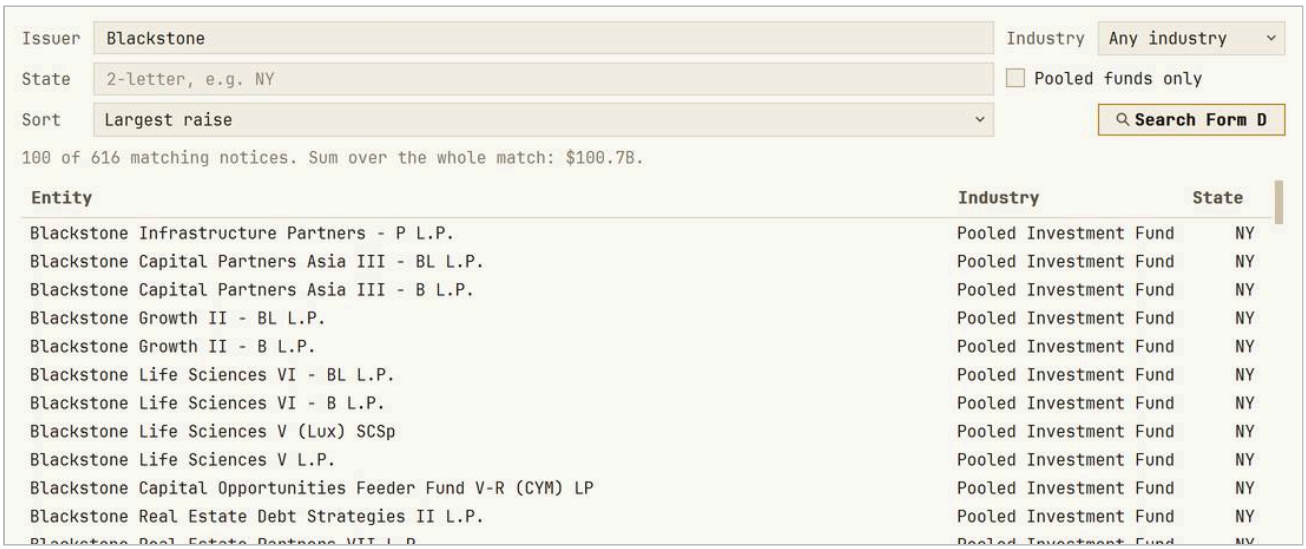


Figure 28.4 More filters… opens Import from Form D — SEC private placements: here a search for Blackstone's fund notices. Pick a notice, then press Prefill fund editor at the bottom of the dialog.

Import a whole ledger at once

In the **FUND LEDGER** card on the canvas, click **Import...**. Paste rows from a spreadsheet or open a CSV/TSV file of **Cash flows** or **NAV marks**. The dialog guesses the columns (date, fund, type, amount), the delimiter, the date order and the decimal separator; you can override each. A preview marks every row **Ready**, duplicate or in error before you press **Import**.



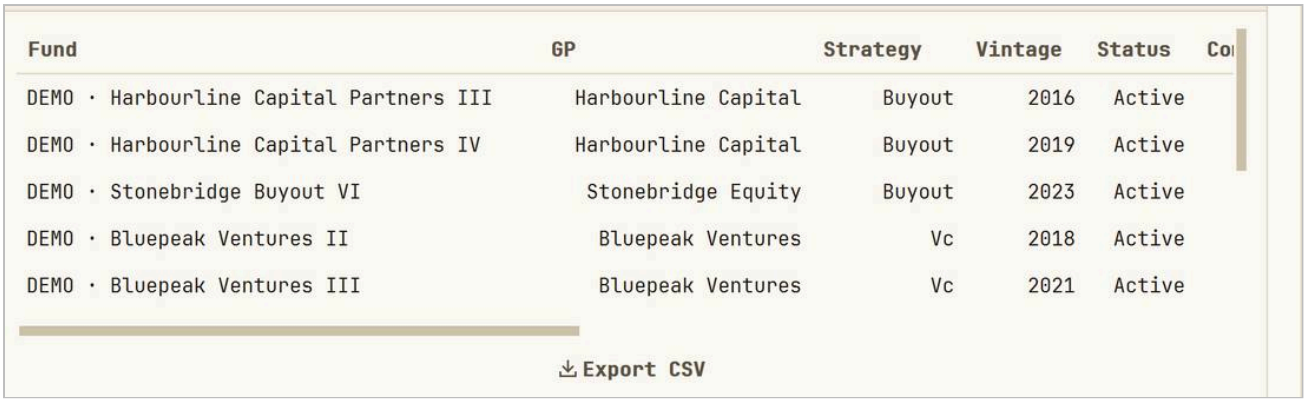
Figure 28.5 The ledger import dialog with its column mapping and preview.

Hedge funds and liquid alternatives

Hedge funds are tracked as **positions** with monthly returns, in the **HEDGE FUND / LIQUID ALTS** card: pick **New position** in **Position**, then fill **Name**, **Strategy**, **Invested** (cost basis) and **Inception** (first return month). Paste the **MONTHLY RETURNS** (month-end returns copied from a spreadsheet, two columns: date, return) and set **Returns are in** (**Percent (0.42 = 0.42%)** or **Fraction (0.0042 = 0.42%)** — never guessed). Add the **Liquidity terms** — **Redemption** frequency, **Notice (days)**, **Gate % / window** (0 = no gate), **Lockup until** — and **Save position**. Right-click the **Fund** or **Position** picker to remove the selected fund or position.

The Program canvas

Card	What it shows
PROGRAM HEADLINE	**COMMITMENT**, **CALLED**, **UNFUNDED**, **PROGRAM NAV**, **DPI**, **TVPI**, **NET IRR**, **ALTS % VS POLICY**. Live: updates on every edit.
CUMULATIVE NET CASH FLOW + NAV BY STRATEGY	Solid lines: cumulative net cash flow (the J-curve); dashed: NAV.
HOLDINGS	Per fund: GP, strategy, vintage, status, commitment, called, unfunded, NAV (adj.), last mark and its date and age, DPI, TVPI, IRR, quartile, fund currency and FX, NAV in the fund currency. Right-click a row to open it in the fund editor or remove it. **Export CSV**.
FUND LEDGER	The selected fund's **Cash flows** and **NAV marks**; **Import...**, **Undo**, **Export CSV**. Right-click a row to change its type, remove it or copy it.



Fund	GP	Strategy	Vintage	Status	Co
DEMO · Harbourline Capital Partners III	Harbourline Capital	Buyout	2016	Active	
DEMO · Harbourline Capital Partners IV	Harbourline Capital	Buyout	2019	Active	
DEMO · Stonebridge Buyout VI	Stonebridge Equity	Buyout	2023	Active	
DEMO · Bluepeak Ventures II	Bluepeak Ventures	Vc	2018	Active	
DEMO · Bluepeak Ventures III	Bluepeak Ventures	Vc	2021	Active	

Figure 28.6 The HOLDINGS table of the demo program (scroll sideways for marks, DPI, TVPI, IRR and quartile).

NAV (adj.)

A fund's last reported NAV is usually a quarter old. **NAV (adj.)** = the last mark + calls − distributions since that mark — the "cash-adjusted" NAV used everywhere on this screen.

Funding simulation

The **FUNDING SIMULATION** card on the Program rail runs thousands of random paths over your pacing curves to estimate the chance that calls outrun your reserves: **Horizon** (1–25 years), **Paths** (500–20,000), **Confidence (%)**, **Seed**, and the shocks (**Market correlation**, **NAV growth vol**, **Distribution vol**, **Call pace vol**). Press **Simulate program**. Results: **P(SHORTFALL)**, **PEAK NEED AT CONFIDENCE**, **PEAK NEED P50 / P95**, **SUSTAINABLE COMMITMENT / YR**, a fan chart and a year-by-year table.

Credits

Simulate program is charged in credits (the price is on the button; 1 credit when this guide was written). Everything else on this screen is free.

28.4 Measure performance

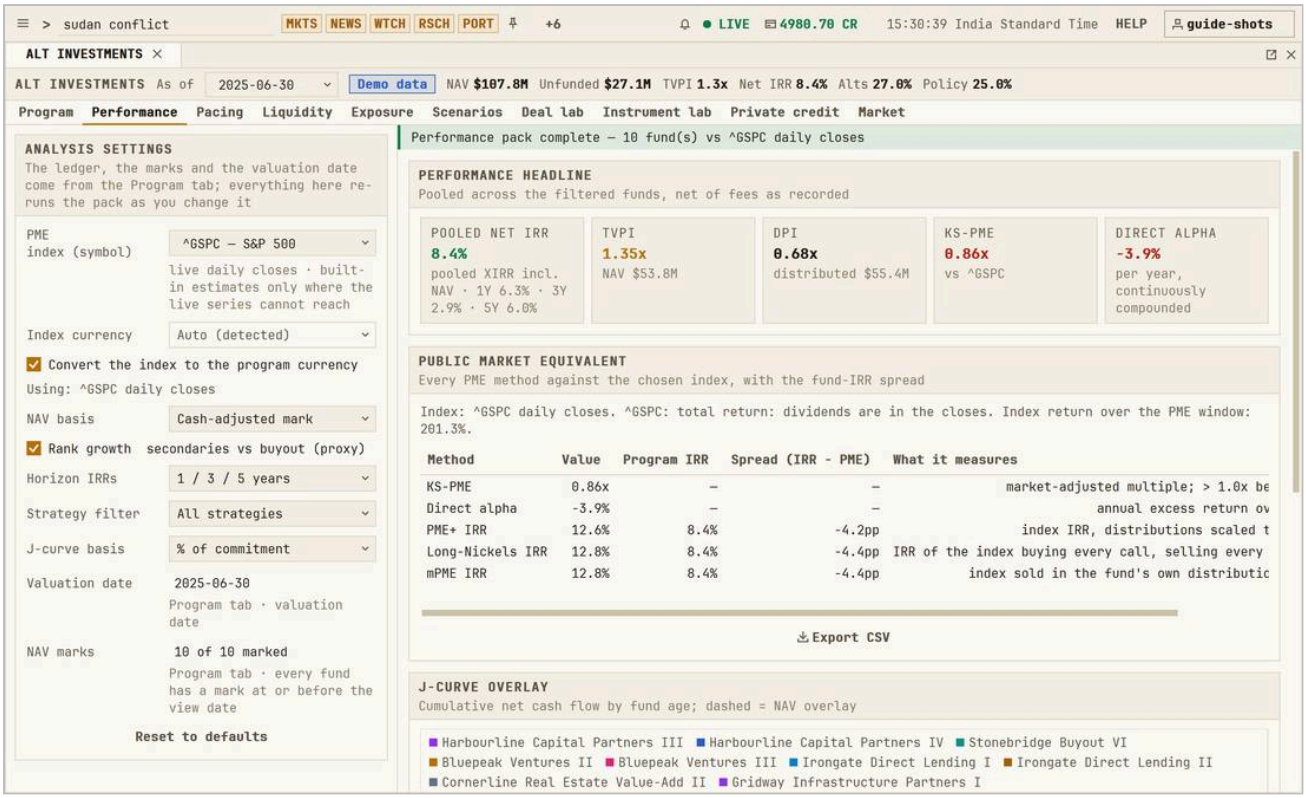


Figure 28.7 The public market equivalent table and the J-curve overlay.

The **PERFORMANCE HEADLINE** pools every filtered fund: **POOLED NET IRR**, **TVPI**, **DPI**, **KS-PME** and **DIRECT ALPHA**.

A **public market equivalent (PME)** asks: "If I had put the same cash into a stock index on the same dates, would I have done better?"

Method	Reads as
KS-PME	Above 1.0x: the program beat the index.
Direct alpha	The annual excess return over the index.
PME+ IRR	The index's IRR with distributions scaled so the ending values match.
Long-Nickels IRR	The IRR of buying the index with every call and selling it with every distribution.
mPME IRR	A modified PME where the index is sold in the fund's own distribution proportions.

Other cards: **J-CURVE OVERLAY** (cumulative net cash flow by fund age) and **PER-FUND DETAIL** (IRR, 1/3/5-year horizon IRRs, TVPI, DPI, RVPI, KS-PME, direct alpha, mPME IRR, **IRR quartile**, TVPI and IRR against the peer median, **Peer group**). Quartiles come from built-in vintage benchmarks.

Settings (**ANALYSIS SETTINGS**): **PME index (symbol)** (the S&P 500 by default; live daily closes, with built-in estimates only where the live series cannot reach), **Index currency** (**Auto (detected)**), **Convert the index to the program currency**, **NAV basis** (**Cash-adjusted mark** or **Last reported mark**), **Rank growth & secondaries vs buyout (proxy)**, **Horizon IRRs** (**1 / 3 / 5 years**, **3 / 5 / 10 years** or **1 / 5 / 10 years**), **Strategy filter** (filters every model on the page), **J-curve basis** (**% of commitment**, **Net cash flow** or **TVPI (x)**) and **Reset to defaults**. **Valuation date** and **NAV marks** show what the Program tab feeds in. **Export CSV** saves the PME table.

28.5 Plan commitments (pacing)

A private program only stays at its target size if you keep committing — new funds replace the ones that pay back. The **Pacing** tab projects that forward.

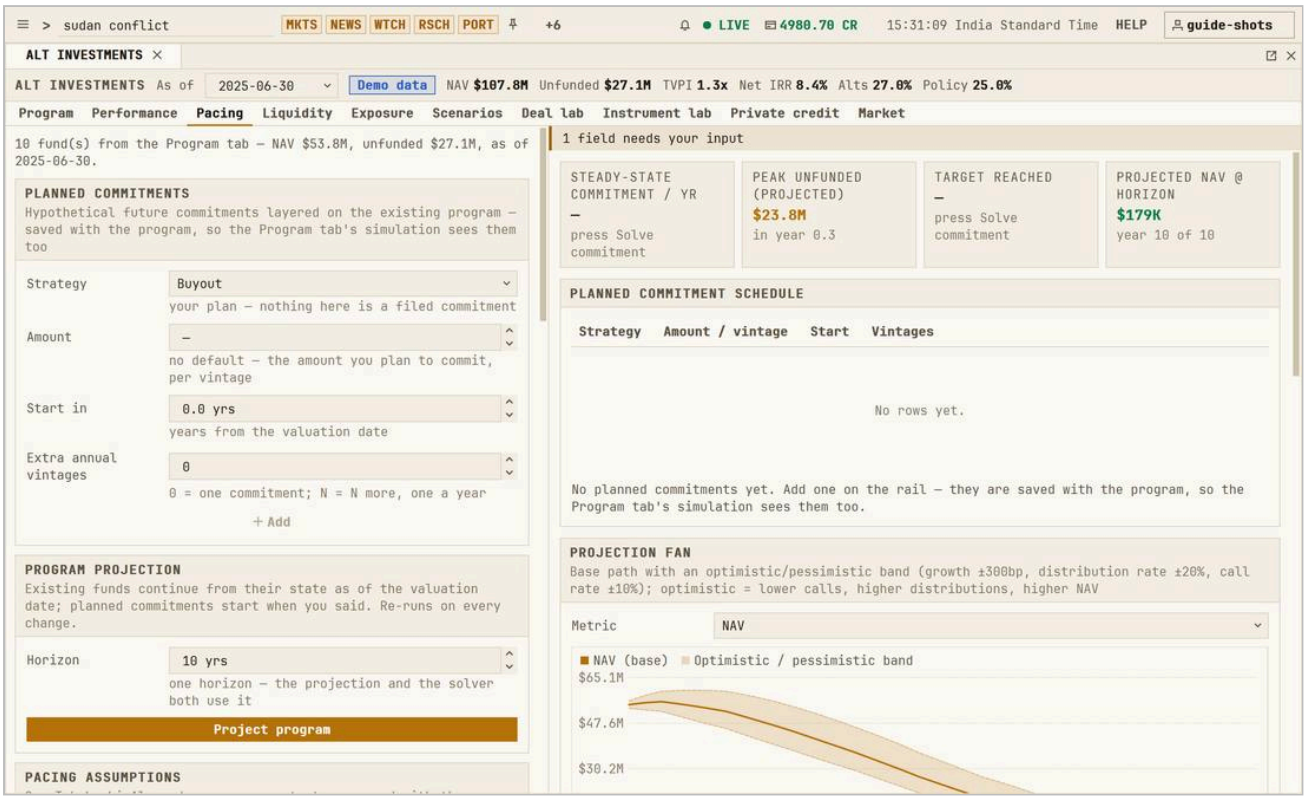


Figure 28.8 The Pacing tab after Project program — planned commitments on the rail, the projection fan on the right.

1. Add any **PLANNED COMMITMENTS**: **Strategy**, **Amount** (per vintage), **Start in** (years from the valuation date) and **Extra annual vintages** (0 = once). Click **Add**. They are saved with the program, so the Program tab's funding simulation sees them too. Right-click a row of the schedule to remove it.

2. Set the **Horizon** and press **Project program**. The **PROJECTION FAN** shows NAV, calls, distributions and net cash flow, with optimistic and pessimistic paths.

3. In **COMMITMENT SOLVER**, pick the **Strategy mix** (target mix, current mix or planned mix) and the **Target mode** (**Target NAV** or **Target % of portfolio**, with **Portfolio** and **Portfolio growth (% a year)**). Press **Solve commitment**.

> **Note**
>
> **Solve commitment** stays greyed out until every field it needs is filled — the line at the top of the canvas says how many still need your input (for example "1 field needs your input").

Results: **STEADY-STATE COMMITMENT / YR**, **PEAK UNFUNDED (PROJECTED)**, **TARGET REACHED** (the year), **PROJECTED NAV @ HORIZON**, **PROJECTED ALLOCATION VS TARGET** and a **YEAR-BY-YEAR SCHEDULE**.

How the projection works

Each strategy follows a **Takahashi-Alexander** curve, a standard model of how a fund calls, grows and pays back. On **PACING ASSUMPTIONS** you can edit each strategy's curve: **Fund life L**, **Bow B** (how back-loaded distributions are), **Growth G**, **Yield Y**, **Wind-down after L**, and the **Contributions** pattern (**Schedule** — % of commitment per fund year — or **Rate** — % of what is still unfunded). The **PACING CURVE PREVIEW** draws one commitment of 100 on the curve.

ALLOCATION POLICY holds your target mix: **Target %**, **Min %**, **Max %** per strategy, the **Overcommitment ratio** and **Commitment growth (% a year)**.

28.6 Check liquidity

The **Liquidity** tab asks whether the program can pay its next capital calls.

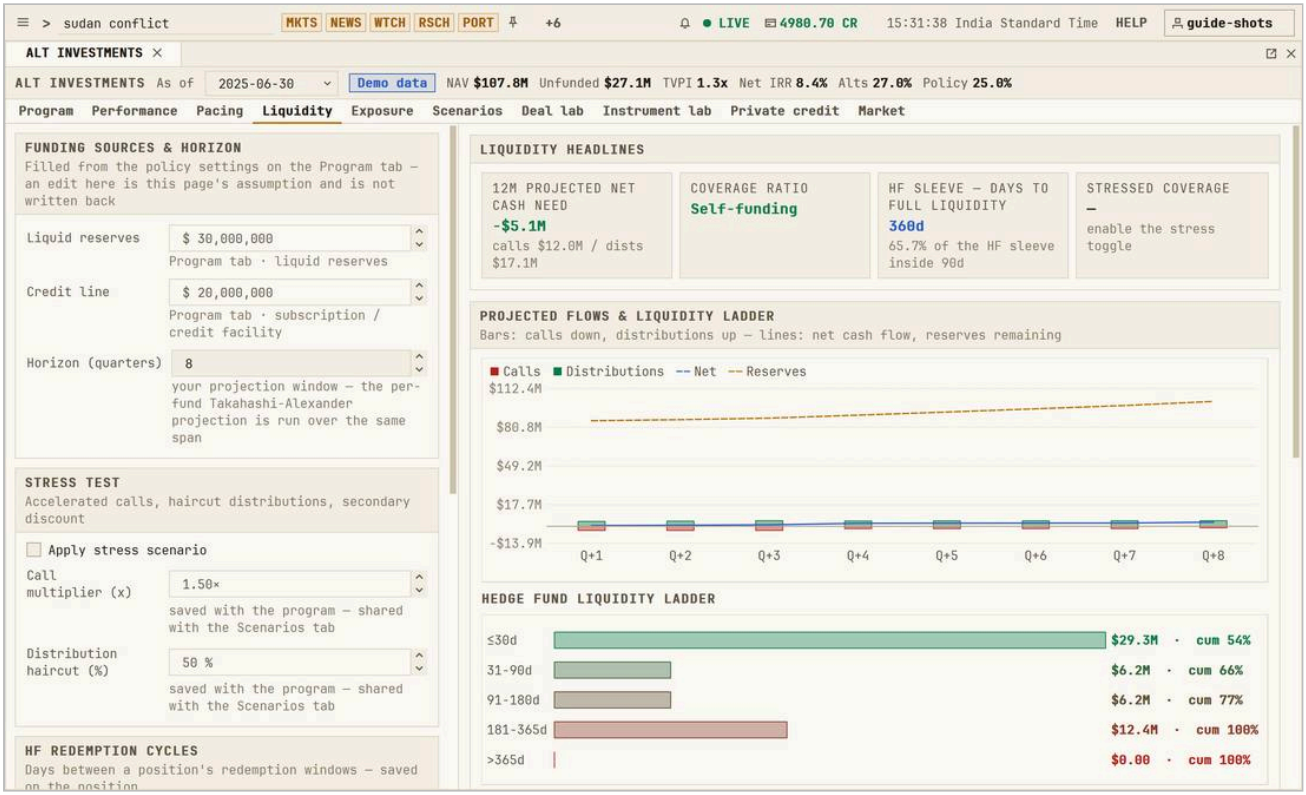


Figure 28.9 Liquidity headlines and the projected flows.

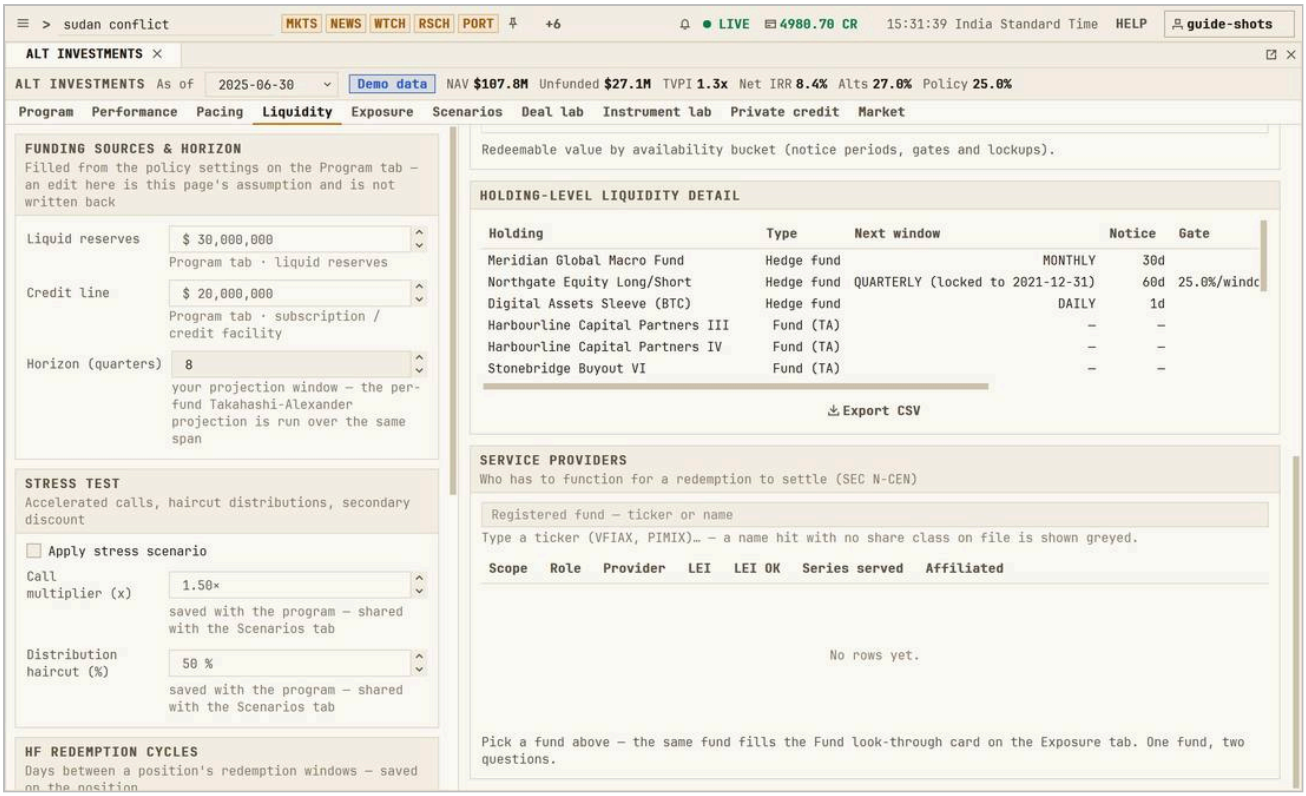


Figure 28.10 The holding-level liquidity detail and the service providers card.

Inputs: **FUNDING SOURCES & HORIZON** (**Liquid reserves** and **Credit line**, both filled from the Program tab — an edit here is not saved there — and **Horizon (quarters)**), **STRESS TEST** (**Apply stress scenario**, **Call multiplier (x)**, **Distribution haircut (%)**), **SECONDARY SALE & THRESHOLDS** (**Sell (% of fund NAV)**, **Discount to NAV (%)**, **Coverage: comfortable at**, **Coverage: shortfall below**). Press **Run liquidity forecast**.

Result	Meaning
12M PROJECTED NET CASH NEED	Calls minus distributions over the next year.
COVERAGE RATIO	Funding sources ÷ net need. It reads as comfortable at or above **Coverage: comfortable at**, and as a shortfall below **Coverage: shortfall below**; between the two, a warning. **Self-funding** when distributions cover the calls.
HF SLEEVE — DAYS TO FULL LIQUIDITY	How long it takes to redeem the whole hedge-fund sleeve.
STRESSED COVERAGE	The same with stressed calls and distributions.
PROJECTED FLOWS & LIQUIDITY LADDER	Bars for calls and distributions, lines for net cash and sources.
HEDGE FUND LIQUIDITY LADDER	Redeemable value by availability bucket (notice, gate, lockup).
HOLDING-LEVEL LIQUIDITY DETAIL	Per holding: next window, notice, gate, days to full liquidity, next 4 quarters' calls and distributions.
SERVICE PROVIDERS	For a registered fund: who must function for a redemption to settle (administrator, custodian, auditor…), from its filings.

HF REDEMPTION CYCLES lets you set the days between a position's redemption windows.

28.7 Analyse exposure

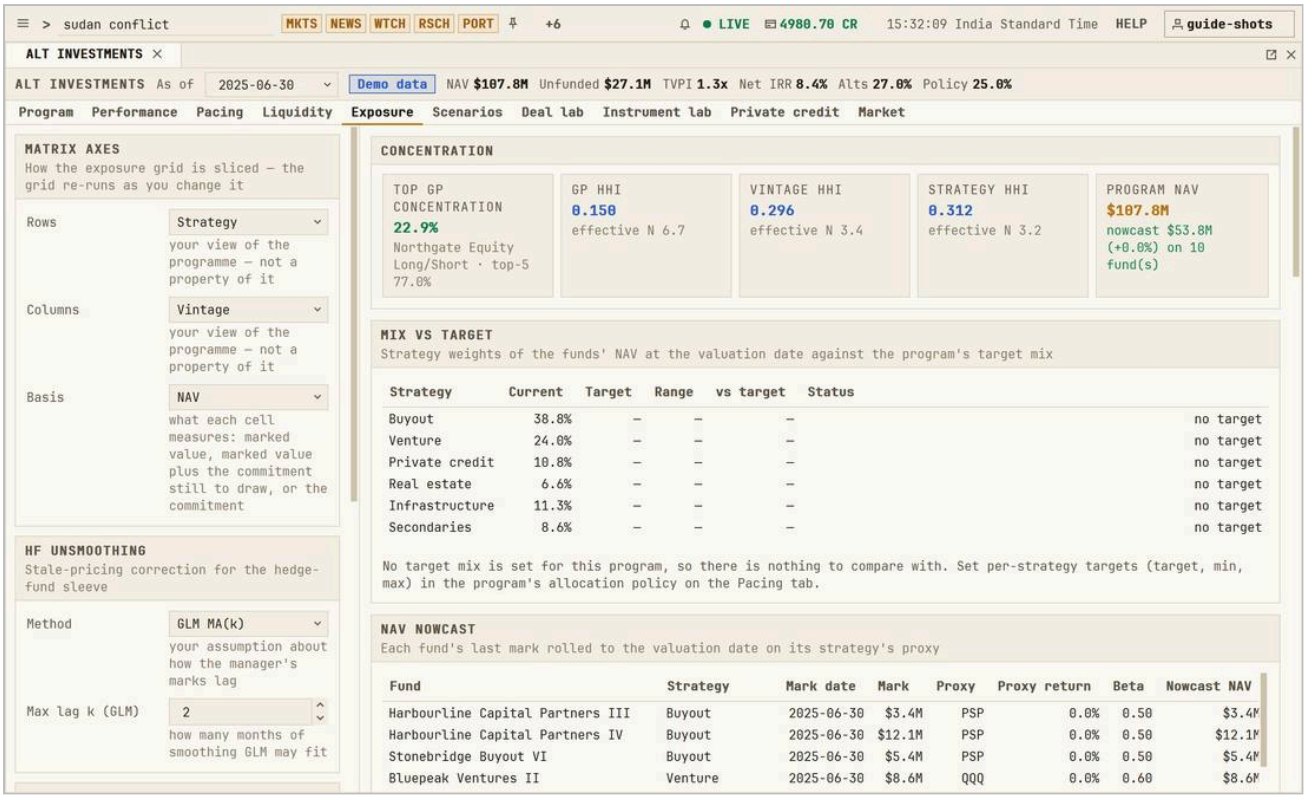


Figure 28.11 Exposure: concentration, the mix against the target, and the NAV nowcast.

Card	What it shows
CONCENTRATION	**TOP GP CONCENTRATION**, **VINTAGE HHI**, **STRATEGY HHI**, **PROGRAM NAV**, **GP HHI**. HHI (Herfindahl) adds up squared shares: higher = more concentrated.
ALLOCATION — STRATEGY × FUND	Where the NAV sits.
EXPOSURE MATRIX	A grid you choose on **MATRIX AXES**: **Rows** (**Strategy**, **GP**, **Geography**, **Region**, **Fund currency**), **Columns** (**Vintage**, **Strategy**, **Region**, **Fund currency**), **Basis** (**NAV**, **NAV + unfunded**, **Commitment**). **Show numbers** prints the values.
HF SLEEVE — SMOOTHED vs UNSMOOTHED	Hedge-fund returns are often "smoothed" (stale prices make them look calmer). **HF UNSMOOTHING** removes that with **GLM MA(k)** (with **Max lag k (GLM)**) or **Geltner AR(1)**: compare volatility and Sharpe before and after.
FUND LOOK-THROUGH	What a registered fund actually holds, from its quarterly portfolio filing: type a ticker or name.
NOWCAST PROXIES / NAV NOWCAST	Roll each fund's last mark forward to the valuation date with a listed proxy and a beta per strategy (**Reset proxies to defaults**).
HF BOOK ANALYTICS	Drawdowns, rolling Sharpe, correlation, up/down capture and alpha against a **Reference index (symbol)**, with your **Risk-free rate (% p.a.)** and **Rolling window (months)**.
MIX vs TARGET	Each strategy's current weight against its policy range.

28.8 Run stress scenarios

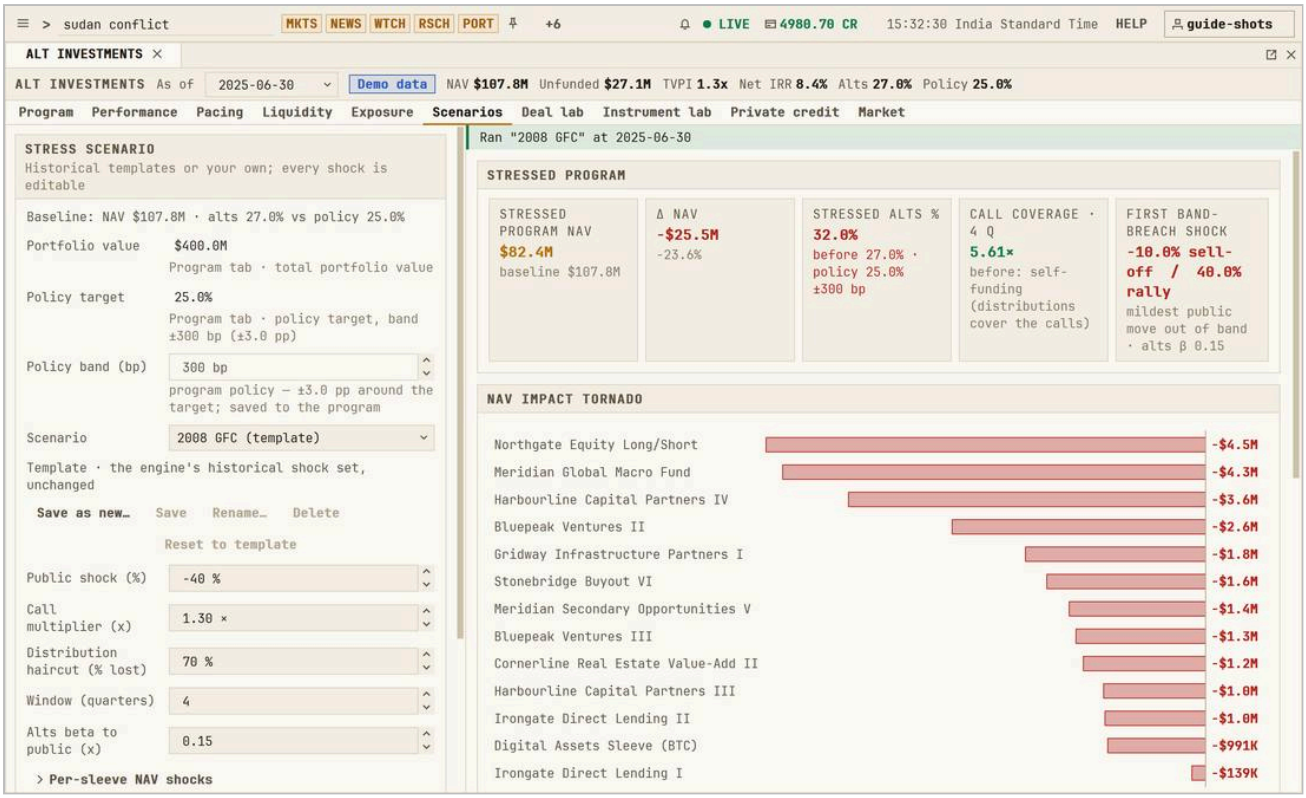


Figure 28.12 A stress scenario and its results.

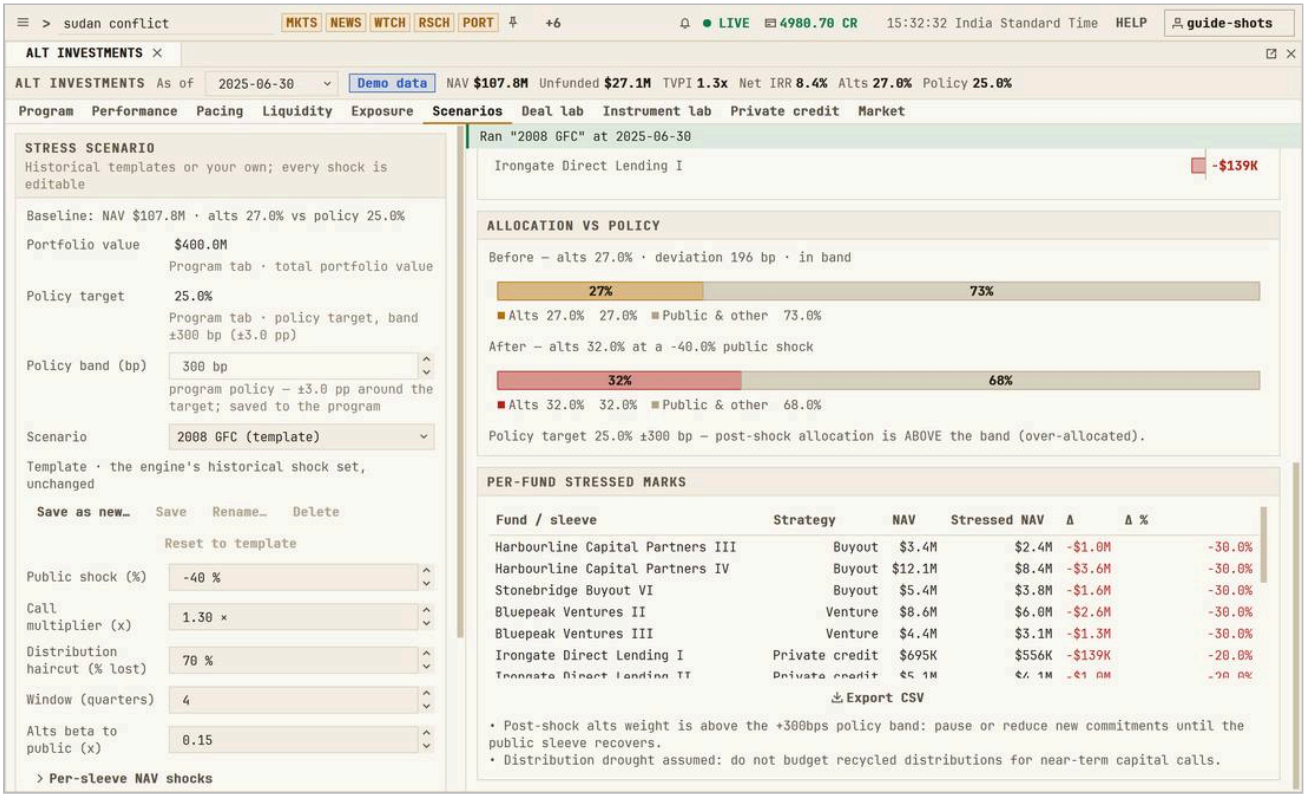


Figure 28.13 Allocation against policy before and after the shock, and the per-fund stressed marks.

1. On **STRESS SCENARIO**, pick a **Scenario** — one of the historical templates (**2001 dot-com (VC)**, **2008 GFC** — the default — and **2022 rate shock**) or one of your own.

2. Check the baseline at the top of the card: **Portfolio value**, **Policy target** and **Policy band (bp)** come from the Program tab (the band is saved to the program). Adjust the shocks: **Public shock (%)**, **Call multiplier (x)**, **Distribution haircut (% lost)**, **Window (quarters)**, **Alts beta to public (x)**, and **Per-sleeve NAV shocks** (buyout, venture, growth, private credit, real estate, infrastructure, secondaries, hedge funds, digital assets). For real estate you can tick **Apply cap-rate expansion to real estate** and set **Cap-rate Δ (bp)**.
3. Optional: under **COMPARE**, pick up to two more scenarios.
4. Press **Run scenario** (edits re-run by themselves).
5. Keep your version with **Save as new...**; **Save**, **Rename...**, **Delete** and **Reset to template** manage it.

Results: **STRESSED PROGRAM NAV**, **STRESSED ALTS %**, **CALL COVERAGE**, **FIRST BAND-BREACH SHOCK**, **SCENARIO COMPARISON**, a **NAV IMPACT TORNADO**, **ALLOCATION vs POLICY** before and after, and **PER-FUND STRESSED MARKS**.

The denominator effect

When public markets fall, the whole portfolio shrinks but private NAVs are marked down slowly. Your alternatives share jumps — and can break the policy band without you buying anything. **FIRST BAND-BREACH SHOCK** is the mildest public move that pushes alternatives out of the band.

28.9 Deal lab

Three calculators for the economics of a fund or a deal. Pick a fund at the top to fill its terms, or choose **Manual / custom**.

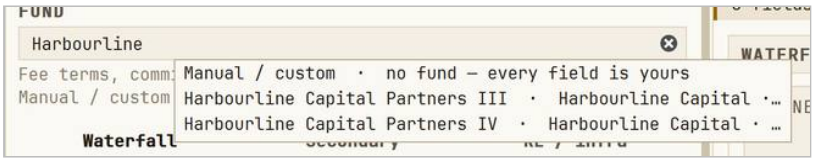


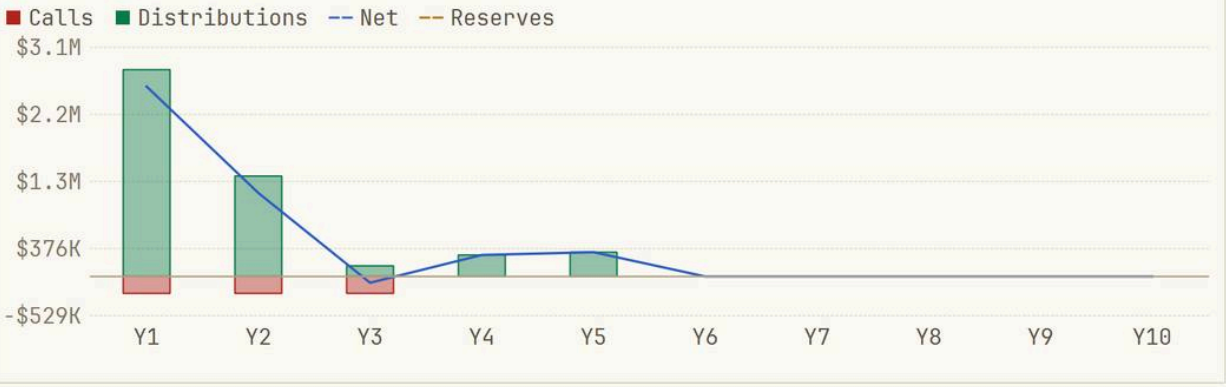
Figure 28.14 Pick a fund at the top of the Deal lab rail: its fee terms, commitment, flows and NAV fill the calculators.



Figure 28.15 The waterfall of Harbourline Capital Partners III: LP net MOIC, GP total, the tier chart and the tier detail.

SECONDARY PRICING RESULT

BID (% OF NAV)	BUYER NET IRR	VS MARKET ANCHOR
90.0%	21.0%	-300 bp
price $3.1M	MOIC 1.4x	below market · anchor 93.0% (buyout)



PROJECTION DETAIL

Year	Call	Distribution	NAV
1.0	$227K	$2.8M	$1.3M
2.0	$227K	$1.4M	$379K
3.0	$227K	$143K	$513K
4.0	$0.00	$290K	$290K
5.0	$0.00	$328K	$0.00
6.0	$0.00	$0.00	$0.00
7.0	$0.00	$0.00	$0.00
8.0	$0.00	$0.00	$0.00
9.0	$0.00	$0.00	$0.00

Figure 28.16 Secondary pricing of the same fund: a 90% of NAV bid gives the buyer a 21.0% net IRR.



EXIT CAP	RENT GROWTH 1.50%	2.25%	3.00% •	3.75%	4.50%
5.00%	$34.7M	$36.7M	$38.8M	$41.1M	$43.5M
5.50%	$32.8M	$34.6M	$36.6M	$38.7M	$40.9M
6.00% •	$31.2M	$32.9M	$34.8M	$36.7M	$38.8M
6.50%	$29.8M	$31.5M	$33.2M	$35.1M	$37.0M
7.00%	$28.7M	$30.3M	$31.9M	$33.6M	$35.5M

PROMOTE WATERFALL

• marks the base-case row / column on the grid above

Tier	Hurdle IRR	LP	GP
Tier 1	8.0%	$16.3M	$1.8M
Tier 2	12.0%	$2.7M	$675K
Tier 3	18.0%	$423K	$181K
Tier 4	18.0%	$0.00	$0.00
Total	–	$19.5M	$2.7M
IRR	12.7%	12.1%	17.2%

Figure 28.17 RE / infra: the exit-cap × rent-growth sensitivity grid (base case ringed) and the promote waterfall.

Tool	Inputs	Results
Waterfall	**Waterfall type** (**European (whole fund)** or **American (deal-by-deal)**), **Preferred return**, **GP catch-up share**, **Carried interest**, **GP commitment**, **Contributed capital** and **Total proceeds**, **Timing** (**Spread: draw, then realise** or **The fund's dated ledger**), the **DEALS — DEAL-BY-DEAL CARRY** table (**Add deal** / **Remove deal**); the **FEE MODEL — GROSS TO NET** (management fee, fee basis, investment period, step-down, offset, fund life, gross MOIC). Press **Run waterfall**.	LP net MOIC, GP total, net MOIC after fees, tier detail, the gross-to-net bridge, per-deal carry, clawback exposure.
Secondary	**Stake NAV**, **Unfunded**, **Strategy**, **Fund age (yrs)**, **Horizon (yrs)**, **Solve direction** (**Bid → buyer IRR** or **Target IRR → bid**), **Bid (% of NAV)** or **Target net IRR**, **Deferral (% price)** and **Deferral (yrs)**, **Unfunded drawn (%)**, **Exit discount to NAV (%)**. Press **Price secondary**.	Bid, buyer net IRR, comparison with the market anchor, projected cash flows.
RE / infra	Rent, vacancy, expenses, price, cap rates, NOI growth, discount rate, capex reserve, exit costs; financing (**LTV**, **Loan rate**, amortising or interest-only, **Min DSCR**, **Min debt yield**); a **PROMOTE — LP/GP JV** ladder. Press **Underwrite**.	Cap rate, DSCR, levered and unlevered IRR, DCF value, the promote waterfall and sensitivity grids.

Waterfall in plain words

A fund pays LPs their money back first, then a **preferred return** (often 8%). Then the GP "catches up" until it has its **carried interest** share (often 20%) of all profit; after that, profit splits 80/20. European = over the whole fund; American = deal by deal (faster carry, with clawback risk).

28.10 Instrument lab

Twenty-four calculators. Search them by name in the **INSTRUMENT** box, set the **ASSUMPTIONS** and press **Analyze**. **MARKET ASSUMPTIONS** (**Risk-free rate**, **Inflation rate**, **Treasury yield**, **Ordinary tax rate**, **LTCG rate**) fill every calculator that needs them.

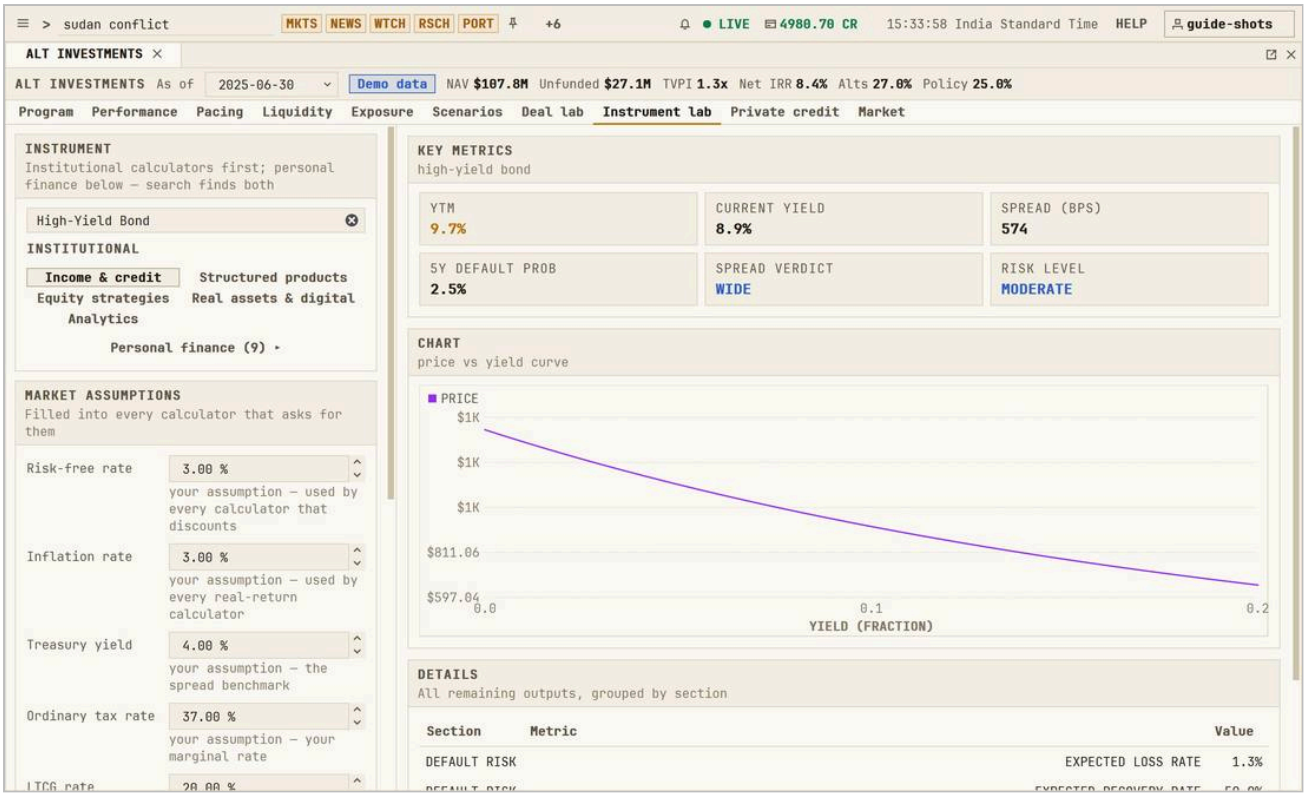


Figure 28.18 The Instrument lab with its key metrics, chart and details.

Group	Calculators
Income & credit	High-Yield Bond, Emerging-Market Bond, Convertible Bond, Preferred Stock, TIPS
Structured products	Structured Note
Equity strategies	Covered Call, Managed Futures / CTA, Market-Neutral Fund
Real assets & digital	International REIT, Commodity Futures, Precious-Metals Equity, Digital Asset
Analytics	Time-Series Performance, VaR & Stress
Personal finance (collapsed)	Series I Savings Bond, Stable Value Fund, Fixed Annuity, Inflation-Indexed Annuity, Variable Annuity, Equity-Indexed Annuity, SRI / ESG Fund, Asset Location, Leveraged ETF Decay

Some calculators start with a **DEMO SERIES** of returns or prices, clearly marked. Replace it with your own data before you rely on the answer.

28.11 Private credit

The **Private credit** tab reads the published loan books (schedules of investments) of listed private-credit lenders, called **BDCs** (business development companies).

1. In the **BDC LENDER** card, click the **BDC lender — name** box to list every lender in the register, or type a name, and pick one. Its book loads by itself.
2. Choose the **Period** (**Latest** by default — each filer's own latest release).

3. Read the **BOOK — FILER AND MODEL** tiles: **FAIR VALUE**, **MARK / COST**, **POSITIONS**, **WEIGHTED RATE**, **FLOATING**, **PIK**, **NON-USD**, **TOP-10 CONCENTRATION**, **PIK POSITIONS**, **NON-ACCRUAL**.

4. Set **CREDIT LOSS ASSUMPTIONS** (**PD** — probability of default, % a year — and **LGD** — loss given default — for **1st lien**, **2nd lien** and **Unsecured / other**; **Reset to defaults**) and a **Rate shock (bp)** in the **BDC LENDER** card, then **Run credit model**. The model runs over the rows loaded on the page; the filer's own figures cover the whole book, and the tiles show both.

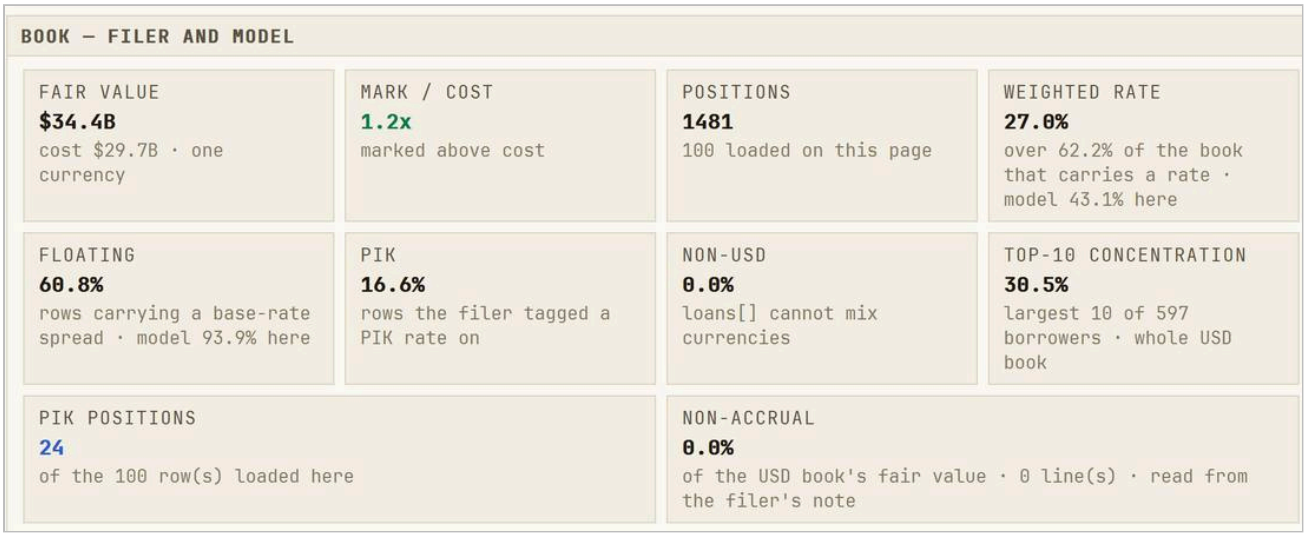


Figure 28.19 BOOK — FILER AND MODEL for ARES CAPITAL CORP: fair value, mark to cost, positions, rates, PIK and non-accrual.

More cards: **BOOK SHAPE** (by currency, lien, rate type, industry), **SCHEDULE OF INVESTMENTS** (every loan, largest fair value first, 100 per page with **Previous 100** / **Next 100**; **Export CSV**), **FAIR VALUE BY REPORTING PERIOD**, **MARK-TO-COST DISTRIBUTION**. **BORROWER SEARCH** (type at least three letters in **Borrower**, then **Search all BDCs**) finds one company across every lender's latest schedule; **WHO LENDS TO THIS BORROWER** lists them. Double-click a borrower in the schedule to search it.

Plain words

Mark / cost below 1.0x (100%) means the lender values the loan below what it paid — a sign of stress. **PIK** (payment in kind) interest is added to the loan instead of paid in cash. **Non-accrual** loans have stopped paying.



Figure 28.20 FAIR VALUE BY REPORTING PERIOD: the lender's fair value and cost at each filed period.

28.12 Market

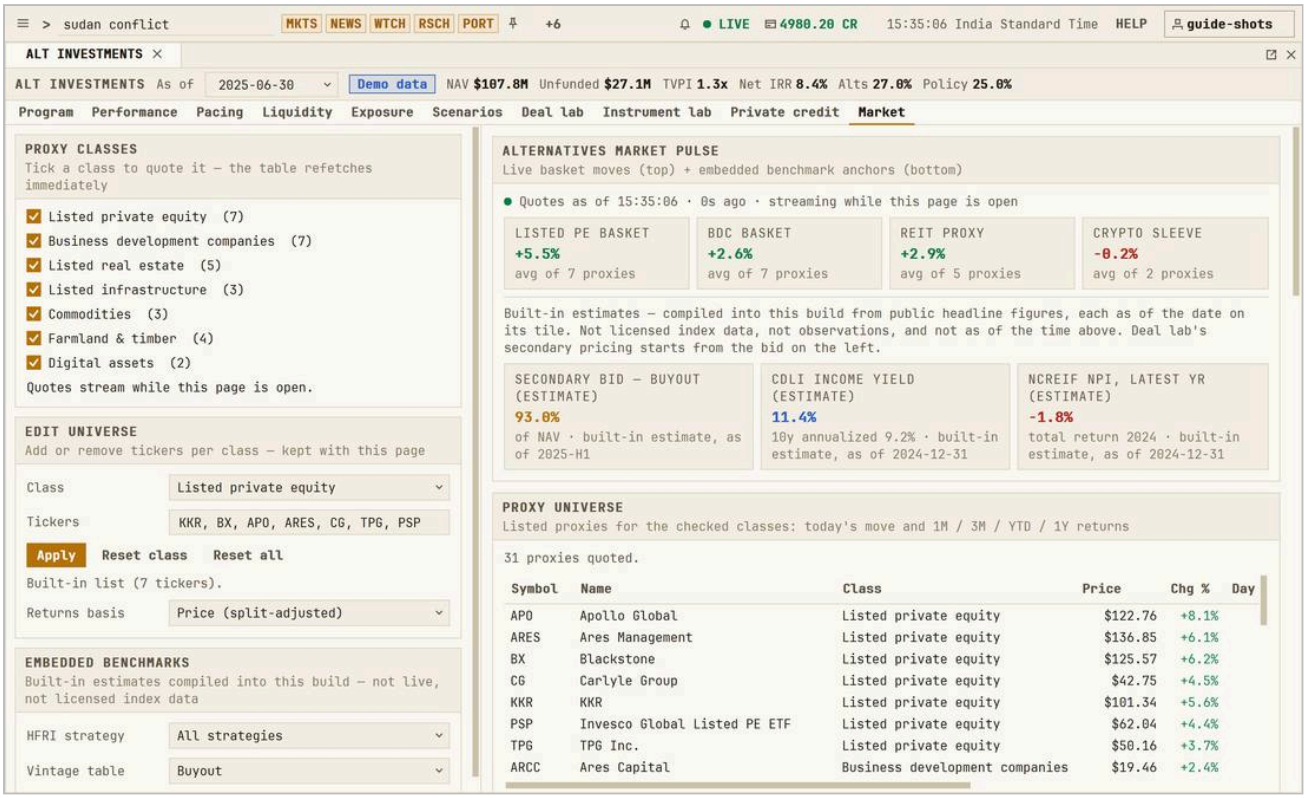


Figure 28.21 The Market tab: proxy classes, the market pulse and the proxy universe.

Card	What it shows
PROXY CLASSES	Tick the classes to quote: **Listed private equity**, **Business development companies**, **Listed real estate**, **Listed infrastructure**, **Commodities**, **Farmland & timber**, **Digital assets** (the number of tickers in brackets). Quotes stream while the page is open.
ALTERNATIVES MARKET PULSE	Live basket moves (**LISTED PE BASKET**, **BDC BASKET**, **REIT PROXY**, **CRYPTO SLEEVE**) and built-in estimates (secondary buyout bid, private credit income yield, private real estate return).
PROXY UNIVERSE	Every proxy: symbol, name, class, price, change, day range, volume, 1M, 3M, YTD and 1Y returns. **Export CSV**. **EDIT UNIVERSE** (rail) adds or removes tickers per class (**Class**, **Tickers**, **Apply**, **Reset class**, **Reset all**) and sets the **Returns basis** (**Price (split-adjusted)** or **Total return (dividends in)**).
BDC MARKET — OBSERVED PRIVATE-CREDIT MARKS	The largest filed loan books: period end, fair value, cost, mark / cost, positions.
Listed BDCs — price vs NAV	Price, NAV per share, price / NAV, premium or discount, dividend yield, and the median premium or discount.
FUNDRAISING & GPs — SEC FORM D	Who is raising money, how much and through whom, from Form D filings (amounts in US dollars). **View** (**Grouped raises** — the parallel vehicles of one closing counted once — or **Form D notices**, one row per filing), **Search** (sponsor or fund name), **Strategy**, **Fund type**, **Filed from** … **to**, **Min sold (USD m)**, **Several vehicles only**, **Sort** (**Newest filing**, **Largest raise**, **Most vehicles**), **Search**, **Reset filters**, **Previous** / **Next**. Click a row for its vehicles, fees and placement agents, and the sponsor's earlier raises; **Add to program…** opens the Program tab's fund editor prefilled (nothing is saved until you press **Save fund**).
Hedge fund composites	Built-in growth-of-1 lines by strategy (pick the strategy under **EMBEDDED BENCHMARKS** on the rail).

Card	What it shows
PE VINTAGE BENCHMARKS (BUILT-IN ESTIMATE)	Pooled IRR, quartiles and median TVPI by vintage — what Performance ranks your funds against (pick the **Vintage table** under **EMBEDDED BENCHMARKS**). **Open Performance**.

Built-in benchmarks are compiled into the terminal and marked "estimate" with their as-of date.

28.13 Reference

Plans and credits

Your plan decides how many tabs open, counted from the left: the first five (**Program**, **Performance**, **Pacing**, **Liquidity**, **Exposure**) on **Exclusive**, all ten on **Exclusive+** and **Exclusive Pro.** A tab beyond your plan keeps its name, shows a lock and opens the upgrade sheet. **Simulate program** is charged in credits (1 credit when this guide was written); all other models are free.

Program rail

Card	Controls
PROGRAM DATA & BACKUPS	Load demo program, Start my program, Restore previous program..., Clear all data
PROGRAM SETTINGS	Policy target %, Total portfolio, Liquid reserves, Credit line, Currency, Stale mark after, As-of date; **FX rates (fund currencies)** with a flat fallback, a dated **Rate table…**, **Use the latest close** and **Reload FX history**
FUND EDITOR	**Search SEC Form D — issuer name**, **More filters…**, Fund (right-click to remove), Name, GP, Strategy, Vintage, Geography, Region split, Fund currency, Commitment, **Fee terms**, Status, **Pacing curve (this fund)**, **Save fund**, **Add cash flow**, **Add NAV mark**
HEDGE FUND / LIQUID ALTS	Position (right-click to remove), Name, Strategy, Invested, Inception, MONTHLY RETURNS (with **Returns are in**), Liquidity terms, **Save position**
FUNDING SIMULATION	Horizon, Paths, Confidence (%), Seed, shocks and correlation, **Reset to defaults**, **Simulate program** (credits)

Form D import dialog

Title **Import from Form D — SEC private placements**. **Issuer**, **Industry**, **State**, **Pooled funds only**, **Sort** (**Largest raise** or **Most recent**), **Search Form D**; a results table (**Entity**, **Industry**, **State**, **Filed**, **Sold**, **Offering**, **Investors**, **Remaining**); a detail panel that says who filed the notice and what it will prefill; **Cancel** and **Prefill fund editor**. Prefill fills the name, GP, vintage, geography and strategy, never the commitment.

Ledger import dialog

Cash flows / NAV marks; **Paste from clipboard**, **Open CSV / TSV...**; **Delimiter**, **First row is a header**, **Date column**, **Fund column**, **Type column**, **Amount column** (or **NAV column**), **Date order**, **Decimal separator**, **Direction**, **Default fund**; a preview (**Line**, **Status**, **Date**, **Fund**, **Type**, **Amount**); **Also import duplicates**; **Cancel**, **Import**. Files up to 8 MB.

Exports

Export CSV on the tables writes a file to the File Manager (**Chapter 47, File Manager** p. 882). Right-click a table for **Copy cell**, **Copy row** and **Copy table as CSV**; Ctrl + C copies the selected rows.

28.14 For advanced users

- **IRR** is an XIRR over the dated flows, with the cash-adjusted NAV as the final value.
- **TVPI** = (distributions + cash-adjusted NAV) ÷ paid-in; **DPI** = distributions ÷ paid-in.
- **KS-PME** = (index-compounded distributions + NAV) ÷ index-compounded calls.
- **Currencies.** Each fund can have its own currency; flows convert at their own date's rate and NAV at the mark date. A fund with no rate is left out of the totals and the header says so.
- **Stale marks.** A NAV older than **Stale mark after** days is flagged.
- **Shared assumptions.** Stress inputs (call multiplier, distribution haircut) are saved with the program and shared between Liquidity and Scenarios.

Do it with AI

- "On ALTS, what is my program's TVPI and net IRR, and which fund drags it down most?"
- "How much should I commit per year to reach a 25% alternatives allocation in five years?"
- "Run the 2008 stress scenario and tell me if my reserves cover the calls."

28.15 Troubleshooting

"required — ..." under a field

The model needs that input (for example the policy target or the total portfolio value). Set it on the Program tab's **PROGRAM SETTINGS**.

"Not saved: the demo program is still loaded"

Your edits cannot be mixed into the sample. Press **Start my program** first.

The IRR shows n/m

The IRR did not converge — usually too few flows or no NAV mark yet. Add the fund's calls, distributions and a NAV mark.

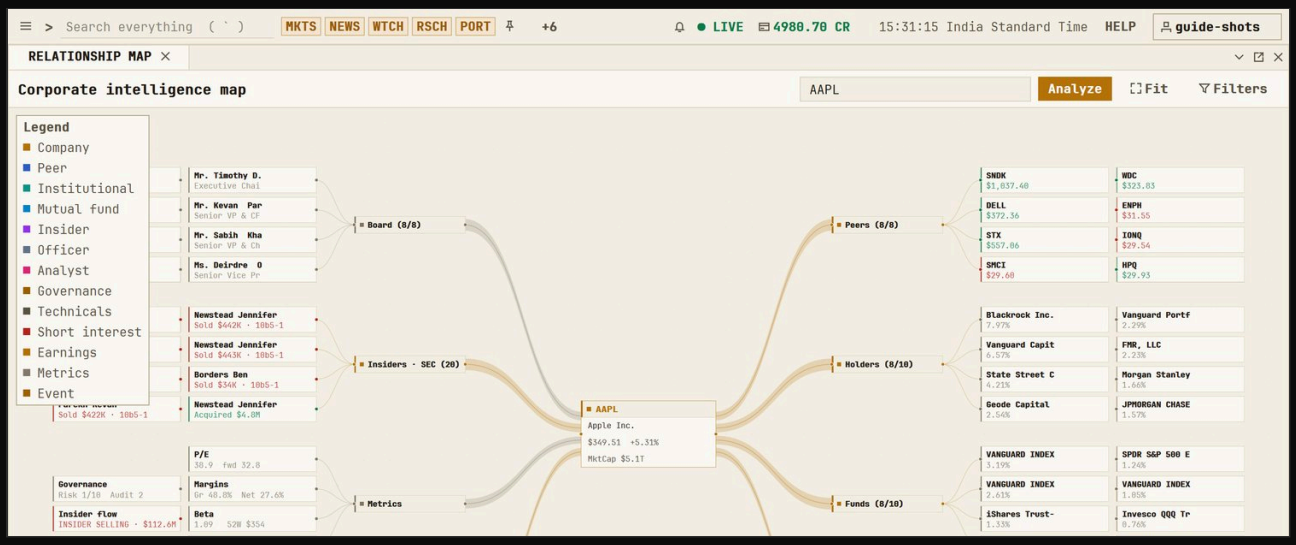
Live prices or the PME index do not load

Sign in. Without a session the built-in estimates are used where they exist.

CHAPTER 29

Relationship Map RMAP

One picture of everything around a company — its peers, the funds and institutions that own it, its board, insiders' trades, analysts' ratings, key metrics and recent filings — drawn as a map you can click through.



At a glance

Open it	• Type `RMAP` in the command line and press **Enter** • Type `relmap`, `relationship` or `relationships` in the command line and press **Enter** • Search **Relationship Map** in the command line and pick it from the list
You need	• Signed in on any paid plan • A company's ticker or name
Best for	• Seeing who owns a company and who runs it • Spotting insider buying or selling • Finding a company's peers before a deeper comparison
Time to learn	5 minutes
Related	**Chapter 22, Equity Research** p. 392, **Chapter 27, M&A Analytics** p. 556, **Chapter 23, Portfolio** p. 430

In this chapter

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29.1 Screen tour

The Relationship Map shows one company at a time. The company sits in the middle as a large card. Groups of smaller cards fan out to the left and right: who owns it, who competes with it, who runs it, what analysts say and what it has filed recently.



Figure 29.1 The Relationship Map for Apple (AAPL). Ownership and market views are on the right, people, metrics and filings on the left.

1. **Search box.** Type a ticker or a company name.
2. **Analyze** builds the map for the company in the search box.
3. **Fit** zooms the map so every card fits in the window.
4. **Filters** opens a panel to show or hide groups of cards.
5. The **Legend** names the colour of each kind of card.
6. The **company card**: ticker, name, price, today's change and market value. Click it to open Equity Research.
7. The **status bar** counts what the map holds and shows the data quality score.

1. **Search box** — type a ticker (AAPL) or a name (Tesla). Suggestions appear as you type.
2. **Analyze** — builds the map. While you wait, a line under the header says what is being fetched.
3. **Fit** — zooms in or out so the whole map fits the window.
4. **Filters** — a panel on the left with one switch per group of cards.
5. **Legend** — floats over the top-left corner of the map once a map has loaded.
6. **Company card** — the subject of the map. One click opens it in **Chapter 22, Equity Research** p. 392.
7. **Status bar** — the counts of cards, peers, holders and filings, where the filing data came from, and a **Data quality** percentage.

Before your first search, the map area shows **Search a company to map it** with a short hint. After that, the screen reopens on the last company you mapped.

29.2 Quick start

1. Type `RMAP` in the command line at the top and press **Enter**.
2. Click the **Ticker or company** box and type `AAPL`. After two letters a list of matching companies drops down.
3. Click **AAPL** in the list, or press **Enter** or click **Analyze** — with the list open, the first suggestion is used.
4. Wait a few seconds. The map area reads **Mapping AAPL...** and the line under the header reads **Fetching relationship data for AAPL...**.
5. The map appears and fits itself to the window. Hover over cards to highlight them.

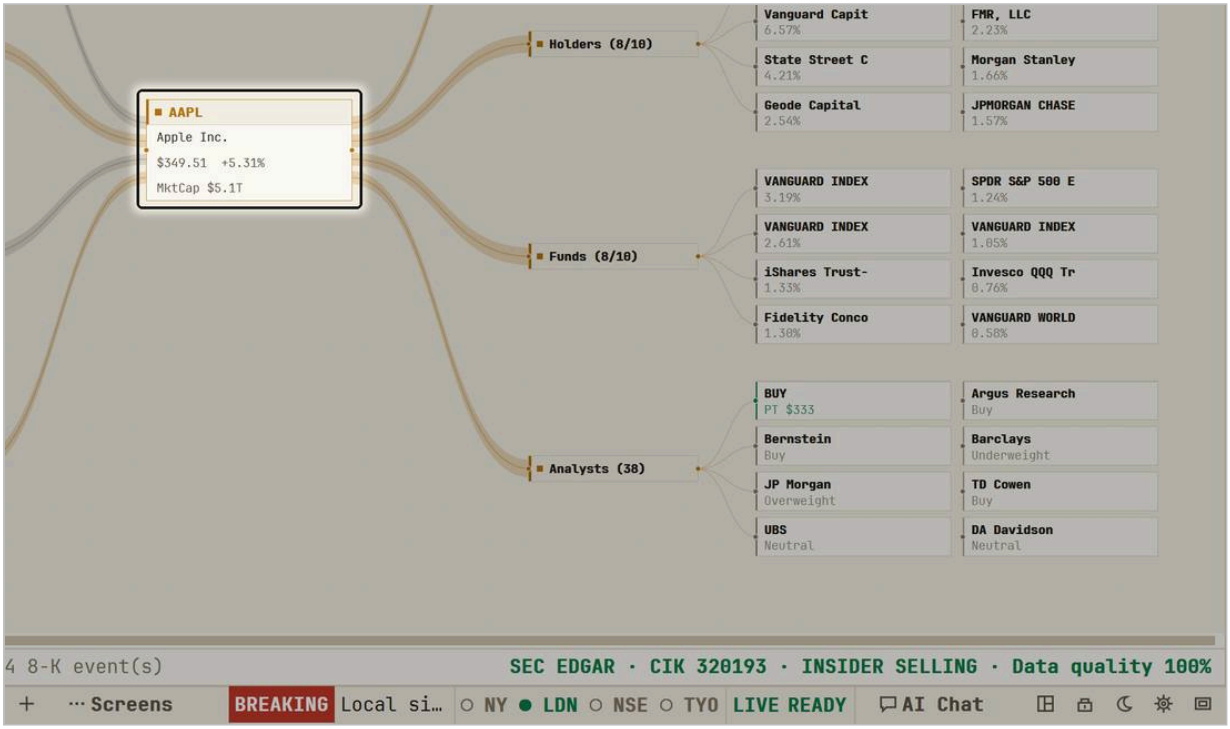


Figure 29.2 Apple's map. The company card sits in the middle; the status bar counts what was found.

6. Click any small card. Its full record opens in a panel on the right (see **§29.4 See the details of a card** p. 608).

> **Tip**
>
> A map you built in the last ten minutes opens instantly — the screen keeps it for ten minutes and does not ask the server again.

29.3 Read the map

Every group of cards hangs from a small label (a "hub") with a count. **Peers (8/8)** means eight peers were found and all eight are drawn. When a group has more entries than fit, the first number is smaller: **Holders (8/10)** draws the top eight of ten. Three hubs show one number instead: **Analysts (38)** is the number of analysts who

cover the company, and **Insiders · SEC (20)** and **8-K Events (14)** count all the filings found, however many cards are drawn. **Metrics** has no count.

Names on the cards are cut short (for example **Vanguard Capit**). Click a card to read the whole name in the detail panel.

Right side: the market's view

Group	What the cards show	Most cards
Peers	Companies in the same industry, home country first. Each card shows the ticker and price; green if its price is up over 52 weeks, red if down.	8
Holders	The largest institutional owners and the share of the company each holds.	8
Funds	The largest mutual-fund owners and their share.	8
Analysts	The consensus rating with the mean price target (**PT**), then recent upgrades (green), downgrades (red) and reiterations.	8, the consensus card included

Left side: people, health and events

Group	What the cards show	Most cards
Board	Officers and directors with their titles.	10
Insiders · SEC	Recent insider trades reported on SEC Form 4 — who bought, sold, acquired or disposed of shares, how much, and whether the trade was under a pre-arranged **10b5-1** plan.	8
Insiders	For companies outside the US (no Form 4), the largest insider holders and their last transaction.	8
Metrics	Six headline facts: **P/E** (and forward P/E), **Margins** (gross and net), **Beta** and 52-week high, **Short int** (short interest as a share of the float and days to cover), **Governance** risk score, and **Insider flow**.	6
8-K Events	Material events the company reported to the SEC on Form 8-K (earnings releases, leadership changes, deals…), with the date.	7

Terms used on the cards:

- **Form 4** — the filing a US company insider must make within two business days of trading the company's shares.
- **Form 8-K** — the filing a US company makes to announce a major event.
- **10b5-1 plan** — a trading plan set up in advance, so a sale under it is routine rather than a signal.
- **Short interest** — shares sold short as a percentage of the shares available to trade. The card turns red above 5%.
- **Days to cover** (**cvr**) — how many days of average volume it would take short sellers to buy back.
- **Governance risk** — a score from 1 (low) to 10 (high) for audit, board, pay and shareholder rights. Red above 6.
- **Insider flow** — the balance of open-market insider buying and selling over the last six months, for example **INSIDER SELLING** with the value sold.

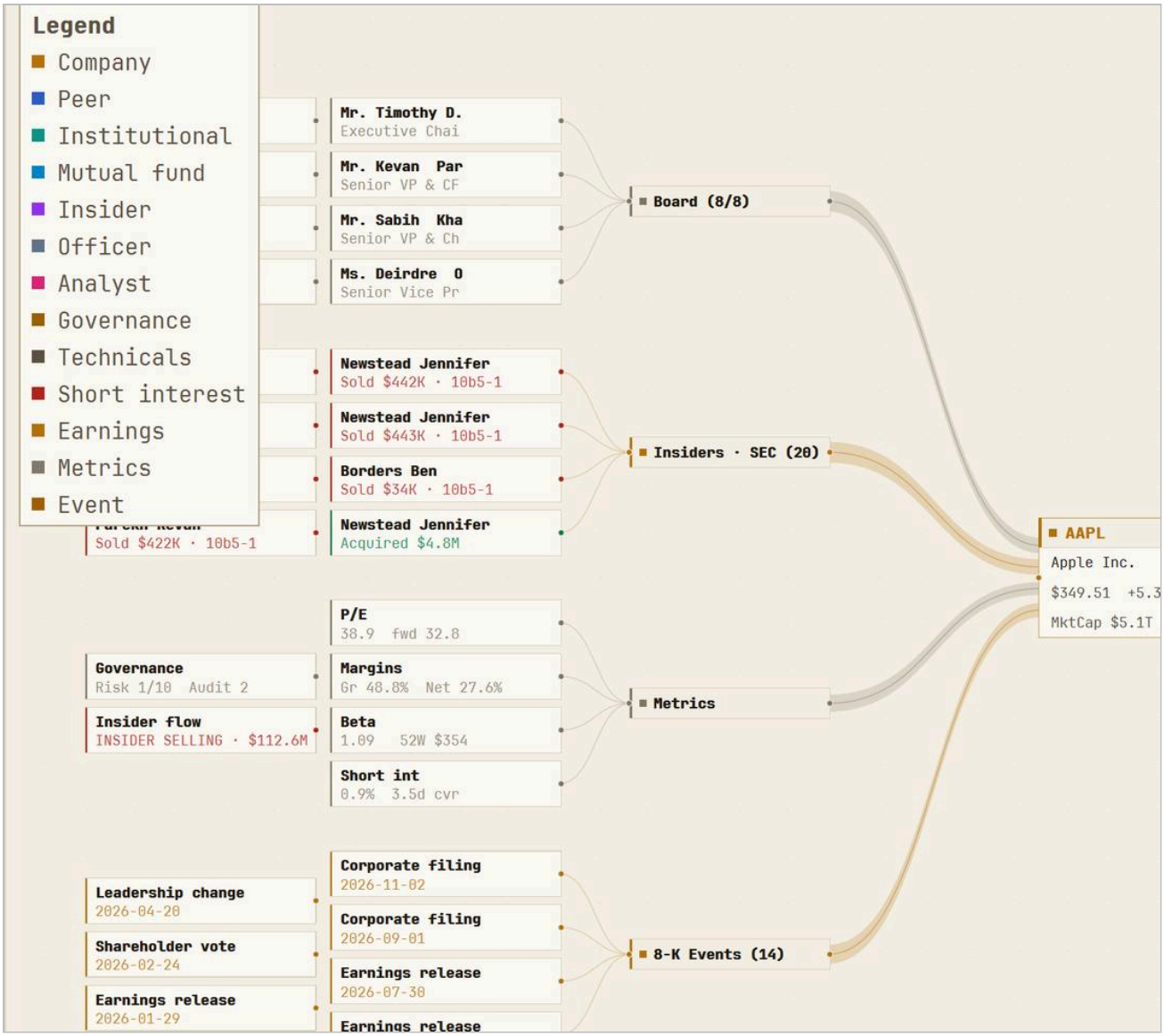


Figure 29.3 The left side of the map — board, insider trades, metrics and filings.

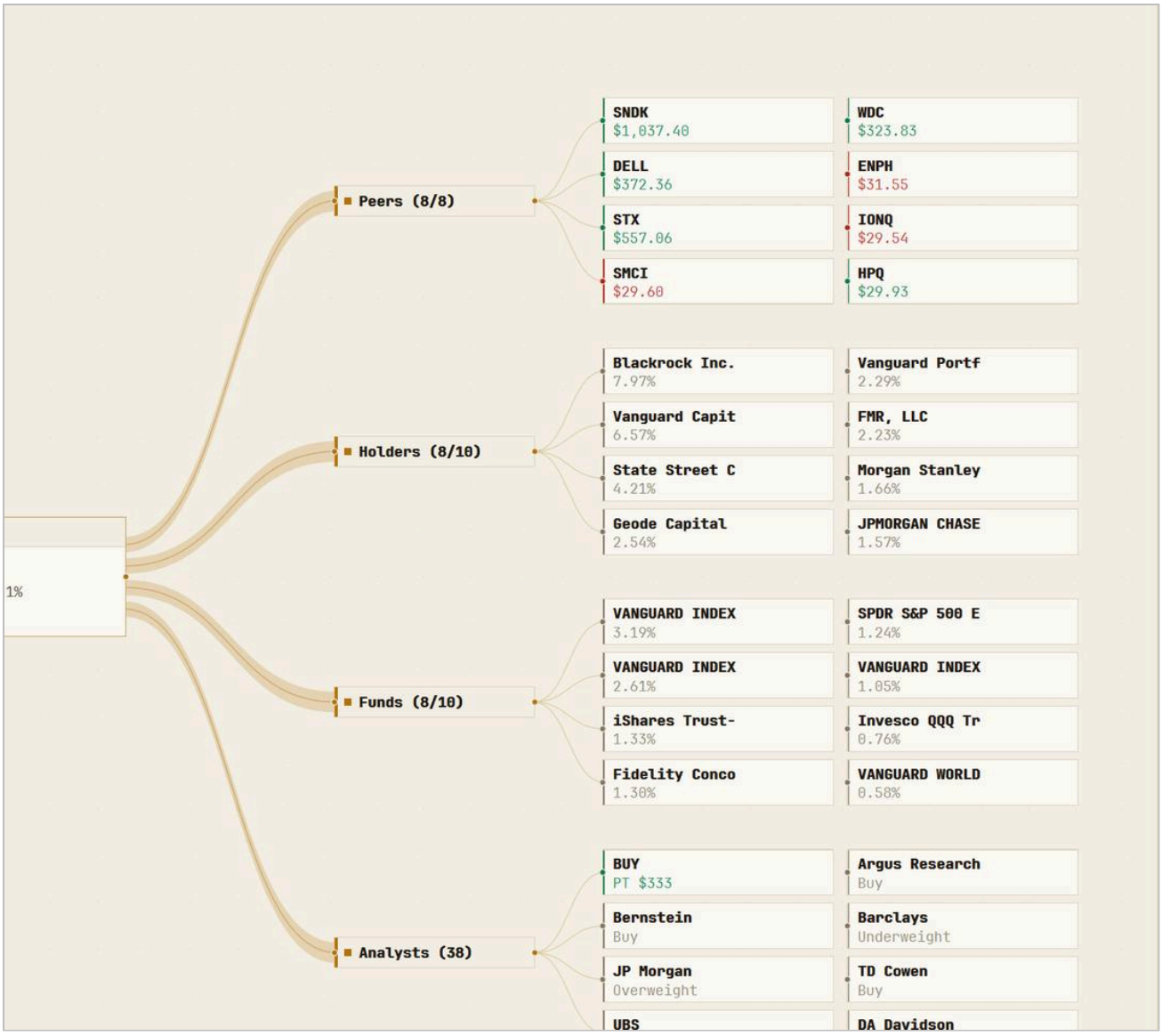


Figure 29.4 The right side — peers, holders, funds and analysts.

29.4 See the details of a card

Use this when a card's short label is not enough — for example to see a holder's exact share count.

1. Click a card. It is outlined, and the detail panel opens on the right. Before you pick a card, the panel's title reads **Select a node**.
2. Read the title, the group (in the accent colour) and the facts. Long values wrap; you can select text and copy it.
3. Click another card to switch, or click an empty part of the map (or the **X** at the top of the panel) to close it.

What the panel lists depends on the card:

Card	Facts in the panel
Peer	Price, Market cap, P/E, Forward P/E, ROE, Revenue growth, Profit margin, EV/EBITDA, Beta, Sector, Recommendation

Card	Facts in the panel
Institutional holder / Mutual fund	Share of company, Shares, Value, Fund family
Analysts (consensus)	Analysts, Target mean, Target median, Target high, Target low, Mean rating
Analyst rating	Date, Action (Upgrade, Downgrade, Maintained, Reiterated), From, To, Price target, Prior target
Officer	Total pay, Born
Insider (SEC Form 4)	Activity, Date, Filed, Net shares, Net value, Transaction codes, 10b5-1 plan, Accession
Insider	Shares, Share of company, Last transaction
Metric	The metric's two lines
Event	Date, Form, Category, Items, Accession
A group's hub (for example Holders (8/10))	Every card of the group by its whole name, with the card's second line

A fact with no data is left out rather than shown as zero.

Note

Company figures are in the currency of the company's listing. Insider trade values from Form 4 are in US dollars.

29.5 Show or hide groups

Use the filters when the map is crowded and you want to focus on, say, ownership only.

1. Click **Filters** in the header. A panel opens on the left of the map.
2. Untick a group, for example **Peers**, **Analysts** and **Events**. The map redraws at once.
3. Click **Fit** to fill the window with what is left.
4. Click **Filters** again to close the panel. Your choices stay in place.

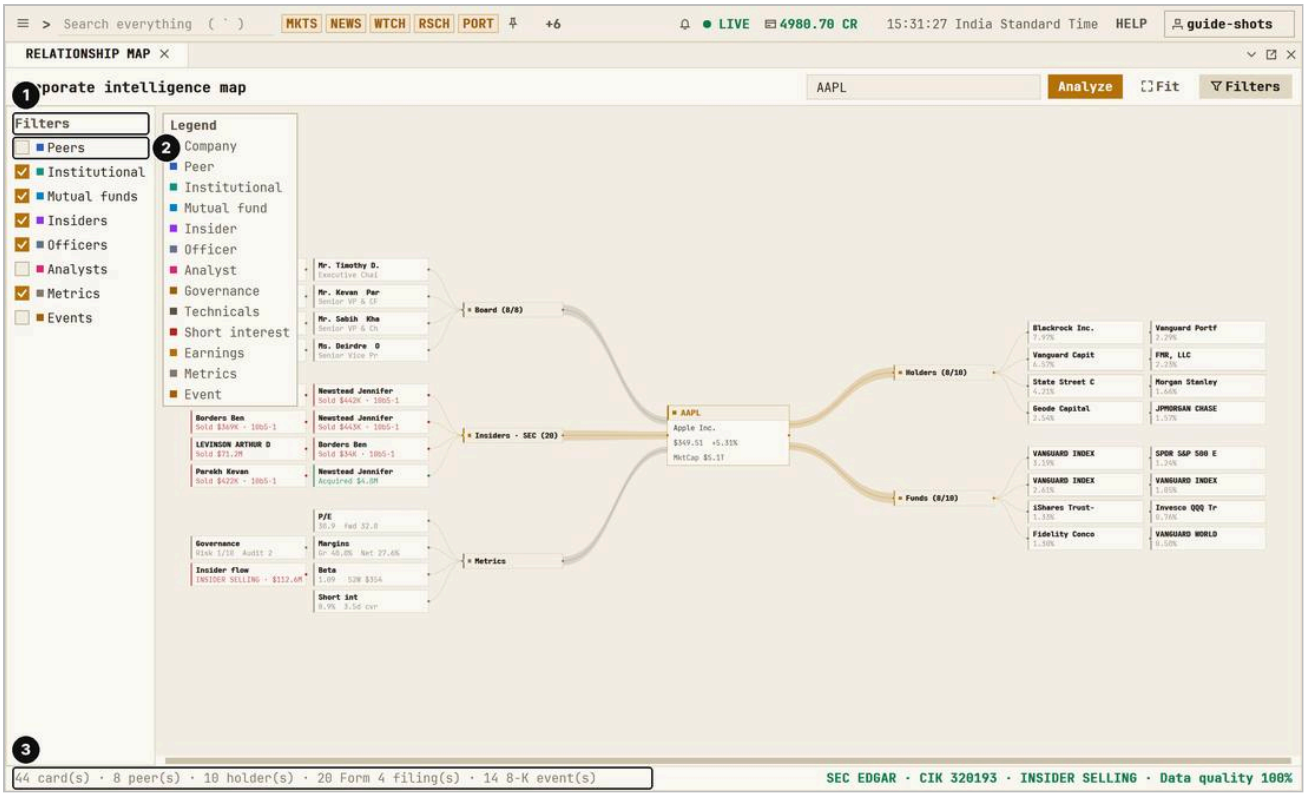


Figure 29.5 Peers, Analysts and Events switched off. The map now shows ownership, people and metrics only.

1. The **Filters** panel. Each switch carries the colour of its cards.
2. Unticked groups disappear from the map.
3. The card count follows the filters (44 cards instead of 70).

Switch	Hides or shows
Peers	The Peers group
Institutional	The Holders and Funds groups (see the note)
Mutual funds	The Holders and Funds groups (see the note)
Insiders	Insiders · SEC, or Insiders for non-US companies
Officers	The Board group
Analysts	The Analysts group
Metrics	The Metrics group
Events	The 8-K Events group

Careful

Institutional and **Mutual funds** control the same thing. Unticking either one hides both the Holders and the Funds groups, and the other box keeps its tick. To bring them back, tick the box you unticked.

The company card is always shown. All switches are on when the screen opens.

29.6 Move around the map

To	Do this
Zoom in or out	Turn the mouse wheel over the map. Zoom goes from 15% to 400%. It zooms towards the pointer.
Pan	Drag an empty part of the map with the left mouse button, or drag anywhere with the middle button.
Move a card	Drag the card (or a hub) with the left mouse button. Its links follow. **Fit** does not put it back; **Analyze** redraws the map from the start.
See everything again	Click **Fit**.
Open the company in Equity Research	Click the company card in the middle.

29.7 Reference

Header

Control	What it does
Corporate intelligence map	The screen's title.
Ticker or company box	Type a ticker or a company name. After two letters, up to 10 matching stocks drop down; click one to map it. **No results found** means nothing matched.
Analyze	Builds the map for the box's text (or the highlighted suggestion). The text is turned to upper case.
Fit	Fits the whole map in the view. Its tooltip says "(or press Home)", but the `Home` key does nothing on this screen: use the button.
Filters	Shows or hides the Filters panel.

Progress and errors

Message	Where	Meaning
Search a company to map it	Map area	Nothing has been mapped yet.
Mapping AAPL…	Map area	The request has been sent. The line under it reads **Peers, holders, insiders, analysts and SEC filings are being gathered.**
Fetching relationship data for AAPL...	Line under the header	The data is being gathered. The bar beside it stays short until the answer arrives; then the map appears.
Error: … (red)	Line under the header	The map could not be built. The map area says **Could not map AAPL** with the reason.

The screen also has the messages **Building graph data...**, **Loaded from cache** and **Complete**, but the map replaces them at once, so you rarely see them.

Status bar

Item	Meaning
N card(s)	How many cards the map draws now (with the current filters).
N peer(s), N holder(s)	How many peers and institutional holders were found in total.
N Form 4 filing(s)	Insider filings found (US companies). If the insider data is not available, this reads **Form 4:** and the reason.
N 8-K event(s)	Event filings found (US companies).
SEC EDGAR · CIK …	Shown in green when the company's SEC filings were read; CIK is the company's SEC identity number. The insider-flow signal follows.
Data quality N%	How much of the expected data arrived. 100% means every group could be filled.

Legend colours

The legend lists 13 kinds of card: Company, Peer, Institutional, Mutual fund, Insider, Officer, Analyst, Governance, Technicals, Short interest, Earnings, Metrics and Event. Colours follow your theme.

What the screen does not have

The map has one layout (the company in the middle, groups to the left and right): there is no layout picker. There is no export, print or right-click menu. The switches in the Filters panel are not saved: they are all on again the next time the screen opens.

29.8 For advanced users

- **Where peers come from.** Peers are up to eight companies filed under the same industry in Fincept's symbol index (the same sector when no industry set is known), with companies from the same home country first. A peer with no price is left out. They are a starting list, not a competitor analysis — check them in **Chapter 22, Equity Research** p. 392 before using them in a valuation.
- **What the map remembers.** The screen saves the last ticker. When you reopen the terminal or switch back to a workspace, the map is rebuilt for that ticker.
- **Cost and plan.** Building a map is free on every paid plan. Repeating a map within ten minutes does not even ask the server again. The SEC Form 4 insider trades need Exclusive+ or Exclusive Pro; on Exclusive the status bar reads **Form 4:** with the reason.
- **Non-US companies.** SEC data exists only for companies that file with the SEC. For a company such as RELIANCE.NS the map shows its board, peers, analysts and metrics, uses insider holdings instead of Form 4 trades, and has no 8-K group. Groups with no data (here, holders) are left out, and the **Data quality** score is lower.

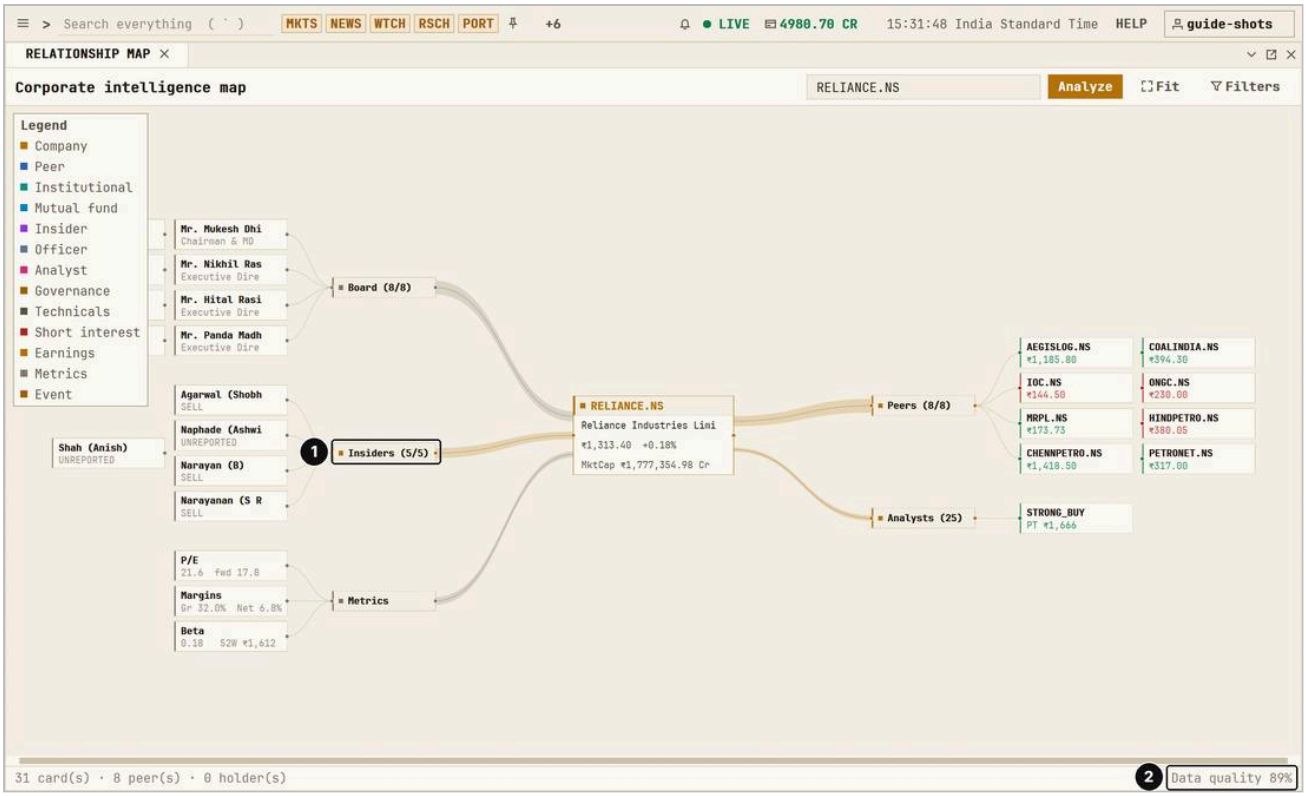


Figure 29.6 Reliance Industries (RELIANCE.NS) — a non-US company. There are no SEC groups and no holders here.

1. Insider holdings and their last transaction, instead of SEC Form 4 trades.
2. A lower data quality score: some groups had no data.

- **Cross-screen workflow.** Map a company here, click the company card to open **Chapter 22, Equity Research** p. 392, and check its ownership and filings sections there. Peers you find here make a good starting list for **Chapter 27, M&A Analytics** p. 556 comparables.

Do it with AI

Ask the terminal's AI (see **Chapter 37, AI Chat** p. 719):

- "Open the relationship map for NVDA."
- "Who are the largest holders of Microsoft, and have insiders been selling?"
- "Map Tesla and list its board members."

The AI opens the map for you as a person would. The cards are drawn on the map rather than being controls, so it answers questions about holders, insiders and officers from its own data tools, not by reading the cards.

29.9 Troubleshooting



Figure 29.7 A ticker that does not exist. The reason is in red under the header and in the middle of the map area.

If something goes wrong

The map stays empty and says "Could not map ...". The ticker was not recognised or the data was not available. Pick the company from the suggestion list instead of typing the ticker, so the exchange suffix is right (for example `RELIANCE.NS`). Then click **Analyze** again.

There is no Insiders · SEC or 8-K Events group. The company does not file with the SEC (it is listed outside the US), or the insider data is not available on your plan (Form 4 trades need Exclusive+ or Exclusive Pro) — the status bar then reads **Form 4:** and the reason.

I moved some cards and want the tidy map back. Click **Analyze** again with the same ticker: the map is redrawn from the start.

Pressing Home does not fit the map. The **Fit** tooltip mentions the `Home` key, but the screen does not react to it. Click **Fit** instead.

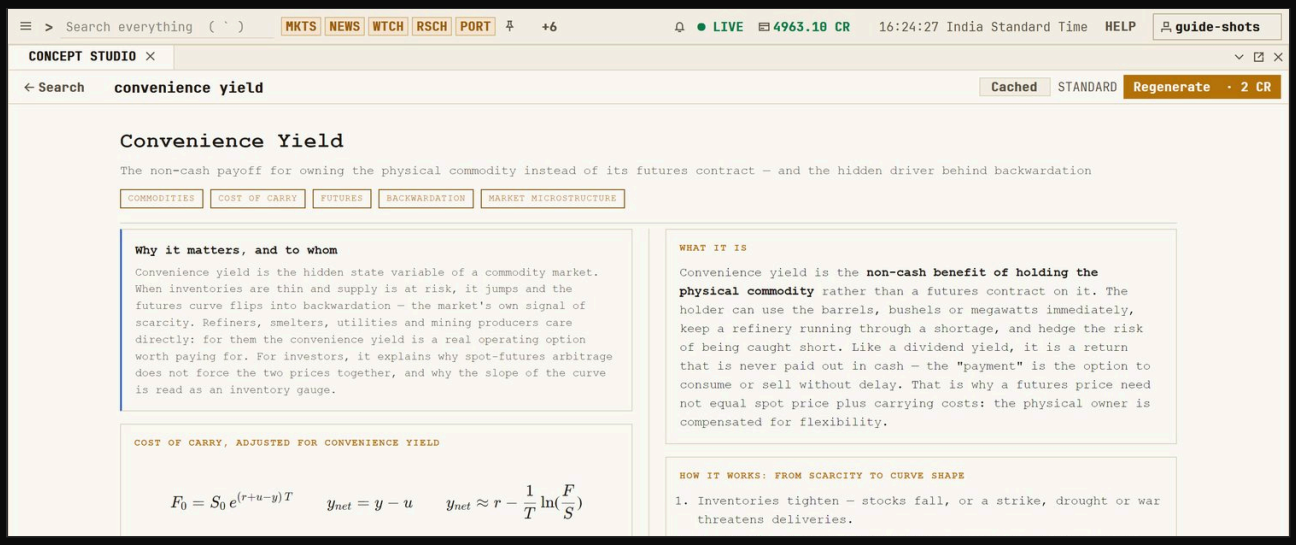
A group I expect is missing. Check the Filters panel: the group may be switched off. A group with no data is not drawn at all.

The numbers look out of date. A map is kept for ten minutes. Wait, then click **Analyze** again for a fresh copy.

CHAPTER 30

Concept Studio CNPT

Type any finance or economics idea — bond convexity, contango, the IS-LM model — and Concept Studio researches it and builds a visual page for you, with plain explanations, formulas, charts, real examples and references.



At a glance

Open it	• Type `CNPT` in the command line and press **Enter** • Type `concept`, `learn`, `explain` or `visualize` in the command line and press **Enter**
You need	• Signed in on any paid plan • 2 credits for each new page (pages already built are free)
Best for	• Learning a term you met in a report • Teaching or revising a topic • A quick refresher before using a screen
Time to learn	5 minutes
Related	**Chapter 37, AI Chat** p. 719, **Chapter 32, Global Data** p. 648, **Chapter 22, Equity Research** p. 392

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30.1 Screen tour

Concept Studio has two pages. The **search page** is where you ask. The **concept page** is what it builds.

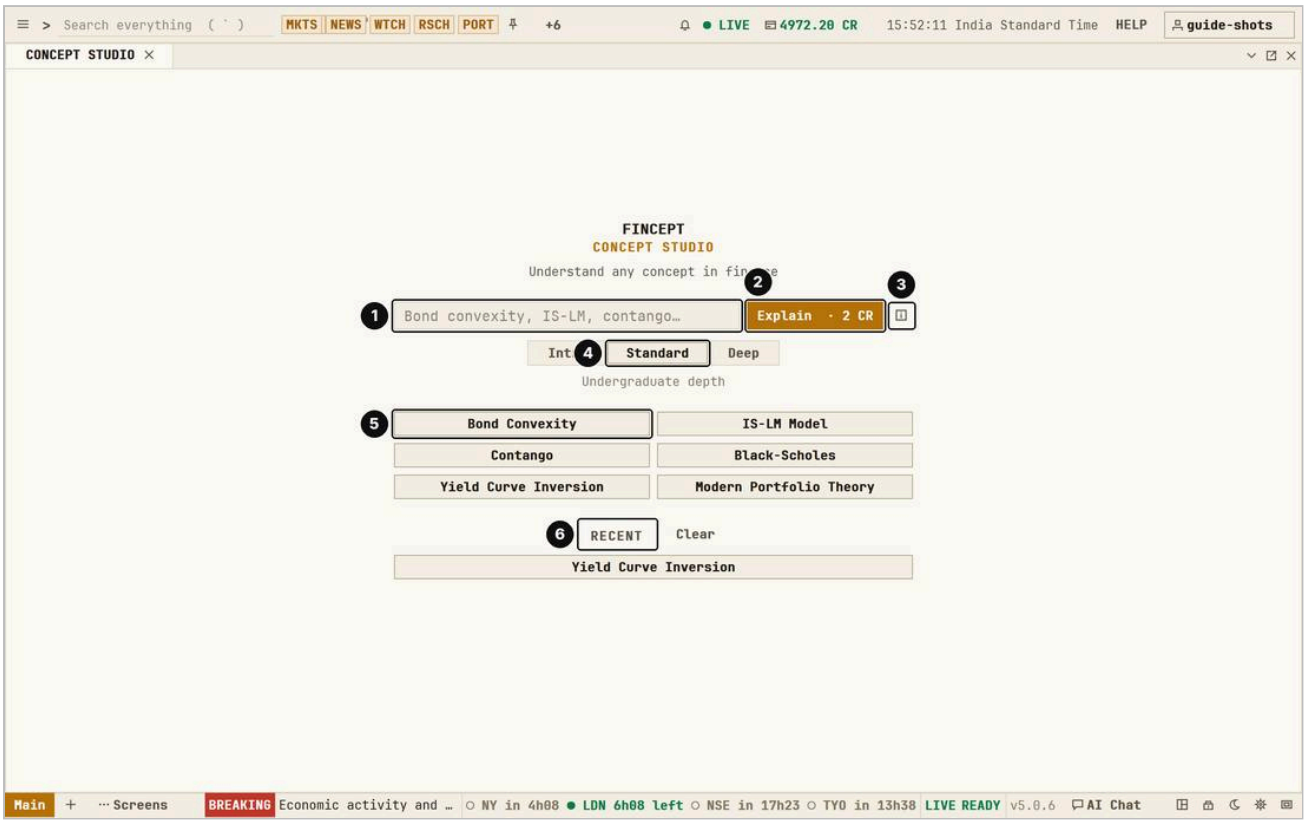


Figure 30.1 The search page.

1. The **search box**. Type a concept; suggestions appear as you type.
2. **Explain** builds the page. The button shows its price.
3. The ⓘ button: hover for the price, click for this screen's price list.
4. **Intro / Standard / Deep** — how advanced the explanation is.
5. **Example chips** — one click builds that page.
6. **Recent** — your latest searches, with **Clear**.

1. **Search box** — type a concept in your own words.
2. **Explain** — builds the page. The price is printed on the button (**2 CR** — two credits).
3. ⓘ — hover it to read the price and when it is charged ("Costs 2 credits — that is the whole charge. Charged when a complete page is delivered..."). Click it for the list of what costs credits on this screen.
4. **Depth** — **Intro** ("Essentials, plain language"), **Standard** ("Undergraduate depth", the default) or **Deep** ("MBA/CFA machinery"). Hover a choice to see who it is written for.
5. **Example chips** — Bond Convexity, IS-LM Model, Contango, Black-Scholes, Yield Curve Inversion and Modern Portfolio Theory. A chip fills the box and presses **Explain** for you.
6. **Recent** — appears after your first search (see **§30.6 Use your recent searches** p. 620).

30.2 Quick start

This quick start builds a new page, which costs 2 credits.

1. Type `CNPT` in the command line and press `Enter`.

2. Click in the search box and type `convenience yield`. Leave the depth on **Standard**.

3. Click **Explain**. The screen switches to the concept page and shows **Researching… Cancel stops the build.**

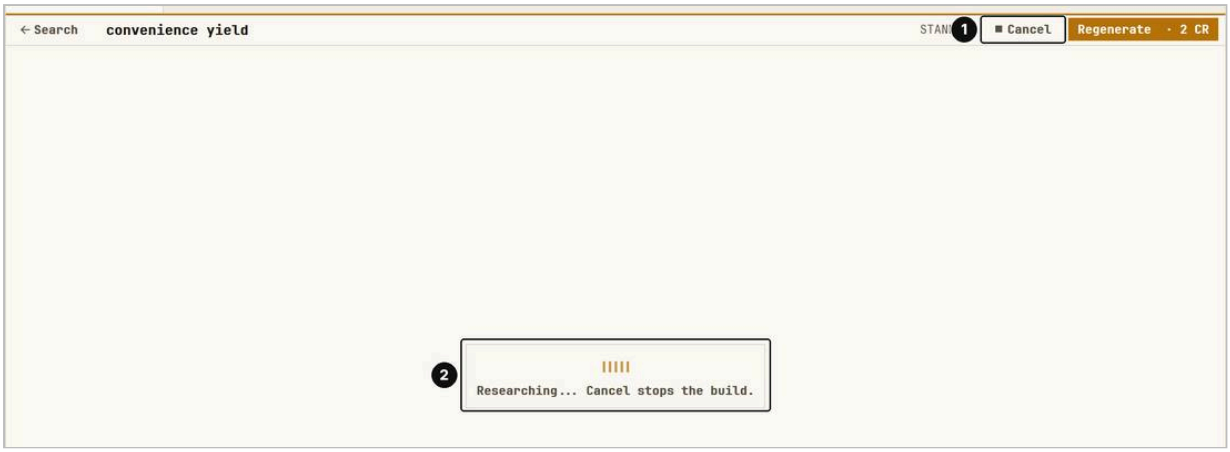


Figure 30.2 The page is being researched. Sections stream in as they are ready; Cancel stops the build.

1. **Cancel** stops the build. Nothing is charged.
2. The progress message.

4. Wait. The first sections appear within a minute or two and the rest stream in. You can read while it builds.

5. When the page is complete, scroll through it. Click a reference to open it in your web browser.

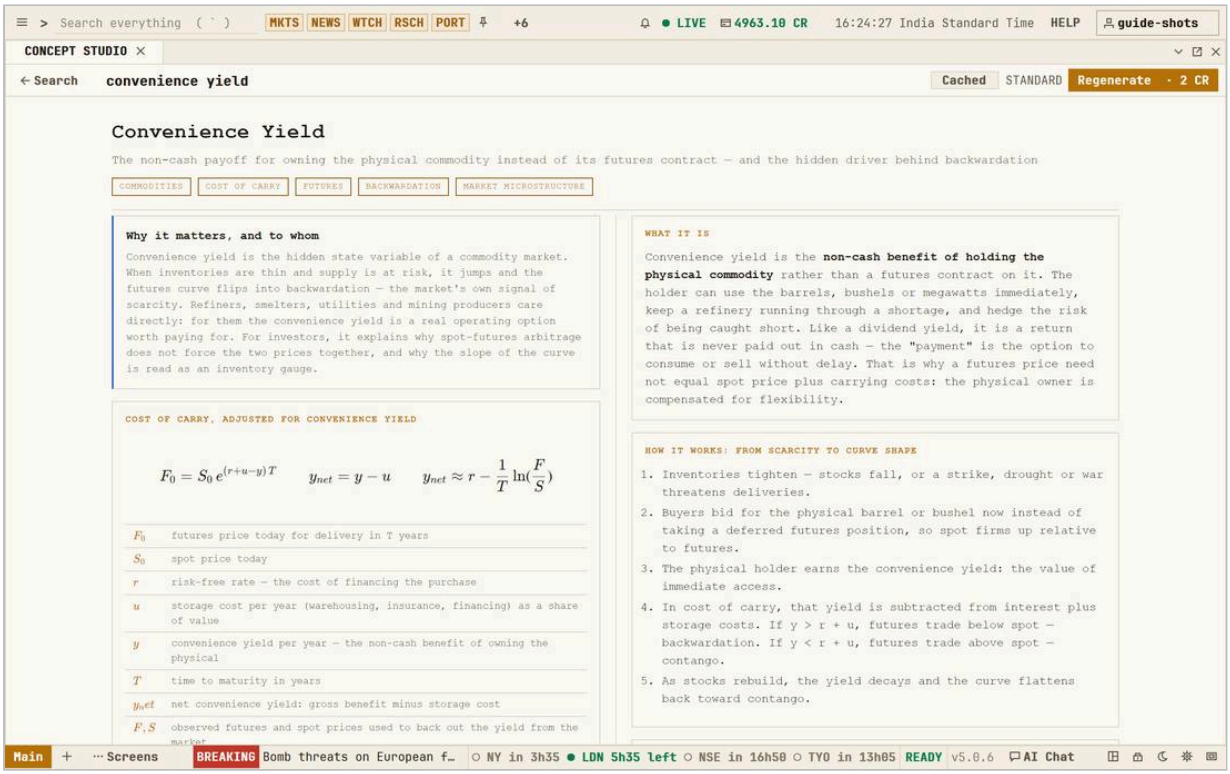


Figure 30.3 A finished concept page — the explanation in two columns, with formulas and their symbols explained.

Tip

To try it for free first, click an example chip such as **Yield Curve Inversion**: popular concepts are often already built and are served from the cache at no charge.

Credits

A complete page costs **2 credits**, charged once when it finishes. A build that fails, that you cancel or that is refused as off-topic costs nothing. A page that was built before is served from the cache — instantly and free — and is marked **Cached**. The cache is shared by every Fincept user and keeps a page for 30 days. It matches the words you typed (capitals and extra spaces do not matter) and the depth: a **Deep** page is a different page from a **Standard** one.

30.3 Explain a concept of your own

1. Click in the search box and type a concept, for example `duration`.
2. After a moment a list of up to eight suggestions drops down. Hover one to read a short description. Suggestions are free.
3. Pick a suggestion with **Up** / **Down** and press **Enter**, or just press **Enter** to use what you typed. **Escape** closes the list. Clicking a suggestion picks it and starts the build at once.
4. Choose a depth if you want a different level.
5. Click **Explain**. The build starts.

Careful

Pressing **Enter** in the search box starts a build, which is charged when it completes — so does clicking a suggestion or an example chip. Pick a suggestion with the arrow keys first if you want its exact wording.

Choose the depth

Depth	Hint on screen	Written for
Intro	Essentials, plain language	First-year student — intuition and analogies
Standard (default)	Undergraduate depth	Finance undergraduate — intuition plus the standard formula
Deep	MBA/CFA machinery	MBA/CFA — the quantitative machinery and edge cases



Figure 30.4 Deep selected. The hint under the buttons changes with the depth.

30.4 Read a concept page

The page has two columns. **UNDERSTAND** on the left explains the idea; **EVIDENCE & DATA** on the right shows it with numbers, charts and history. The top bar shows your query, the depth (for example **STANDARD**) and, for a page served from the cache, **Cached**.



Figure 30.5 The parts of a concept page (a taller window shows more of it at once).

1. **Search** goes back to the search page.
2. Your query.
3. **Cached**: this page was served from the cache, free.
4. The depth the page was written at.
5. **Regenerate** asks for the page again (free while it is in the cache).

A page is made of sections. Which ones appear depends on the concept:

Section	What it looks like
Title	The concept's name, a one-line subtitle and topic tags.
Text	Explanation with headings, lists and bold key terms.
Formula	The formula, with a table that says what each symbol means.
Chart	An interactive chart. Hover it to read values. A note under it says what to take away and where the data came from.

Section	What it looks like
Stats	Up to four key numbers, with change and a note.
Table	Rows and columns of facts.
Timeline	Dated events in order, for example past episodes of the concept in the markets.
Worked example	A scenario with numbers and a **Takeaway**.
Comparison	Up to three side-by-side cards, for example two related ideas.
Quote	A quotation and who said it.
Callout	A boxed insight or warning. A callout that names a terminal screen shows **Open in Fincept Terminal →** — click it to go there. If the terminal cannot tell which screen is meant, it opens Global Data and says **Opening Global Data — the terminal's data hub.**
References	Numbered sources. A click opens them in your web browser.

At the bottom, **Explore in terminal** offers buttons to continue in the terminal: **Global Data**, **Equity Research**, **Economy** and any screen the page mentioned.

30.5 Stop, regenerate or go back

Button	When	What happens
Cancel	While the page builds	Stops the build and returns to the search page with your query still in the box. A notification says **Generation cancelled**. Nothing is charged.
Regenerate	Any time	Asks for the same query and depth again. A complete page in the cache is replayed, free and marked **Cached** — so Regenerate does not give you a fresh version of a cached page. Only when no complete page exists (for example after a build that stopped early) is a new page built and charged.
Search	Any time	Back to the search page. A running build is stopped first.

30.6 Use your recent searches

The **Recent** row lists up to eight of your latest searches. They are kept with your account, so they also appear on your other computers.

1. Click a recent search. It fills the search box — it does not start a build.
2. Click **Explain** to build it (free if the page is still cached).
3. To empty the list, click **Clear** and confirm **Clear** in the dialog **Clear recent searches**.



Figure 30.6 The Recent row under the example chips.

30.7 Reference

Search page

Control	What it does
Search box	Your concept, 2 to 300 characters. Up to eight suggestions after a short pause; Up / Down to move, Enter or a click to build, Escape to close the list. The × at its right end empties it.
Explain · 2 CR	Builds the page. With too few credits it shows a lock; a click then explains why instead of building.
ⓘ	Hover: the price and when it is charged. Click: what costs credits on this screen.
Intro / Standard / Deep	Depth of the explanation. Default **Standard**.
Example chips	Six ready concepts; a click builds the page (charged).
Recent chips	Your last eight searches; a click fills the box.
Clear	Empties the recent list after a confirmation.

Concept page top bar

Control	What it does
Search	Back to the search page.
Query	What you asked.
Cached	The page was served from the cache (free). Hover for "Served instantly from the page cache".
Depth	**INTRO**, **STANDARD** or **DEEP**.
Cancel	Stops a build (only while building).
Regenerate	Asks for the page again: replayed free from the cache when a complete page exists, otherwise built and charged.

Messages

Message	Meaning
Researching... Cancel stops the build.	The AI is gathering material.
Researching / Building (a small line at the top of the page)	Once sections arrive: the stage, and what the build is doing now. It disappears when the page is complete.
Building the page... Cancel stops the build.	The sections are being written.
The page build did not respond.	Nothing arrived for a long time (over three minutes). Go back and try again, or click **Regenerate**.
Build stopped early: … (a notification)	The build broke off part-way. What arrived stays on screen; nothing is charged.
Generation cancelled (a notification)	You clicked **Cancel**.
Could not clear recent searches: … (a notification)	**Clear** failed; the list is unchanged.
Chart failed to render / This section failed to render	One section could not be drawn; the rest of the page is fine.

30.8 For advanced users

- **Scope.** Concept Studio covers finance, economics and business. Ask for something else and a dialog titled **Concept Studio covers finance, economics and business** explains that the query is outside its scope. It offers the closest concept it can build as a **Search '...'** button, or three example concepts. **Dismiss** closes it. Nothing is charged for the refusal; clicking **Search '...'** or an example starts a normal (charged) build.
- **What is remembered.** The screen remembers your depth and your last query. When you come back, the query is put back in the box but not rebuilt — a rebuild would be charged, so you start it yourself.
- **Good queries.** Name one concept, not a question about markets today: `term premium`, `Kelly criterion`, `purchasing power parity`. For live market questions use **Chapter 37, AI Chat** p. 719.
- **From concept to data.** Use **Explore in terminal** or a callout's **Open in Fincept Terminal** → to jump to the screen where you can see the concept in live data — for example yield curves in **Chapter 33, Sovereign Bonds** p. 660 or inflation in **Chapter 32, Global Data** p. 648.
- **With the AI.** The terminal's AI (**Chapter 37, AI Chat** p. 719) can work this screen like a person: type a concept, pick a depth and press **Explain**. Because **Explain**, Enter in the box, the suggestions and the chips spend credits, it asks for your approval first.

30.9 Troubleshooting

If something goes wrong

The Explain button shows a lock. Your credit balance is too low for a new page. Top up in **Chapter 50, Profile, Plan & Billing** p. 920, or open a page that is already cached.

A dialog says my query is outside the scope. Rephrase it as a finance or economics concept, or click the suggested **Search '...'** button.

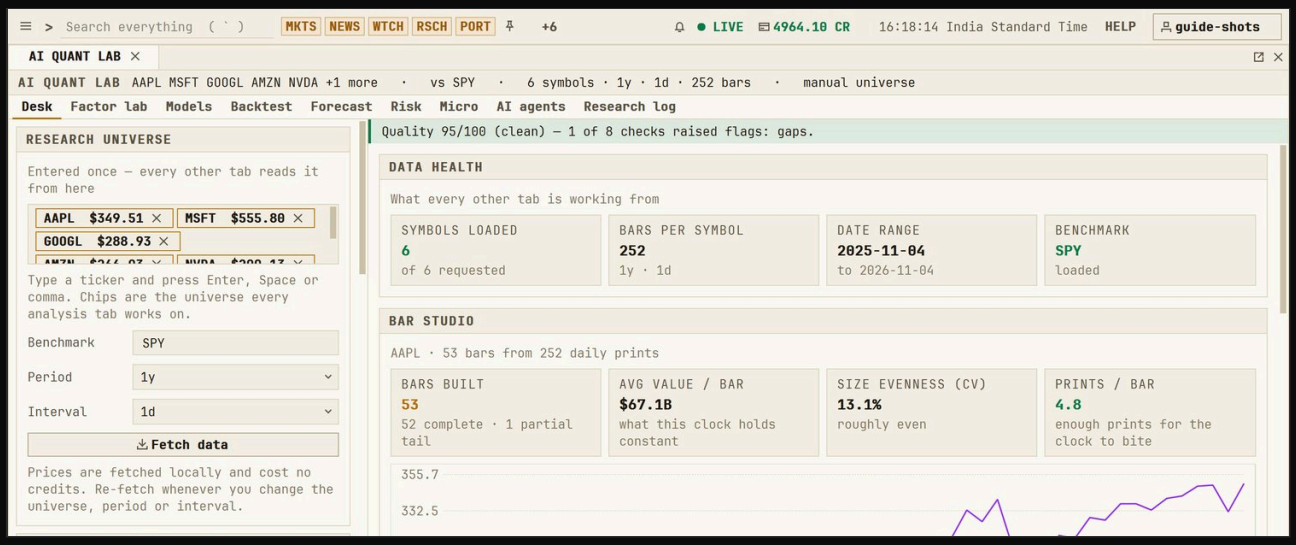
The page stopped half-way. A note says **Build stopped early**. Keep reading what arrived, or click **Regenerate** to try again. A page that did not finish is not charged.

A reference does not open. References open in your default web browser. Check that one is installed and set as default.

CHAPTER 31

AI Quant Lab QLAB

A quantitative research workbench. Set up a list of symbols once, then test factors, train models, backtest, forecast, measure risk, study order books and let AI agents run research loops — every result kept in a research log on your account.



At a glance

Open it	• Type `QLAB` in the command line and press **Enter** • Type `quantlab`, `quant` or `lab` in the command line and press **Enter** • From Equity Research or a Backtesting run, use the link that opens the Quant Lab on that symbol
You need	• Signed in on any paid plan • Exclusive: the first six tabs; Exclusive+ and Exclusive Pro: all nine • Credits only for AI agent runs and the Prove it audit
Best for	• Testing whether a signal predicts returns • Comparing portfolio constructions and risk measures • Learning quantitative methods on real data
Time to learn	30 minutes
Related	**Chapter 24, Backtesting** p. 464, **Chapter 22, Equity Research** p. 392, **Chapter 25, Derivatives** p. 493, **Chapter 23, Portfolio** p. 430

In this chapter

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31.1 Screen tour

The AI Quant Lab is a row of nine tabs that all work on the same **research universe** — the list of symbols you set once on the **Desk** tab. Every tab has the same layout: input cards on the left, results on the right.

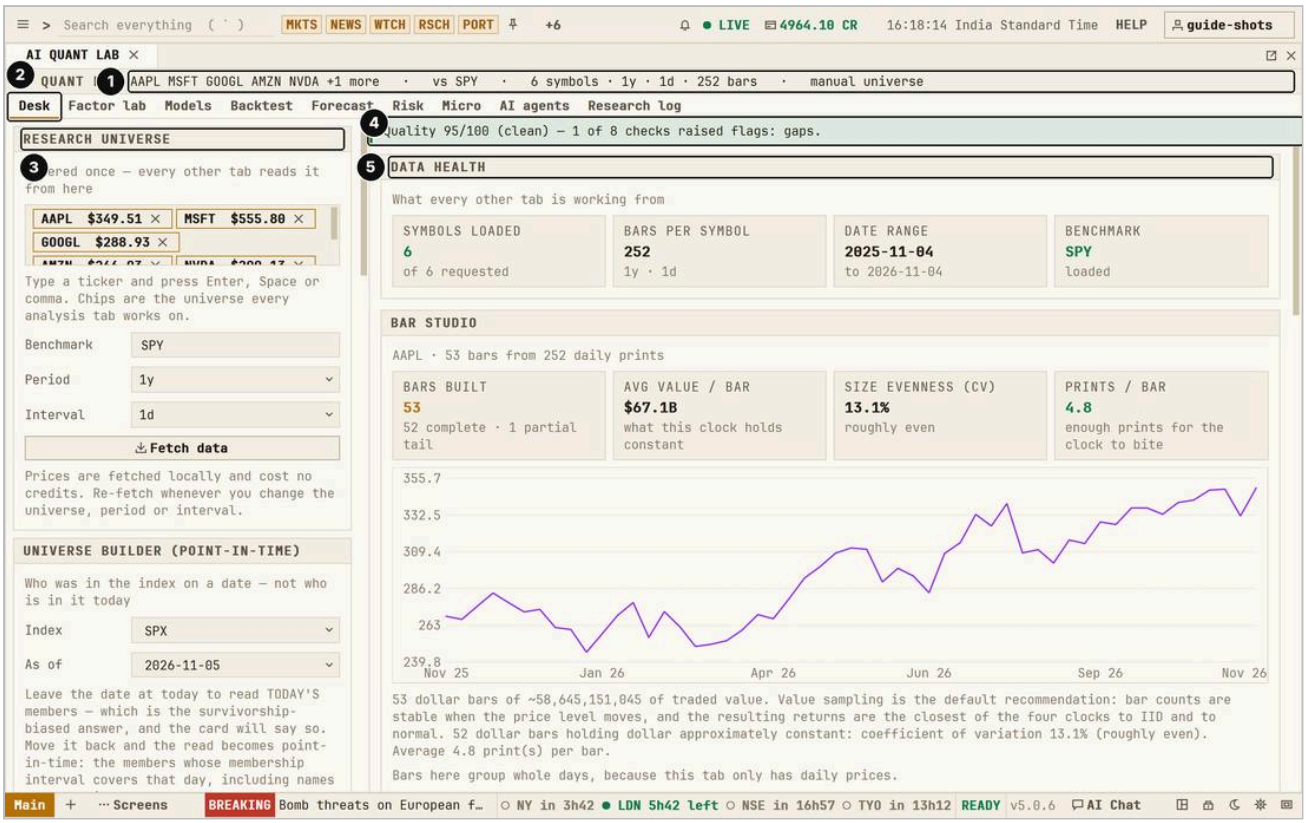


Figure 31.1 The AI Quant Lab on its Desk tab, with the sample universe "US mega tech" loaded and bars built for AAPL.

1. The **context strip**: the universe, the benchmark, how much data is loaded and where the universe came from.
2. The **tabs**. Each is one area of quantitative work.
3. The **input cards** (left). Scroll for more cards.
4. The **status line**: what the last action did, or why it failed.
5. The **results** (right). Each card fills when you run its action.

1. **Context strip** — for example "AAPL MSFT GOOGL AMZN NVDA +1 more · vs SPY · 6 symbols · 1y · 1d · 252 bars · manual universe". Check it before you trust a result: it says exactly what the numbers were computed on.
2. **Tabs** — **Desk**, **Factor lab**, **Models**, **Backtest**, **Forecast**, **Risk**, **Micro**, **AI agents** and **Research log**.
3. **Input cards** — one card per task, with its settings and a run button.
4. **Status line** — green when something finished, red when it failed.
5. **Results** — cards with key numbers (tiles), charts and tables.

Tab	What it is for
Desk	Choose the symbols, benchmark, period and bar size; check the data.
Factor lab	Indicators, alpha factors and tests of whether they predict returns.
Models	Train machine-learning models on your universe; build labels; schedule retraining.
Backtest	Turn a rule into positions and see how it would have done; portfolio optimisation; an options backtest.
Forecast	Forecast a series; test it for trends, cycles and volatility.

Tab	What it is for
Risk	Risk metrics, value at risk, stress tests, optimisers and attribution for a weighted portfolio.
Micro	Live crypto order books: spread, depth, market-making quotes, toxic flow, slippage.
AI agents	AI research runs and autonomous research loops; reinforcement-learning trading.
Research log	Every experiment you ran, the audit "Prove it", signal library, graveyard and lineage.

Plans and credits

The AI Quant Lab opens on every paid plan, but the **Exclusive** plan includes its first six tabs (Desk to Risk); **Micro**, **AI agents** and **Research log** show a lock and an upgrade note. **Exclusive+** and **Exclusive Pro** include all nine.

Fetching prices and running the lab's analyses are free. Two things cost credits, and their buttons show the price: an **AI agents** deep analysis or research loop (2 credits each, charged once, when it delivers) and check 7 of **Prove it**, which runs a server backtest (1 credit, whether you press **Run all** or that check's own **Run**).

31.2 Quick start

1. Type `QLAB` in the command line and press `Enter`. The lab opens on the **Desk** tab (later, on the tab you left it on).
2. In the **SAMPLE UNIVERSES** card on the left (scroll down a little), click **US mega tech**. It sets six symbols (AAPL, MSFT, GOOGL, AMZN, NVDA, META) and fetches one year of daily prices.
3. Wait for the status line to read **Universe loaded — 6 symbols · 1y · 1d · 252 bars**. The **DATA HEALTH** tiles fill.

4 Click the **Factor lab** tab. In the **ALPHA EXPRESSION** card, keep the example expression and click **Run expression**. The **ALPHA EXPRESSION RESULT** card scores the expression across your six symbols.

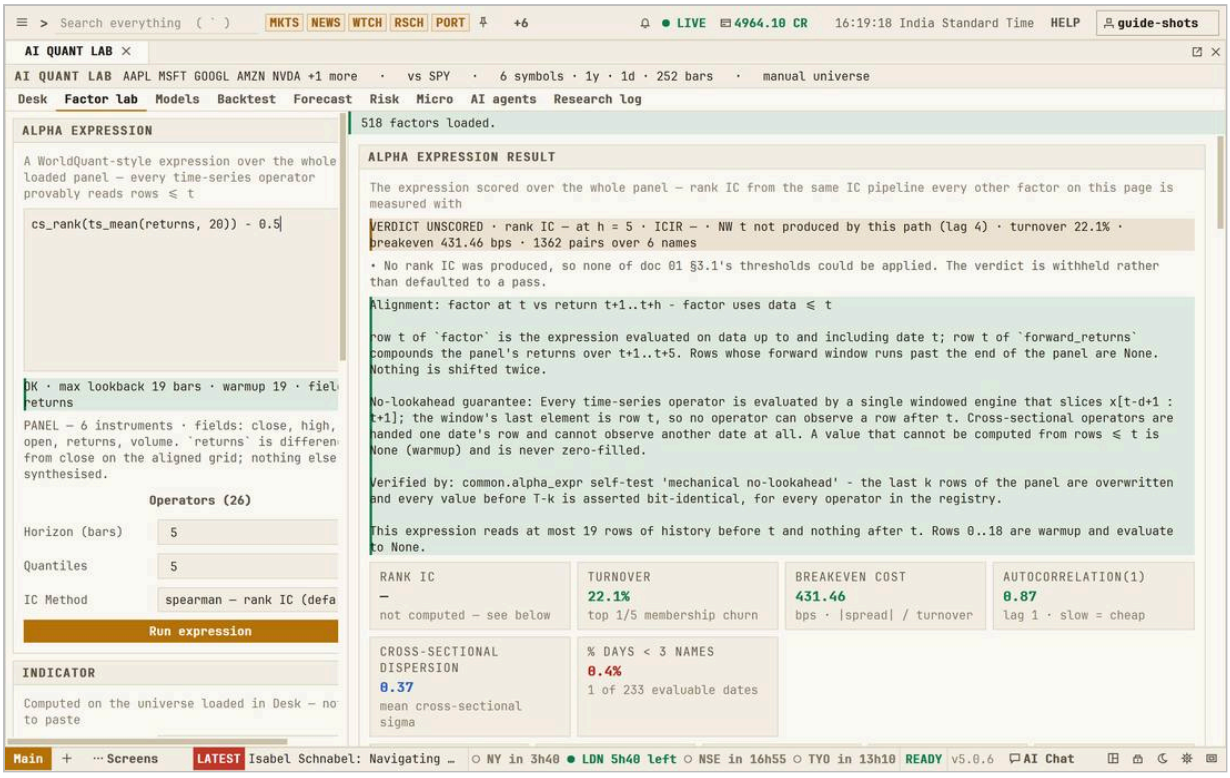


Figure 31.2 The Factor lab after Run expression. With six symbols the lab measures turnover and the quantile ladder but withholds the rank IC.

5 Click the **Backtest** tab and click **Run backtest**. The **BACKTEST RESULTS** card shows return, Sharpe ratio and drawdown for a simple top-K strategy on your six names.

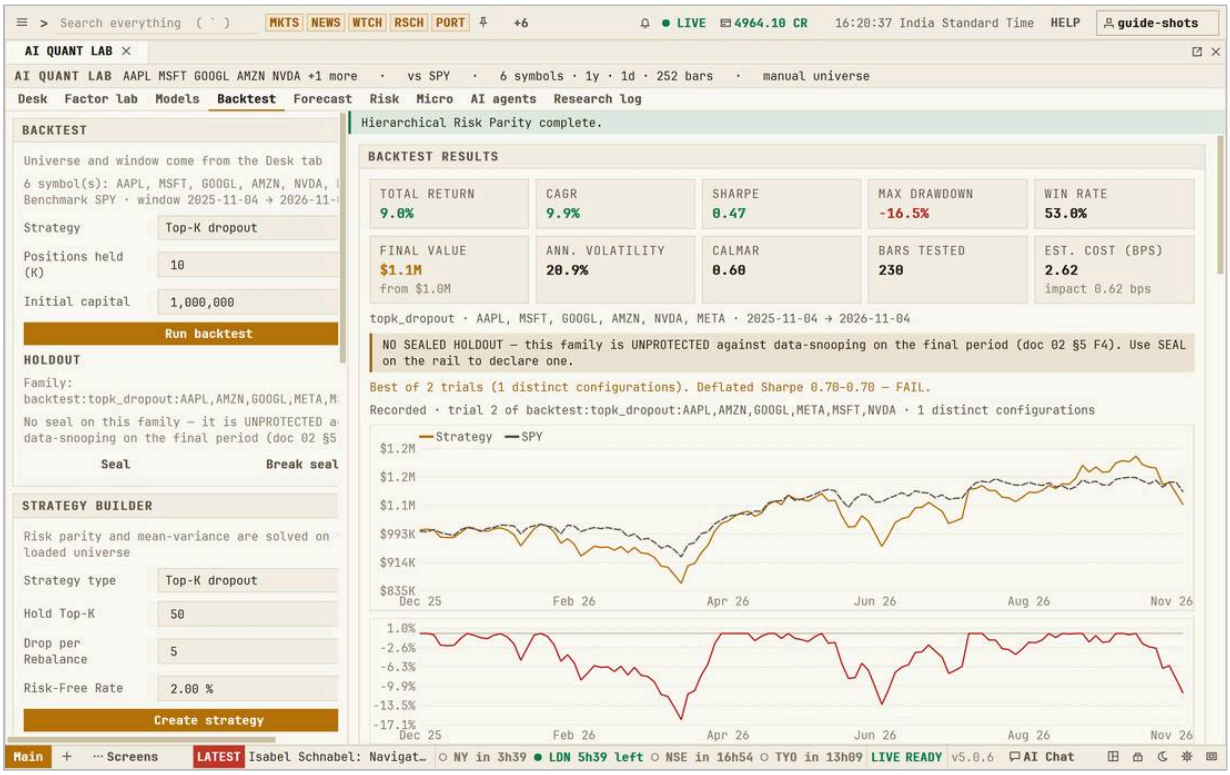


Figure 31.3 A backtest of the default Top-K dropout strategy on the sample universe.

6. Open **Research log** to see both runs recorded under **EXPERIMENTS**.

> **Tip**
> Everything the lab computes uses the universe in the context strip. Change it on the **Desk** and press **Fetch data** before you run anything else.

31.3 Set up your research universe (Desk)

The Desk is where you decide what every other tab works on.

Enter symbols by hand

1. In **RESEARCH UNIVERSE**, click in the symbol box, type a ticker (for example `JPM`) and press `Enter`, `Space` or a comma. It becomes a chip with its live price. Click a chip's × to remove it.
2. Set the **Benchmark** — the index you compare against. Default **SPY**. Leave it empty and relative measures (beta, relative charts) are not available.
3. Choose a **Period** (**3mo**, **6mo**, **1y**, **2y**, **5y**, **max**) and an **Interval** — the bar size (**1d**, **1wk**, **1mo**).
4. Click **Fetch data**. Prices are fetched for every symbol and the benchmark. This is free.

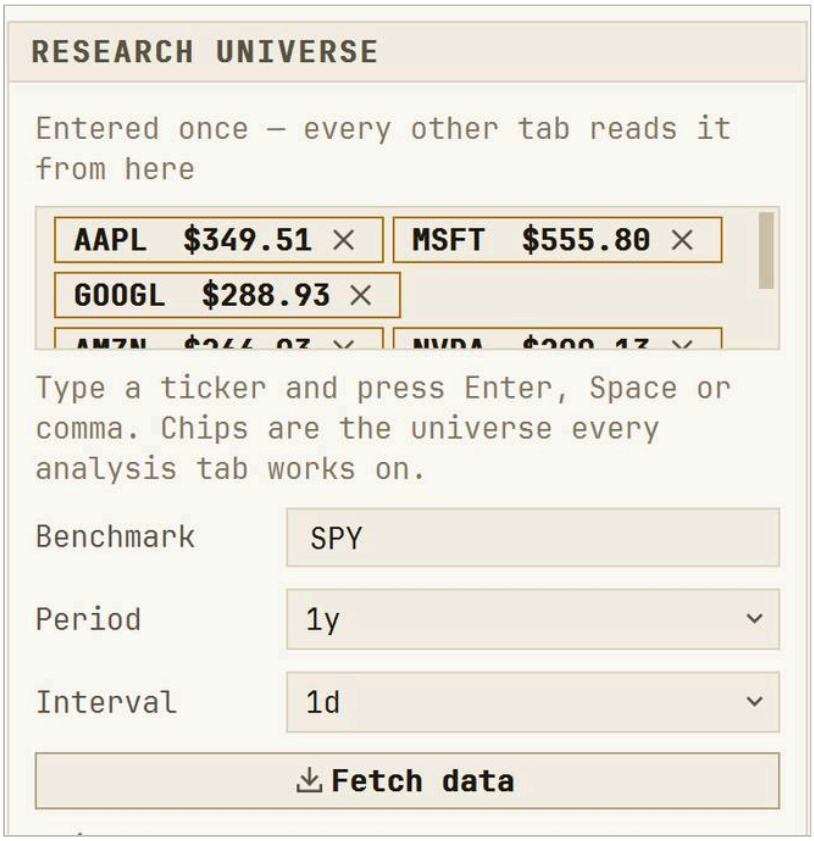


Figure 31.4 The RESEARCH UNIVERSE card.

Symbols use the terminal's usual format: `AAPL`, `RELIANCE.NS`, `BTC-USD`. If some symbols have no data, the status line reads **Universe loaded with gaps — …** and the rest still load; a benchmark with no data shows **not loaded — check the ticker** in the **BENCHMARK** tile.

Sample universes

SAMPLE UNIVERSES sets the symbols and fetches in one click:

Sample	Symbols
US mega tech	AAPL, MSFT, GOOGL, AMZN, NVDA, META
US factor zoo	SPY, QQQ, IWM, MTUM, VLUE, QUAL, USMV
Global ETF	SPY, EFA, EEM, AGG, GLD
Crypto	BTC-USD, ETH-USD, SOL-USD

Build a universe from an index on a date (point-in-time)

A backtest on today's index members quietly ignores companies that were dropped or went bust — **survivorship bias**. The **UNIVERSE BUILDER (POINT-IN-TIME)** card reads who was in an index on a past date.

1. Pick an **Index** (**SPX**, **NDX**, **RUT**, **DJI**) or type the id your membership file was filed under.
2. Set **As of** to a past date. Left at today, the card warns that today's members are survivorship-biased.
3. Click **Load constituents.** The universe is replaced with the members on that date (up to 60 symbols; the card says when it trimmed the list) and the context strip shows, for example, **SPX as-of 2023-03-01 — point-in-time**.
4. If the server holds no membership for that index, **Upload membership** appears: choose your own index-membership export (a .csv, .tsv or .txt file).

Other Desk cards

Card	What it does
ENGINE STATUS	**Check engines** asks the lab's server engines whether they are reachable and how many lab modules each serves; the status line then reads, for example, **18 of 18 engines reachable.**
FUNDAMENTALS (SEC · POINT-IN-TIME)	**Ingest universe** pulls the SEC filings of your US symbols, so the Factor lab can use reported figures with the date they became public. Free; at most 25 symbols per run — a larger universe is refused, not trimmed. A line says which symbols have fundamentals.
BAR STUDIO & DATA HEALTH	Pick a **Symbol**. **Build bars** regroups its history into bars of equal traded value, volume or number of trades (**Bar clock**: DOLLAR, VOLUME, TICK, TIME, TICK IMBALANCE), aiming at **Target bars** (default 60). **Run quality check** runs eight checks on the raw prices (impossible bars, non-positive prices, duplicate or unsorted dates, unrecorded splits, return spikes, frozen closes, calendar gaps, volume anomalies). Nothing is repaired: problems are flagged.

The results side of the Desk shows **DATA HEALTH** (symbols loaded, bars per symbol, date range, benchmark), **BAR STUDIO**, **DATA HEALTH REPORT** (quality score, checks flagged, issues found, and a table **DATE / CHECK / WHAT WAS FOUND**), **UNIVERSE PREVIEW** (every close rebased to 100), **CORRELATION** (a heat map of how the symbols move together) and **THE LAB AT A GLANCE** — a short guide to every tab with an **Open** button.



Figure 31.5 BAR STUDIO after Build bars on AAPL with the default dollar clock — the bars built, what each bar holds and how even they are.

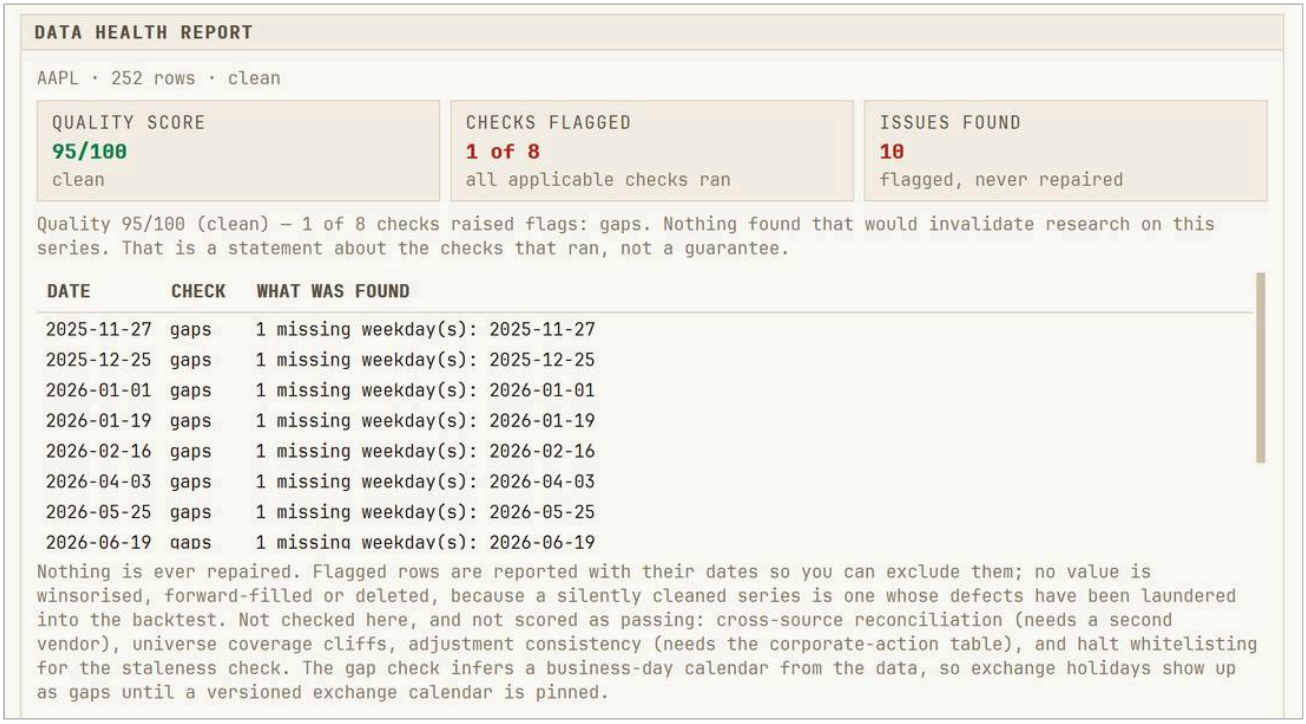
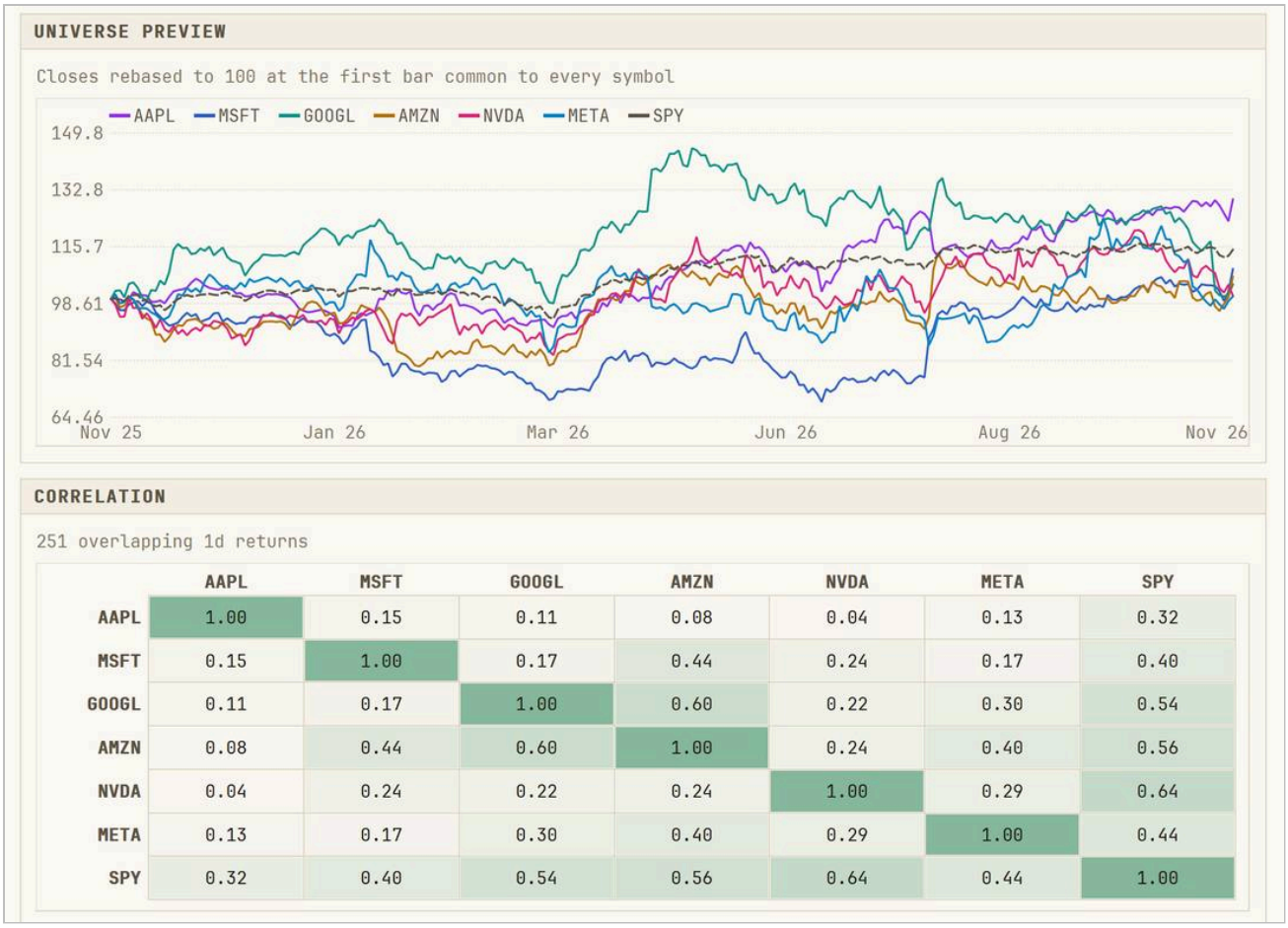


Figure 31.6 DATA HEALTH REPORT after Run quality check — the score, the checks that raised flags and every flagged date.



	AAPL	MSFT	GOOGL	AMZN	NVDA	META	SPY
AAPL	1.00	0.15	0.11	0.08	0.04	0.13	0.32
MSFT	0.15	1.00	0.17	0.44	0.24	0.17	0.40
GOOGL	0.11	0.17	1.00	0.60	0.22	0.30	0.54
AMZN	0.08	0.44	0.60	1.00	0.24	0.40	0.56
NVDA	0.04	0.24	0.22	0.24	1.00	0.29	0.64
META	0.13	0.17	0.30	0.40	0.29	1.00	0.44
SPY	0.32	0.40	0.54	0.56	0.64	0.44	1.00

Figure 31.7 Universe preview (every close rebased to 100) and the correlation heat map of daily returns.

31.4 Test factors (Factor lab)

A **factor** is a number computed for each symbol on each day — momentum, value, volatility — that might predict future returns. The **information coefficient** (**IC**) measures how well it does: the correlation between today's factor and the next bars' returns. What counts as good grows with the horizon: the lab grades a rank IC of roughly 0.010–0.020 as good at 1 day, 0.020–0.035 at 5 days and 0.030–0.050 at 21 days. An IC above 0.20 usually means the test sees the future, not real skill.

Compute an indicator

1. In **INDICATOR**, pick a **Symbol** from your universe.
2. Pick an **Indicator**: Moving Average, RSI, MACD, Bollinger Bands, ATR, Stochastic Oscillator, Momentum, Volatility, OBV, VWAP or Drawdown. Only the settings that indicator uses are shown.
3. Click **Compute**. The chart draws the indicator with the price; tiles show **LAST**, **MEAN**, **MIN** and **MAX**, and a table lists every value by **DATE**.

Test whether a factor predicts returns

1. In **FACTOR IC TEST**, pick a **Symbol** and a **Factor**: Momentum, Volatility, RSI, the last computed indicator, or **Earnings yield (SEC PIT)** (built from SEC filings — ingest them on the Desk first).
2. Set the **Factor window** (default 20 bars) and the **Forward horizon** (default 1 bar).
3. Click **Run IC**.

The result card **FACTOR PREDICTIVE POWER** shows **IC (PEARSON)**, **RANK IC**, **NEWEY-WEST t(IC)** (is the IC statistically real? aim for |t| ≥ 3), **TOP-QUINTILE TURNOVER**, **BREAKEVEN COST** (the trading cost, in basis points, that would wipe out the edge), **IC HALF-LIFE**, **MONOTONICITY** (do higher factor buckets earn steadily more? aim for 0.80), **Q5-Q1 SPREAD**, **RAW t** and **OBSERVATIONS**. A decay chart shows rank IC at longer horizons and a ladder table (**BIN**, **EQUAL-WEIGHT**, **VOLUME-WEIGHTED**, **OBS**) shows the mean forward return of each bucket. Lines underneath say which quality bars were met.

Write your own alpha expression

ALPHA EXPRESSION evaluates a formula over every symbol and day at once, for example `cs_rank(ts_mean(returns, 20)) - 0.5` (the default): rank each symbol's 20-day average return against the others.

1. Type the expression. As you type, a note checks it: how far back it looks, how many warm-up bars it needs and which fields it reads (open, high, low, close, volume, returns).
2. Click **Operators** to see the list of functions you can use; hover one for its description.
3. Set **Horizon (bars)** (1–20, default 5), **Quantiles** (3–10, default 5) and **IC Method** (**spearman** — rank IC, the default — or **pearson**).
4. Click **Run expression**. **ALPHA EXPRESSION RESULT** shows rank IC, turnover, breakeven cost, autocorrelation, dispersion, the top-bottom spread, monotonicity and **ICIR** (mean IC ÷ its standard deviation).

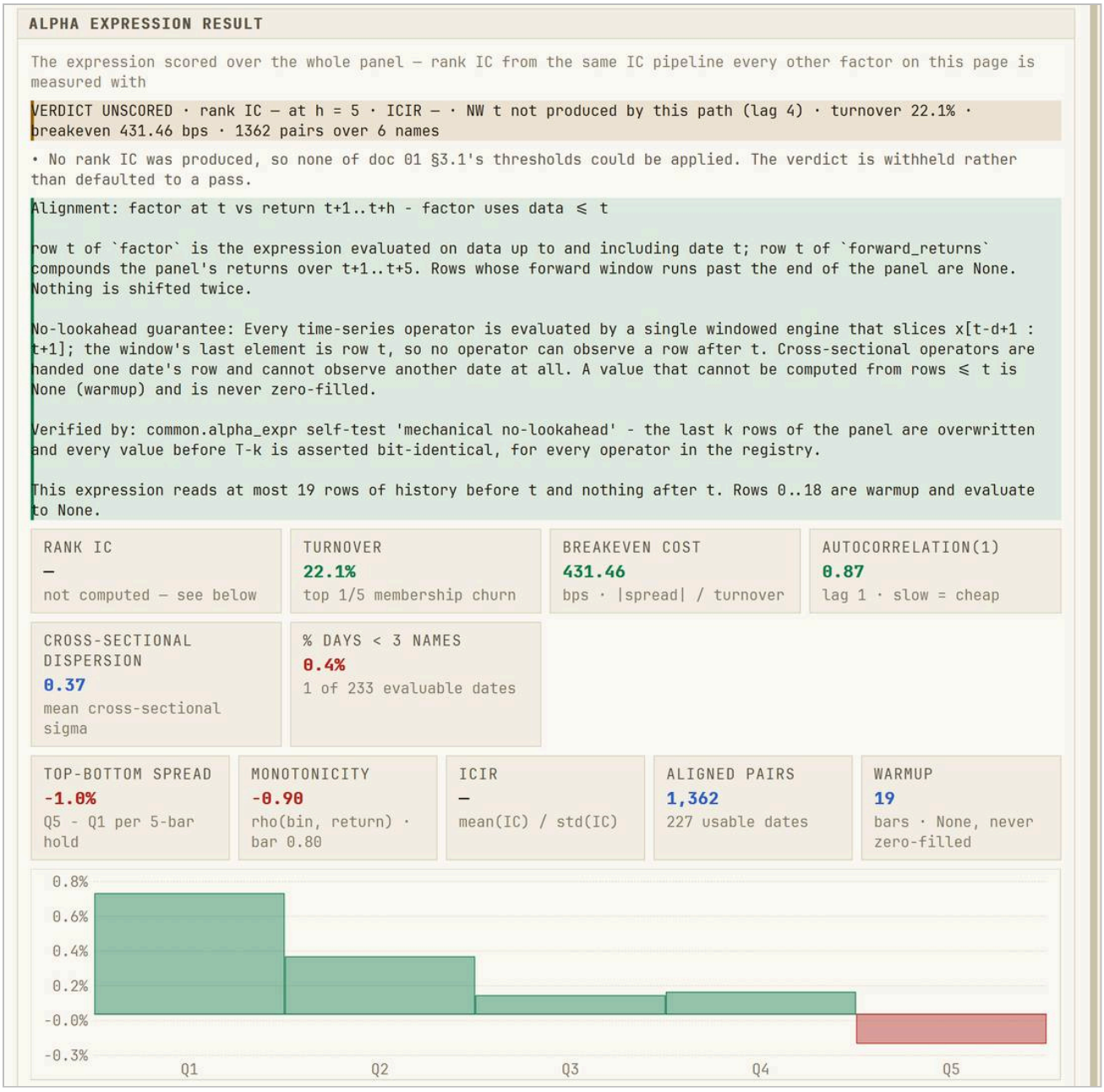


Figure 31.8 ALPHA EXPRESSION RESULT — the verdict line, how the expression avoids look-ahead, the tiles and the quantile ladder.

The rank IC needs at least 10 symbols with data on each date. With fewer (the six of **US mega tech**), the card says **NO IC** and **VERDICT UNSCORED**, but still measures turnover, breakeven cost, autocorrelation and the ladder. Load a larger universe (for example an index on the Desk) for a full score.

Note

Window sizes inside an expression must be plain numbers, such as `ts_mean(close, 20)`. The lab refuses a window that is itself computed, because it could not check how far back it looks.

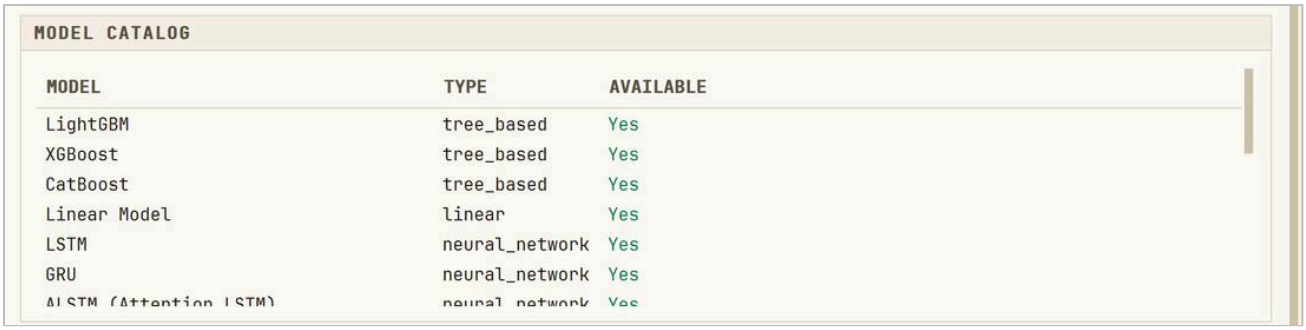
More Factor lab cards

Card	What it does
FUNDAMENTALS	Reads one reported figure for a **Symbol** (**Concept**: Revenue, Net income, Total assets, Total liabilities, Stockholders' equity, Diluted EPS, Shares outstanding), **Period annual** or **quarterly**, **As of** a date: only what was public by then (today, the default, gives the latest restated figures). **Fetch fundamentals** fills **FUNDAMENTALS (AS REPORTED)**: **LATEST VALUE**, **FILED**, **FACTS VISIBLE**, **SUPERSEDED**, a chart and a table with the filing date of every figure and whether it was later restated.
DATA PROCESSORS	Pick a **Processor** (min-max, z-score, robust z-score, cross-sectional z-score or rank, winsorize, tanh, fill or drop missing values, handle infinities) and a **Symbol**; **Run pipeline** normalises the close series and shows it in **PROCESSOR — BEFORE / AFTER** (mean and standard deviation before and after, and a table).
FACTOR LIBRARY	**Browse factors** lists the built-in Alpha158 / Alpha360 factor expressions (**NAME**, **CATEGORY**, **EXPRESSION**); type in the filter box to search by name, category or expression.

31.5 Train models (Models)

The Models tab trains prediction models on your universe's bars. Everything it creates appears in **MODEL REGISTRY** (**KIND**, **LABEL**, **ID**, **CREATED**), so other cards can pick it from a list instead of copying ids. Training runs on Fincept's servers and is free.

Card	What it does	Key settings (default)
MODEL CATALOG	**List models** shows what can be trained.	—
TRAIN (QLIB)	Trains a model on the Alpha158 factor set over your bars.	**Model** (lightgbm, xgboost, catboost, linear, lstm, gru, transformer, tcn and more), **Instruments**; **Train**, **Stop**
DEEP / GBDT MODELS	Trains a neural network on one symbol's returns.	**Architecture** (lstm, gru, transformer, lstm_attention, localformer), **Symbol**, **Return lags** (5), **Epochs** (10); **Create & train**, **Stop**
AUTO-ML	Picks the best model, builds an ensemble or tunes settings.	**Symbol**, **Task** (Model selection, Create ensemble, Tune hyperparameters), **Model** (All available), **Task type** (Regression, Classification), **Ensemble method** (Voting, Stacking), **Return lags** (5); **Run AutoML**, **Stop**
ONLINE LEARNING	A model that learns bar by bar, as if live: it predicts each bar before it learns it.	**Symbol**, **Learner** (linear, bayesian_linear, pa, tree, adaptive_tree…); **Create**, **Refresh**; then **Model**, **Return lags** (5), **Replay bars** (250); **Train stream**, **Stop**
ROLLING RETRAIN	A walk-forward schedule: retrain on a moving window.	**Schedule ID**, **Frequency** (weekly, daily, monthly), **Region** (us, cn), **Market** (sp500), **Window (bars)** (252), **Step (bars)** (20), **Horizon (bars)** (20); **Create schedule**, **List schedules**, **Preview windows**
LABELING STUDIO	Builds the labels a model learns to predict, and audits them for look-ahead.	**Mode** (Triple-barrier, Meta-label), **Symbol**, **Profit barrier (0 = off)** and **Stop barrier (0 = off)** (2.0 σ), **Vertical barrier (bars)** (20), **Volatility lookback** (100), **Vertical label** (zero — three classes, or sign — two classes), **Primary: sign of N-bar momentum** (5, Meta-label only), **Average-uniqueness weights** (on), **Time-decay floor (0 = off)**; **Run labeling**, **Leakage probe**



MODEL CATALOG

MODEL	TYPE	AVAILABLE
LightGBM	tree_based	Yes
XGBoost	tree_based	Yes
CatBoost	tree_based	Yes
Linear Model	linear	Yes
LSTM	neural_network	Yes
GRU	neural_network	Yes
ALSTM (Attention LSTM)	neural_network	Yes

Figure 31.9 MODEL CATALOG after List models — what can be trained, its type and whether it is available.

Triple-barrier labels mark each starting day +1, −1 or 0 depending on whether the price first hits a profit target, a stop, or neither before a time limit. **LABELS & LEAKAGE** shows how many events were labelled, the class balance, how often the time limit was hit and the average uniqueness of labels (overlapping labels count less).

31.6 Backtest a strategy (Backtest)

A **backtest** replays a rule over past prices to see how it would have performed.

1. In **BACKTEST**, choose a **Strategy**: **Top-K dropout** (hold the K best-ranked names, swap out the weakest each period), **Weight-based (momentum)** or **Enhanced indexing**.
2. Set **Positions held (K)** (default 10; hidden for **Enhanced indexing**, which holds every name) and **Initial capital** (default 1,000,000).
3. Click **Run backtest**.

BACKTEST RESULTS shows **TOTAL RETURN**, **CAGR** (yearly growth rate), **SHARPE** (return per unit of risk), **MAX DRAWDOWN** (worst fall from a peak), **WIN RATE**, **FINAL VALUE**, **ANN. VOLATILITY**, **CALMAR** (return ÷ max drawdown), **BARS TESTED** and **EST. COST (BPS)**, with an equity curve.

Under the tiles, three lines keep you honest: a warning when the strategy family has **NO SEALED HOLDOUT** (see below), the number of trials behind the result with its deflated Sharpe ratio (for example "Best of 2 trials (1 distinct configurations). Deflated Sharpe 0.70–0.70 — FAIL."), and **Recorded · trial N of M · K distinct configurations** — the run's entry in the research log.



Figure 31.10 VALIDATION — the overfitting checks, their verdict and the strategy's results by market regime.

VALIDATION asks whether the result could be luck: **PSR(0)** (probability the true Sharpe is above zero), **DEFLATED SHARPE** (corrected for how many variants you tried), **PBO** (probability of backtest overfitting), **SHARPE 95% CI** and **MIN TRACK RECORD** (how long a live record would be needed to confirm it). A verdict line sums the checks up (for example **VERDICT MARGINAL**), a bar chart shows the Sharpe ratio on five slices of the history, and a table splits the result by market regime (high, mid and low volatility).

Seal a holdout

A **holdout** is a final stretch of data you promise not to look at until the end. Under **HOLDOUT**, click **Seal**, set **Holdout months** (default 12, up to 120) and click **Confirm seal**. A backtest in that strategy family that asks for a later end date is cut back to the start of the sealed months. **Break seal** spends the holdout: type a **Reason** and click **Confirm break**. It is permanent and recorded in the research log.

Other Backtest cards

Card	What it does
STRATEGY BUILDER	Builds a strategy definition: **Strategy type** (Top-K dropout, Enhanced indexing, Weight-based, Risk parity, Mean-variance (max Sharpe)). Only the settings that type uses are shown: **Hold Top-K** (50) and **Drop per Rebalance** (5) for Top-K dropout; **Weighting** (signal_proportional, equal_weight, inverse_volatility, risk_parity) for Weight-based; **Tracking error target** (2%) and **Alpha target** (1%) for Enhanced indexing; **Target volatility** (10%) and **Rebalance** (daily, weekly, monthly) for Risk parity; **Risk-Free Rate** (2%) for all. **Create strategy** fills the **STRATEGY** card; **Portfolio metrics** scores an equal-weight portfolio of the universe against the benchmark.

Card	What it does
PORTFOLIO OPTIMIZATION	Solves weights on your universe: **Method** (Hierarchical risk parity, Minimum variance, Maximum Sharpe, Efficient frontier), **Risk-Free Rate** (2%), **Min weight per name** and **Max weight per name** (0% and 100%, for Minimum variance and Maximum Sharpe), **Frontier points** (60, for Efficient frontier); **Run optimization**. Results in **PORTFOLIO CONSTRUCTION**: **EXPECTED RETURN**, **EXPECTED VOLATILITY**, **SHARPE**, **NAMES ALLOCATED**, and the weight of each symbol as a chart and a table.
DELTA-HEDGED OPTIONS BACKTEST	One option held to expiry and hedged with the underlying: **Underlying**, **Option type** (call, put), **Side** (short, long), **Strike**, **Expiry (bars)** (63), **Contracts**, **Multiplier** (100), **Hedge mode** (per_bar, threshold), **Delta band** (threshold mode), **Risk-Free Rate**, **Dividend yield**, **IV Source** (Captured IV history, Flat IV (constant), Paste IV path) and a cost **Model** (Engine default, Custom half-spread and commission, or NOT MODELLED — free hedges, flagged as a warning); **Run options backtest**. Results split profit into **GROSS P&L**, **COSTS** and **NET P&L**, and compare **ENTRY IV** with **REALIZED VOL**, with rebalance count and hedge turnover.
HAND-OFF	**Open in Backtesting** carries the universe and capital to the full **Chapter 24, Backtesting** p. 464 screen.

31.7 Forecast a series (Forecast)

1. In **SERIES**, pick a **Symbol** and a **Transform**: **Close**, **Returns** or **Log returns**. Every card below uses this series, except **VOLATILITY MODEL (GARCH)**, which has its own **Symbol** and always works on returns.
2. In **FORECAST**, set **Horizon (steps)** (default 20) and a **Method** (linear, ridge, lasso, elastic net, KNN, Holt-Winters, ARIMA, naive, drift, seasonal naive, and probabilistic methods with P10–P90 or 5/50/95 bands). **AR lags** (7) and **Season (0=off)** (0) tune the methods that use them.
3. Click **Run forecast**. The chart continues the series with the forecast and, where the method gives one, a confidence band.

Card	What it does
ARIMA	Fits an ARIMA(p, d, q) model — **p (AR order)** (1), **d (differencing)** (1), **q (MA order)** (1) — and forecasts **Forecast steps** (20) with 95% intervals; **Fit ARIMA**. **ARIMA FIT** shows the order, AIC, BIC and in-sample R^2.
DIAGNOSTICS	**Stationarity (ADF + KPSS)** tests whether the series has a stable mean (a requirement for many models); **ACF / PACF** (**ACF/PACF lags** 24) suggests ARIMA orders; **Seasonality (STL)**, **Anomalies** and **Descriptive** statistics. Each fills its own result card.
CROSS-SERIES	Tests the series against **Symbol B**: **Granger causality** (does B help predict A? up to **Granger max lag** 4; needs 30 shared observations) and **OLS beta (A on B)**.
VOLATILITY MODEL (GARCH)	Pick a **Symbol** and a **Model** (**GARCH(1,1)** or **GJR-GARCH(1,1)**); **Fit** forecasts volatility over **Horizon (periods)** (21, 5–63). **Evaluate vs EWMA** checks it out of sample on the share of history set by **Train fraction** (0.70). **Vol screen** ranks the universe; tick **Use captured IVs (Derivatives ~30d ATM)** to compare with implied volatility captured on the Derivatives screen.
CFA TOOLKIT	Pick an **Analysis** (trend analysis, ARIMA model, supervised and unsupervised learning, resampling methods, data validation) and click **Run CFA analysis**. Runs on the symbol's own closes.

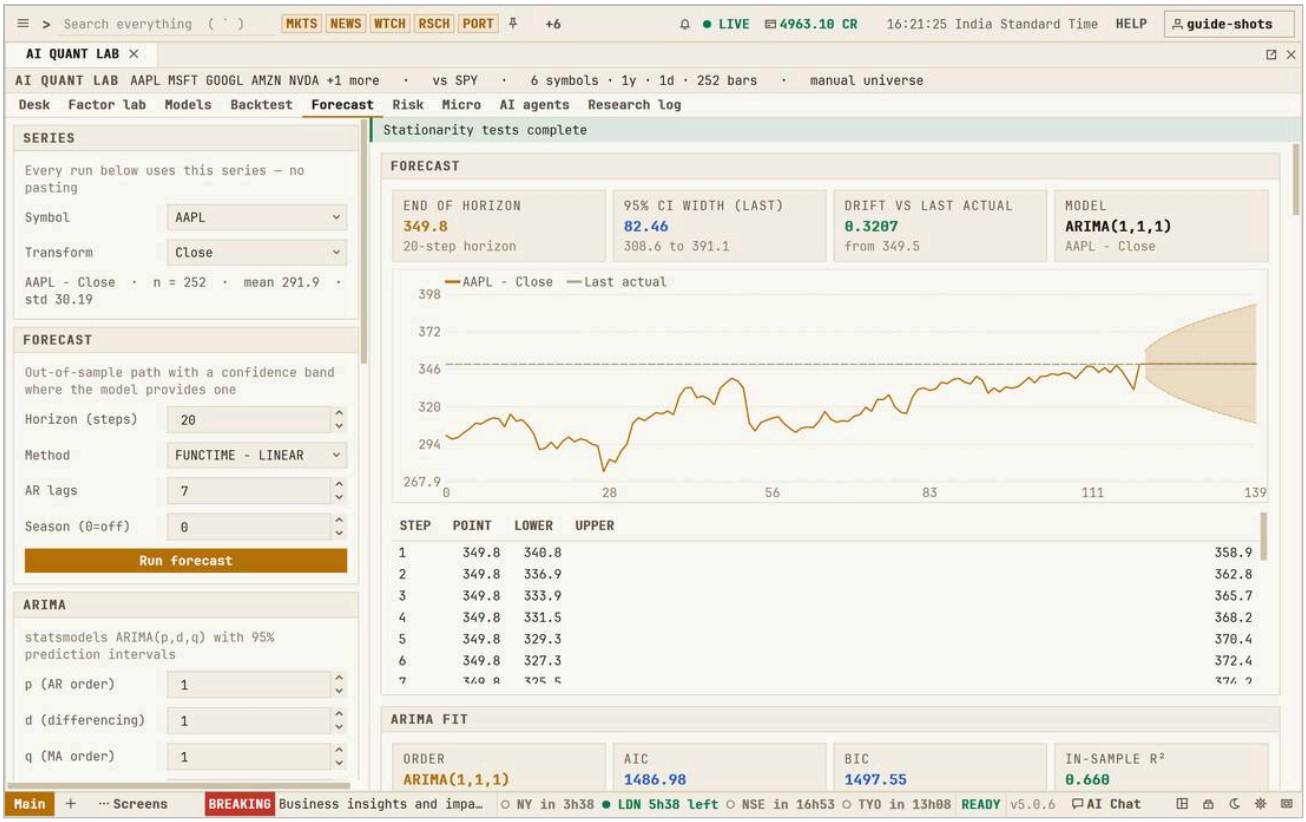


Figure 31.11 The Forecast tab — a 20-step forecast of AAPL with its 95% band, the step table (STEP, POINT, LOWER, UPPER) and ARIMA FIT.

31.8 Measure portfolio risk (Risk)

The Risk tab treats your universe as one portfolio with the weights in the **PORTFOLIO** card.

1. In **PORTFOLIO**, type a **WEIGHT %** for each symbol, or click **Equal weight**.
2. In **RISK METRICS**, set the **Risk-free rate** and click **Run risk metrics**: volatility, drawdown and risk-adjusted ratios.
3. In **VALUE AT RISK**, choose **Confidence** (90%, 95% or 99%; default 95%), **Horizon (days)** (1), the **Headline method** (Parametric, Historical — the default — or Monte Carlo) and the **Position value** (1,000,000), then click **Run VaR**.
4. In **STRESS TEST**, choose an **Exposure mix** (for example **Balanced — 60 equity / 30 bond / 10 commodity**) and a **Portfolio value**, then click **Run stress test** to apply past crises (2008, COVID, dot-com, stagflation and others).

Value at risk (VaR) is the loss you should not exceed on, say, 95 days out of 100. **CVaR** is the average loss on the remaining bad days.

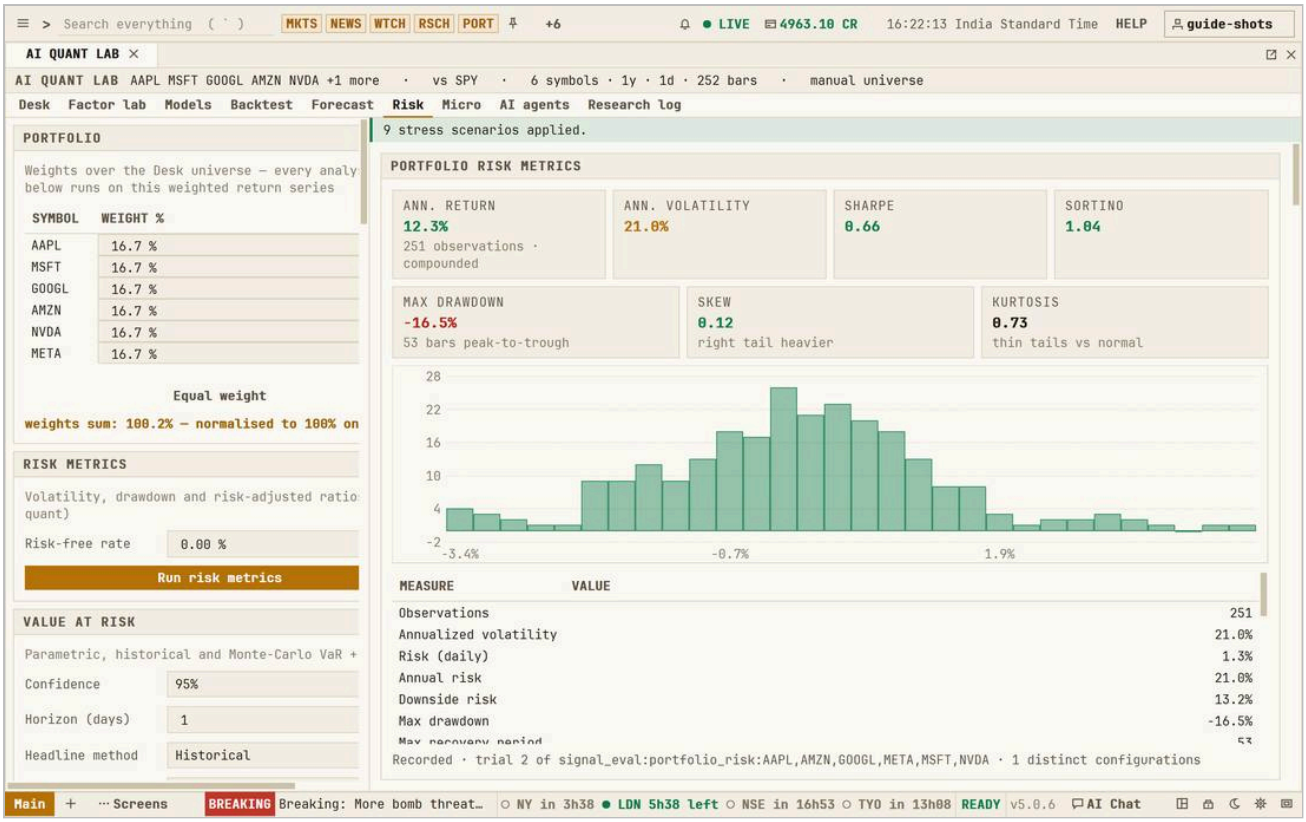


Figure 31.12 PORTFOLIO RISK METRICS for an equal-weight portfolio of the sample universe; the rail on the left holds the PORTFOLIO weights and the run cards.

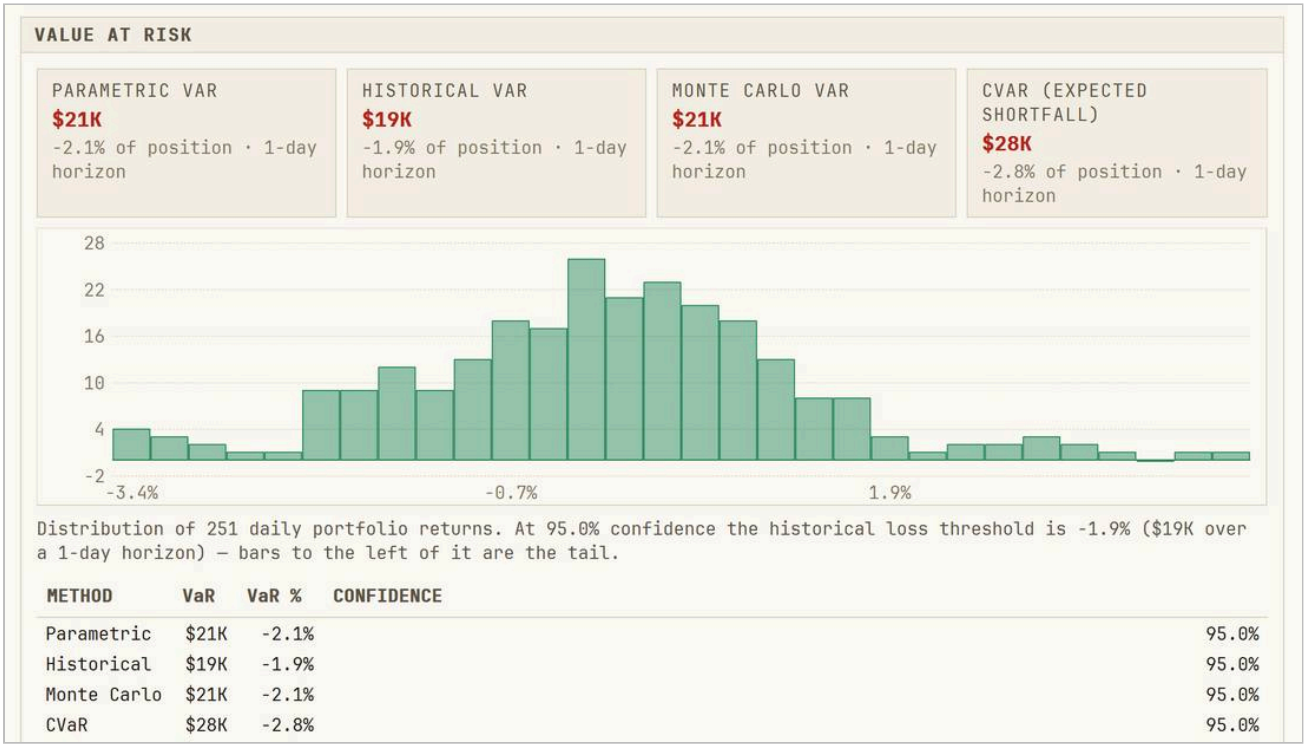


Figure 31.13 VALUE AT RISK after Run VaR at 95% over one day — parametric, historical and Monte Carlo VaR, CVaR, the return distribution and the summary table.



SCENARIO	P&L	P&L %	SHOCKED VALUE
Dot-Com Bust (2000-2002)	-$249K	-24.9%	$751K
COVID-19 Crash (Mar 2020)	-$239K	-23.8%	$762K
2008 Financial Crisis	-$228K	-22.8%	$772K
Emerging Markets Crisis	-$161K	-16.1%	$840K
Stagflation Scenario	-$111K	-11.1%	$889K
Aggressive Fed Rate Hike	-$102K	-10.2%	$898K
Mild Recession	-$80K	-8.0%	$921K

Figure 31.14 STRESS SCENARIOS after Run stress test with the default exposure mix — the profit or loss in each past crisis and the shocked portfolio value.

Card	What it does
CVaR OPTIMIZATION	**Run CVaR optimization** finds weights that minimise tail loss at **CVaR confidence** (0.95). The same card runs **Mean-variance** (**Mean-variance objective**: Minimum variance or Maximum Sharpe), **Frontier** (**Frontier points** 20) and **Covariance**.
COVARIANCE LAB	Estimates how the symbols co-move (**Estimator**: Sample, EWMA, Ledoit-Wolf shrinkage — default —, Nonlinear shrinkage, RMT denoise; **EWMA λ** 0.94) with **Estimate covariance**, and reports how stable the estimate is.
OPTIMIZER (CONSTRAINED)	Solves an **Objective** (Minimum variance, Maximum Sharpe, Mean-variance utility with **Risk aversion λ** 5, Risk parity) under rules you tick: **Long only (w ≥ 0)** (on), **Per-asset cap** (**Max per asset** 25%), **Top-name group cap** (**Top 3 names max** 50%), **Turnover budget** (**Max sum|Δw|** 30%, measured from the **PORTFOLIO** weights unless you untick **…from the PORTFOLIO weights above**), **Max names** (off by default). Click **Solve**. An impossible set of rules comes back INFEASIBLE with the conflicting rules named.
FACTOR RISK MODEL	Splits risk into factor and specific parts. **Source**: a statistical model (**Factors K**, default auto) or an imported model file (**Browse**); **Max missing** (0.20); tick **Decompose ACTIVE risk vs benchmark** to measure risk relative to the benchmark. **Estimate / import**, then **Re-decompose current weights** after you change the weights.
VIEWS & STRESS (ENTROPY POOLING)	Enter views (for example "AAPL mean ≤ −2%") with **Add view** and **Pool views** to re-weight history until it agrees; **Run as stress** shows what the other assets did.
WHAT-IF REBALANCE	**Add trade** rows and **Evaluate** to see the new risk and turnover before you trade.
ATTRIBUTION	**Attribute vs benchmark** splits the return difference from the benchmark.
TEARSHEET (REPORTING)	**Run tearsheet**: cumulative returns against the benchmark, drawdown and rolling volatility (**Rolling window (days)**, 20).

31.9 Study order books (Micro)

Micro works on a live crypto order book — it does not use the Desk universe.

1. In **VENUE**, pick an **Exchange** and a **Symbol** (for example **BTC/USDT**; type `BTC/USDT:USDT` for a perpetual).
2. Set **Book depth (levels)** (20) and click **Fetch book**. **ORDER BOOK** shows best bid and ask, spread, mid and the order-book imbalance; **MICROSTRUCTURE** adds the weighted mid, volumes and pressure.
3. Click **Auto refresh: off** to refresh every 5 seconds (it stops when you leave the tab), or **Full snapshot** for book, trades, quotes, toxicity and slippage in one call.

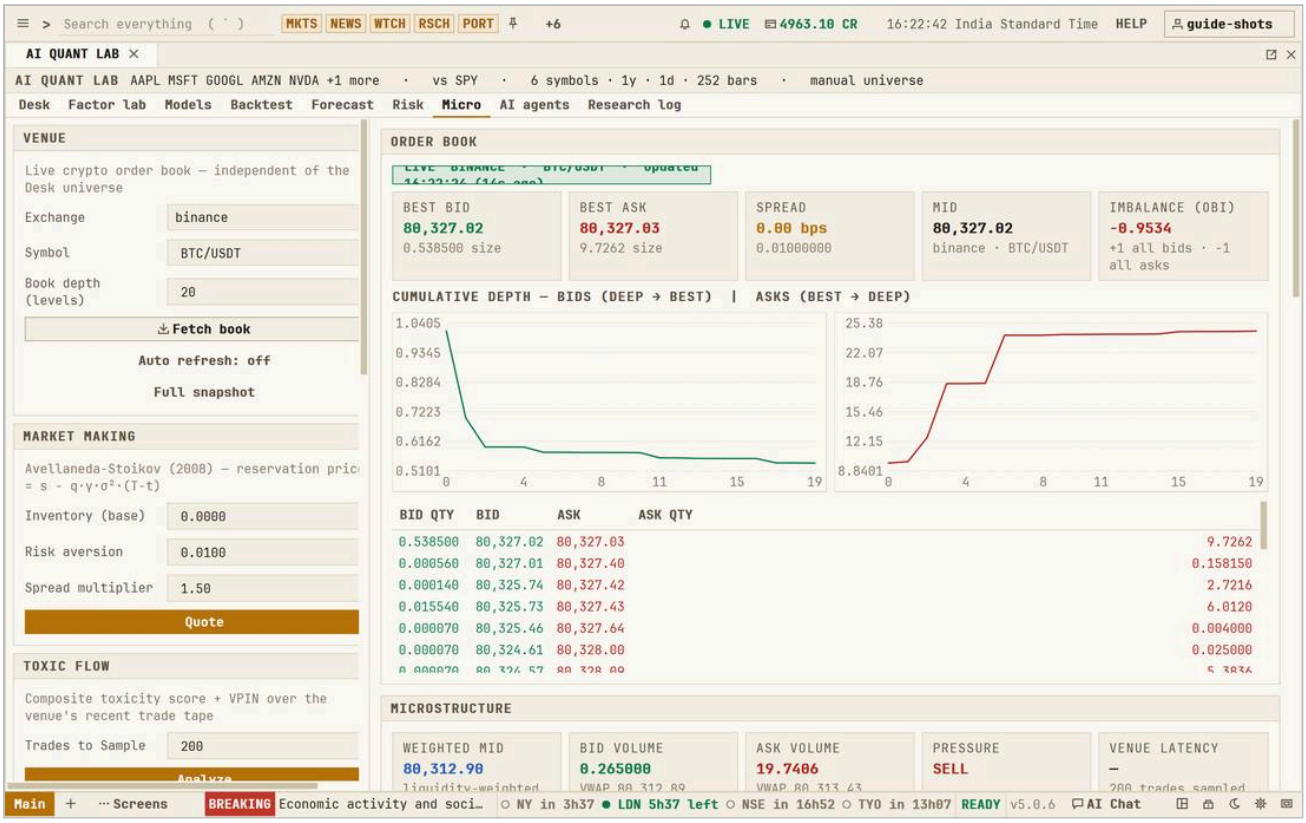


Figure 31.15 A live BTC/USDT order book — best bid and ask, spread, imbalance, cumulative depth and the top levels — with MICROSTRUCTURE below.

Card	What it does
MARKET MAKING	Quotes a bid and an ask for your **Inventory (base)** (0), **Risk aversion** (0.01) and **Spread multiplier** (1.5) (Avellaneda-Stoikov model); **Quote** fills **MARKET MAKING QUOTES**.
TOXIC FLOW	Scores whether recent trades look informed (toxicity and VPIN) over **Trades to Sample** (200); **Analyze**.
SLIPPAGE	Walks the book for an order of **Order size (base)** on a **Side**; **Estimate** fills **SLIPPAGE ESTIMATE** with the expected fill and levels consumed.
EXECUTION TCA (OWN FILLS)	**Load fills** reads every algo fill this computer has booked; **Break down by** (Symbol, Strategy, Side), a cost **Model** and **Impact model**; **Run TCA** measures the cost against the decision price; **Run calibration** (**Calibrate mode**: live or paper) fits the cost model. No exchange call, no credits.
L2 CAPTURE (LOCAL)	Uses the venue and symbol above. Set **Depth (levels/side)** (10) and click **Start capture** to record the live book to a file on your computer, with gaps logged. Free. **FEED LATENCY (PERSISTED)** keeps per-venue delay statistics (median, P90, P99) across restarts.

31.10 Run AI research (AI agents)

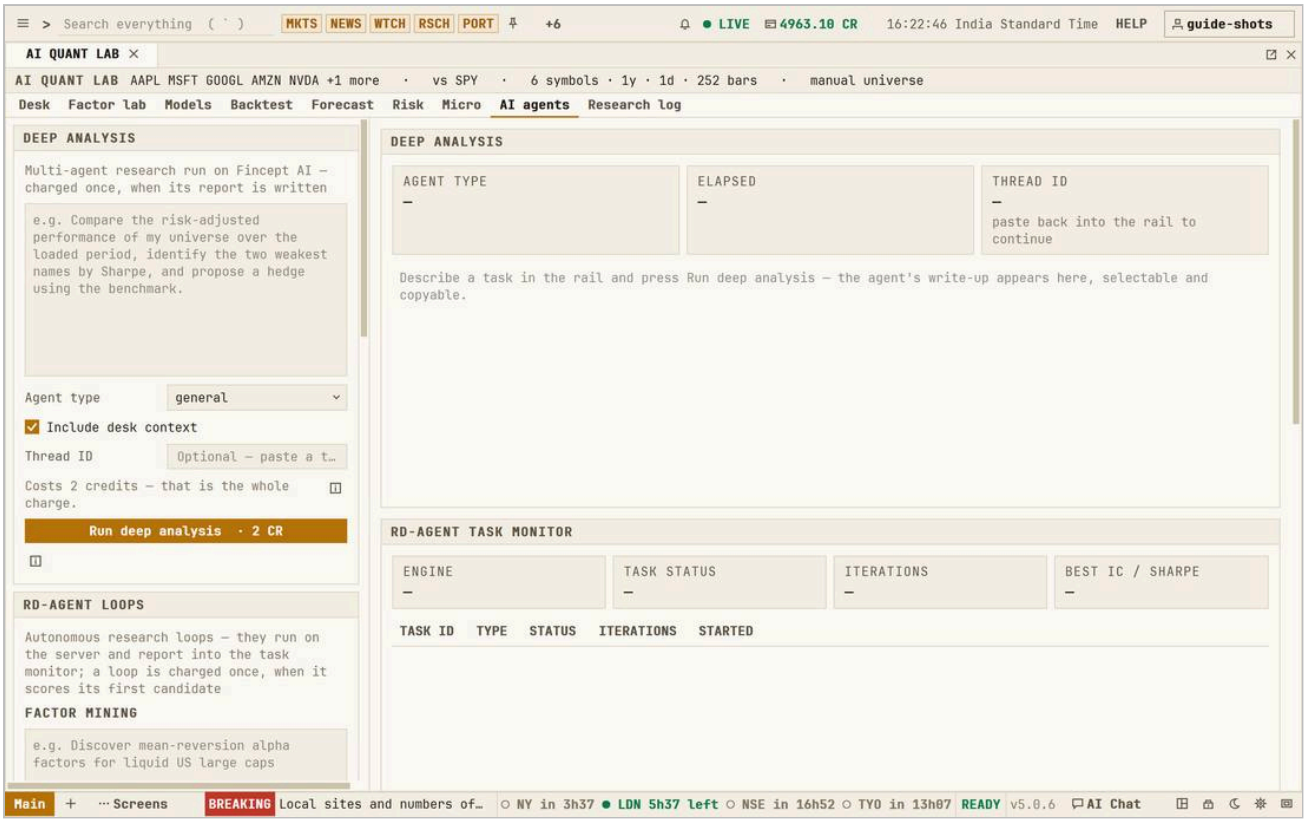


Figure 31.16 The AI agents tab. The run buttons show their price.

Card	What it does	Cost
DEEP ANALYSIS	Write a research task. With **Include desk context** ticked, your universe, benchmark, period and data stats are added so the agent works on your desk. Pick an **Agent type** (general, research, trading_strategy, portfolio_management, risk_assessment); paste a **Thread ID** to continue an earlier conversation. **Run deep analysis**.	2 credits, charged when the report is written
RD-AGENT LOOPS	Autonomous loops on the server that propose and score ideas. **FACTOR MINING**: describe the idea, pick a **Target market** (US, CN, EU, IN, JP, HK, GLOBAL), **Max iterations** (10) and **Target IC** (0.05); **Start factor mining**. **MODEL OPTIMIZATION**: **Model type** (lightgbm, xgboost, lstm, gru, transformer, tcn), **Optimize for** (sharpe, ic, max_drawdown, win_rate, calmar_ratio), **Max iterations**; **Start model optimization**. **QUANT RESEARCH**: a goal, **Target market**, **Max iterations**; **Start quant research**. Progress appears in **RD-AGENT TASK MONITOR** with **Refresh**, **Stop**, **Resume** and **Get factors**.	2 credits per loop, charged when it scores its first candidate; resuming is free
RL TRADING	Trains a reinforcement-learning trading policy on one symbol's bars: **Algorithm** (PPO, DQN, A2C, SAC, TD3), **Symbol**, **Episodes** (100), **Learning rate** (0.0003), **Initial capital** (100,000); **Train agent**, **Evaluate**. **RL TRAINING CONSOLE** streams training output.	Free

A run that fails or finds nothing is not charged.

31.11 Keep a research log (Research log)

Every backtest, factor test, model training and optimisation the lab runs is recorded on your account — the same log appears on every computer you sign in on. The log counts how many times you tried each idea, which is what an honest Sharpe ratio needs.



Figure 31.17 EXPERIMENTS — every run the lab recorded, newest first. Click a row for its full record.

1. Open **Research log** and click **Refresh** in the **RESEARCH LOG** card. **EXPERIMENTS** lists your runs, newest first: **RECORDED**, **KIND**, **FAMILY**, **VERDICT**, **HEADLINE**, **STATUS** and **TRIAL #**.

2. Filter with **Kind** (All kinds, Backtests, Signal evaluations, Model training, Optimisations), **Family** (a strategy family key such as `backtest:topk_dropout:AAPL,MSFT`) and **Max rows** (100, up to 500).

3. Click a row to see its full record in **EXPERIMENT DETAIL**.

4. In **TRIALS**, enter a family and click **Fetch trials**: **N NOMINAL** (runs), **N DISTINCT** (different settings) and **BEST SHARPE**.

5. Give up on an idea: select its row, click **Retire this idea**, type why it died (a reason is required) and click **Confirm**. Retiring is one-way. The idea moves to the **GRAVEYARD** and is hidden from **EXPERIMENTS** unless you tick **Include retired**.

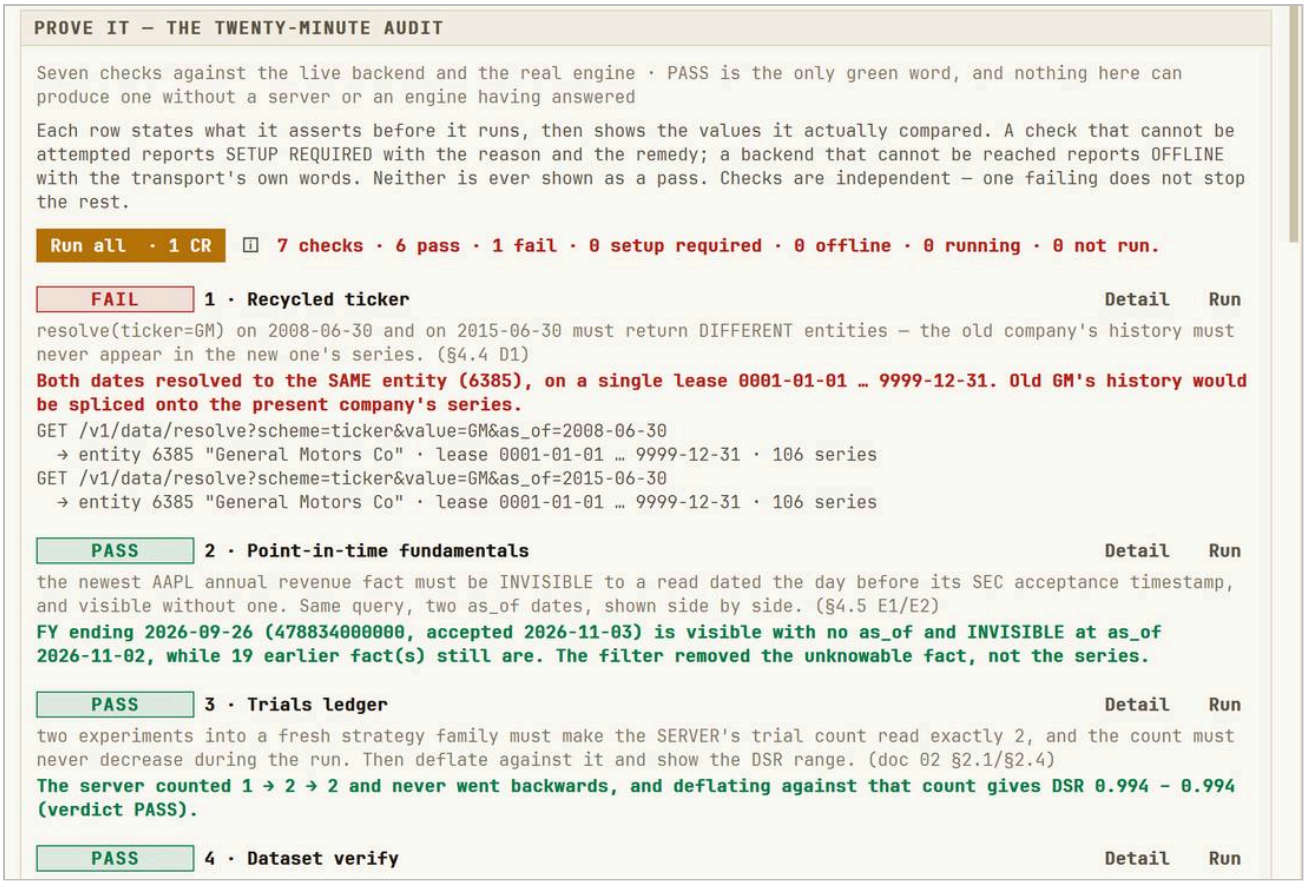


Figure 31.18 PROVE IT after Run all — each check states what it asserts and shows the values it compared.

Card	What it does
PROVE IT — THE TWENTY-MINUTE AUDIT	Seven checks against the live server that show the lab's safeguards work: **1 · Recycled ticker**, **2 · Point-in-time fundamentals**, **3 · Trials ledger**, **4 · Dataset verify**, **5 · Sealed holdout**, **6 · Validation honesty** and **7 · Cost honesty**. **Run all** (1 credit) or **Run** one check — only check 7 is charged (1 credit, a server backtest); the other six are free. **Detail** shows the values compared. Each check reads **PASS**, **FAIL**, **SETUP REQUIRED**, **OFFLINE**, **RUNNING…** or **NOT RUN**; checks are independent, so one failing does not stop the rest.
SIGNAL LIBRARY & CORRELATION	**Refresh library** lists submitted signal families; pick a **Family** and **Correlate** to see how similar it is to the others (**MAX |CORR|**).
GRAVEYARD	Retired ideas with the reason and final trial count; **Search** it.
LINEAGE	Link a family to a **Parent family** with a **Relation** (derived_from, refinement_of, combination_of) and **Link**.

31.12 Reference

Context strip and tabs

Item	Meaning
Symbols	The first five symbols, then "+N more". **No research universe yet. Set one up on the Desk tab.** when empty.
vs SPY	The benchmark.
Data summary	Symbols loaded · period · interval · bars per symbol. **fetching…** while prices load; **no data — press Fetch data** when nothing is loaded (for example after you reopen the lab).

Item	Meaning
Provenance	**manual universe**, **SPX current membership — survivorship-biased** or **SPX as-of 2023-03-01 — point-in-time**.
Tabs	Desk, Factor lab, Models, Backtest, Forecast, Risk, Micro, AI agents, Research log. A locked tab shows a lock and opens the upgrade note.

Desk defaults and limits

Setting	Default	Options / limit
Benchmark	SPY	Any symbol; empty disables relative stats
Period	1y	3mo, 6mo, 1y, 2y, 5y, max
Interval	1d	1d, 1wk, 1mo
Universe from an index	—	Up to 60 symbols
Index	SPX	SPX, NDX, RUT, DJI or any id you uploaded
Bar clock	DOLLAR	DOLLAR, VOLUME, TICK, TIME, TICK IMBALANCE
Target bars	60	5–2000
Universe preview	—	First 12 symbols charted

Factor lab defaults

Setting	Default	Range
Expression	`cs_rank(ts_mean(returns, 20)) - 0.5`	—
Horizon (bars)	5	1–20
Quantiles	5	3–10
IC Method	spearman	spearman, pearson
Method (Moving Average)	sma	sma, ema
Window (bars)	20	2–500
Std deviations (Bollinger)	2.0	0.5–5
Fast EMA / Slow EMA / Signal EMA (MACD)	12 / 26 / 9	—
%K Window / %D Window (Stochastic)	14 / 3	—
Annualize (x sqrt 252) (Volatility)	off	—
Factor window	20	2–500
Forward horizon	1	1–60

Status messages

Message	Meaning
Fetching price history for …	Prices are loading.
Universe loaded — …	All symbols loaded.

Message	Meaning
Universe loaded with gaps — …	Some symbols had no data.
No market data loaded yet — open the Desk tab, set your universe and press Fetch data.	A run needs prices first.
Run failed — results below are from an earlier run	The latest run failed; older results stay visible.
Pick a symbol — the universe is set on the Desk tab.	The card's symbol list is empty.

31.13 For advanced users

- **Hand-offs in.** Equity Research and Backtesting can open the lab on a symbol: the universe becomes that symbol and the lab lands on **Desk**. A Backtesting run staged from the lab opens straight on its experiment family in **Research log**.
- **Hand-off out. Open in Backtesting** (Backtest tab) carries the universe and starting capital to **Chapter 24, Backtesting** p. 464 for a full engine run with costs and reports.
- **What is remembered.** The universe, benchmark, period, interval, the open tab and the list of models you created are saved with your workspace; the trained models, online learners, retraining schedules, RL policies and sealed holdouts themselves are kept on the server for your account. Prices are not saved: when you come back the context strip reads **no data — press Fetch data**, so open **Desk** and click **Fetch data**.
- **Point-in-time discipline.** Fundamentals carry the date the SEC accepted the filing, and a read **As of** a date sees only what was public then. Combine a point-in-time universe with point-in-time fundamentals to avoid look-ahead.
- **Trials and deflation.** Every run in a family adds to its trial count; **DEFLATED SHARPE** in the Backtest tab uses it. Trying fifty variants and keeping the best is what it corrects for.

Do it with AI

The terminal's AI (see **Chapter 37, AI Chat** p. 719) works the lab the way you do: it sets the Desk, presses a tab's run button and reads the tiles and tables that come back. Anything that spends credits asks you first. It can also read your research log directly. Try:

- "Open the Quant Lab with AAPL, MSFT and NVDA over two years and run a 20-day momentum IC test."
- "In the Quant Lab, compute 95% one-day VaR for an equal-weight portfolio of my universe."
- "Show my research log for top-K dropout backtests."

31.14 Troubleshooting

If something goes wrong

Every run says "No market data loaded yet". Open **Desk**, check the symbols and click **Fetch data**. The context strip must show bars loaded.

A card says "Pick a symbol — the universe is set on the Desk tab." although the universe is loaded. The tab's **Symbol** list is still empty. Open **Desk** and click **Fetch data** again: every open tab then receives the symbols. Pick one in the **Symbol** list and run the card again.

The status says "Universe loaded with gaps", or the benchmark shows "not loaded — check the ticker". Use the terminal's symbol format (`RELIANCE.NS`, `BTC-USD`). Pick it from the command line first to see the exact spelling.

"needs at least N bars". The window is longer than the history. Lower the window or choose a longer **Period** on the Desk.

Micro, AI agents and Research log show a lock. Your plan includes the first six tabs. Exclusive+ and Exclusive Pro include all nine.

A Prove it check says SETUP REQUIRED or OFFLINE. SETUP REQUIRED gives the reason and the fix (for example, ingest fundamentals first). OFFLINE means the server did not answer; try again later. Neither is a pass.

PART V

Macro & World

Economic data from every country, sovereign bonds, global trade, geopolitics and shipping — on maps and in tables.

32	Global Data	GDAT
33	Sovereign Bonds	BOND
34	Global Economy	GECO
35	Geopolitics	GEOP
36	Maritime	MARI

CHAPTER 32

Global Data GDAT

One explorer for economic and financial data from statistics offices, central banks and international organisations around the world — search it, chart up to twelve series side by side, read the numbers and export them.



At a glance

Open it	• Type `GDAT` in the command line and press **Enter** • Type `gd`, `global`, `data` or `econ` in the command line and press **Enter** • Type the name of an indicator (for example `us cpi`) in the command line and pick it under **Economic series**
You need	• Signed in on any paid plan
Best for	• Charting inflation, jobs or growth for any country • Comparing two economies or two indicators • Pulling a long history into a spreadsheet
Time to learn	10 minutes
Related	**Chapter 13, Economic Calendar** p. 218, **Chapter 33, Sovereign Bonds** p. 660, **Chapter 34, Global Economy** p. 672, **Chapter 44, Excel** p. 844

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32.1 Screen tour

Global Data has three layers. At the top, a command strip to search. In the middle, the **stage**: your charted series, two charts and an **About** card. At the bottom, the **dock**: topics to browse and the search results.

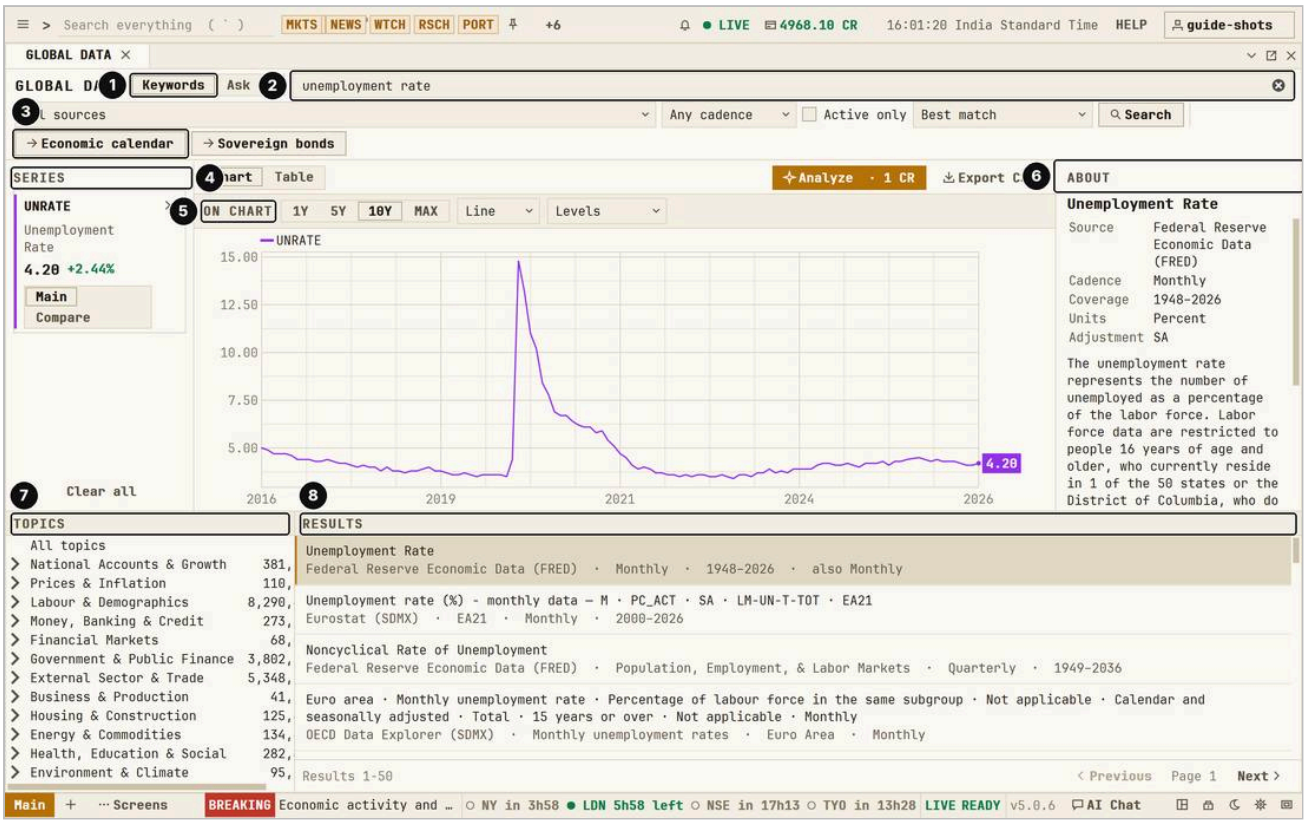


Figure 32.1 Global Data after a search for "unemployment rate". The best match is charted, its story is in About.

1. **Keywords / Ask AI** — search by words, or ask a question in plain English.
2. The **search box**. Press Enter or click **Search**.
3. Shortcuts to the **Economic calendar** and **Sovereign bonds** screens.
4. The **Series** rail: one card per charted series.
5. The **main chart**. A second, **compare** chart opens under it when you add a series to it.
6. **About** describes the selected series: source, cadence, coverage, units.
7. **Topics** — browse the catalogue by subject.
8. **Results** — the series that match. Click one to chart it.

1. **Mode — Keywords** finds series whose names match your words. **Ask AI** reads a question and turns it into the right search.
2. **Search box** with its filters: **All sources**, the cadence (**Any cadence**), **Active only** and the order (**Best match**).
3. **Economic calendar** and **Sovereign bonds** open those screens (**Chapter 13, Economic Calendar** p. 218, **Chapter 33, Sovereign Bonds** p. 660).
4. **Series rail** — each charted series shows its code, name, latest value and last change.
5. **Charts — On chart** (main) and **Compare**. Each holds up to six series.
6. **About** — the story of the series you picked last.
7. **Topics** — twelve subject groups with the number of series in each.
8. **Results** — 50 series per page, each with its source, cadence and the years it covers.

A **series** is one indicator for one place at one cadence — for example "unemployment rate, United States, monthly". **Cadence** is how often a new value is published (daily, weekly, monthly, quarterly or annual).

32.2 Quick start

1. Type `GDAT` in the command line and press **Enter**.
2. Click in the box that says **Series, topic or code** and type `unemployment rate`.
3. Press **Enter**. The results fill the bottom-right list. When the charts are empty, the best match is charted for you straight away.

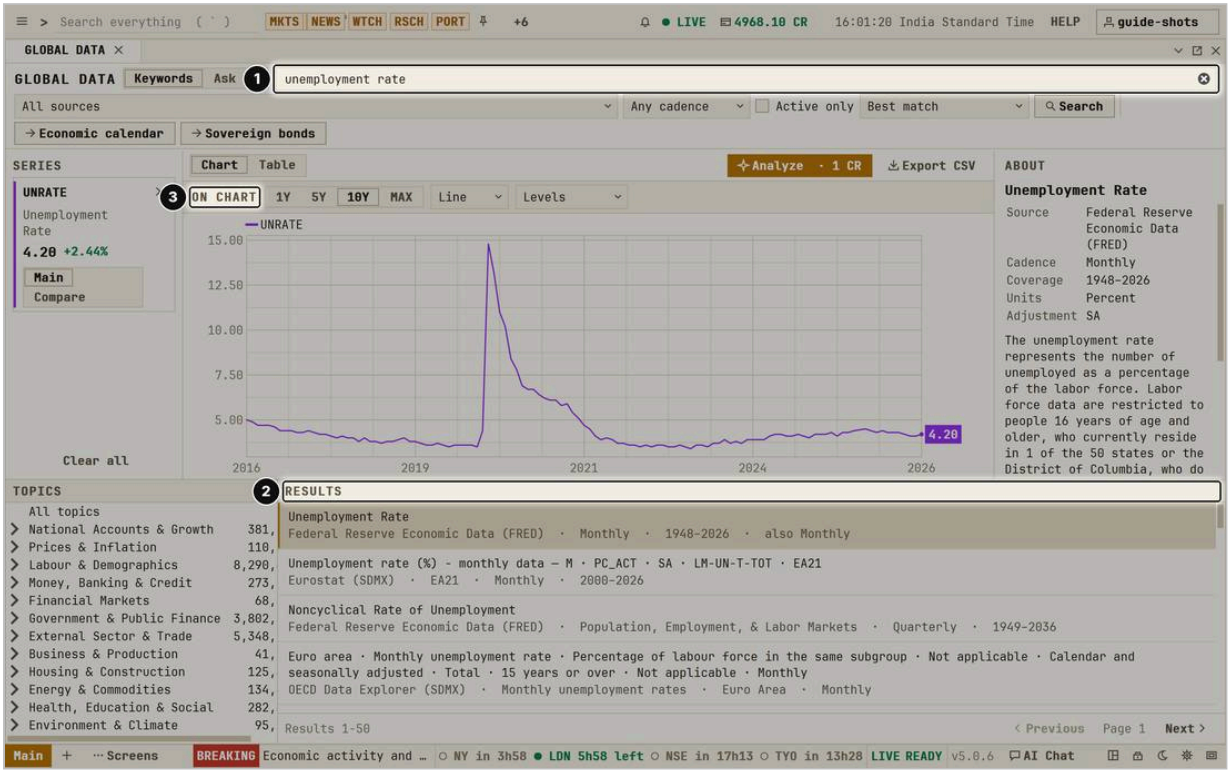


Figure 32.2 A keyword search. The top result is charted because the charts were empty.

1. Your words.
2. Matching series. Each row: name, source, cadence, coverage.
3. The best match, already charted.

4. Click **10Y** above the chart to see ten years instead of one. (How far back a series reaches depends on your plan — see **§32.10 Reference** p. 656, Limits.)
5. Move the pointer over the chart. A crosshair shows the date and the value of each line.
6. Read the **About** card on the right: where the data comes from, its units and whether it is seasonally adjusted.

Tip

You can skip the screen: type an indicator in the command line at the top (for example `japan inflation`) and pick it under **Economic series**. Global Data opens with that series on the chart — on the main chart, or on the compare chart when the main one is full.

32.3 Search for data

Use this when you know roughly what you want.

1. Make sure **Keywords** is selected.
2. Type words, a topic or a series code. Short, specific words work best: `germany gdp`, `india cpi`, `UNRATE`.
3. Narrow the search if needed with the filters on the second line (see the table below).
4. Click **Search** (or press Enter).
5. Use **Previous** and **Next** under the list to page through results, 50 at a time.

Filter	What it does
All sources	Pick one publisher: a statistics office, a central bank or an international organisation.
Any cadence	Pick **Daily**, **Weekly**, **Monthly**, **Quarterly** or **Annual**.
Active only	Hide series that are no longer published.
Best match / Latest data first	The order of the results.

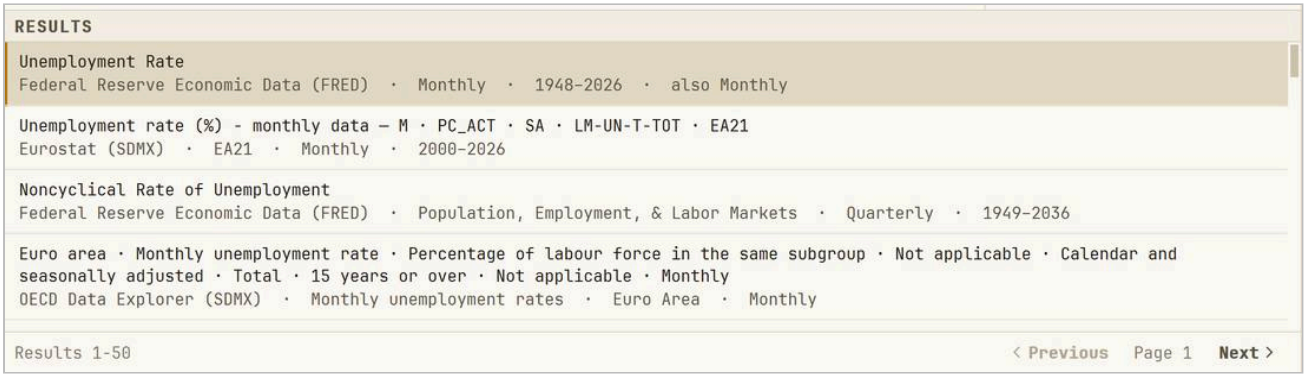


Figure 32.3 Results for "unemployment rate". Each row shows the series name, its source, its cadence and the years it covers.

Chips under the command strip explain what the search did:

Chip	Meaning
Searched for: …	The words the catalogue was searched for.
Nothing matched in …: showing every source	The source filter was too narrow and was relaxed.
Nothing matched …: showing every cadence	The same, for the cadence filter.
Nothing matched for …: showing every region	The same, for a country or area named in your words.
A topic chip, for example Prices & Inflation ×	The topic filter. Click its × ("Clear this topic filter") to drop it.

The line under the results counts the rows (**Results 1-50**). If a search takes more than a few seconds, it says **Still searching. Broad words take longer; add a word to narrow them.**

Note

When one indicator is published at several cadences, the list shows it once and adds "also Monthly, Quarterly..." to the row.

32.4 Browse by topic

Use the topic tree when you do not know the exact name.

1. In **Topics** at the bottom left, click a subject such as **Prices & Inflation**. The arrow opens its sub-topics.
2. The results now list only that topic's series, and a topic chip appears under the command strip.
3. Add words in the search box to narrow further, or click **All topics** to start again.

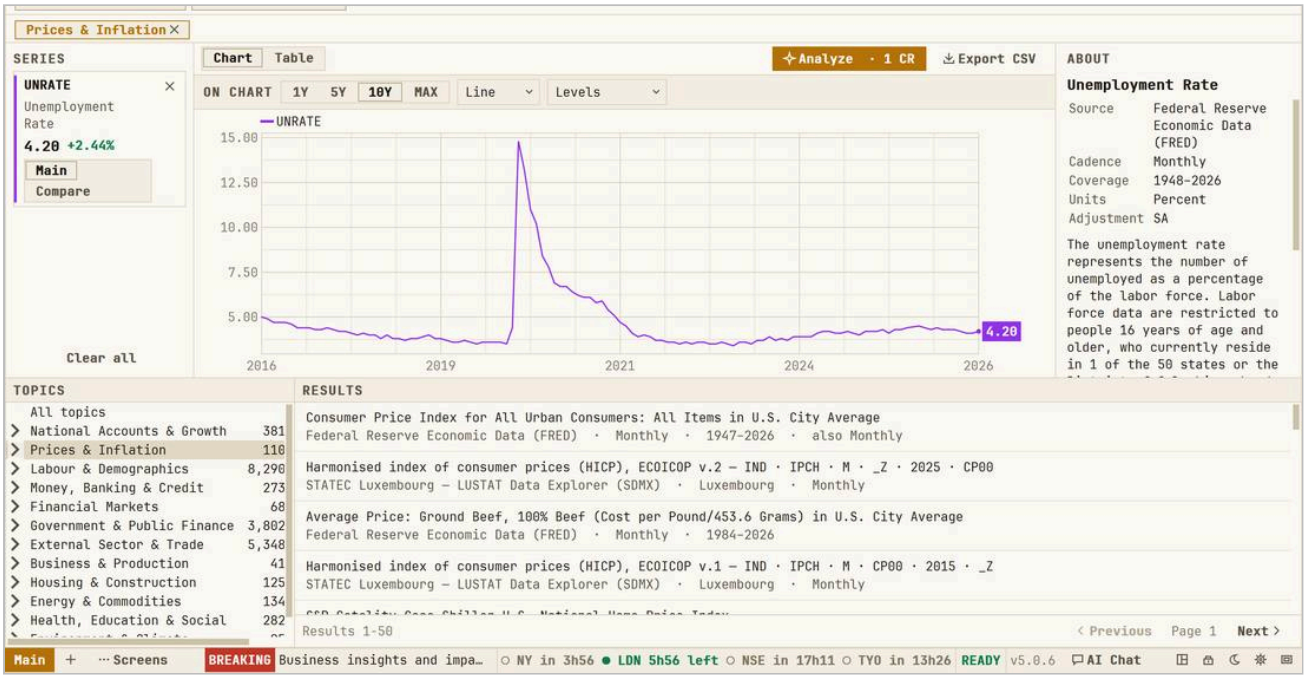


Figure 32.4 Browsing the Prices & Inflation topic. The topic chip at the top shows the filter; its × removes it.

The number beside each topic is how many series it and its sub-topics hold. Hover a topic to see its description and its counts. Browsing a topic is a free catalogue search, even in **Ask AI** mode.

32.5 Ask a question with AI

Use **Ask AI** when you would rather describe what you want. It costs 1 credit per question.

1. Click **Ask AI** at the top left. The box now says **Ask a question, e.g. US wage growth**. The source and cadence filters are switched off in this mode.

2 Type a question, for example `How fast are wages growing in the UK?`



Figure 32.5 Ask AI mode. The button shows the price before you press it.

3 Click **Ask** (or press Enter). The AI works out the topic, region and cadence, and lists the matching series. A chip such as **Understood: …** shows how it read your question.

4 Click a result to chart it, as usual. Click **Keywords** to go back to plain search.

An answer has no **Previous** / **Next** pages: another page would be the same question asked, and charged, again. When the screen is reopened, the question comes back in the box but is not asked again until you press Enter.

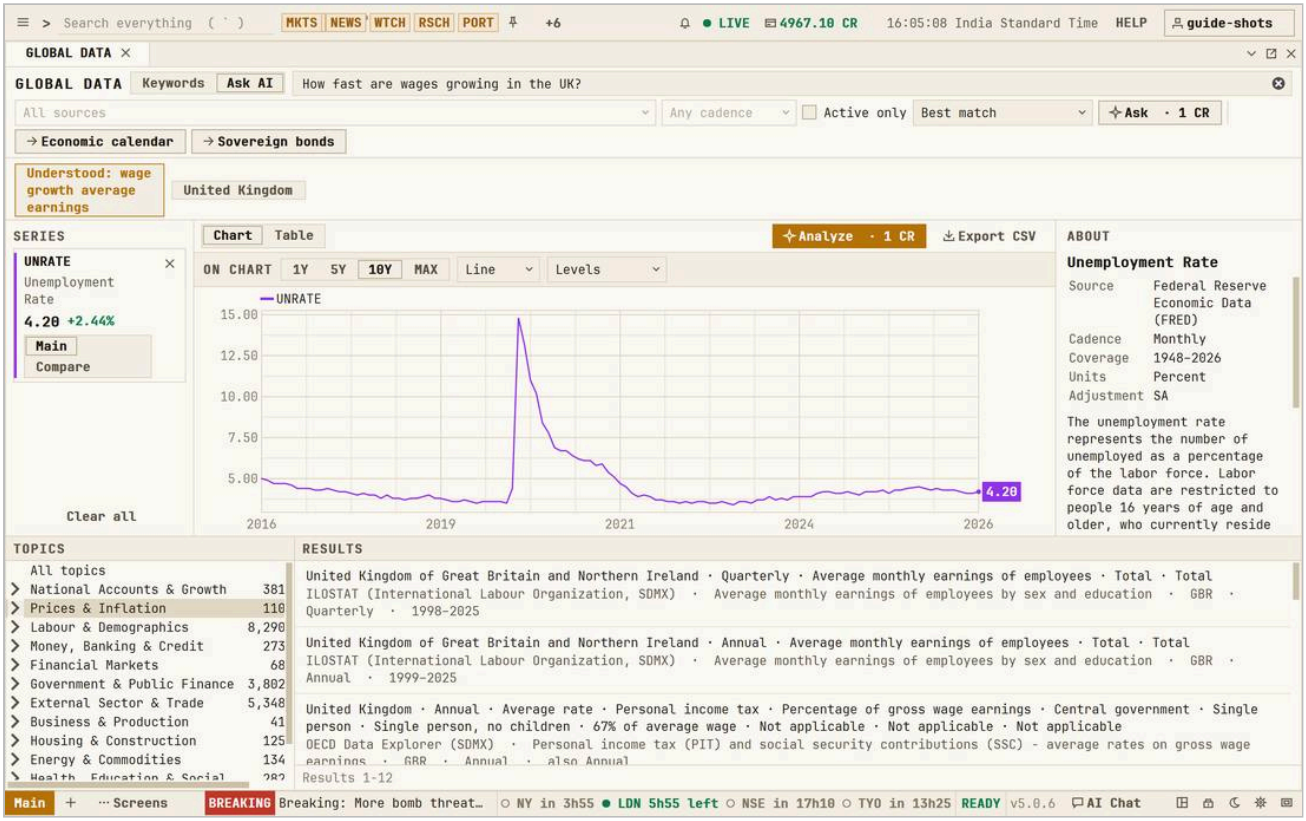


Figure 32.6 The answer to a question — the chips show what the AI understood, the list shows the series it found.

Plans and credits

Searching, browsing, comparing and exporting are free. Charting is free within your plan's monthly allowance of new series (see Limits in **§32.10 Reference** p. 656). Each **Ask** costs 1 credit, and so does each **Analyze**.

If your keyword search reads like a question, the **Search** button turns into **Ask** and shows the price — that search is sent to the AI. A search reads like a question when it has six words or more, or three words or more that start with words such as *what*, *how*, *why*, *show*, *find*, *give*, *compare*, *is* or *I want*. Shorten it to keep the search free.

32.6 Chart a series and compare two

Use this to put two indicators or two countries side by side.

1. Click a result. If nothing is charted yet, it goes onto the main chart. (A result that is already charted only shows its **About** card.)
2. Click a second result. A small menu asks where it goes.
3. Pick **Show on the main chart** to draw it on the same chart, or **Add to the compare chart** to draw it on a second chart under the first.
4. Move a series between charts at any time with the **Main** and **Compare** buttons on its card in the Series rail.
5. Remove a series with the × on its card. **Clear all** removes every series.



Figure 32.7 A chart's own controls, and a series card in the Series rail.

1. **Main** / **Compare** move the series between the two charts.
2. × takes the series off the charts.
3. **1Y** / **5Y** / **10Y** / **MAX** — the time window of this chart.
4. **Line** / **Area** / **Step** / **Bars** — the chart style.
5. **Levels** / **Index=100** / **% change** — how values are shown.

Window, style and scale

Each chart has its own controls in its title bar:

Control	Options	What it does
Window	**1Y** (default), **5Y**, **10Y**, **MAX**	How much history the chart shows, counted back from the newest value on that chart (not from today). **MAX** shows every value your plan can read.
Style	**Line**, **Area**, **Step**, **Bars**	How each series is drawn. **Step** suits rates that jump (policy rates); **Bars** suits annual data.
Scale	**Levels**, **Index=100**, **% change**	**Levels** shows the published values. **Index=100** rescales every line to 100 at the start of the window, so series in different units can be compared. **% change** shows the change from one period to the next.

Tip

Comparing a US index with a euro-area one? Put both on one chart and choose **Index=100**: each line then shows growth since the start of the window, whatever its units.

32.7 Read the numbers in a table

1. Click **Table** above the charts. Every charted series becomes a column, one row per date.
2. Click **Chart** to return.



Date	UNRATE
2026-09-01	4.20
2026-08-01	4.10
2026-07-01	4.10
2026-06-01	4.20
2026-05-01	4.30
2026-04-01	4.30
2026-03-01	4.30
2026-02-01	4.40
2026-01-01	4.30
2025-12-01	4.40
2025-11-01	4.50
2025-09-01	4.40
2025-08-01	4.30

Figure 32.8 The Table view lists every value of the charted series by date.

32.8 Export to CSV

1. Chart the series you want.
2. Click **Export CSV**. A save dialog opens, titled **Export data**, with the name `global-data.csv`.
3. Choose a folder and a name and click **Save**. The note under the results says **Saved.** (or **Couldn't save the file there.** when the folder cannot be written to).

The file has a `date` column (YYYY-MM-DD) and one column per charted series, headed `source:code`; series on both charts are included. A date on which a series has no value is left blank. The file holds the values the screen loaded — the whole series your plan can read, not only the chart's window. Open it in **Chapter 44, Excel** p. 844 or any spreadsheet.

32.9 Get an AI read of your charts

Analyze writes a short reading of everything on the charts and suggests related series. It costs 1 credit.

1. Chart one or more series.
2. Click **Analyze** (the button shows **1 CR**).

3 The **About** card turns into **AI analysis**: what the charts show, followed by **Worth adding** — searches for series that would round out the picture. Click one to run that search.

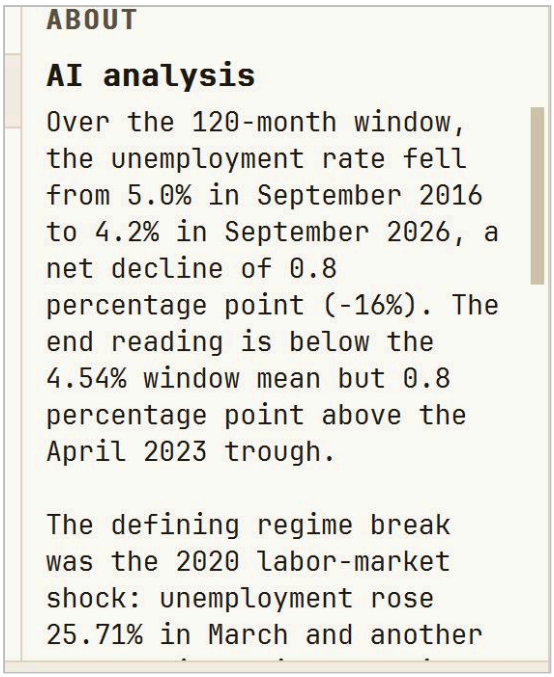


Figure 32.9 Analyze writes a reading of the charts in the About card.

Analyze is greyed out until a series is charted. It reads each chart over its own window, and sends a summary of each series (with the correlations between them), not the raw values. In **Ask AI** mode, the question in the box goes with it. Click a series card or a result to bring the **About** card back.

32.10 Reference

Command strip

Control	What it does
Keywords / Ask AI	Plain search, or a question read by AI (1 credit per question).
Search box	**Series, topic or code** in Keywords mode; **Ask a question, e.g. US wage growth** in Ask AI mode. The × clears it.
All sources	Limit the search to one publisher. Off in Ask AI mode.
Any cadence	Limit to **Daily**, **Weekly**, **Monthly**, **Quarterly** or **Annual**. Off in Ask AI mode.
Active only	Hide series that are no longer published.
Best match / Latest data first	Order of the results.
Search / Ask	Runs the search. Shows a price when the search goes to the AI.
Economic calendar	Opens **Chapter 13, Economic Calendar** p. 218.
Sovereign bonds	Opens **Chapter 33, Sovereign Bonds** p. 660.

Series rail

Item	What it does
Series card	Code, name, latest value and last change of a charted series. Its colour matches its line.
Main / Compare	Moves the series to the main or the compare chart.
× (Remove)	Takes the series off the charts.
Load N saved series	Appears when you reopen the screen: your last charts are remembered but not loaded until you click it.
Clear all	Removes every series from both charts.

Stage toolbar and charts

Control	What it does
Chart / Table	Charts, or a table of values by date.
Analyze	A written AI reading of every charted series (1 credit).
Export CSV	Saves the charted values to a CSV file.
On chart / Compare	The two charts. Up to 6 series each.
1Y, 5Y, 10Y, MAX	Time window of one chart.
Line, Area, Step, Bars	Chart style.
Levels, Index=100, % change	Scale.
Crosshair	Hover a chart to read the date and every line's value.

About card

Field	Meaning
Source	Who publishes the series.
Table	The publisher's table or dataset it belongs to.
Region	The country or area.
Cadence	How often it is published.
Coverage	First and last year with data.
Units	What the numbers measure (percent, index, billions…).
Adjustment	Seasonal adjustment, for example SA (seasonally adjusted) or NSA (not adjusted).

Below the fields, the publisher's own description of the series.

Dock

Item	What it does
Topics	**All topics** and twelve subjects: National Accounts & Growth, Prices & Inflation, Labour & Demographics, Money, Banking & Credit, Financial Markets, Government & Public Finance, External Sector & Trade, Business & Production, Housing & Construction, Energy & Commodities, Health, Education & Social, Environment & Climate. Each opens into sub-topics.
Results	50 rows per page. Click a row to chart it.
Previous / Next, Page N	Page through results.
Note line	Status and messages (see Troubleshooting).

Limits

Limit	Value
Series per chart	6 (12 on the stage)
Results per page	50
New series loaded per month	Exclusive: 300 · Exclusive+: 1,500 · Exclusive Pro: unlimited. Past the allowance a load costs a tenth of a credit; re-loading a series you already loaded this month is free. Hover the results list to read your plan's rule.
How far back a series reaches	Exclusive: the last year · Exclusive+: 5 years · Exclusive Pro: all of it. Older values are left out (the newest value is always kept), and the screen does not say so: **5Y**, **10Y** and **MAX** then show no more than your plan's years.
Sources one search looks in	Exclusive: 12 · Exclusive+ and Exclusive Pro: 48, picked for the words you typed.

32.11 For advanced users

- **What is remembered.** The screen remembers the series on each chart, your words, the mode (**Keywords** or **Ask AI**), the topic, the filters, **Chart** or **Table**, and each chart's window, style and scale. The values are not stored: when you come back, click **Load N saved series** to fetch them again (its tooltip says how many series it fetches). A question is not asked again until you press Enter.



Figure 32.10 After a restart the charts wait behind Load 1 saved series.

1 **Load 1 saved series** fetches the remembered series again.

- **Series codes.** Each series has the publisher's own code (shown in bold on its card). Typing the code in the search box finds it directly.
- **Index=100 maths.** Each line is divided by its first value in the window and multiplied by 100. **% change** is (this value ÷ previous value − 1) × 100.
- **From the command line.** `/economic` followed by words searches only economic series and calendar events.
- **Cross-screen workflow.** Find a release date in **Chapter 13, Economic Calendar** p. 218, chart its history here, compare it with bond yields in **Chapter 33, Sovereign Bonds** p. 660, then export to **Chapter 44, Excel** p. 844 for your own model.

Do it with AI

Ask the terminal's AI (see **Chapter 37, AI Chat** p. 719):

- "Chart US and euro-area inflation for the last ten years in Global Data."
- "Find the latest unemployment rate for Japan."
- "Compare India's GDP growth with China's, indexed to 100."

32.12 Troubleshooting

If something goes wrong

"Each chart holds up to 6 series. Remove one first." That chart is full. Remove a series with its ×, or add the new one to the other chart.

"No observations have been published for that series yet." The series exists in the catalogue but has no values yet. Pick another series.

"That series is taking longer than usual. Try again in a few minutes." The data is still being prepared. Try again later.

"Nothing matched. Try fewer words, or Ask AI." Use fewer or more general words, remove filters, or switch to **Ask AI**.

The charts are empty after I reopen the screen. Your series are remembered but not loaded. Click **Load N saved series** in the Series rail.

"Sign in to search and chart the data catalogue" Global Data needs your session. Sign in; the screen loads as soon as the session is ready.

"Still searching. Broad words take longer; add a word to narrow them." A very general search is still running. Wait, or add a word (a country, a cadence) and search again.

"Too many requests in a short time. Try again in N s." Wait the number of seconds shown, then search again.

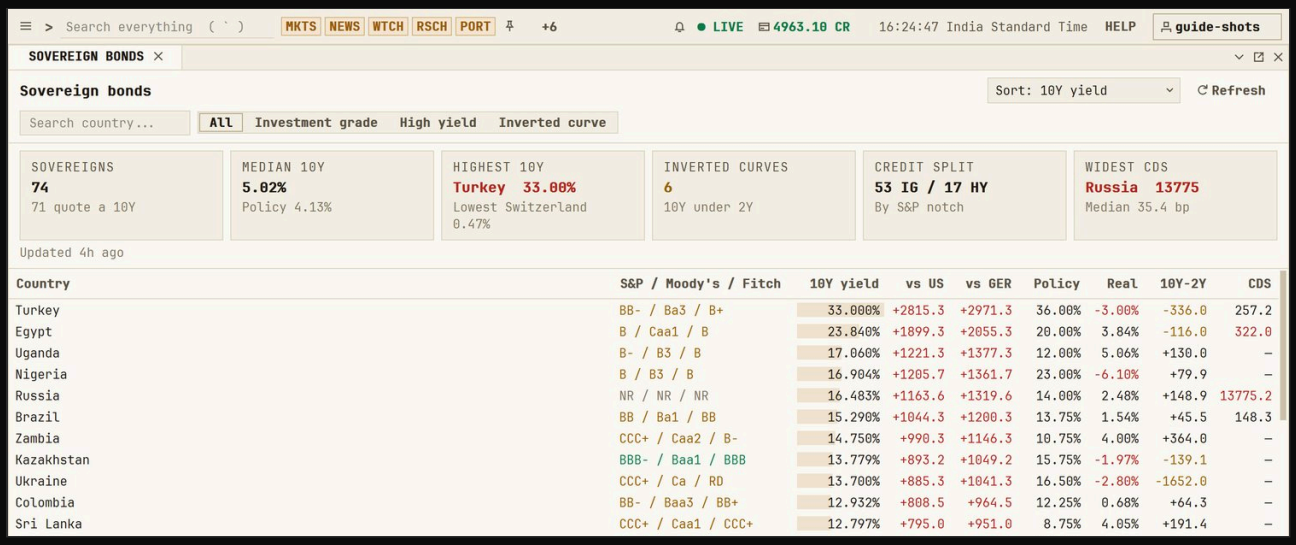
"Couldn't reach the data service. Check your connection." or **"The data service ... (HTTP ...)"** The terminal could not get an answer. Check your internet connection and try again in a moment.

5Y, 10Y or MAX shows only the last year (or five). Your plan limits how far back a series reaches (see Limits in **§32.10 Reference** p. 656).

CHAPTER 33

Sovereign Bonds BOND

Government bond yields for about 75 countries on one page — 10-year yields, spreads, policy rates, real rates, curve shape, credit ratings and CDS — and, for each country, a page with its full yield curve and history. A separate window searches European exchange-listed bonds.



At a glance

Open it	• Type `BOND` in the command line and press **Enter** • Type `bonds`, `sovereign`, `yields` or `govbonds` in the command line and press **Enter** • Click **Sovereign bonds** in the Global Data command strip • Type `/bond` and a country (for example `/bond germany`) in the command line and pick a government bond
You need	• Signed in on any paid plan
Best for	• Comparing borrowing costs across countries • Spotting inverted yield curves • Checking a country's ratings and credit risk
Time to learn	5 minutes
Related	**Chapter 32, Global Data** p. 648, **Chapter 13, Economic Calendar** p. 218, **Chapter 34, Global Economy** p. 672, **Chapter 25, Derivatives** p. 493

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33.1 Screen tour

The Sovereign Bonds screen has two pages: a **list** of every country, and a **bond page** for one country. It opens on the list.

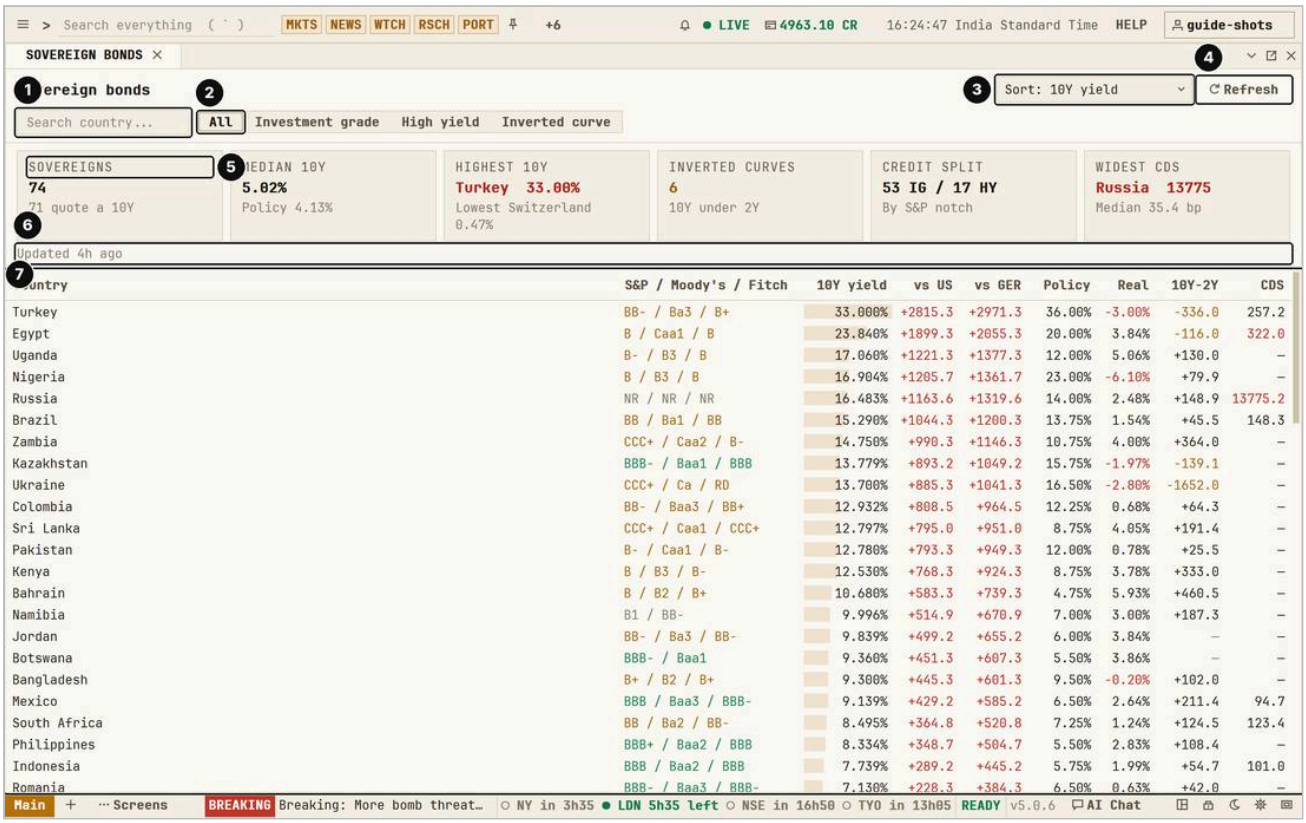


Figure 33.1 The list of sovereigns, sorted by 10-year yield.

1. **Search** — type part of a country name to filter the list.
2. **All / Investment grade / High yield / Inverted curve** — filter by credit quality or curve shape.
3. **Sort** — choose the column that orders the list.
4. **Refresh** reloads the data.
5. **Summary tiles** — the whole cross-section at a glance.
6. How old the data is.
7. **The table** — one row per country. Click a row to open its bond page.

1. **Search country...** — filters the list as you type.
2. **Filters — All**, **Investment grade**, **High yield**, **Inverted curve**. A country no agency rates is neither investment grade nor high yield: it shows only under **All** (and **Inverted curve**).
3. **Sort** — eight orders, from **Sort: 10Y yield** (the default, highest first) to **Sort: country**.
4. **Refresh** — reloads the page.
5. **Summary tiles** — six tiles described below.
6. **Updated** — the age of the oldest data behind the page (for example **Updated 1h ago**).
7. **Table** — one row per country.

The table

Column	What it shows
Country	The sovereign issuer.

Column	What it shows
S&P / Moody's / Fitch	The country's credit ratings from the three main agencies, in green for investment grade and amber for high yield.
10Y yield	The yield of the 10-year government bond, with a bar that shows its size against the others.
vs US	The 10-year spread over the US Treasury, in basis points (bp — hundredths of a percentage point).
vs GER	The 10-year spread over the German Bund, in bp.
Policy	The central bank's policy interest rate.
Real	The 10-year yield minus the policy rate. Negative values are highlighted.
10Y-2Y	The 10-year yield minus the 2-year yield, in bp. A negative value means an **inverted curve**.
CDS	The sovereign credit default swap price in bp: what it costs per year to insure against the country's default.

A dash (**—**) means no figure is published for that country.

Key terms:

- **Yield** — the yearly return a bond pays if you buy it today and hold it to maturity.
- **Spread** — the difference between two yields; a wider spread means investors want more to lend to that country.
- **Investment grade** — a rating of BBB− (S&P/Fitch) or Baa3 (Moody's) or better. Below that is **high yield**.
- **Inverted curve** — short-term yields above long-term ones, often read as a warning of slower growth.

The summary tiles

Tile	Big number	Small line
SOVEREIGNS	Countries on the page	How many quote a 10-year yield
MEDIAN 10Y	The median 10-year yield	The median policy rate
HIGHEST 10Y	Highest 10-year yield and its country	The lowest
INVERTED CURVES	Countries whose 10Y yields less than their 2Y	—
CREDIT SPLIT	Investment grade vs high yield count	By S&P notch
WIDEST CDS	The highest CDS and its country	The median CDS

The tiles always describe every sovereign on the page; the search box and the filters change only the table.

33.2 Quick start

1. Type `BOND` in the command line and press **Enter**. The list loads, highest 10-year yield first.

2 Click **Inverted curve** to see only countries whose curve is inverted.

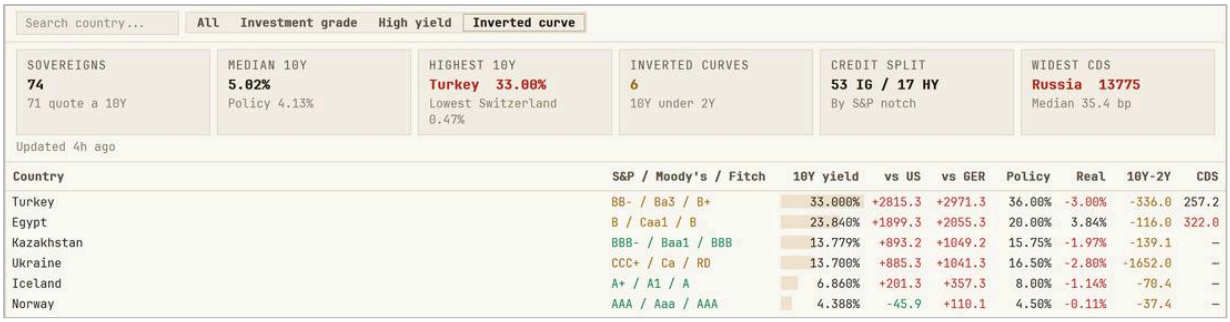


Figure 33.2 Only the countries with an inverted curve.

3 Click **All** again, then type `Germany` in **Search country...**.

4 Click the **Germany** row. Its bond page opens.

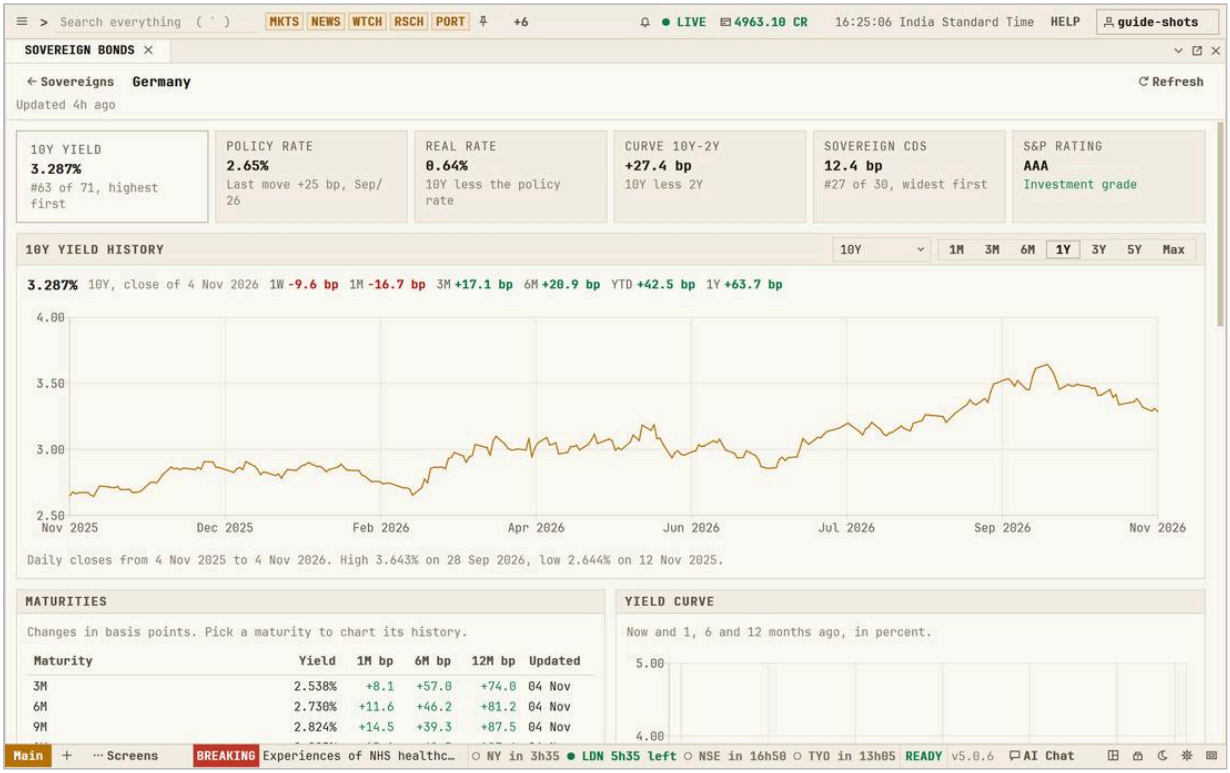


Figure 33.3 Germany's bond page — key figures, the 10-year yield history and the yield curve.

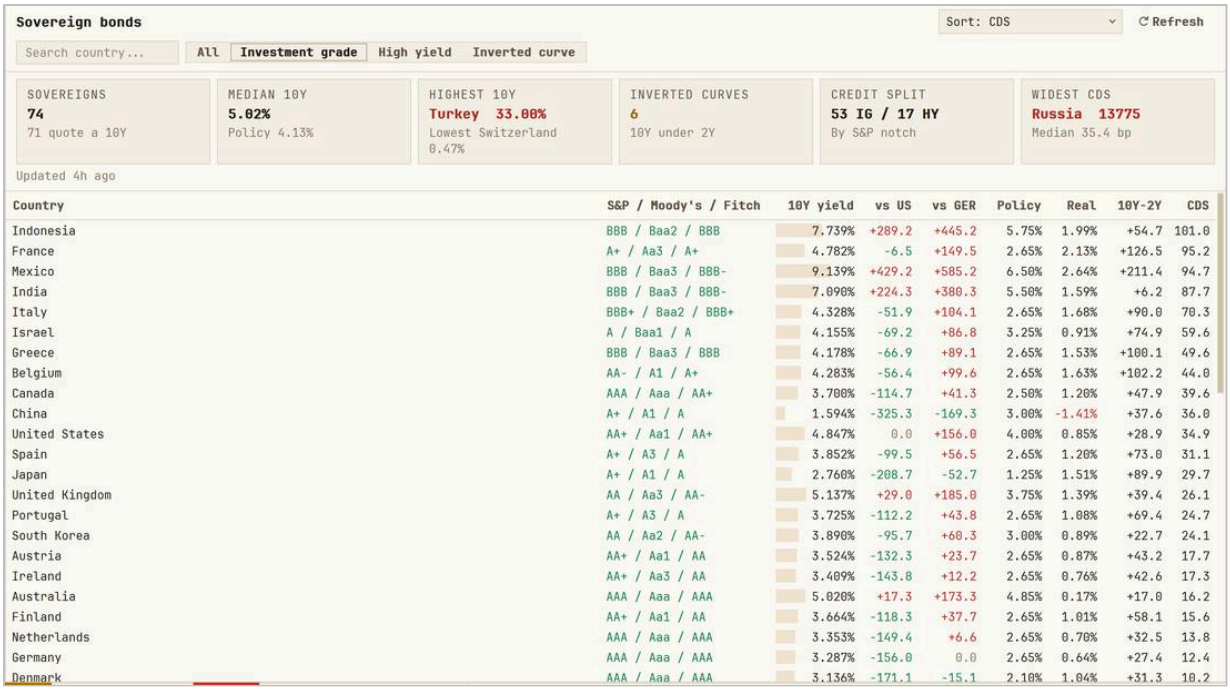
5 Press `Escape` (or click **Sovereigns**) to return to the list. The row you opened stays marked.

33.3 Compare countries

Use the list to rank and filter countries.

1 Pick a filter: **Investment grade** or **High yield** to compare like with like.

2 Open the sort list and choose an order, for example **Sort: CDS** to see the riskiest by default insurance.



Country	S&P / Moody's / Fitch	10Y yield	vs US	vs GER	Policy	Real	10Y-2Y	CDS
Indonesia	BBB / Baa2 / BBB	7.739%	+289.2	+445.2	5.75%	1.99%	+54.7	101.0
France	A+ / Aa3 / A+	4.782%	-6.5	+149.5	2.65%	2.13%	+126.5	95.2
Mexico	BBB / Baa3 / BBB-	9.139%	+429.2	+585.2	6.50%	2.64%	+211.4	94.7
India	BBB / Baa3 / BBB-	7.090%	+224.3	+380.3	5.50%	1.59%	+6.2	87.7
Italy	BBB+ / Baa2 / BBB+	4.328%	-51.9	+104.1	2.65%	1.68%	+90.0	70.3
Israel	A / Baa1 / A	4.155%	-69.2	+86.8	3.25%	0.91%	+74.9	59.6
Greece	BBB / Baa3 / BBB	4.178%	-66.9	+89.1	2.65%	1.53%	+100.1	49.6
Belgium	AA- / A1 / A+	4.283%	-56.4	+99.6	2.65%	1.63%	+102.2	44.0
Canada	AAA / Aaa / AA+	3.700%	-114.7	+41.3	2.50%	1.20%	+47.9	39.6
China	A+ / A1 / A	1.594%	-325.3	-169.3	3.00%	-1.41%	+37.6	36.0
United States	AA+ / Aa1 / AA+	4.847%	0.0	+156.0	4.00%	0.85%	+28.9	34.9
Spain	A+ / A3 / A	3.852%	-99.5	+56.5	2.65%	1.20%	+73.0	31.1
Japan	A+ / A1 / A	2.760%	-208.7	-52.7	1.25%	1.51%	+89.9	29.7
United Kingdom	AA / Aa3 / AA-	5.137%	+29.0	+185.0	3.75%	1.39%	+39.4	26.1
Portugal	A+ / A3 / A	3.725%	-112.2	+43.8	2.65%	1.08%	+69.4	24.7
South Korea	AA / Aa2 / AA-	3.890%	-95.7	+60.3	3.00%	0.89%	+22.7	24.1
Austria	AA+ / Aa1 / AA	3.524%	-132.3	+23.7	2.65%	0.87%	+43.2	17.7
Ireland	AA+ / Aa3 / AA	3.409%	-143.8	+12.2	2.65%	0.76%	+42.6	17.3
Australia	AAA / Aaa / AAA	5.020%	+17.3	+173.3	4.85%	0.17%	+17.0	16.2
Finland	AA+ / Aa1 / AA	3.664%	-118.3	+37.7	2.65%	1.01%	+58.1	15.6
Netherlands	AAA / Aaa / AAA	3.353%	-149.4	+6.6	2.65%	0.70%	+32.5	13.8
Germany	AAA / Aaa / AAA	3.287%	-156.0	0.0	2.65%	0.64%	+27.4	12.4
Denmark	AAA / Aaa / AAA	3.136%	-171.1	-15.1	2.10%	1.04%	+31.3	10.2

Figure 33.4 Investment-grade countries ordered by CDS.

3 Scroll the table. The search box and filters work together.

Sort option	Order
Sort: 10Y yield	Highest yield first (default)
Sort: spread vs US	Widest spread first
Sort: policy rate	Highest first
Sort: real rate	Highest first
Sort: CDS	Widest first
Sort: curve 10Y-2Y	Steepest first
Sort: credit rating	Best rating first
Sort: country	Alphabetical

A country that does not publish the figure you sort by goes to the bottom, whichever order you pick.

33.4 Read a country's bond page

Click a country row to open its page. Everything on it is about that one country.

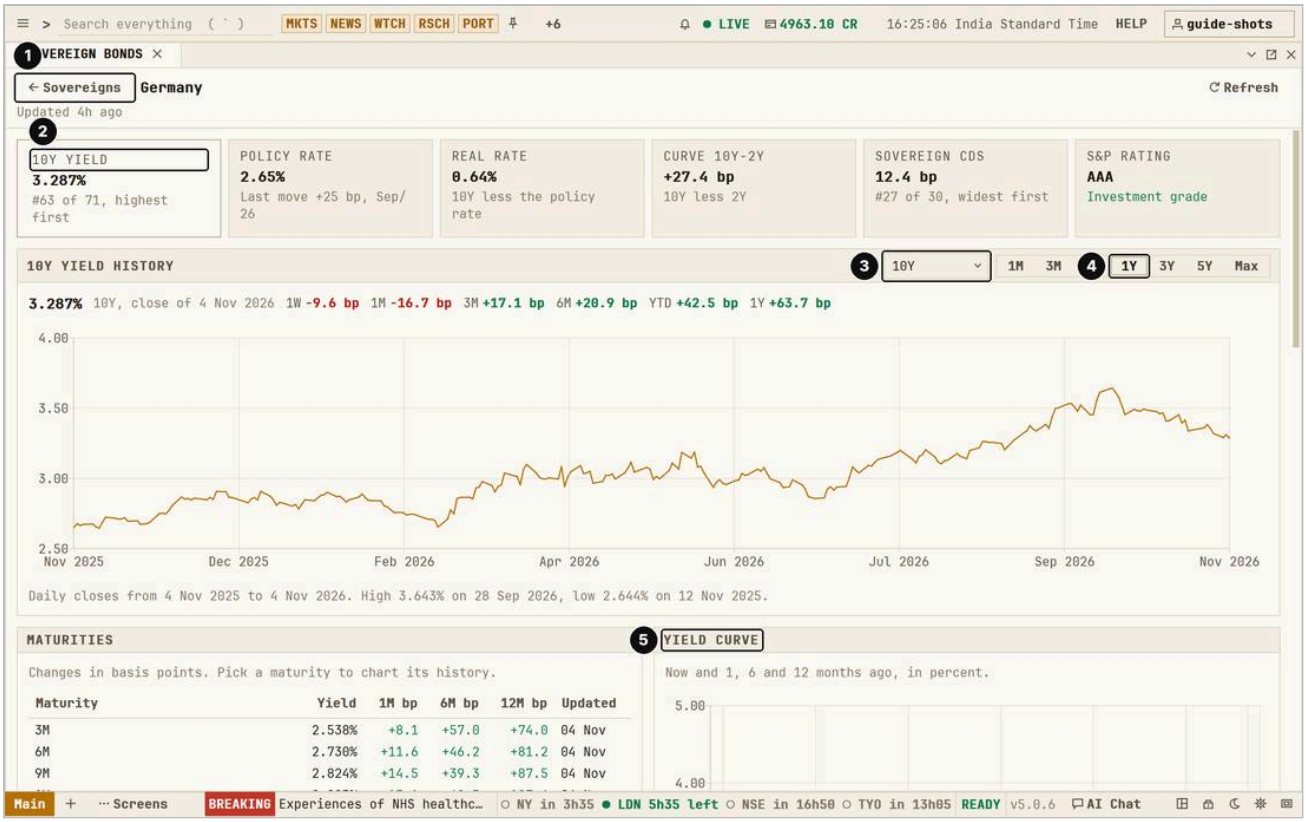


Figure 33.5 The parts of the bond page.

1. **Sovereigns** returns to the list (or press Escape).
2. **Key figures**: 10Y yield, policy rate, real rate, curve, CDS and S&P rating, each with its rank or note.
3. **Maturity to chart** — the bond whose history is drawn.
4. **1M … Max** — the history window. Default **1Y**.
5. **Yield curve** — now and 1, 6 and 12 months ago.

Key figures

Tile	Small line
10Y yield	Its rank, for example "#12 of 71, highest first"
Policy rate	The last move in bp and when
Real rate	"10Y less the policy rate"
Curve 10Y-2Y	Whether the curve is inverted
Sovereign CDS	Its rank, widest first
S&P rating	Investment grade, high yield or unrated

Yield history

The large chart shows the daily yield of one maturity. Choose it in the maturity list above the chart (**10Y** by default), or click a row of the **Maturities** table. The line above the chart gives the latest yield, the date of that close, and the change over **1W**, **1M**, **3M**, **6M**, **YTD** and **1Y** in bp.

Pick the window with **1M**, **3M**, **6M**, **1Y**, **3Y**, **5Y** or **Max**. **1M** to **1Y** show daily closes; **3Y**, **5Y** and **Max** show weekly closes, or monthly closes when even weekly ones are too many for one chart (a line under the chart then says so: the changes, the high and the low still use every day). Under the chart a line says which closes are plotted

and over which dates, with the high and the low and their dates (**Daily closes from … to …**). A second line, when present, lists one-day jumps that usually mark a switch to another reference bond rather than a market move — read them before trusting a big move on the chart.

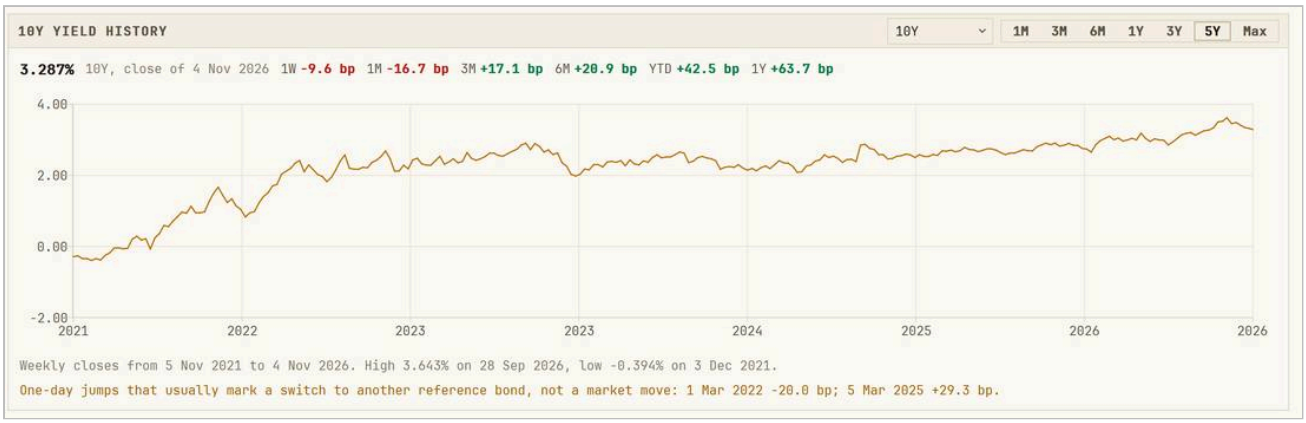


Figure 33.6 Five years of the 10-year yield. Longer windows plot weekly closes.

Yield curve

The **Yield curve** chart plots the yield of every published maturity (for Germany, 3 months to 30 years) **Now** and **1 month ago**, **6 months ago** and **12 months ago**, in percent. A curve that slopes down at the short end is inverted.

Tables further down

Scroll the bond page for:

Section	What it shows
Maturities	Every maturity's **Yield** and its change over **1M bp**, **6M bp** and **12M bp**, with the date it was **Updated**. Click a row to chart that maturity.
Spreads and rates	Spread vs Germany, the United States, China and Japan; policy rate, last policy move and rank; real rate; curve 10Y-2Y, 5Y-2Y and 2Y-1Y; curve shape; sovereign CDS and its rank.
Credit	Ratings from S&P, Moody's, Fitch and DBRS; the grade by S&P; the S&P notch ("N of 22, AAA is 1").
Yield forecasts	Published forecasts: **Maturity**, **Current**, **Forecast** and the date it is **For**.
Year-end curves	The whole curve at the end of past periods, newest first.



Figure 33.7 Maturities and the yield curve now and 1, 6 and 12 months ago. The 2Y row is selected, so the chart above shows the 2-year yield.



SPREADS AND RATES

Spread vs Germany	0.0 bp
Spread vs United States	-156.0 bp
Spread vs China	+169.3 bp
Spread vs Japan	+52.7 bp
Policy rate	2.65%
Last policy move	+25 bp, Sep/26
Policy rate rank	#47 of 74, highest first
Real rate (10Y less policy)	0.64%
Curve 10Y-2Y	+27.4 bp
Curve 5Y-2Y	+8.0 bp
Curve 2Y-1Y	+8.8 bp
Curve shape	Not inverted
Sovereign CDS	12.44 bp
CDS rank	#27 of 30, widest first

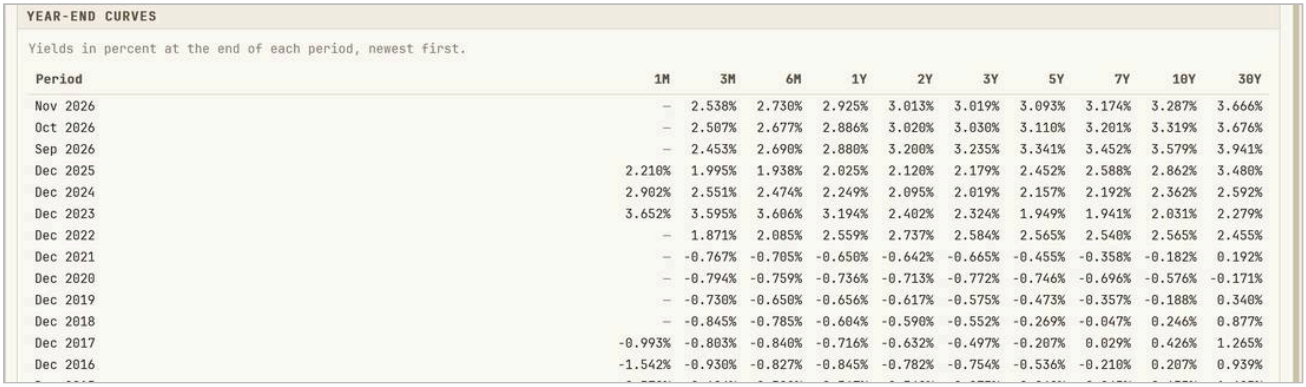
CREDIT

S&P	AAA
Moody's	Aaa
Fitch	AAA
DBRS	AAA
Grade (by S&P)	Investment grade
S&P notch	1 of 22, AAA is 1

YIELD FORECASTS

Maturity	Current	Forecast	For
2Y	3.013%	3.407%	Mar 2027
5Y	3.093%	3.482%	Mar 2027
10Y	3.287%	3.578%	Mar 2027
30Y	3.666%	3.786%	Mar 2027

Figure 33.8 Spreads and rates, Credit and Yield forecasts.



YEAR-END CURVES

Yields in percent at the end of each period, newest first.

Period	1M	3M	6M	1Y	2Y	3Y	5Y	7Y	10Y	30Y
Nov 2026	–	2.538%	2.730%	2.925%	3.013%	3.019%	3.093%	3.174%	3.287%	3.666%
Oct 2026	–	2.507%	2.677%	2.886%	3.020%	3.030%	3.110%	3.201%	3.319%	3.676%
Sep 2026	–	2.453%	2.690%	2.880%	3.200%	3.235%	3.341%	3.452%	3.579%	3.941%
Dec 2025	2.210%	1.995%	1.938%	2.025%	2.120%	2.179%	2.452%	2.588%	2.862%	3.480%
Dec 2024	2.902%	2.551%	2.474%	2.249%	2.095%	2.019%	2.157%	2.192%	2.362%	2.592%
Dec 2023	3.652%	3.595%	3.606%	3.194%	2.402%	2.324%	1.949%	1.941%	2.031%	2.279%
Dec 2022	–	1.871%	2.085%	2.559%	2.737%	2.584%	2.565%	2.540%	2.565%	2.455%
Dec 2021	–	-0.767%	-0.705%	-0.650%	-0.642%	-0.665%	-0.455%	-0.358%	-0.182%	0.192%
Dec 2020	–	-0.794%	-0.759%	-0.736%	-0.713%	-0.772%	-0.746%	-0.696%	-0.576%	-0.171%
Dec 2019	–	-0.730%	-0.650%	-0.656%	-0.617%	-0.575%	-0.473%	-0.357%	-0.188%	0.340%
Dec 2018	–	-0.845%	-0.785%	-0.604%	-0.590%	-0.552%	-0.269%	-0.047%	0.246%	0.877%
Dec 2017	-0.993%	-0.803%	-0.840%	-0.716%	-0.632%	-0.497%	-0.287%	0.029%	0.426%	1.265%
Dec 2016	-1.542%	-0.930%	-0.827%	-0.845%	-0.782%	-0.754%	-0.536%	-0.210%	0.207%	0.939%

Figure 33.9 Year-end curves — the whole curve at the end of past periods, newest first. A dash means no figure for that maturity.

A maturity marked **No longer quoted** has no daily history.

33.5 Find a bond from the command line

The `/bond` command searches government bonds and European exchange-listed bonds without opening the screen first.

1. Click the command line at the top and type `/bond germany`.

2 The list shows matching bonds. Government bonds come first, under **SOVEREIGN BONDS**: they read like "DE10Y · Germany 10Y Govt Bond" with their yield on the right. Exchange-listed bonds follow under **BONDS**.

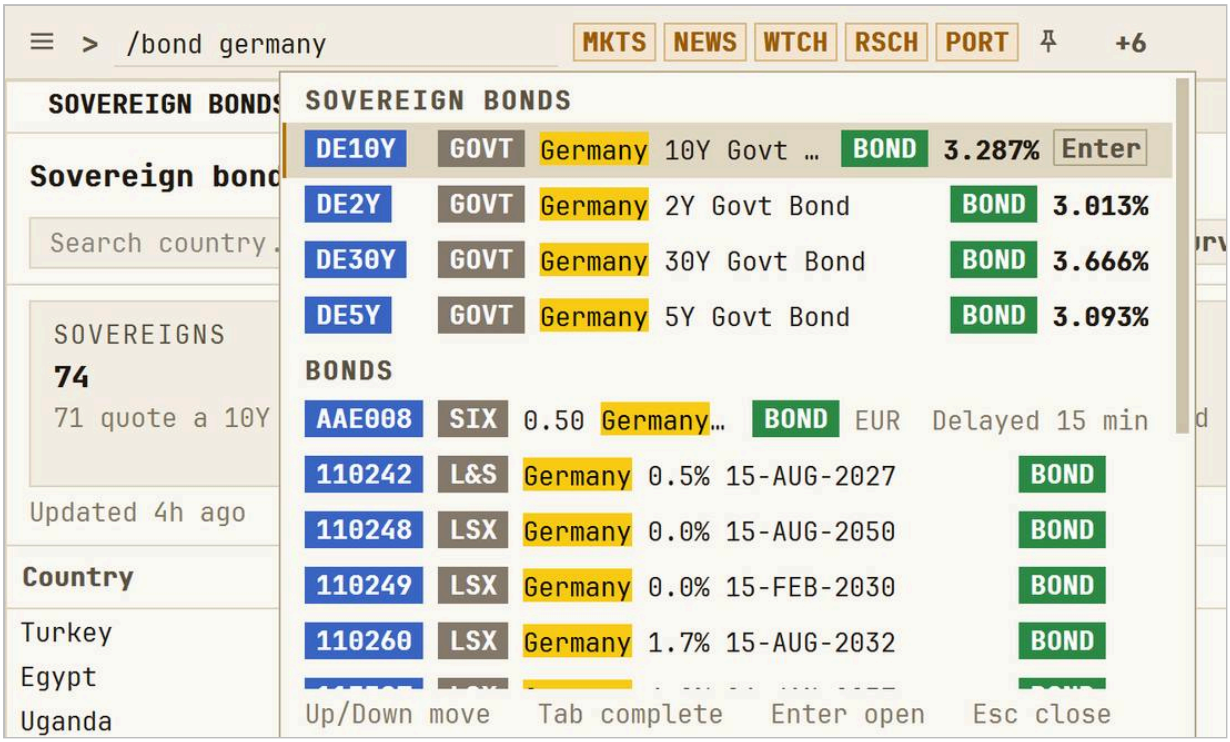


Figure 33.10 /bond germany lists Germany's government bonds first, then exchange-listed bonds.

3 Pick a government bond: the Sovereign Bonds screen opens on that country's page, charting that maturity.

33.6 The European bonds window

European exchange-listed bonds (and other instruments) found with `/bond` open in their own window, **European Bonds & Instruments**, separate from the main terminal window. You can keep it beside the terminal; closing it does not affect anything else. There is one such window: picking another bond from `/bond` brings it to the front and shows that bond.

In the `/bond` list these bonds appear under **BONDS**, after the government bonds: each row shows the bond's code, the venue that lists it, its name (often coupon and maturity, such as "0.5% 15-AUG-2027"), and its currency and price delay (for example **EUR Delayed 15 min**).

1 Type `/bond` and a bond name, issuer, ISIN (the 12-character international security code) or symbol, for example `/bond bund`, and pick a European bond from the list. The window opens on it.

2 In the window, type in **Search by name, issuer, ISIN or symbol** to look for others. Results update as you type; the list shows up to 50 matches.

3 Narrow the list with the family menu: **Bonds** (default), **All instruments**, **Equities**, **Funds and ETPs** or **Warrants**.

4 Click a row (or move to it with the arrow keys). Its terms appear on the right.

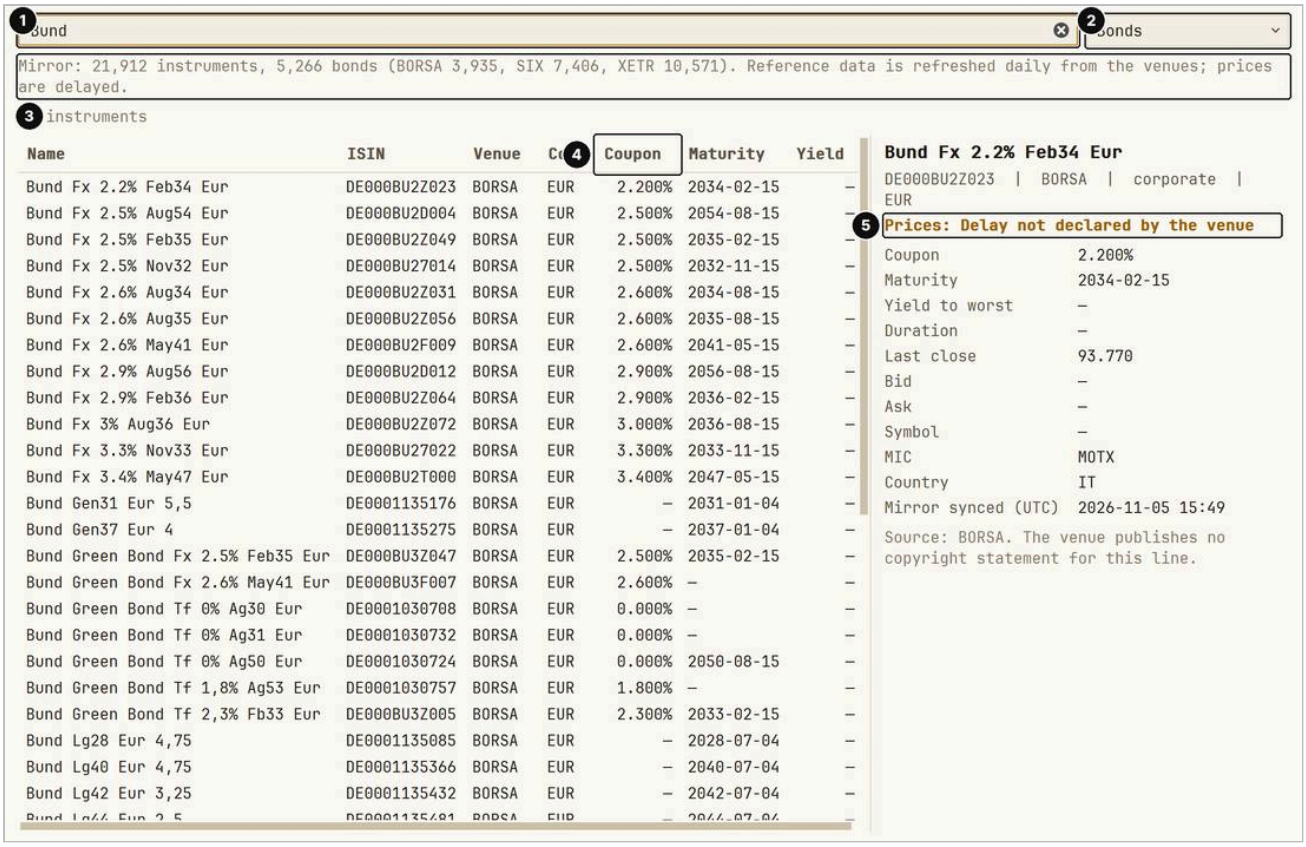


Figure 33.11 The European Bonds & Instruments window, opened on a bond picked from /bond bund, then searched for Bund.

1. Search: results update as you type.
2. The family menu (**Bonds** by default).
3. The coverage line: how many instruments and bonds, by venue.
4. The results; click a row for its terms.
5. The terms panel. The amber line says how delayed the prices are.

Results column	Meaning
Name	The instrument's name.
ISIN	Its international code.
Venue	The exchange that lists it.
Ccy	Its currency.
Coupon	The yearly interest rate it pays.
Maturity	When it repays.
Yield	Its yield, where published.

The terms panel lists what the venue publishes: **Coupon**, **Maturity**, **Yield to worst**, **Duration**, **Nominal**, **Amount in issue**, **Issue date**, **Last close**, **Bid**, **Ask**, **Market date**, **Volume**, **Symbol**, **Valor**, **MIC**, **Status**, **Trading model**, **Country**, **Sector**, **First trading day**, **Last trading day**, **Mirror synced (UTC)** (when the window's copy of the venue's data was last refreshed) and the source. A Swiss line shows its close as **Last close (CHF)**. A line in amber (**Prices: ...**) states how delayed the prices are — they are never live. A figure the venue does not publish is shown as a dash.

33.7 Reference

List page

Control	What it does
Search country...	Filters the rows by country name, instantly.
All / Investment grade / High yield / Inverted curve	Filters. One at a time.
Sort list	The eight orders above.
Refresh	Reloads the data from the server.
Updated …	Age of the oldest data table behind the page.
Table row	Click (or press **Enter**) to open the bond page.

Bond page

Control	What it does
Sovereigns	Back to the list (**Escape** and **Alt** + **Left** also work).
Refresh	Reloads this country.
Maturity to chart	The maturity drawn in the history chart.
1M, 3M, 6M, 1Y, 3Y, 5Y, Max	History window. Default **1Y**.
Maturities row	Click to chart that maturity.

European Bonds & Instruments window

Control	What it does
Search box	Name, issuer, ISIN or symbol.
Family menu	**Bonds**, **All instruments**, **Equities**, **Funds and ETPs**, **Warrants**.
Coverage line	How many instruments and bonds the window covers, by venue. Reference data is refreshed daily; prices are delayed.
Count line	How many instruments match the search, up to 50 (**No instruments match.** when none do). Before you type it says **Type a bond name, an issuer, an ISIN or a symbol.**
Results table	Click a row, or move to it with the arrow keys, for its terms.
Terms panel	The picked instrument's terms. **Pick a row to see its terms.** until you choose one.

33.8 For advanced users

- **What is remembered.** The screen remembers the filter, the sort, the country you opened, whether you were on the list or the bond page, and the maturity and window of its chart.

- **Reading spreads.** A spread vs US of **+300** means that country pays 3 percentage points more than the US for 10-year money. Compare it with the **CDS** column: a high spread with a low CDS often reflects currency or inflation rather than default risk.
- **Real rate here** is the 10-year yield minus the policy rate — a quick gauge of how tight policy is compared with long-term borrowing costs, not an inflation-adjusted yield.
- **Cross-screen workflow.** Use **Chapter 32, Global Data** p. 648 to chart longer histories of government yields, check upcoming central-bank decisions in **Chapter 13, Economic Calendar** p. 218, and use **Chapter 25, Derivatives** p. 493 for rate options.

Do it with AI

Ask the terminal's AI (see **Chapter 37, AI Chat** p. 719):

- "Which countries have an inverted yield curve right now?"
- "Show Italy's 10-year spread over Germany and its ratings."
- "Open the sovereign bond page for Japan on the 30-year maturity."

33.9 Troubleshooting

If something goes wrong

"Sign in to load sovereign bond data." The page needs your session. It loads by itself as soon as you are signed in.

"No sovereign matches this filter." The search text and the filter together match nothing. Clear the search box or click **All**.

A country's CDS or rating shows a dash. No figure is published for it.

"European instrument data is not available on this server." The European bond window has no data right now. Government bonds on the Sovereign Bonds screen are not affected.

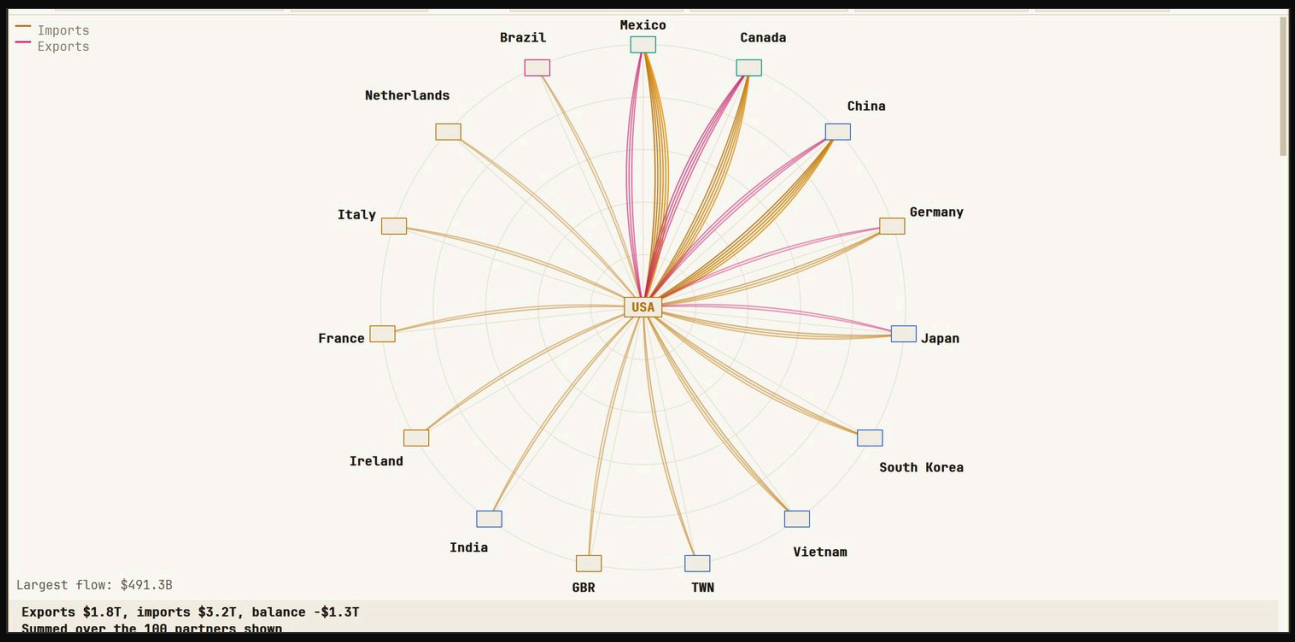
"That instrument is no longer in the venue mirror." The venue no longer lists that bond. Search for it again by issuer or ISIN.

"Waiting for sign-in." The European bond window needs your session. The search runs as soon as you are signed in.

CHAPTER 34

Global Economy GECO

Who trades with whom, how every country compares, and the pipelines, cables, ports and plants underneath — trade flows, a world map of country indicators and infrastructure layers on one screen.



At a glance

Open it	• Type `GECO` in the command line and press **Enter** • **Menu** › **Navigate** › **Tools & Workspace** › **Global Economy** • Type a country and `trade` in the command line, for example `united kingdom trade`
You need	• Signed in on any paid plan • Credits for trade questions; the map and layers are free
Best for	• A country's biggest trading partners • Comparing countries over time • Mapping cables, pipelines and ports
Time to learn	15 minutes
Related	**Chapter 32, Global Data** p. 648, **Chapter 36, Maritime** p. 699, **Chapter 35, Geopolitics** p. 688

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34.1 Screen tour

Global Economy answers one question three ways: who a country trades with, how every country compares on an economic indicator, and what physical infrastructure carries the world's trade. Two rows of controls sit at the top; the chart fills the rest of the screen, with a table under it once you ask a question.

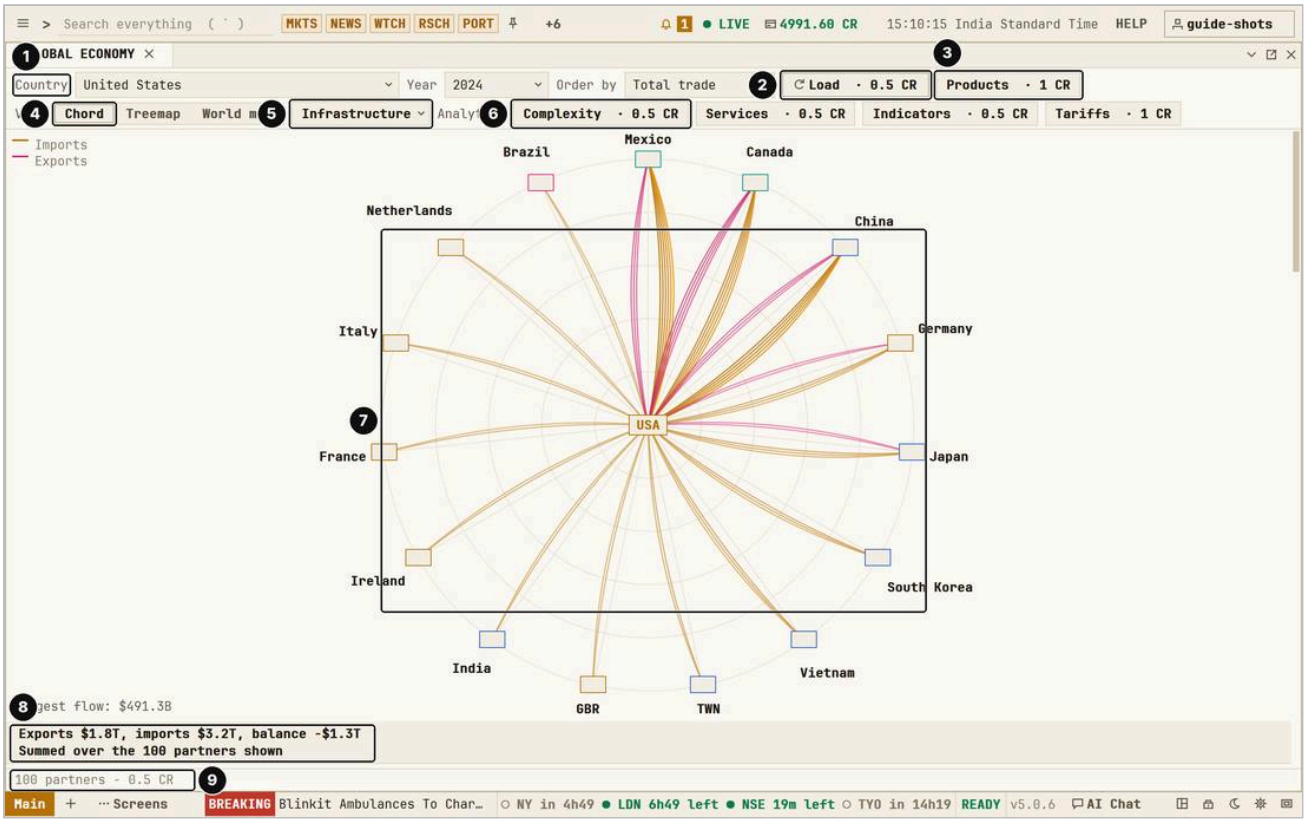


Figure 34.1 Global Economy after pressing Load: the United States and its biggest trading partners in 2024.

1. **Country**, **Year** and **Order by** set the question.
2. **Load** asks it. The price is on the button.
3. **Products** shows what the country trades, by product.
4. **View**: switch between **Chord**, **Treemap** and **World map** for free.
5. **Infrastructure** puts pipelines, cables, ports and more on the world map.
6. **Analytics**: four more questions about the same country and year.
7. The chart: the country in the middle, its 15 biggest partners around it.
8. Totals: exports, imports and balance over the partners shown.
9. The footer: what the last question returned and what it cost.

The screen opens empty on purpose. Each trade question costs credits, so nothing is loaded until you press a button with a price on it. The world map and the infrastructure layers are free.



Figure 34.2 The screen as it opens. The chart says what to press and what it costs.

1. Nothing is fetched until you press **Load**; the price is in this line.

34.2 Quick start

1. Type `GECO` in the command line and press **Enter**. The **Country** list fills in a moment; it opens on United States and the newest year.

2. Pick a country in **Country**, for example *Germany*, and a year in **Year**.

3. Press **Load**. The button shows its price (0.5 credits at the time of writing). After a few seconds the chord diagram appears.

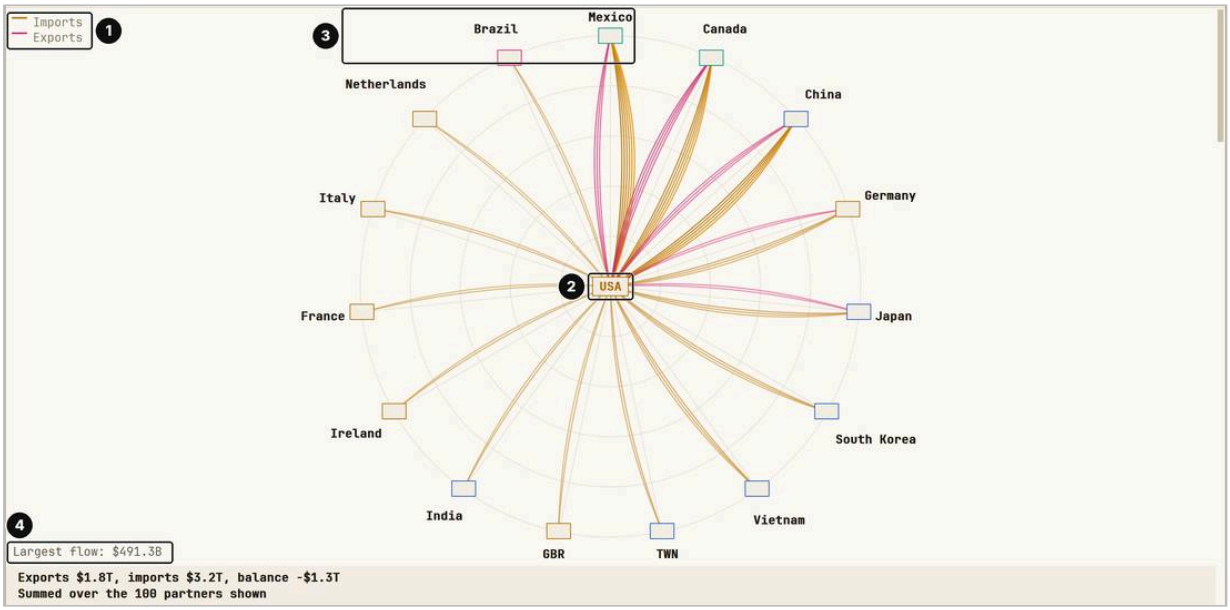


Figure 34.3 The chord diagram. Thicker bundles are bigger flows; the two colours are imports and exports.

1. The legend names the two colours: imports and exports.
2. The country you asked about sits in the middle.
3. Its partners sit around the circle, biggest first.
4. The largest single flow, for scale.

4 Read the strip under the chart: the country's exports, imports and balance with the partners shown. Scroll down for the table of every partner, with **Exports**, **Imports** and **Balance** for each.



Figure 34.4 Under the chart: the totals strip (the partner table starts just below it) and the footer, which says what the answer cost.

5 Click **Treemap** to see the same answer as boxes sized by value. Switching views costs nothing.

Plan & credits

Load, **Complexity**, **Services** and **Indicators** each cost one trade question; **Products** and **Tariffs** one product sweep. The price is printed on each button. Asking exactly the same question again the same day (UTC) is free: the footer then says "no charge (same query)". The world map and the layers are always free.

34.3 Read a country's trading partners

Use this to see who matters most to a country's trade, and whether it buys more than it sells.

1 Press **Load** for the country and year you want (see the Quick start).

2 Read the **Chord** view: each bundle of lines joins the country to one partner. One colour shows imports, the other exports.

3 Click **Treemap**. Each box is a partner, sized by trade with it and grouped by continent. Hover a box for its full name, continent, value and share of the total.

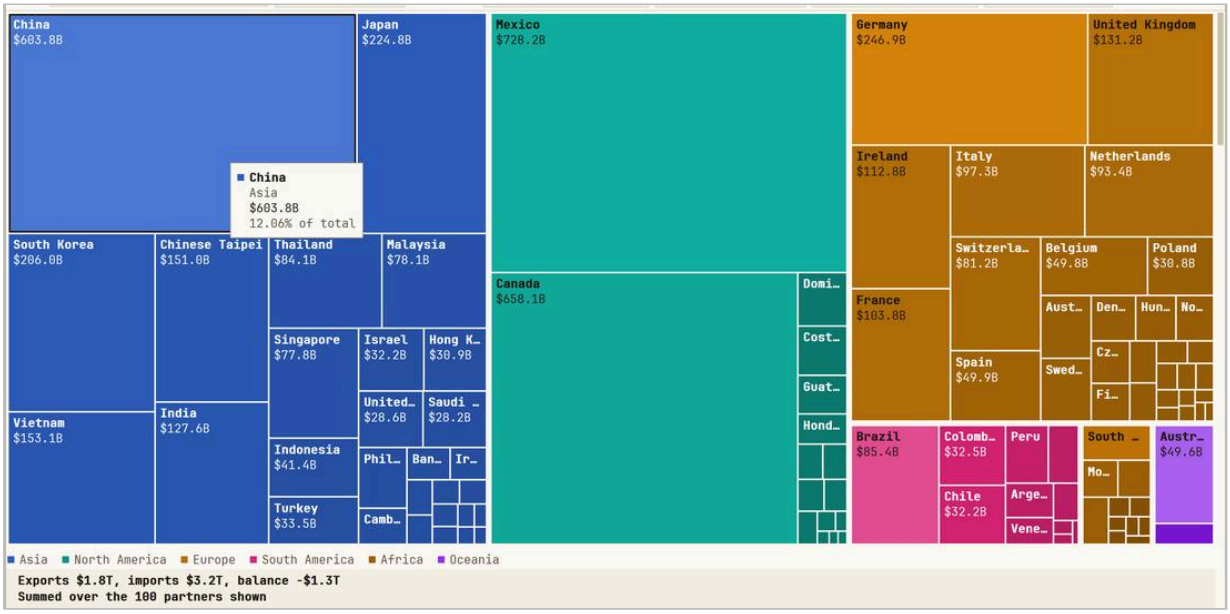


Figure 34.5 The treemap, with the card that appears when you hover a box.

4 Change **Order by** to **Exports**, **Imports** or **Trade balance**. The chart and table re-sort at once, with no new charge.



Figure 34.6 The same answer ordered by exports.

1 **Order by** re-sorts what you already have.

5 Scroll down to the table to read the exact figures. **Balance** is green when the country sells more to that partner than it buys, red when it buys more.

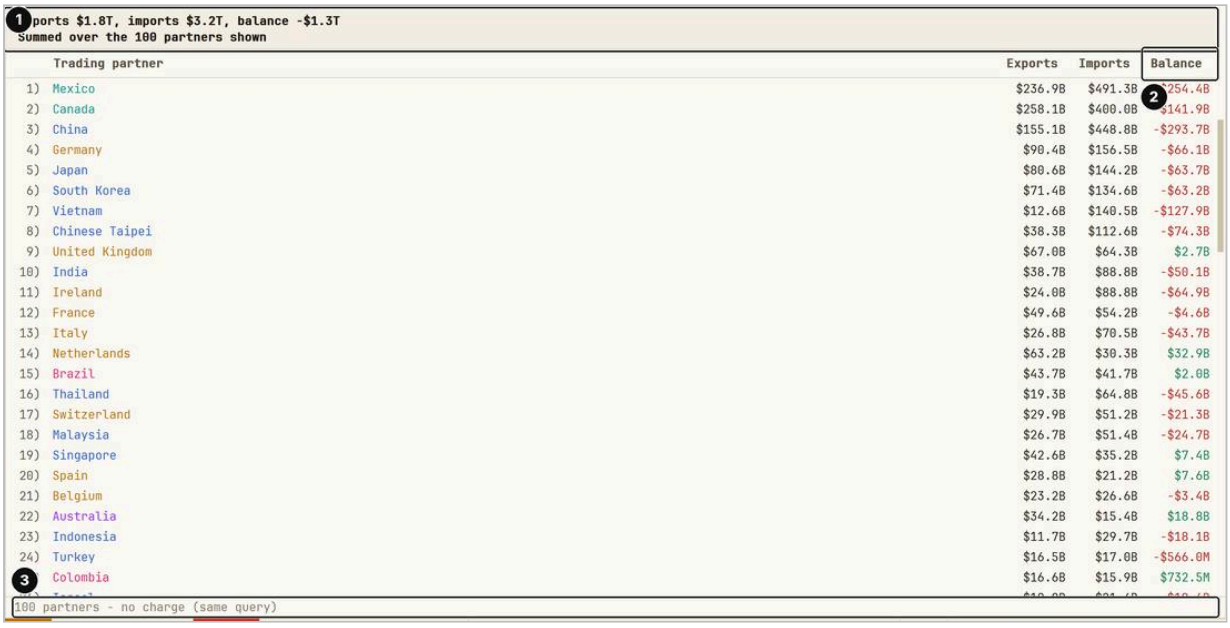


Figure 34.7 The partner table under the chart, biggest partner first.

1 The totals for the partners shown.

2 Green: the country sells more to that partner than it buys. Red: it buys more.

3 How many partners came back, and what the answer cost. A repeat the same day is free.

Tip

The chord diagram shows the 15 biggest partners so it stays readable. The treemap and the table show all of them (up to 100).

34.4 See what a country trades

Products breaks the country's trade down by product group, so you can see what it actually sells or buys.

1. Set **Order by** to **Imports** to see what the country buys, or to anything else to see what it sells.

2. Press **Products**. The view switches to the treemap, now grouped by product section (for example machinery, vehicles, chemicals).



Figure 34.8 United States exports by product group. Each colour is a product section, named in the legend at the bottom.

3. Scroll down. The table lists each **Product** with its **Section**, **Value** and **HS6 lines** (how many detailed product codes it holds). Hover a box in the treemap for the same figures.

	Product	Section	Val	HS6 lines
1)	Crude Petroleum	Mineral Products	$122.0B	72
2)	Refined Petroleum	Mineral Products	$100.7B	181
3)	Petroleum Gas	Mineral Products	$88.4B	488
4)	Gas Turbines	Machines	$63.9B	744
5)	Cars	Transportation	$63.0B	1296
6)	Vaccines, blood, antisera, toxins and cultures	Chemical Products	$53.1B	584
7)	Integrated Circuits	Machines	$43.9B	334
8)	Packaged Medicaments	Chemical Products	$40.7B	954
9)	Motor vehicles; parts and accessories (8701 to 8705)	Transportation	$39.8B	2015
10)	Planes, Helicopters, and/or Spacecraft	Transportation	$39.2B	371
11)	Medical Instruments	Instruments	$35.2B	1507
12)	Machinery Having Individual Functions	Machines	$28.2B	899
13)	Aircraft parts (gliders, balloons, and powered aircraft)	Transportation	$28.0B	564
14)	Computers	Machines	$25.0B	771
15)	Broadcasting Equipment	Machines	$24.0B	377
16)	Soybeans	Vegetable Products	$23.2B	99
17)	Other Plastic Products	Plastics and Rubbers	$22.6B	796
18)	Gold	Precious Metals	$22.3B	213
19)	Delivery Trucks	Transportation	$21.3B	687
20)	Coal, Briquettes and Similar Manufactured Solid Fuels	Mineral Products	$18.8B	196
21)	Ethylene Polymers	Plastics and Rubbers	$16.5B	535
22)	Orthopedic Appliances	Instruments	$14.9B	1028
23)	Valves	Machines	$14.8B	1018
24)	Office Machine Parts	Machines	$12.2B	554
3	Centrifuges	Machines	$12.1B	1615

150 product lines (exports) - no charge (same query)

Figure 34.9 The product table: United States exports in 2024, biggest first.

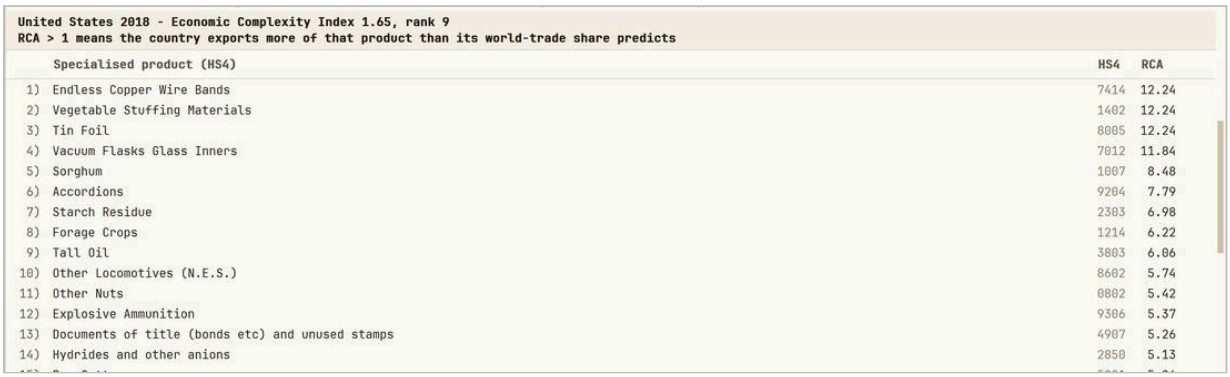
1. The product section, in its treemap colour.
2. How many detailed product codes the line holds.
3. How many product lines came back (up to 150).

Products are grouped by the HS system, the world's standard list of traded goods: an HS4 line is a product family (for example "Cars"), an HS6 line a more detailed product inside it.

34.5 Dig deeper with the analytics

The four **Analytics** buttons ask more questions about the same country and year. Each answer replaces the table and adds a summary strip above it. Press **Load** or **Products** to get the partner or product table back.

1. Press **Complexity** for the country's Economic Complexity Index and rank, and the products it specialises in (RCA above 1; see **§34.9 For advanced users** p. 685).



United States 2018 - Economic Complexity Index 1.65, rank 9
RCA > 1 means the country exports more of that product than its world-trade share predicts

	Specialised product (HS4)	HS4	RCA
1)	Endless Copper Wire Bands	7414	12.24
2)	Vegetable Stuffing Materials	1402	12.24
3)	Tin Foil	8005	12.24
4)	Vacuum Flasks Glass Inners	7012	11.84
5)	Sorghum	1007	8.48
6)	Accordions	9204	7.79
7)	Starch Residue	2303	6.98
8)	Forage Crops	1214	6.22
9)	Tall Oil	3803	6.06
10)	Other Locomotives (N.E.S.)	8602	5.74
11)	Other Nuts	0802	5.42
12)	Explosive Ammunition	9306	5.37
13)	Documents of title (bonds etc) and unused stamps	4907	5.26
14)	Hydrides and other anions	2850	5.13

Figure 34.10 Complexity for the United States in 2018: its ECI and rank, then the products it specialises in, highest RCA first.

2. Press **Services** for trade in services (transport, travel, financial services and so on), in the direction **Order by** picks.



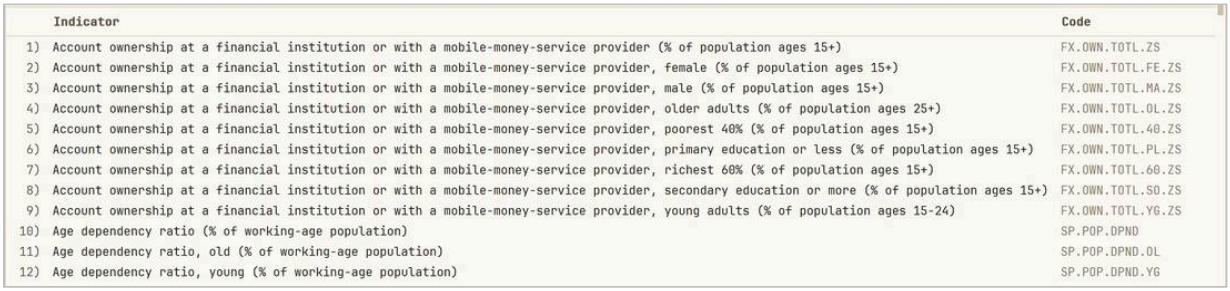
United States 2018 services exports: $840.7B across 11 categories
top-level EBOPS categories only (current USD)

	Service category	EBOPS	Value	Share
1)	Travel	2	$196.0B	23.3%
2)	Other business services	9	$177.0B	21.1%
3)	Royalties and license fees	8	$144.2B	17.2%
4)	Financial services	6	$114.0B	13.6%
5)	Transportation	1	$92.3B	11.0%
6)	Computer and information services	7	$40.6B	4.8%
7)	Personal, cultural, and recreational services	10	$23.8B	2.8%
8)	Government services, n.i.e.	11	$21.9B	2.6%
9)	Insurance services	5	$17.9B	2.1%
10)	Communications services	3	$10.0B	1.2%
11)	Construction services	4	$2.9B	0.4%

11 service categories (exports) - no charge (same query)

Figure 34.11 Services exports of the United States in 2018: the total, then each category with its value and share.

3. Press **Indicators** for up to 500 World Bank development indicators the country publishes for that year.



	Indicator	Code
1)	Account ownership at a financial institution or with a mobile-money-service provider (% of population ages 15+)	FX.OWN.TOTL.ZS
2)	Account ownership at a financial institution or with a mobile-money-service provider, female (% of population ages 15+)	FX.OWN.TOTL.FE.ZS
3)	Account ownership at a financial institution or with a mobile-money-service provider, male (% of population ages 15+)	FX.OWN.TOTL.MA.ZS
4)	Account ownership at a financial institution or with a mobile-money-service provider, older adults (% of population ages 25+)	FX.OWN.TOTL.OL.ZS
5)	Account ownership at a financial institution or with a mobile-money-service provider, poorest 40% (% of population ages 15+)	FX.OWN.TOTL.40.ZS
6)	Account ownership at a financial institution or with a mobile-money-service provider, primary education or less (% of population ages 15+)	FX.OWN.TOTL.PL.ZS
7)	Account ownership at a financial institution or with a mobile-money-service provider, richest 60% (% of population ages 15+)	FX.OWN.TOTL.60.ZS
8)	Account ownership at a financial institution or with a mobile-money-service provider, secondary education or more (% of population ages 15+)	FX.OWN.TOTL.SO.ZS
9)	Account ownership at a financial institution or with a mobile-money-service provider, young adults (% of population ages 15-24)	FX.OWN.TOTL.YG.ZS
10)	Age dependency ratio (% of working-age population)	SP.POP.DPND
11)	Age dependency ratio, old (% of working-age population)	SP.POP.DPND.OL
12)	Age dependency ratio, young (% of working-age population)	SP.POP.DPND.YG

Figure 34.12 Indicators: each indicator's name and code, in alphabetical order.

4. Click a partner row in the partner table first if you want a specific corridor, then press **Tariffs.** Without a selected row, the country's top partner is used.

Note

Tariffs needs a partner list, so press **Load** first. If you press it with nothing loaded, the footer says "Press Load, then select a partner row to see the tariffs on that corridor." and nothing is charged.

34.6 Compare every country on the world map

The world map shades every country by one indicator, such as GDP, inflation or government debt, and can play it forward year by year. It is free.

1. Click **World map**. The map opens on GDP in US dollars, at the same year as **Year**.

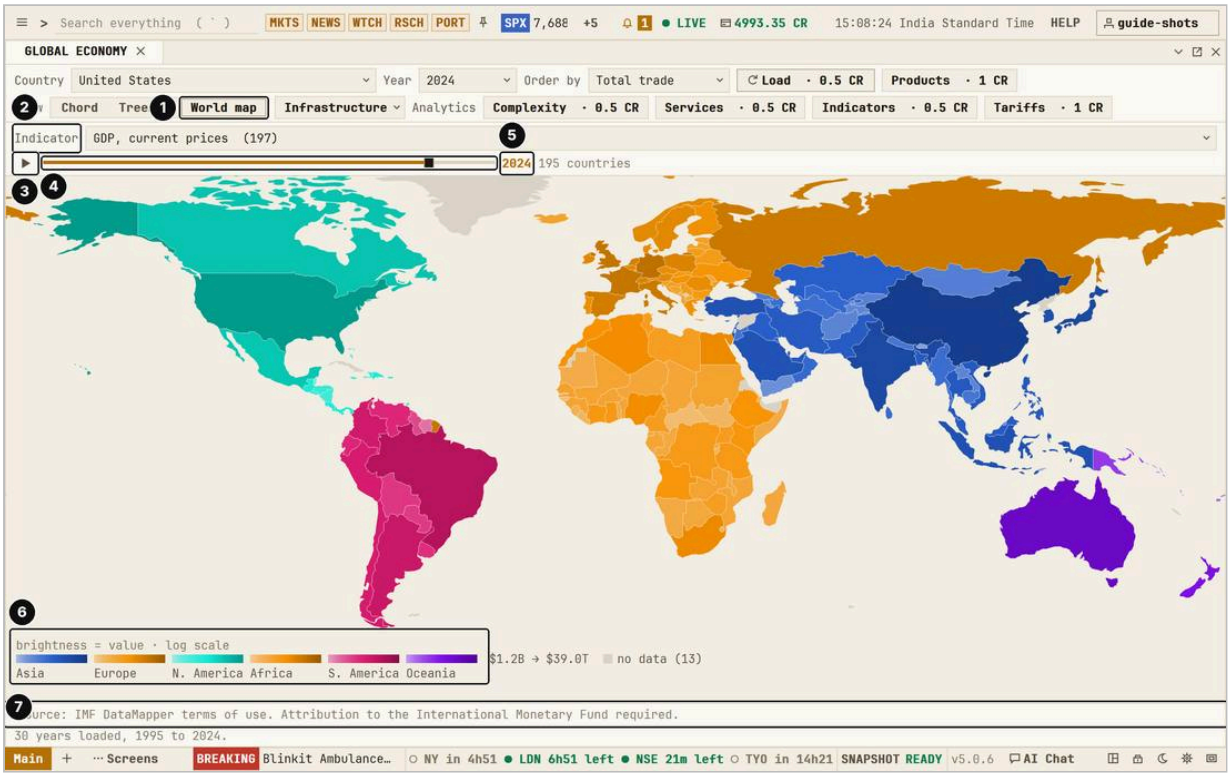


Figure 34.13 The world map. Each continent has its own colour; brighter means a higher value.

1. **World map** view.
2. **Indicator** picks what the map shows. The number after each name is how many countries it covers.
3. Play the years forward.
4. Drag the timeline to any year.
5. The year on the map, and how many countries have a value.
6. The legend: continent colours, value range, scale and **no data** count.
7. Where the figures come from.

2 Hover a country. A card shows its name, the indicator, its value and the date the value is for.

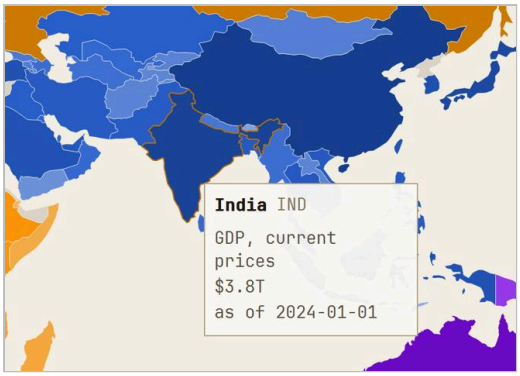


Figure 34.14 Hovering India: its value and the date the value is for.

3 Open **Indicator** and pick another measure. The map redraws at once.



Figure 34.15 Part of the indicator list (131 entries at the time of writing). The number in brackets is how many countries each covers.

4 Press play, or drag the timeline, to move through the years. The colour scale stays fixed for every year, so a country that gets brighter really grew.

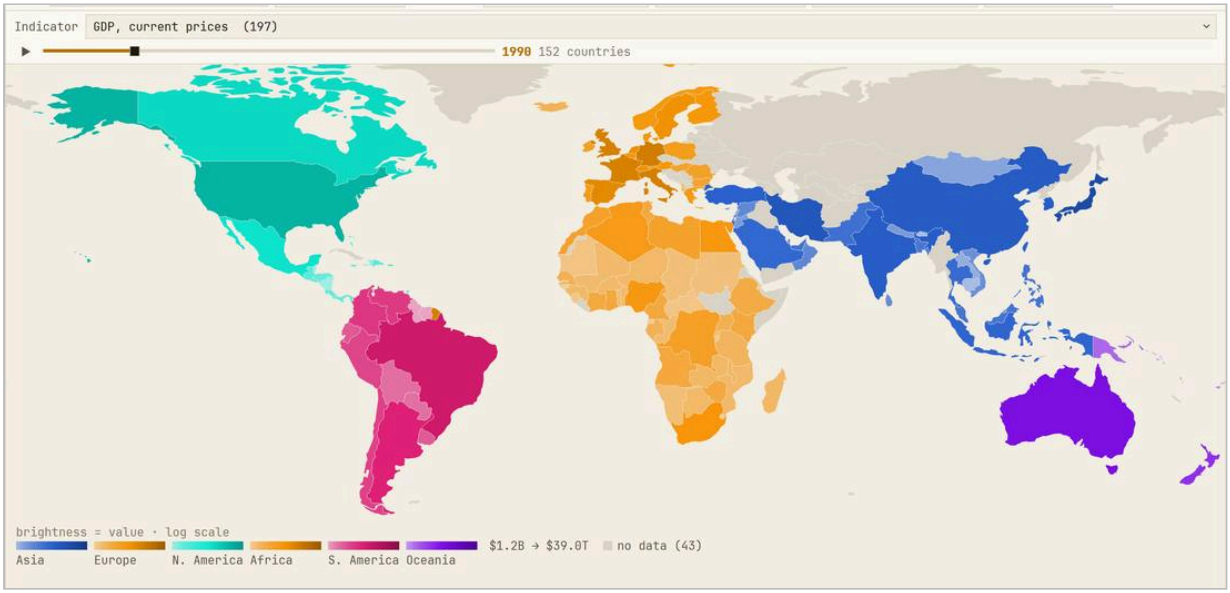


Figure 34.16 The same map in 1990.

5 Click a shaded country to choose it in **Country**. Then press **Load** to see its trade. The click itself costs nothing.

34.7 Show infrastructure on the map

Seventeen free layers show the physical side of trade: pipelines, power plants, cables, data centres, ports, airports, border crossings, chokepoints and military bases.

1. Click **Infrastructure**. The menu lists every layer with its colour and how many assets it holds, grouped as energy, telecom, transport and defence.

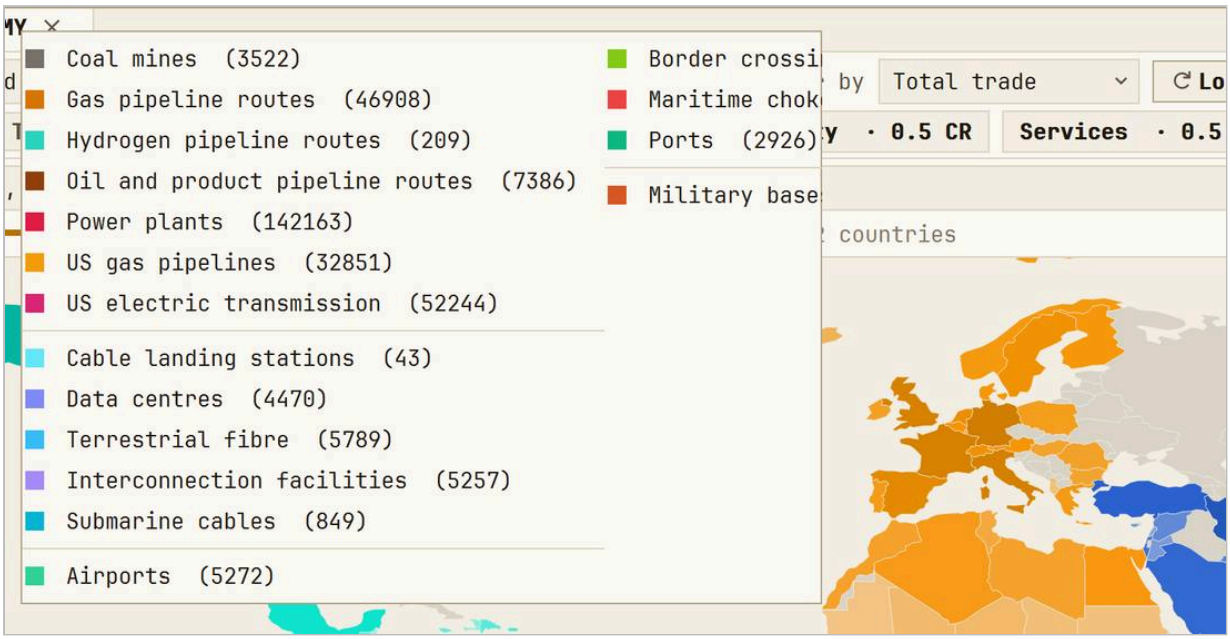


Figure 34.17 The Infrastructure menu. The second column (cut short on screen) holds Border crossings, Maritime chokepoints, Ports and Military bases.

2. Pick a layer, for example **Submarine cables**. The screen switches to the world map, the country shading steps back, and the layer is drawn. The button now shows the layer's name and how many features were drawn.

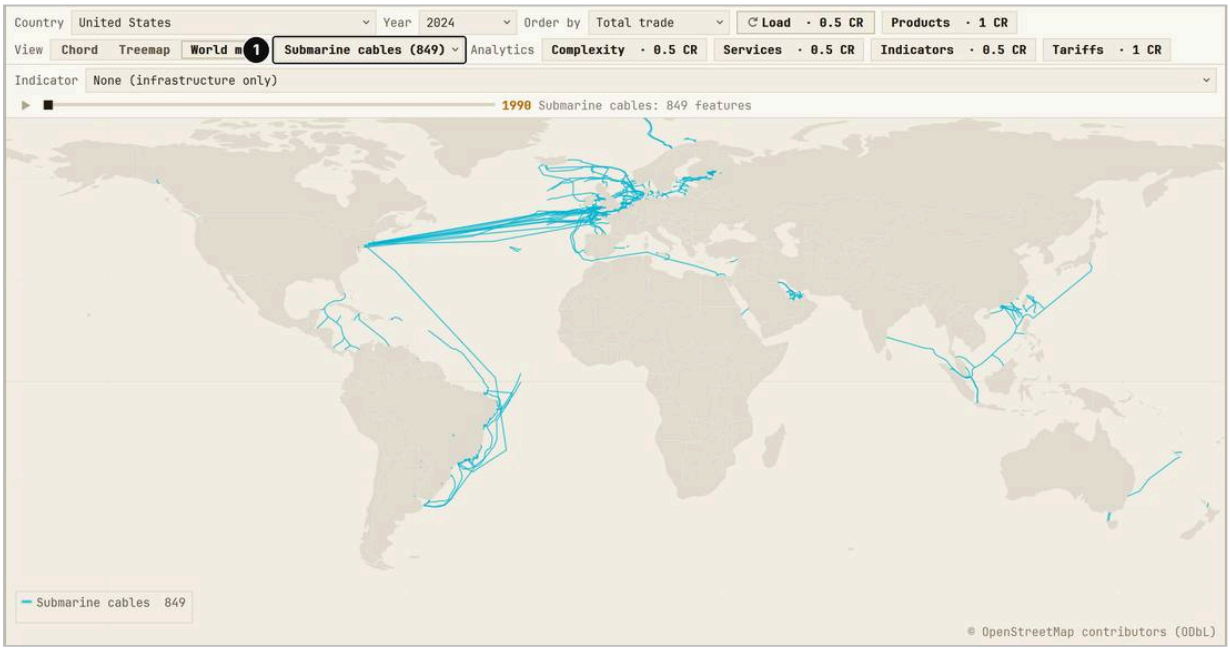


Figure 34.18 The submarine cables layer. Its name and colour also appear at the bottom left.

1. The button names the layer that is on.

3. Hover a line or a dot for its name and details (status, operator, capacity, countries, date), when the source publishes them.

4. Pick another layer to switch to it (one layer at a time), or pick the ticked layer again to turn it off.

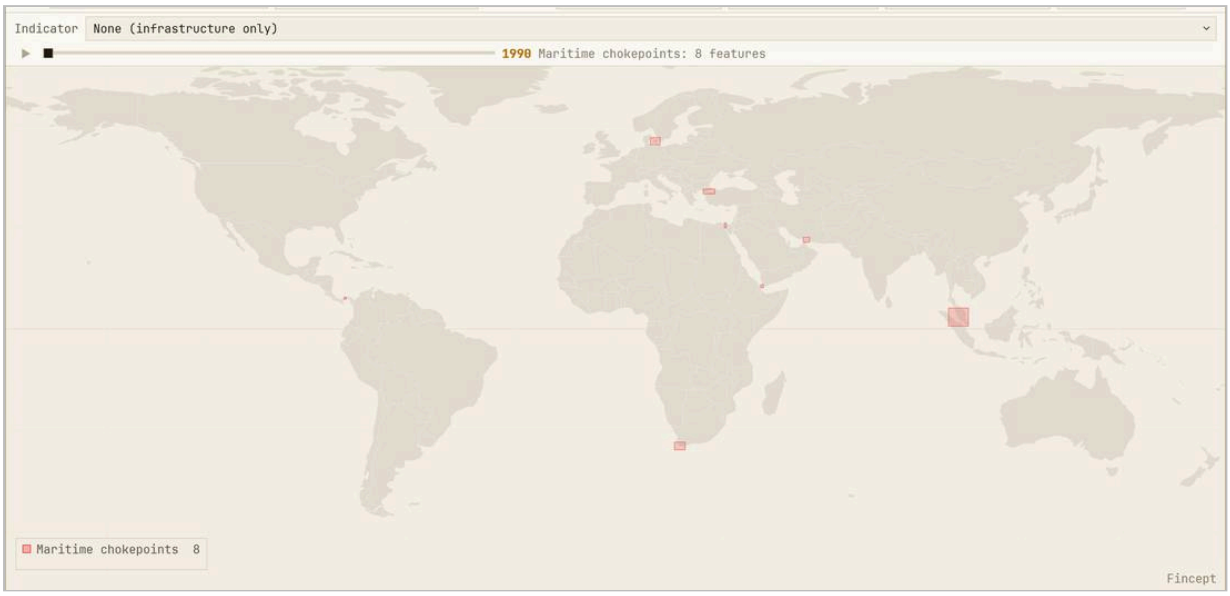


Figure 34.19 The maritime chokepoints layer.

Tip

Want both a layer and a shaded map? Turn the layer on first, then pick an indicator. See **§34.9 For advanced users** p. 685.

34.8 Reference

Top row: the question

Control	What it does	Default
Country	The reporting country: the one whose trade you want to see. The list comes from the trade data and shows **Loading...** or **Sign in to load** until it arrives.	United States
Year	The year of trade, newest first. Only years the data holds are listed.	The newest year
Order by	**Total trade**, **Imports**, **Exports** or **Trade balance**. Re-sorts the chart and the table at once, with no new charge. It also picks the direction for **Products** and **Services** (**Imports** gives imports; anything else gives exports).	Total trade
Load	Asks for the country's trading partners in that year. Charged; the price is on the button. Changing the country or year does nothing until you press it.	
Products	Asks what the country trades, by product group (up to 150 HS4 product lines, grouped into HS sections). Charged.	

Second row: how to see it

Control	What it does
View — Chord	Arcs between the country (centre) and its 15 biggest partners. One colour for imports, one for exports; thicker bundles are bigger flows. The legend (top left) names the two colours and the bottom line gives the largest flow.
View — Treemap	Every partner (or product group) as a box sized by value, grouped by continent (or HS section). Hover a box for its full name, group, value and share of the total.
View — World map	Every country shaded by one indicator, with a timeline. Free.
Infrastructure	A menu of 17 map layers grouped by kind (energy, telecom, transport, defence), each with its colour swatch and how many assets it holds. One layer at a time; pick it again to turn it off. Picking a layer opens the world map. Free.
Analytics — Complexity	The country's Economic Complexity Index (a measure of how diverse and sophisticated its exports are) and rank for the year, and the products it specialises in. Charged.
Analytics — Services	Services trade by category (transport, travel, finance...), in the direction **Order by** picks. Charged.
Analytics — Indicators	Up to 500 World Bank development indicators (the button's own label for them) the country publishes for the year. Charged.
Analytics — Tariffs	Tariff lines on the corridor from the country to one partner: the partner row you selected in the table, else its top partner. Needs a **Load** first. **Year** does not change the answer: the tariff question is asked for the two countries only. Charged.

Switching between **Chord**, **Treemap** and the table is free: they all draw the same answer.

The table

The table appears under the chart once an answer arrives; scroll the page down to reach it. A strip above it gives the totals.

Answer	Columns
Partners (Load)	rank, **Trading partner** (in its continent colour), **Exports**, **Imports**, **Balance** (green surplus, red deficit). Strip: "Exports ..., imports ..., balance ... Summed over the N partners shown". Up to 100 partners.
Products	rank, **Product**, **Section** (in its colour), **Value**, **HS6 lines** (how many detailed product codes are inside). Up to 150 lines. The totals strip above it still shows the partner totals from **Load**.
Complexity	rank, **Specialised product (HS4)**, **HS4**, **RCA**. Strip: the ECI and rank for the year. Up to 100 products.
Services	rank, **Service category**, **EBOPS** (the category code), **Value**, **Share**. Strip: total and number of categories. Up to 100 rows.
Indicators	rank, **Indicator**, **Code**, **Value** (as published: dollars, percents or counts). Up to 500 rows.
Tariffs	rank, **HS4 line** (a number: the HS section in front of the 4-digit product code, so 10405 is section 1, HS4 0405), **Tariff**, **Prediction**, **Result**. Strip: the two countries and the number of lines, highest tariff first. Up to 200 lines.

World map

Control	What it does
Indicator	Which indicator shades the map. Each entry shows how many countries it covers. The first entry, **None (infrastructure only)**, clears the shading. Opens on GDP in US dollars when available.
Play / pause	Plays the indicator forward one year at a time (about 1.6 years a second) and stops at the last year. Pressing play on the last year starts again from the first.
Timeline slider	Drag to any year. Dragging stops playback.
Year	The year on the map, in the accent colour. While the map is on screen, changing **Year** in the top row moves the map to that year too (free).
Status	How many countries have a value, or what is loading.
Legend (bottom left)	The continent colours, the value range, how many countries have **no data**, and the scale (linear, log or diverging about 0).
Source line	Where the figures come from and the terms that go with them (for the map's indicators, the IMF: the International Monetary Fund).

Mouse: the wheel zooms where the pointer is (up to 96 times); drag to pan; double-click to go back to the whole world. Hover a country for its name, the indicator, its value and the date the value is for ("latest reported" when it is older than the year shown). Click a country to choose it in **Country**. This does not load anything: press **Load** when you are ready.

The map uses the same continent colours as the treemap. Brighter means a higher value.

Infrastructure layers

Group	Layers (number of assets at the time of writing)
Energy	**Coal mines** (3,522), **Gas pipeline routes** (46,908), **Hydrogen pipeline routes** (209), **Oil and product pipeline routes** (7,386), **Power plants** (142,163), **US gas pipelines** (32,851), **US electric transmission** (52,244)
Telecom	**Cable landing stations** (43), **Data centres** (4,470), **Terrestrial fibre** (5,789), **Interconnection facilities** (5,257), **Submarine cables** (849)
Transport	**Airports** (5,272), **Border crossings** (8,159), **Maritime chokepoints** (8), **Ports** (2,926)
Defence	**Military bases** (7,860)

Hover a layer in the menu for what it covers and where the data comes from.

Behaviour	Detail
One at a time	Picking a second layer turns the first off. Pick the ticked layer again to turn it off.
Map shading steps back	While a layer is on, **Indicator** moves to **None** so the lines and dots stand out. Pick an indicator after the layer is on to see both together.
The button names the layer	**Infrastructure** changes to the layer's name and how many features were drawn.
Hover	A pipeline, cable or plant shows a card: its name and, when published, **Status**, **Operator**, **Capacity**, **Countries** and **As of**.
Limit	Up to 50,000 features per layer. When a layer holds more, the status line says "first 50000 of N".

Behaviour	Detail
Legend	The layer's colour and name appear at the bottom left.

What it costs

Action	Cost
Opening the screen, the country and year lists, switching views, Order by	Free
World map, Indicator, playing the timeline, Infrastructure layers	Free
Load, Complexity, Services, Indicators	One trade question each (price on the button)
Products, Tariffs	One product sweep each (price on the button)

A question is charged once per day (UTC). Asking exactly the same question again that day costs nothing; the footer then says "no charge (same query)". Changing the country, year or direction is a new question.

What the screen remembers

The country, year, **Order by**, the view, the map indicator and the infrastructure layer are saved with your workspace. Nothing is fetched on its own when the screen opens again: the chart waits for **Load**.

34.9 For advanced users

How the numbers are built

- **Trade figures** are annual goods trade between pairs of countries, in US dollars, reported by product line. The partner answer adds up all products for each partner. The totals strip adds up the partners shown (up to 100), so a country with more than 100 partners has a little trade outside the total.
- **Balance** is exports minus imports. Green means the country sells more to that partner than it buys.
- **Economic Complexity Index (ECI)** ranks countries by how many different products they export and how rare those products are. A higher ECI means a more diverse, more sophisticated export base.
- **RCA** (revealed comparative advantage) compares a product's share in the country's exports with its share in world exports. RCA above 1 means the country exports more of it than the world average: a specialisation. **Complexity** lists only those products.
- **Services** use their own category codes (**EBOPS**, the international classification of services trade). **Share** is each category's part of the total shown in the strip.
- **Tariff** is the duty rate, in percent, on an HS4 product line on that corridor, highest first. Hover a tariff cell for the two underlying rates the source publishes. **Prediction** and **Result** are shown as the source publishes them.

How the map is coloured

The map picks its colour scale from the data:

- values on both sides of zero (growth, balances) use a scale that diverges around 0;
- all-positive values that span 1,000 times or more (GDP, population) use a log scale;
- everything else is linear.

The scale is fixed across every year of the timeline before the first year is drawn. That is what lets you see change when you press play: a country that gets brighter really grew.

The timeline runs as far forward as the source publishes, which can include projections for the coming years. Each year is labelled, and the hover card gives the date of every value.

Combine an indicator with a layer

1. Turn on a layer (for example a pipeline layer). The indicator moves to **None**.
2. Now pick an indicator in **Indicator**. Because you chose it after the layer, the map keeps both: the countries are shaded and the layer is drawn on top.
3. Pick **None (infrastructure only)** again to go back to the layer alone.

Open a country from anywhere

Type a country with the word `trade` (or `exports`, `export`, `imports`, `import`, `tariff`, `tariffs`) in the command line, for example `united kingdom trade`, and pick **United Kingdom trade flows** under **TRADE FLOWS**. The screen opens with the United Kingdom chosen in **Country** and the footer says "United Kingdom selected. Press Load for its trade flows." Nothing is charged until you press **Load**.



Figure 34.20 Typing a country and the word trade: the trade flows result comes first.

1. What you typed.
2. The trade flows result. Press **Enter** or click it.

If no **TRADE FLOWS** group appears, the country's name has also matched a ticker: type `exports` instead of `trade`, for example `japan exports`, which offers **Japan trade flows**.

On the dashboard

The **Chapter 8, Dashboard** p. 123 has **Trade flows** and **Trade treemap** tiles (the chord and treemap for one country), a **World map** tile and an **Infrastructure map** tile, under the Geopolitics group of **Add widget**.

Do it with AI

The AI works this screen through its controls, like you do. Try:

- "Open Global Economy, choose Germany and the latest year, and load its trading partners."
- "On the Global Economy world map, show inflation and play it from the start."
- "Show the submarine cables layer on the Global Economy map."

Anything charged (**Load**, **Products**, the four analytics) asks for your approval first.

34.10 Troubleshooting

The chart says "Pick a country and a year, then press Load." Nothing has been asked yet. The screen never loads trade by itself, because each question costs credits. Press **Load**.

I changed the country and nothing happened. Changing **Country** or **Year** only marks the view as out of date; the footer says "Selection changed. Press Load." Press **Load** to ask the new question.

The country list says "Sign in to load" or "Waiting for sign-in". The lists load as soon as your session is ready. Wait a moment after signing in; they fill by themselves.

The chord diagram says "Pane too small for the chord diagram". Make the panel larger, or switch to **Treemap**, which works at any size.

Tariffs says "Press Load, then select a partner row". Tariffs needs a partner. Press **Load**, click a partner row in the table, then press **Tariffs**.

A country on the map is grey. The indicator has no value for that country. The legend counts these as **no data**.

Clicking a country on the map says it "is not in the trade corpus". The map covers more countries than the trade data. Pick another country, or choose it from **Country** if it is listed under another name.

An infrastructure layer stopped at "first 50000 of ...". That layer holds more features than one read can draw. Zooming does not load more; the features shown are the first 50,000 the server returned.

"The trade corpus is not available on this server." The trade data is temporarily unavailable. Try again later; the world map and the layers keep working.

Services says "No services exports recorded for ... Years with data: ...". Services data ends earlier than goods data. Pick one of the years the message lists in **Year**, then press **Services** again.

Complexity shows the index but no specialised products. For the newest years the product list can still be empty. Pick an earlier year in **Year** and press **Complexity** again.

CHAPTER 35

Geopolitics GEOP

Conflict, unrest and political events from the world's news, placed on a map and listed in a table, with humanitarian datasets, a reference chart of crises and a trade-policy calculator beside them.



At a glance

Open it	• Type `GEOP` in the command line and press **Enter** • **Menu** › **Navigate** › **Research & Intelligence** › **Geopolitics** • Type a country and the word `conflict` in the command line (for example `sudan conflict`) and pick the result
You need	• Signed in on any paid plan • Credits for each events query (the price is on the button)
Best for	• Seeing where events are happening today • Checking a country before you trade its market • Finding humanitarian datasets
Time to learn	10 minutes
Related	**Chapter 11, News** p. 182, **Chapter 36, Maritime** p. 699, **Chapter 34, Global Economy** p. 672, **Chapter 32, Global Data** p. 648

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35.1 Screen tour

Geopolitics turns the world's news into events: who did what, where and when, sorted into categories such as armed conflict, protests or elections. **Monitor** puts them on a map and in a table; three more tabs add humanitarian datasets, a reference chart and trade-policy calculators.



Figure 35.1 The Monitor tab after Apply filters: the latest events around the world.

1. Four tabs: **Monitor**, **HDX data**, **Relations**, **Trade**.
2. Filters: **Country**, **City** and **Category**.
3. **Apply filters** loads events. The price is on the button.
4. The legend: each category's pin shape and colour.
5. The conflict map. Each pin is an event.
6. Choose the map style.
7. The events table. Click a row for its details.
8. Counts, top categories and the hotspot countries.
9. How many events could be placed on the map, of those loaded.

The screen never loads events by itself, because each query costs credits. Until you press **Apply filters**, the map tells you what to do and what it costs.



Figure 35.2 Geopolitics as it opens.

1. The map says what to press and the price.

35.2 Quick start

1. Type `GEOP` in the command line and press **Enter**. The screen opens on **Monitor**.
2. Leave the filters empty to see the latest events everywhere, or type a country in **Country** (for example *Ukraine*).
3. Press **Apply filters** (1.5 credits at the time of writing). After a few seconds pins appear on the map and the events fill the table.
4. Click a row in the table, or a pin on the map. The event shows under **Event details** on the right.



Figure 35.3 An event selected in the table, with its details on the right.

1. The selected event.
2. Its category, headline, country, city, date and source.

5. Press **Open source** under **Event details** to read the original report in your web browser.

Plan & credits

Apply filters is the only control on this screen that spends credits. One press is charged once per set of filters per day (UTC); pressing it again with the same filters that day is free. **HDX data**, **Relations** and **Trade** are free.

35.3 Filter events

Use the filters to narrow the map to one country, one city or one kind of event.

1. Type a country in **Country** (its English name, for example *Sudan*).
2. Optionally type a city in **City** (for example *Khartoum*).
3. Optionally pick one **Category**. Each entry shows how many events it holds, busiest first.
4. Press **Apply filters**, or press **Enter** in **Country** or **City**.
5. Press **Clear** to empty the filters. It does not run a query: press **Apply filters** when you are ready.

The category list comes from the server and can change. On 5 November 2026 it held **Armed Conflict**, **Protests**, **Civilian Violence**, **Crisis**, **Explosions**, **Riots**, **Strategic**, **Terrorism**, **Political Violence**, **Diplomacy**, **Elections**, **Maritime**, **Cyber**, **Sanctions** and **Nuclear**. A category can also appear with *(Unclassified)* after its name; it uses the same pin as the category itself.

35.4 Find humanitarian datasets

HDX data searches a large public library of humanitarian datasets: displacement, food security, health, conflict data and more. It is free.

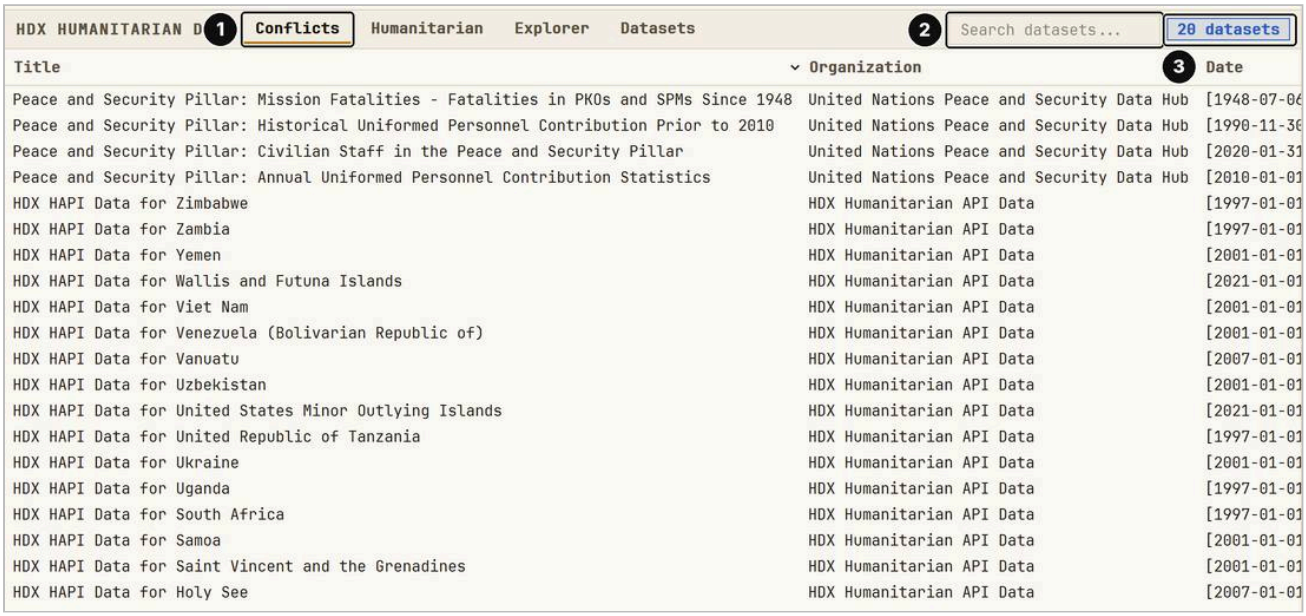


Figure 35.4 HDX data, Conflicts view.

1. Four views: **Conflicts**, **Humanitarian**, **Explorer**, **Datasets**.
2. Search all datasets by words.
3. How many datasets this view holds.

1. Click **HDX data**. The **Conflicts** view loads by itself. Hover a title for the dataset's description; scroll the table sideways for **Organization**, **Date**, **Resources** and **Tags**.

2. Click **Humanitarian** for humanitarian datasets.

3 To search, click **Datasets** first, then type words in **Search datasets...** and press Enter. The results show in the **Datasets** view. (Searching from another view leaves that view on **Loading HDX data...** until you click **Datasets**.)

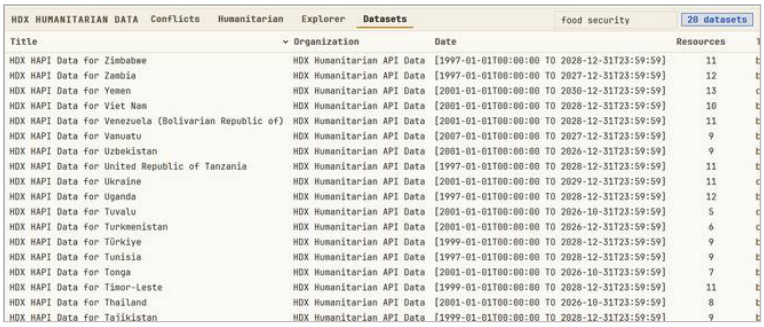


Figure 35.5 Results for "food security".

4 Click **Explorer** to search by country or topic: pick a **Country** (or type one), or a **Topic**, then press **Search**. The results replace the table.



Figure 35.6 The Explorer bar under the table.

35.5 Read the Relations chart

Relations is a fixed reference chart, not live data. It shows six major conflicts (**Active conflicts**), four crisis types (**Crisis types**) and four aid organisations (**Organizations**) as cards, with a severity badge, a dataset count and the nodes each one connects to.

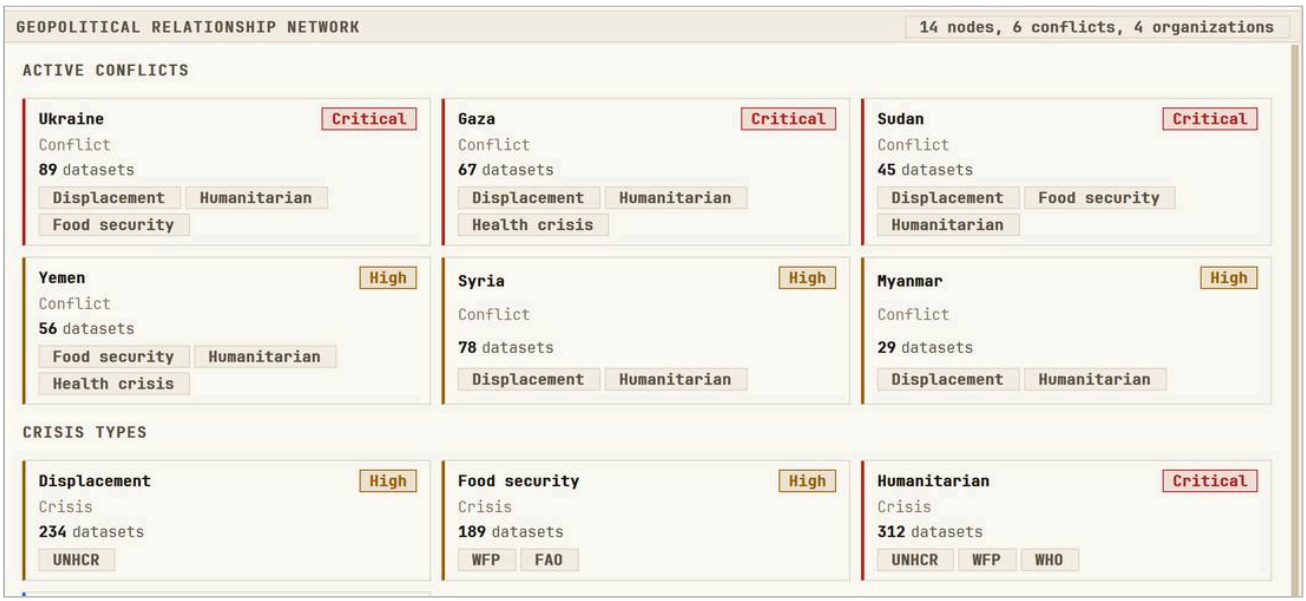


Figure 35.7 Relations: the six active conflicts and the first crisis types. Health crisis and the four organisations follow below them.

35.6 Model trade policy

Trade answers textbook questions about trade policy from numbers you type: what free trade gains, what a tariff costs, what a trade bloc creates or diverts, what removing barriers does. It is free.

1. Click **Trade**.
2. Pick an **Analysis type**, or click its tab: **Benefits & costs**, **Restrictions**, **Trading blocs** or **Barrier removal**.



Figure 35.8 The Restrictions page and its fields.

3. Change the fields. Each has a hint under it.
4. Press **Run analysis**. The result appears under **Analysis results** as a table of measures and values.



Figure 35.9 The result of Benefits & costs with its default numbers: each measure and its value, under Analysis results.

Note

The result depends only on the numbers you type. It is a model, not a forecast for a real country.

35.7 Reference

Top bar

Control	What it does
Monitor	The conflict map, the events table and the sidebar. The screen opens here.
HDX data	Search and browse humanitarian datasets (free).
Relations	A fixed reference chart of major conflicts, crisis types and aid organisations.
Trade	Four trade-policy calculators that run on numbers you type (free).
Status line	Shows **Loading events...** while a query runs, **Request failed** when one fails (hover it for the reason), or a note such as "Sudan selected. Press Apply filters to load its events." Hidden when there is nothing to say.
UTC clock	The time in UTC (Coordinated Universal Time), as HH:MM.
mapped / loaded count	Appears after a query. Green when at least one event could be placed on the map, red when none could. Hover it for the exact numbers, including the total the server holds.

Filters column

Control	What it does	Default
Country	A country name, typed (for example *Ukraine*). Enter presses **Apply filters**.	Empty (all countries)
City	A city name, typed (for example *Kyiv*). Enter presses **Apply filters**.	Empty
Category	One event category, or **All categories**. Each entry shows how many events it holds, busiest first.	All categories
Apply filters	Runs the query. Shows its credit price. This is the only control on the screen that spends credits.	
Clear	Empties the three filters. It does **not** run a new query; what is on screen stays until you press **Apply filters**.	
Legend	Every category with the glyph (shape and colour) its pins use on the map.	

Conflict map

Control	What it does
Basemap	The map tiles under the pins: **Satellite**, **Dark**, **Ocean**, **Streets**, **Light**, **Terrain**. It matches the terminal's theme (**Light** on the light theme) until you pick one yourself.
+ / −	Zoom in and out. The mouse wheel zooms too; drag to pan.
Pins	One per event that has a location. A pin's shape and colour say its category (see the legend). A larger, fainter pin is placed at the country's centre because the event has no exact place: its hover label says *(country-level)*. Several events at one spot are fanned out slightly so each stays clickable.
Clicking a pin	Selects that event's row in the table and shows it under **Event details**.

After each query the map zooms to fit the pins.

Events table

Column	What it shows
Category	The event's category, with its map glyph.
Country	Where it happened.
City	The city, when known.
Title	A one-line summary of what happened (or the headline when no summary exists). Hover for the summary, the original headline and the classifier's confidence.
Date	The date the event was reported.

Click any column header to sort. Click a row to show the event under **Event details**. Drag the bar between the map and the table to give either more room (the map starts at three quarters of the height).

Sidebar

Section	What it shows
Overview	Three tiles: **Events** (rows loaded), **Mapped** (rows with a location) and **Nations** (different countries). A dash means nothing has been loaded yet.
Top categories	Up to eight categories, most events first, with a bar showing each one's share against the largest.
Hotspots	The five countries with the most events, with a bar for each.
Event details	The selected event: its category, title, **Country**, **City**, **Date**, **Source**, and an **Open source** button that opens the original article in your web browser (shown only when there is a link).

HDX data

Control	What it does
Conflicts	Conflict-related datasets (loaded when you open the view).
Humanitarian	Humanitarian datasets.
Explorer	Shows a bar under the table with **Country** (type one, or pick one of the listed crisis countries: Ukraine, Gaza, Sudan, Yemen, Syria, Afghanistan, Myanmar, Ethiopia, Haiti, Somalia, Venezuela), **Topic** (**Conflict**, **Humanitarian**, **Displacement**, **Food security**, **Health**, **Education**, **Refugees**) and **Search**. A country, when given, wins over the topic.
Datasets	A broad search across crises, conflicts and displacement. After a search (the box or **Explorer**), it shows that search's results instead.
Search datasets...	Type any words and press `Enter` to search all datasets. The results show in the **Datasets** view: click **Datasets** before you search (the search does not switch views by itself).
N datasets	How many rows the current view holds.

Table columns: **Title** (hover for the description), **Organization**, **Date**, **Resources** (how many files the dataset holds) and **Tags**. Click a header to sort. Each view keeps its results, so switching back is instant.

Relations

A fixed chart, not live data. Three groups of cards: **Active conflicts**, **Crisis types** and **Organizations**. Each card shows the name, a severity badge (Critical red, High amber, Medium blue; an organisation shows its type), a dataset count and up to three linked nodes, with **+N** when there are more. The header counts the nodes, conflicts and organisations. Use it as a map of how crises and agencies connect, not as a current measure.

Trade

Pick an **Analysis type** (or click its tab); fill in the fields; press **Run analysis**. The answer appears under **Analysis results** as a **Metric** / **Value** table, and the header says how many fields came back. All four are free.

Analysis (tab)	Fields and defaults
Benefits & costs of trade (Benefits & costs)	**Trade volume** 30 % of GDP (0-100); **Expected price reduction** 5 % (0-50); **Traded goods share** 30 % of consumption (0-100).
Trade restrictions analysis (Restrictions)	**Tariff rate** 10 % (0-200); **Quota volume** 1,000 units (0-1,000,000); **Export subsidy rate** 5 % (0-100); **Development level** (Developed economy, Developing economy, Middle income); **Industry maturity** (Mature industry, Infant industry, Emerging industry).
Trading blocs analysis (Trading blocs)	**Integration type** (Free trade area, Customs union, Common market, Economic union; each with examples such as USMCA or the EU); **Trade creation estimate** 100 B USD (0-1,000); **Trade diversion estimate** 30 B USD (0-1,000).
Trade barrier removal impact (Barrier removal)	**Liberalization scope** (Limited liberalization, Moderate liberalization, Comprehensive liberalization; default Moderate); **Tariff reduction** 50 % (0-100); **Economy size (GDP)** 500 B USD (0-100,000).

What it costs

Action	Cost
Opening the screen, the country and category lists, the legend	Free
Apply filters	The price on the button, charged once per set of filters per day (UTC). Running the same filters again that day, or reading more pages of the same answer, is free.
Clear, sorting, clicking pins and rows, the basemap	Free
HDX data, Relations, Trade	Free

What the screen remembers

The open tab, the **Country** text and the **City** text are saved with your workspace. Events are not reloaded when you come back: the screen never runs a charged query by itself.

35.8 For advanced users

What one query fetches

Apply filters reads up to five pages of 100 events for your filters and merges them, dropping repeats. Only some events carry an exact place, so a bigger read gives a fuller map. You pay once for the whole read. Running the same filters again on the same day (UTC) is free, so you can re-run a question to pick up new events without

paying twice.

The **mapped / loaded** count in the top bar tells you how many of the loaded events could be placed on the map. Hover it to see the total the server holds for your filters.

Read the pins carefully

- A small, solid pin is placed where the event happened.
- A larger, fainter pin is placed at the middle of the country, because the report named only the country. Its label ends in *(country-level)*. Read it as "somewhere in this country".
- Pins on the same spot are spread in a small spiral so you can click each one.

Open a country from anywhere

Type a country with the word `conflict` (or `conflicts`, `geopolitics`, `geopolitical`, `war`, `events`, `unrest`, `protest`, `protests`) in the command line, for example `sudan conflict`, and pick **Sudan conflict & geopolitical events**. The screen opens on **Monitor** with *Sudan* in **Country** and the status line says "Sudan selected. Press Apply filters to load its events." Nothing is charged until you press **Apply filters**.



Figure 35.10 Typing a country and the word conflict: the events results come first, with how many events each holds.

1 The country's events. Press `Enter` or click it.

On the dashboard

The **Chapter 8, Dashboard** p. 123 has a **Geopolitics events** tile under the Geopolitics group of **Add widget**.

Do it with AI

The AI works this screen through its controls. Try:

- "Open Geopolitics, filter to Ukraine and load the events."
- "On Geopolitics, which countries are the hotspots right now?"
- "Find humanitarian datasets about food security in Yemen on the HDX data tab."

Apply filters spends credits, so the AI asks for your approval before pressing it.

35.9 Troubleshooting

The map says "No events loaded. Set a filter and press Apply filters." The screen never loads events by itself, because each query costs credits. Press **Apply filters** (with or without filters).

I pressed Clear and the events are still there. Clear only empties the filters. Press **Apply filters** to ask the new question.

The count says few events are mapped. Many reports name a place the system cannot pin down. They are still in the table; only the ones with a location get a pin.

"No events match these filters." Nothing matched. Check the spelling of the country or city (use the country's English name), or choose **All categories**.

The status line says "Request failed". Hover it to read the reason. If the map was empty, the message also shows over the map. Check your connection and credits, then press **Apply filters** again.

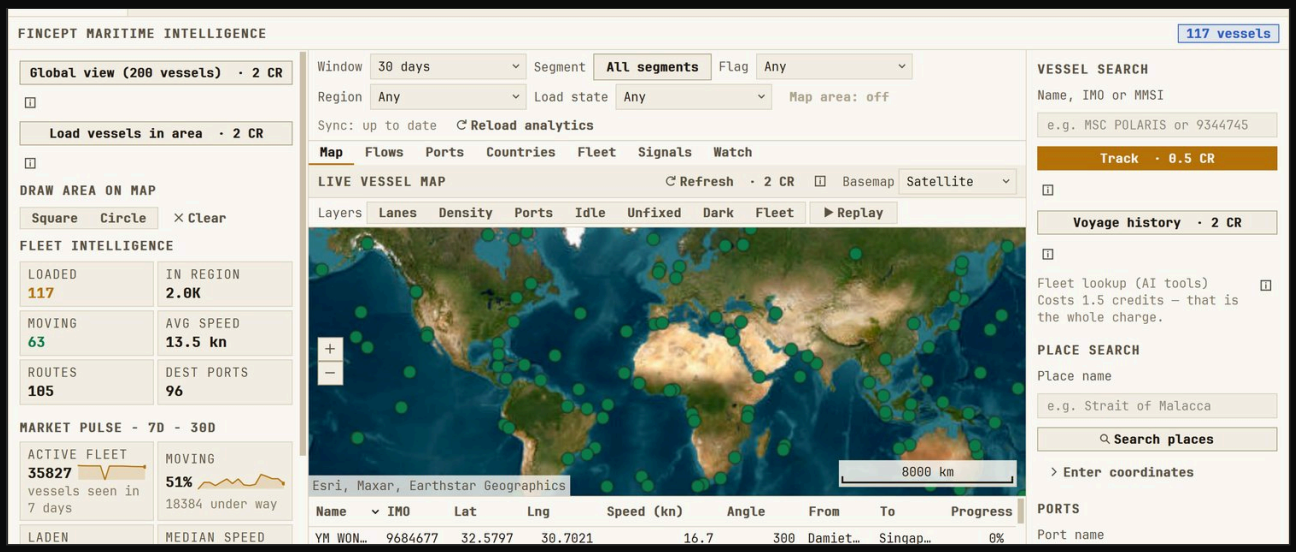
HDX data says "Failed to load HDX data". The dataset search did not answer. Switch to another view and back, or search again; each view retries when you open it with no results.

The Legend says "Sign in to load categories." The category list loads as soon as your session is ready.

CHAPTER 36

Maritime MARI

Ships on a live map. Plot vessels anywhere, track one ship and replay its voyage, find ports and places, and read the shipping market itself — trade lanes, port congestion, country arrivals, the fleet and its warning signs.



At a glance

Open it	• Type `MARI` in the command line and press **Enter** • **Menu** › **Navigate** › **Research & Intelligence** › **Maritime** • Type a ship's name with the word `vessel`, or a 7-digit IMO number, in the command line and pick the result
You need	• Signed in on any paid plan • Credits for vessel sweeps, tracking and voyage history (the price is on each button) • Exclusive Pro for Track, Voyage history and the AIS dark views
Best for	• Watching a strait or a port • Following one ship to its destination • Reading freight and commodity flows
Time to learn	15 minutes
Related	**Chapter 35, Geopolitics** p. 688, **Chapter 34, Global Economy** p. 672, **Chapter 11, News** p. 182, **Chapter 8, Dashboard** p. 123

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36.1 Screen tour

Maritime has three columns. The left column loads ships and sums them up; the centre holds the map and six analytics tabs about the whole shipping market; the right column finds one ship, a place or a port.

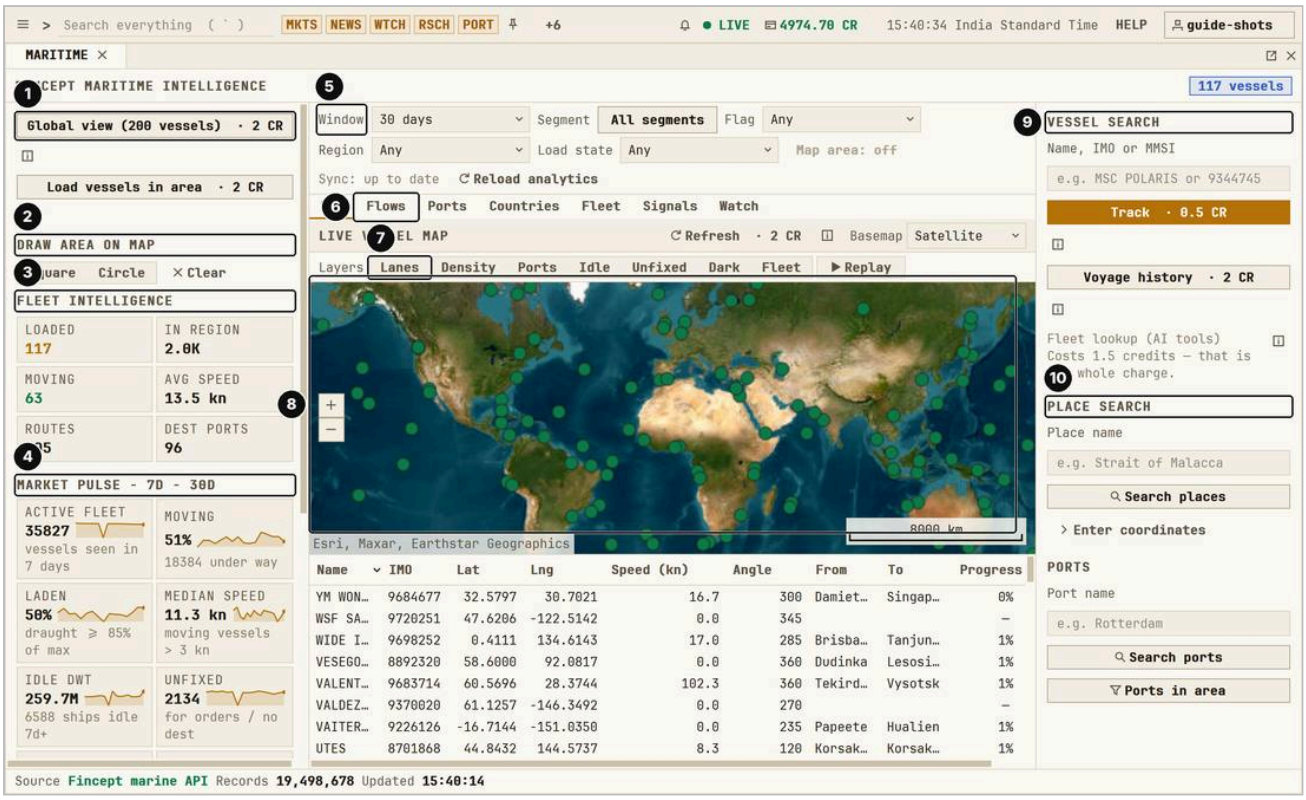


Figure 36.1 Maritime after Global view: a sample of ships across the world, with the market figures on the left.

1. Load ships: the whole world, or the area you set. Each shows its price.
2. Draw a box or circle on the map to load the ships inside it.
3. Figures about the ships you loaded.
4. Figures about the whole tracked fleet over 7 days. Free.
5. The filter bar: time window, ship type, flag, region, laden or empty.
6. Tabs: the map, then six free analytics views.
7. Map layers. Free.
8. The live vessel map. Click a pin to select that ship.
9. Find one ship by name, IMO or MMSI, track it and replay its voyage.
10. Find a place or a port.

The map stays empty until you press a sweep button, because sweeps cost credits. Everything else on the screen (the analytics tabs, the layers, ship and port search) is free.

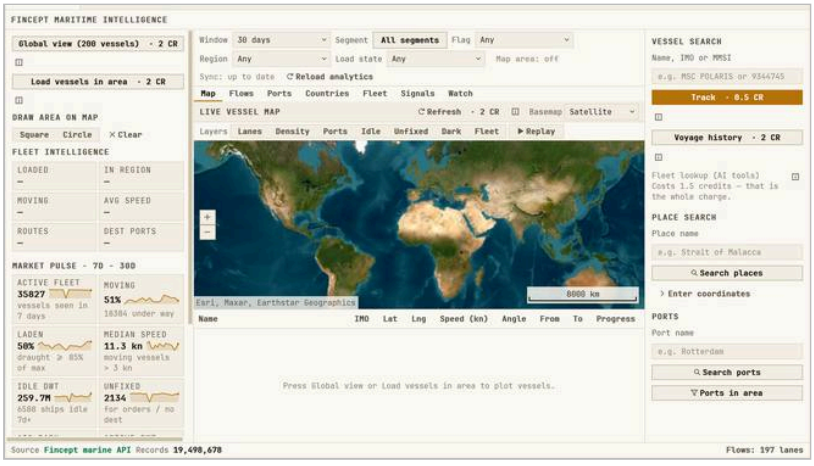


Figure 36.2 Maritime as it opens. The list under the map says which button to press.

36.2 Quick start

1. Type `MARI` in the command line and press `Enter`. **Market pulse** on the left fills with this week's figures for the whole fleet.
2. Press **Global view (200 vessels)**. The price is on the button (2 credits at the time of writing). After a few seconds, ships appear on the map and in the list under it.
3. Read **Fleet intelligence**: how many ships are loaded, how many move, their average speed, and how many routes and destinations they declare.
4. Click a pin on the map. The ship's details show on the right under the search box, with its free **Vessel profile**.
5. Turn on a layer, for example **Density**, to see where ships really sail.

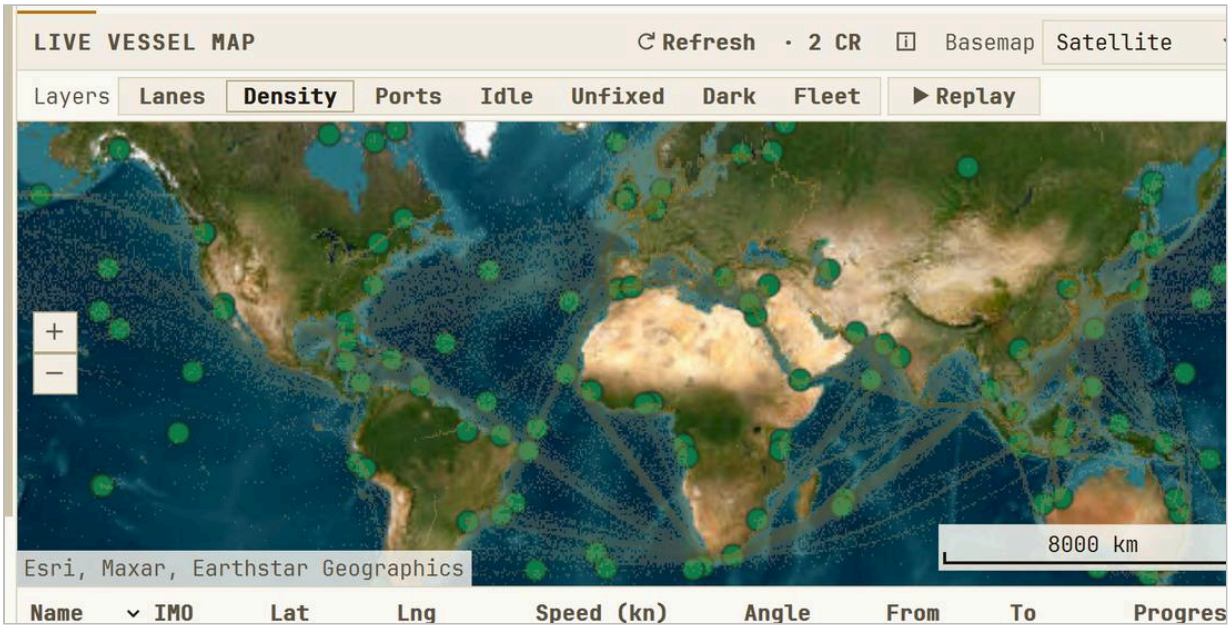


Figure 36.3 The Density layer: the world's shipping lanes, drawn from where ships have been.

Plan & credits

Global view, **Load vessels in area**, **Refresh**, a drawn shape and a picked place each run one area search. **Track** costs one position lookup and **Voyage history** one history lookup. The prices are printed on the buttons. The analytics tabs, layers, **Market pulse**, ship register search, profiles, place and port search are free.

36.3 Load ships in an area

Use this to watch one strait, port or sea instead of the whole world.

1. Under **Place search**, type a place, for example *Strait of Hormuz*. Suggestions appear as you type (from 3 characters).

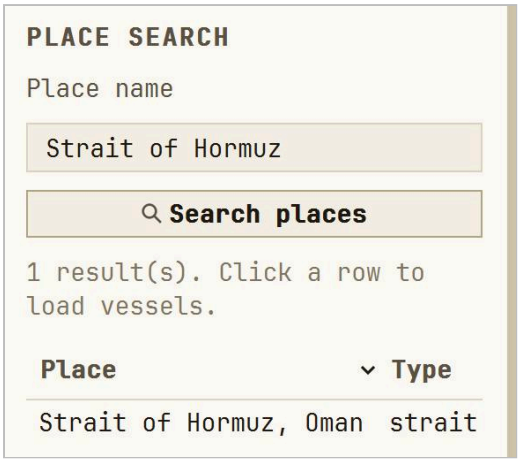


Figure 36.4 A place search and its result. Clicking the row loads the ships inside that place.

2. Pick a suggestion, or press **Search places** and click a row in the list. The area is filled in and the ships inside it are loaded (one area search).

3. Or draw the area yourself: click **Square** or **Circle** under **Draw area on map**, then drag on the map. Each shape you finish loads the ships inside it.



Figure 36.5 The Square tool is on: a drag on the map now draws a box instead of panning.

1. On: drag on the map to draw.
2. **Clear** removes the shapes.

4. Or open **Enter coordinates** and type the four limits, then press **Search area**.

5. Press **Refresh** later to run the same area again.

Careful

Auto runs the area search again every 5 minutes for as long as the screen is open, and each run is charged. Turning it on asks first and shows the cost per hour and per day. Leave it off unless you need a live picture.

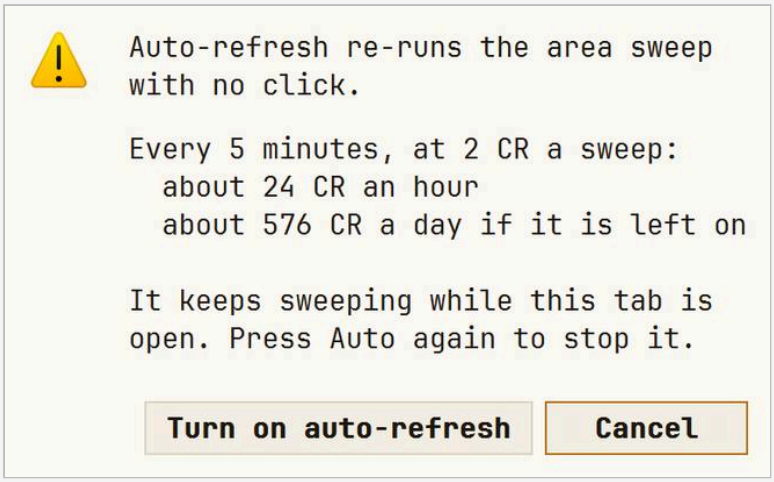


Figure 36.6 The question Auto asks before it turns on.

36.4 Track one ship

Use this to find where a ship is now and where it has been.

1. Under **Vessel search**, type part of the ship's name, its IMO or its MMSI. Suggestions from the free ship register appear as you type.

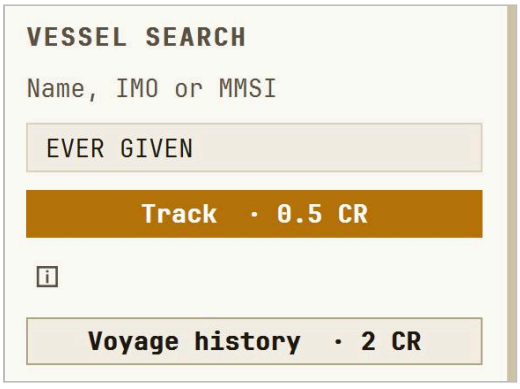


Figure 36.7 A ship's name typed in Vessel search. Track and Voyage history show their prices.

2 Pick the ship from the suggestions, or press **Track**. Its current position appears on the map and its details in the card under the buttons. This is charged and needs Exclusive Pro: picking a suggestion of a ship that can be tracked presses **Track** for you. Typing a full 7-digit IMO and pressing **Track** goes straight to the position lookup.

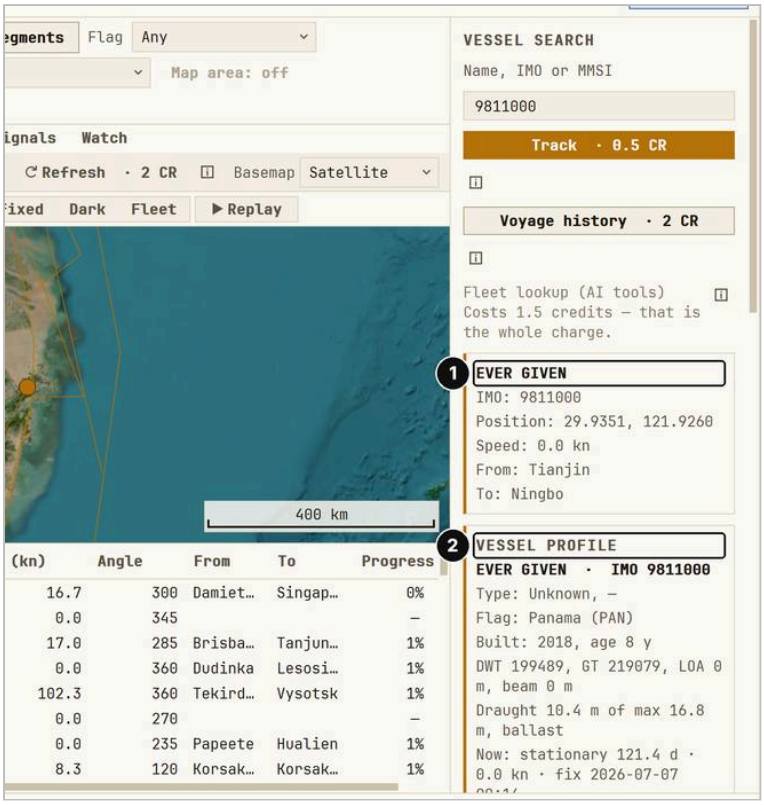


Figure 36.8 A tracked ship: its card and profile on the right, its pin on the map.

1. The ship's last reported position: coordinates, speed, where from and where to.
2. Its register profile: flag, build year, size, draught and how long it has been still.

3 Press **Voyage history** to draw the ship's recorded track. Older points are fainter; the newest is solid.



Figure 36.9 The voyage history on the map.

Tip

Clicking any pin on the map selects that ship, fills the box with its IMO and loads its free profile. Press **Voyage history** straight away to see its track.

36.5 Find a port

1. Under **Ports** (scroll the right column down if you do not see it), type a port name, for example *Rotterdam*, and press Enter or **Search ports**. It is free. Suggestions also appear as you type (from 3 characters). The results list under the buttons; "Searching..." shows while the answer is on its way.



Figure 36.10 The Ports box with a port name typed, while the search runs.

2. Click a result, or pick a suggestion. A pin is dropped on the port and the map flies to it.

3. Press **Ports in area** to list every port inside the area you set (a searched place, a drawn shape or typed coordinates).

36.6 Read the shipping market

The six tabs next to **Map** describe the whole tracked fleet, not just the ships you loaded. They are free. The filter bar above them (**Window**, **Segment**, **Flag**, **Region**, **Load state**) applies to all of them.

Flows: where cargo goes

Pick how to group the lanes in **Level**, **By** and **Weight**, then click a lane in **Top lanes** or in the circle diagram. **Lane transit time** and **Vessels on lane** fill in for that lane.

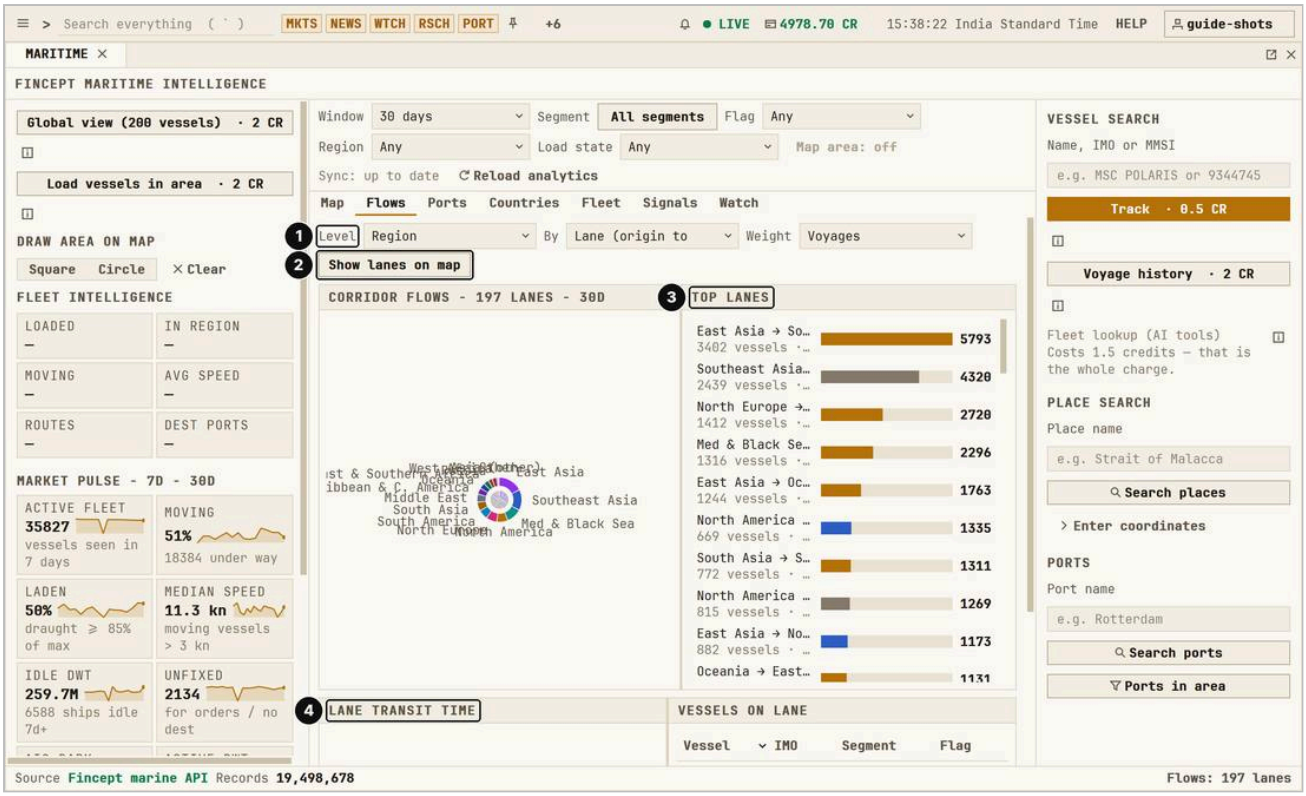


Figure 36.11 Flows: the corridor diagram and the top lanes. Click a lane to fill Lane transit time and Vessels on lane below.

1. Group by region, country or port.
2. Draw the lanes on the map.
3. The biggest lanes. Click one to open it.
4. How long the lane takes, over time.

Ports: league table and congestion

Pick a measure in **Rank by** (calls, tonnage handled, unique ships or turnaround). The league table ranks ports by it; **Congestion** lists ports where ships are queuing now; the matrix below shows voyages between pairs of ports.

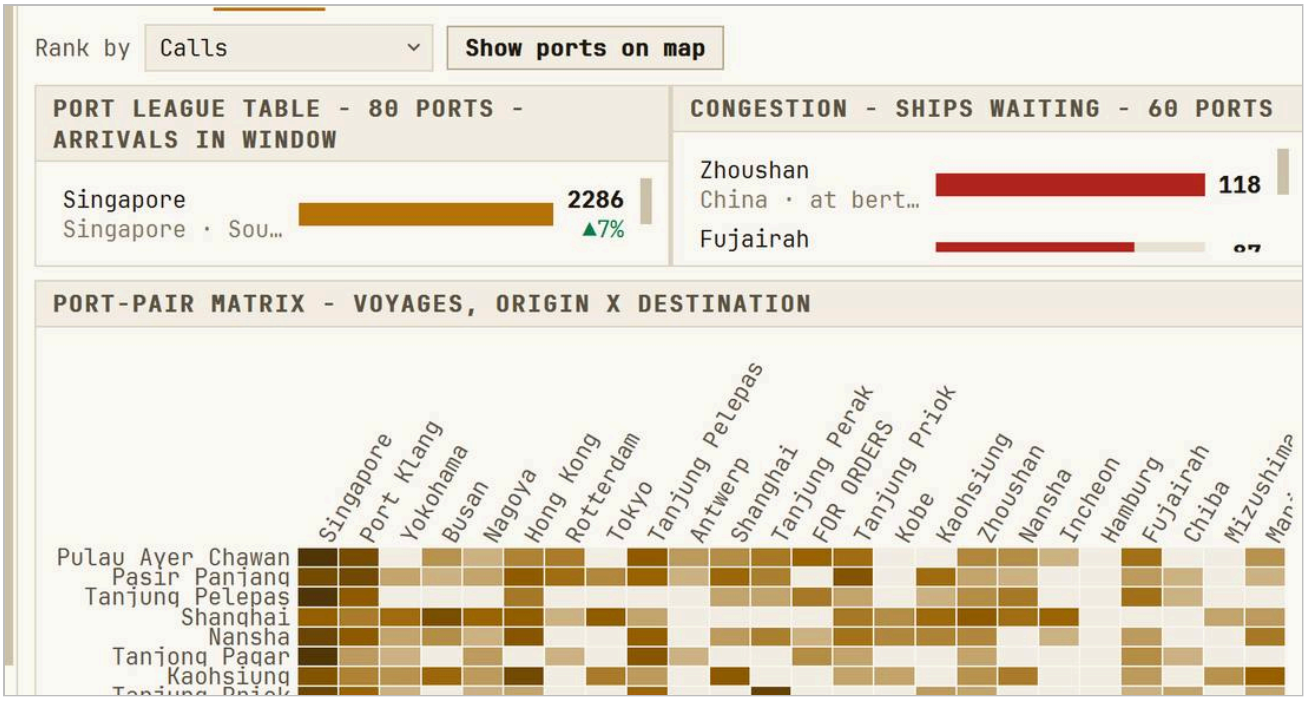


Figure 36.12 Ports: the busiest ports, where ships are waiting, and voyages between port pairs.

Countries: seaborne arrivals

Pick a measure in **Colour by**, then click a country on the map or in **Ranked**. The three panels below fill with its daily calls, the tonnage heading there in the next 14 days and its sea trade partners.

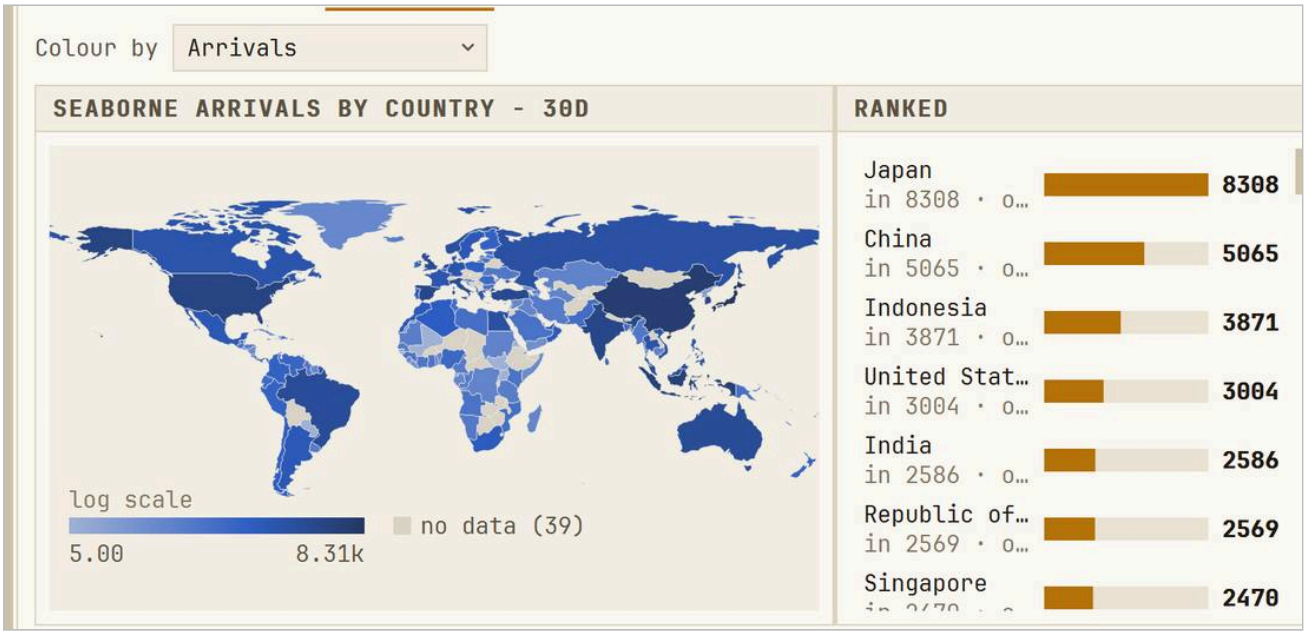


Figure 36.13 Countries: arrivals by country on a map and as a ranking.

Fleet: what the fleet is made of

Pick **Size by** (tonnage, ship count or gross tonnage). The treemap splits the fleet by ship type and size band; beside it are the biggest flags, and below a flag map and the fleet's age.

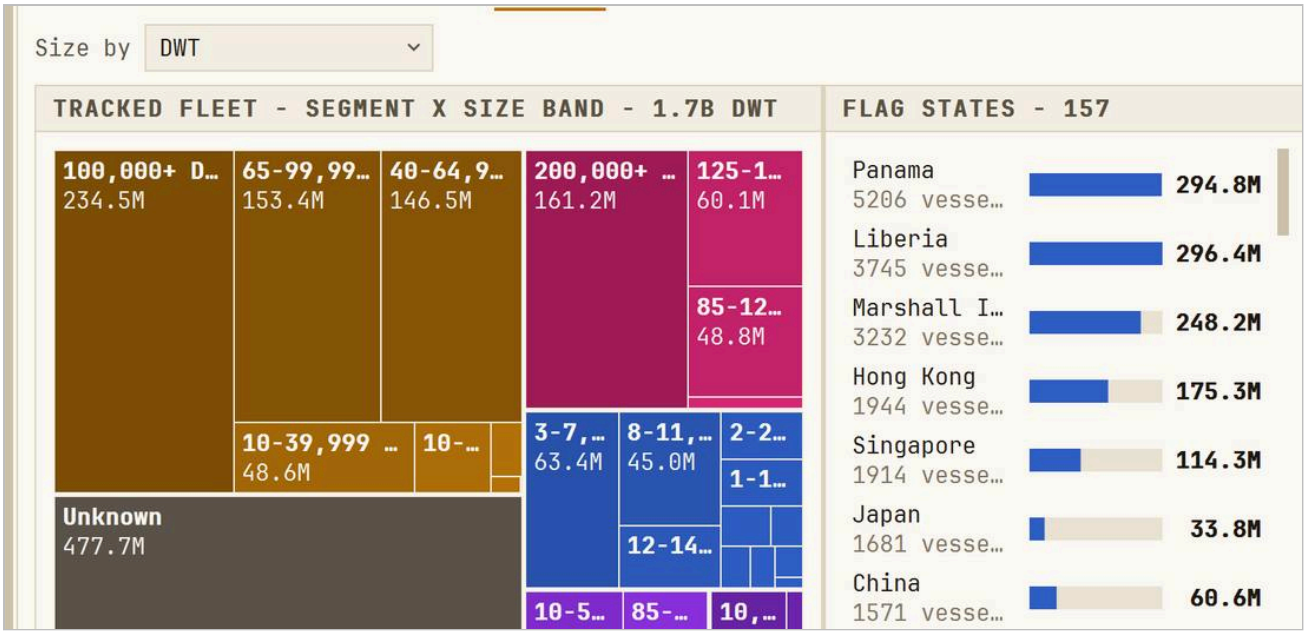


Figure 36.14 Fleet: tonnage by ship type and size, and the biggest flag states.

Signals: the fleet's pulse, week by week

Six weekly charts, one line per ship type, then the daily crossings of each chokepoint. A line that breaks away from its own past is the signal to look at.

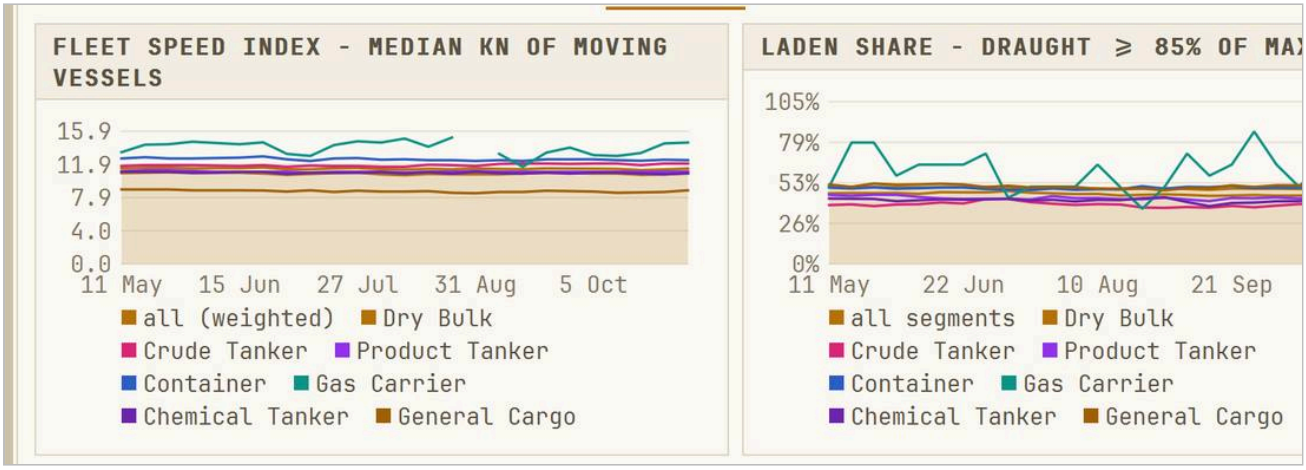


Figure 36.15 Signals: weekly speed and laden share. Idle and unfixed tonnage, active ships, AIS dark and chokepoint transits follow below.

Watch: ships worth a second look

Pick a list in **Watchlist**: idle ships, ships sailing for orders, ships gone dark or impossible position jumps. **Pin on map** puts them on the map; click a row for the ship's profile.

Watchlist Idle ⩾ 7 days (la Pin on map

6532 vessels, 257.2M DWT, Dry Bulk 1649 · Crude Tanker 370 · Unknown 1802 · Product Tanker 955 · Container 485

VESSELS - 1500

Vessel	IMO	Segment	Flag	DWT	Built	Metric
PIONEERING SPIRIT	9593505	Unknown	MLT	499125	2014	11.4 d idle
FSO AFRICA	9224764	Unknown	MHL	441655	2002	23.0 d idle
FSO ASIA	9224752	Crude Tanker	MHL	432023	2002	66.9 d idle
ERHA FPSO	9280823	Unknown	NGA	375600	2005	474.3 d idle
YUUM K'AK' NAAB	7708302	Unknown	SGP	360700	1981	54.7 d idle
KHALIJ E FARS	9544114	Unknown	TUV	355015	2011	90.0 d idle
FSO UNITY	8765319	Crude Tanker	NGA	341000	2003	16.8 d idle
FSO UOTE 1	9045455	Unknown	LBR	335432	1993	215.1 d idle
PETROBRAS 63	7385124	Unknown	MHL	322912	1983	12.4 d idle
Front Eminence	9353802	Crude Tanker	MHL	321300	2009	474.5 d idle

Figure 36.16 Watch: ships idle for 7 days or more, biggest first.

Why it works this way

Analysts read these for commodity and freight signals: tankers idling for weeks can mean oil stored at sea; more ships *for orders* can mean traders waiting for better prices; falling transits through a chokepoint show a route being avoided.

36.7 Use the map layers

1. Turn on **Lanes** for arcs between countries, sized by voyages.

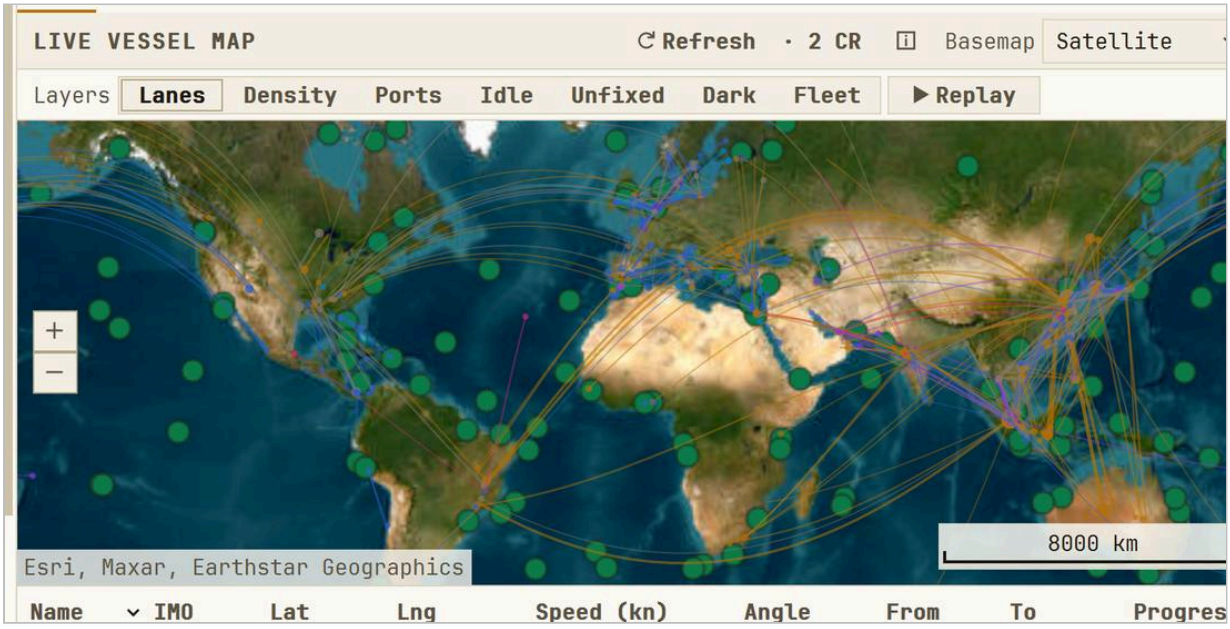


Figure 36.17 The Lanes layer.

2 Turn on **Ports** for port calls (bubbles) and queues outside ports (red bubbles).

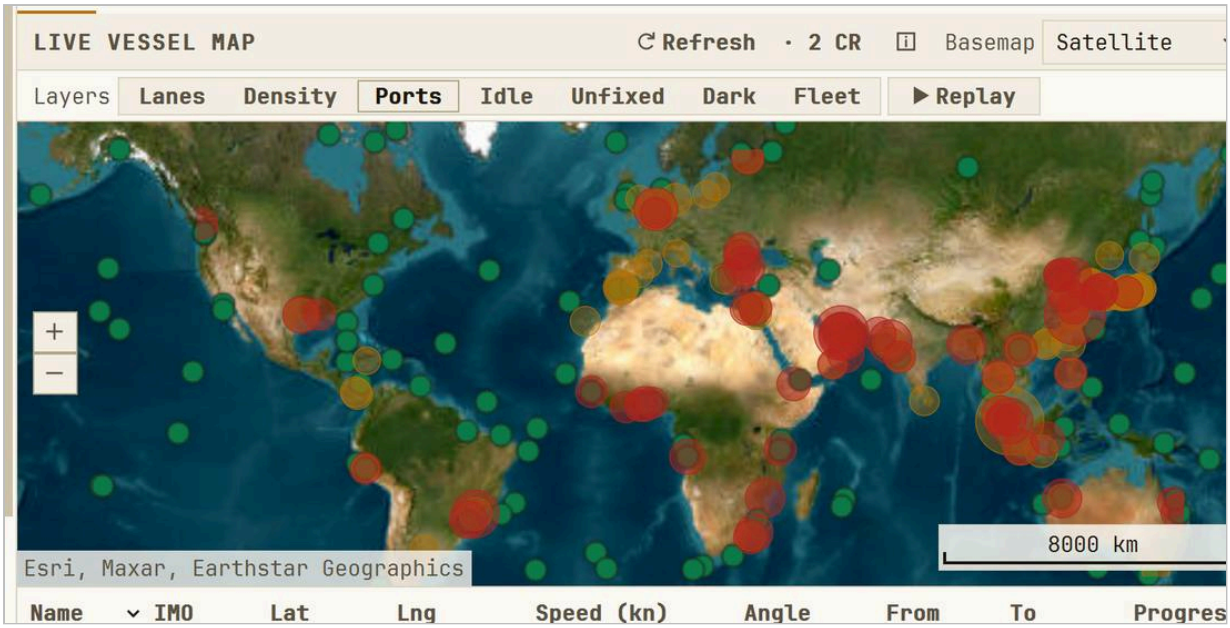


Figure 36.18 The Ports layer.

3 Turn on **Replay** with **Density** to drag a day slider through the history.



Figure 36.19 Replay: the day slider next to the layer switches.

4 **Idle**, **Unfixed**, **Dark** and **Fleet** pin matching ships on the map. Hover a layer switch to read what it shows.

36.8 Reference

Left column

Control	What it does
Global view (200 vessels)	Samples ships from the whole world and spreads up to 200 of them over the map (usually fewer: see **§36.9 For advanced users** p. 715). Shows its credit price.
Load vessels in area	Loads ships inside the current area (a searched place, a drawn shape or typed coordinates). Shows its credit price.
Draw area on map — Square / Circle	Turns on a drawing tool: drag on the map to draw a box or a circle. Each finished shape loads the ships inside it (an area search, charged). Click the tool again to go back to panning.
Clear	Removes every drawn shape and turns the drawing tool off.
Fleet intelligence	Six tiles worked out from the ships on the map: **Loaded** (pins drawn), **In region** (how many ships the server counts in the area), **Moving** (faster than 0.5 knots), **Avg speed** (of the moving ships), **Routes** (origin-destination pairs) and **Dest ports** (different destinations). A dash means nothing is loaded.
Market pulse - 7D	The heading also shows the analytics **Window** (for example *30d*). Eight free tiles about the whole tracked fleet over the last 7 days, each with a small trend line once data arrives: **Active fleet**, **Moving**, **Laden**, **Median speed**, **Idle DWT**, **Unfixed**, **AIS dark**, **Active DWT**. Under them, chokepoint transits for the last 7 days against the 90-day normal.
Trade corridors	The origin-to-destination pairs of the loaded ships (**Route**, **Vessels**, **Status**), busiest first. Click a row to see it under **Selected route** on the right.

Centre: filter bar and tabs

Control	What it does	Default
Window	How far back the analytics look: 7, 30, 90, 180 or 365 days.	30 days
Segment	One or more ship types (Dry Bulk, Crude Tanker, Product Tanker, Chemical Tanker, Gas Carrier, Container, General Cargo, Ro-Ro / Car Carrier, Reefer, Passenger / Cruise, Offshore / Misc, Unknown). **Clear** at the bottom resets it.	All segments
Flag	One flag state.	Any
Region	One sea region.	Any
Load state	**Laden** (loaded), **Ballast** (empty) or **Any**.	Any
Map area: off / Map area: on	When on, the shapes drawn on the map limit every analytics view. Available once you have drawn a shape.	off
Sync line	Whether the analytics are up to date with the latest positions: **Sync: up to date**, or how many rows are still pending.	
Reload analytics	Asks for the analytics again. Free.	

The tabs are **Map**, **Flows**, **Ports**, **Countries**, **Fleet**, **Signals** and **Watch**. Every analytics tab is free; changing a filter reloads the tab you are on.

Map tab

Control	What it does
Refresh	Runs the last sweep again (the area if one is set, otherwise the global view). Charged like the sweep.
Auto off / Auto 5m	Re-runs the sweep every 5 minutes while the screen is open. Turning it on asks first and shows what it will cost per hour and per day. Off by default; it never turns itself back on.
Basemap	**Satellite** (default), **Dark**, **Ocean**, **Streets**, **Light**, **Terrain**.
Layers	Seven switches (below). Free.
Replay	Shows a day slider: drag it to see the density grid for any day in the history.
+ / −, wheel, drag	Zoom and pan the map.

Layer	What it draws
Lanes	Arcs between country pairs. Width is the number of voyages in the window; colour is the main ship type.
Density	Half-degree squares shaded by how many ship-days were spent there: the real shipping lanes.
Ports	Bubbles for port calls; red bubbles are ships waiting outside a port now.
Idle	Ships that have not moved for 7 days or more (laid up, or used as floating storage).
Unfixed	Ships sailing *for orders* or with no declared destination.
Dark	Ships whose last position report is older than 72 hours. Needs Exclusive Pro.
Fleet	The latest position of every ship that matches the filter bar. Free; it is not the charged sweep.

Vessel list columns: **Name**, **IMO**, **Lat**, **Lng**, **Speed (kn)**, **Angle** (heading), **From**, **To**, **Progress**. Click a column header to sort. At most 200 ships are listed; the footer says "Showing 200 of N" when more came back. To select a ship, click its pin on the map: its row is then highlighted in the list.

Flows tab

Control	What it does
Level	**Region**, **Country** or **Port**.
By	**Lane (origin to destination)** or **Flag state to destination**.
Weight	**Voyages**, **DWT** (deadweight tonnage, the cargo a ship can carry) or **Vessels**.
Show lanes on map	Turns on the **Lanes** layer.
Corridor flows	A circle diagram of the flows. Click a flow to open that lane.
Top lanes	The biggest lanes as bars. Click one to open it.
Lane transit time	For the lane you opened: median days, 90th-percentile days and voyages, over time.
Vessels on lane	**Vessel**, **IMO**, **Segment**, **Flag**, **DWT**, **Progress**, **ETA**. Click a row to open the ship's profile.

Ports tab

Control	What it does
Rank by	**Calls**, **DWT handled**, **Unique vessels**, **Turnaround (h)**.
Show ports on map	Turns on the **Ports** layer.
Port league table	The busiest ports by the chosen measure, arrivals in the window.
Congestion - ships waiting	Ports with queues now.
Port-pair matrix	Voyages between origin and destination ports, as a heat grid.

Countries tab

Control	What it does
Colour by	**Arrivals**, **Departures**, **DWT in**, **DWT out**, **Net DWT (in - out)**, **Laden share of arrivals**.
Seaborne arrivals by country	A world map shaded by the chosen measure. Click a country to open it.
Ranked	The same countries as bars. Click one to open it.
Arrivals & departures - daily	The opened country's daily calls.
Inbound - next 14 days by ETA	Tonnage declared as heading there, by expected arrival day.
Sea trade partners	The countries it trades with by sea.

Fleet tab

Control	What it does
Size by	**DWT**, **Vessels** or **Gross tonnage**.
Tracked fleet - segment x size band	A treemap of the fleet by ship type and size.
Flag states	The biggest flags as bars.
Flag-state fleet map	Flags shaded on a world map.
Fleet age - vessels by build year	How old the fleet is.

Signals tab

Six weekly charts: **Fleet speed index** (median knots of moving ships), **Laden share** (draught at 85 % or more of its maximum), **Idle tonnage**, **Unfixed tonnage**, **Active vessels** and **AIS dark** (position older than 72 hours). Below them, **Chokepoint transits**: daily crossings of each chokepoint, with a dotted line for the 90-day normal.

Watch tab

Control	What it does
Watchlist	**Idle >= 7 days (lay-up / floating storage)**, **Unfixed - FOR ORDERS / no destination**, **AIS dark - fix older than 72 h**, **Position jumps - implied speed > 35 kn** (a position that jumped further than a ship can sail). The last two need Exclusive Pro.
Pin on map	Puts the listed ships on the map.

Control	What it does
Table	**Vessel**, **IMO**, **Segment**, **Flag**, **DWT**, **Built**, **Metric**, **Laden**, **Detail**. Click a row to open the ship's profile.

Right column

Control	What it does
Name, IMO or MMSI	Type at least 2 characters of a ship's name, or a full IMO (7 digits) or MMSI (9 digits). Suggestions from the free ship register appear as you type; picking one shows the ship's register card and, if the ship can be tracked, presses **Track**. Enter presses **Track**.
Track	Finds the ship's current position and shows it on the map. Charged (the price is on the button); needs Exclusive Pro. A name that matches one trackable ship is tracked; several matches are offered as a list.
Voyage history	Draws the ship's recorded track (older points fainter). Needs an IMO. Charged; needs Exclusive Pro.
Fleet lookup (AI tools)	The price the AI pays to position up to 50 ships in one go. There is no button: the AI tools use it.
Selected vessel card	Name, **IMO**, **Position**, **Speed**, **From**, **To** of the selected ship.
Vessel profile	Free details from the ship register: type, flag, year built, size (DWT, gross tonnage, length, beam), draught, status, destination, and its recent voyages (**From**, **To**, **Dep**, **Days**). On Exclusive Pro it also draws the ship's last reported fixes on the map.
Place search — Place name, Search places	Type a place (a strait, a port city, a sea). Suggestions appear from 3 characters. Picking one loads the ships inside it (an area search, charged).
Enter coordinates	Opens **Min latitude**, **Max latitude**, **Min longitude**, **Max longitude** and **Search area** (charged).
Ports — Port name, Search ports, Ports in area	Find ports by name anywhere, or list the ports inside the current area. Suggestions appear as you type (from 3 characters). Click a result or pick a suggestion to drop a pin on it and fly there. Free. Columns **Name**, **Country**, **Source** (the public register the port record comes from).
Selected route	The corridor you clicked in **Trade corridors**: its name, **Trade value** (n/a when unknown), **Status** and **Active vessels**.

Footer

Source, **Records** (rows in the vessel database), **Updated** (when the map was last filled) and the status of the last action. Hidden until there is something to show.

The badge at the right of the screen's title bar (for example **117 vessels**) counts the ships on the map now.

What it costs

Action	Cost
Opening the screen, every analytics tab and layer, Market pulse, filters, ship-register search, vessel profiles, place and port search	Free
Global view, Load vessels in area, Refresh, a drawn shape, a picked place, Search area	One area search each (the price is on the button)
Auto 5m	One area search every 5 minutes while it is on
Track	One position lookup
Voyage history	One history lookup

What the screen remembers

The text in **Name, IMO or MMSI** and the four coordinates. Ships are never reloaded on their own: the map stays empty until you press a sweep button, so opening the screen costs nothing.

36.9 For advanced users

Words used on this screen

Term	Meaning
IMO number	A ship's permanent 7-digit identity number. It never changes, even when the ship is renamed.
MMSI	A 9-digit radio identity used by the ship's position transmitter. It can change with the flag.
AIS	The radio system ships use to broadcast their position, speed and destination. The positions on this screen come from it.
DWT	Deadweight tonnage: how much cargo, fuel and stores a ship can carry, in tonnes.
Laden / Ballast	Loaded with cargo / sailing empty. A ship counts as laden when its draught (how deep it sits) is at least 85 % of its maximum.
For orders	A ship sailing without a declared destination, waiting to be told where to deliver. Many such ships can mean traders are holding cargo for a better price.
Chokepoint	A narrow passage that much of world shipping must use, such as a strait or a canal.

How the global view is built

Global view (200 vessels) asks for a large sample of ships from the whole world and then keeps an even spread of them on a grid of the world, so busy lanes do not hide everything else. The world is cut into 100 squares and each square keeps at most two ships. Much of that grid is land or empty sea, so the map usually shows fewer than 200 ships (117 in the picture at the start of this chapter). **Load vessels in area** and the area searches keep the first 200 ships the area returns.

Fleet intelligence is worked out from the ships you loaded, not from the whole fleet: **Loaded** is what is drawn, **In region** is how many the server counts in the area. **Market pulse** is the whole tracked fleet.

Save credits

- Use the free **Fleet** layer to see where ships of one type are, instead of a charged sweep.
- Use the free ship-register suggestions and **Vessel profile** to identify a ship before you press **Track**.
- Leave **Auto off** unless you need a live picture: it charges one area search every five minutes.

Open a ship from anywhere

Type a ship's name with the word `vessel` (or `ship`, `ships`, `tanker`, `boat`, `imo`, `mmsi`, `maritime`), or just its 7-digit IMO or 9-digit MMSI, in the command line and pick it. The screen opens with the ship's register card and its free voyage profile. Its live position is not fetched until you press **Track**.



Figure 36.20 Typing vessel and a ship's name: the ship comes first, with its IMO number.

1 The ship. Press Enter or click it.

On the dashboard

The **Chapter 8, Dashboard** p. 123 has a **Maritime vessels** tile under the Geopolitics group of **Add widget**.

Do it with AI

The AI works this screen through its controls and can position up to 50 ships in one request (the **Fleet lookup (AI tools)** price). Try:

- "On Maritime, which ports have the most ships waiting right now?"
- "Show the density layer on the Maritime map for the last 90 days of crude tankers."
- "Find the ship EVER GIVEN and show its voyage history."

Anything charged asks for your approval first.

36.10 Troubleshooting

The map is empty and the list says "Press Global view or Load vessels in area to plot vessels." The screen never loads ships by itself, because sweeps cost credits. Press **Global view (200 vessels)**, or pick a place under **Place search**.

"No vessels in this area." The area holds no tracked ships, or it is too small. Draw a larger shape or search a busier place.

"Invalid area: max must exceed min". In **Enter coordinates**, the maximum latitude and longitude must be larger than the minimum ones.

Voyage history says it needs an IMO. History is looked up by IMO number. Type the name, pick the ship from the suggestions (that puts its IMO in the box), then press **Voyage history**.

"2 matching vessel(s) - pick one" (or another number). The name you typed matches more than one ship in the register, so **Track** did not guess. Pick the right one from the suggestions under the box (check the IMO and flag); picking a trackable ship tracks it.

"No vessel in the register matches ..." or **"Type at least 2 characters of a name, or a full IMO or MMSI."** Check the spelling, type more of the name, or use the ship's 7-digit IMO or 9-digit MMSI.

"No IMO - cannot be positioned". The register knows the ship but holds no IMO number for it. Positions and voyage history are looked up by IMO, so this ship can be identified but not tracked.

"No history for this vessel". No past positions are recorded for that IMO. **Track** may still show where it is now.

The list says "Sign in to plot vessels on the map." The sweeps need a session. Sign in; the analytics tabs also wait for it and load by themselves once it is ready.

"Not tracked by the AIS feed". The ship is in the register but its position is not being received. Its profile still shows; **Track** cannot place it.

Track or the AIS dark views say they need another plan. Live positions, voyage history and the AIS dark views need Exclusive Pro.

Auto would not turn on: "Temporarily unavailable while we fix something on our side." Fincept has paused the automatic sweep for everyone for a while. It comes back by itself; there is nothing to update. Press **Refresh** by hand meanwhile, and press **Auto** again later (it never turns itself back on).

An analytics tab says "Unavailable". That view did not answer. Press **Reload analytics**.

PART VI

AI & Automation

Ask, delegate and automate. AI chat that operates the terminal, your own agents, long-running missions, visual workflows and MCP tools.

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38	Agent Studio	AGNT
39	Mission Control	MCTL
40	Node Editor	NODE
41	MCP Servers	MCPS
42	Use Your Own AI	

CHAPTER 37

AI Chat CHAT

Ask the terminal anything in plain words. The AI reads live data, opens and works the screens for you, and keeps every conversation — in the AI Chat screen and in the companion panel on the bottom bar.

At a glance

Open it	• Press **F9** • Type `CHAT` in the command line and press **Enter** (or `chat`, `ai`, `aichat`, `assistant`, `bot`) • Click **AI Chat** on the bottom bar for the companion panel • **Screens** › **AI Chat**
You need	• Signed in on any paid plan • Exclusive+ or higher for Fincept AI's tools: live look-ups, working the screens, web search • Credits for Fincept AI answers (the price is under the message box), or your own AI (see **Chapter 42, Use Your Own AI** p. 819)
Best for	• Quick answers with live figures • Letting the AI open screens and fill them in for you • Research write-ups, comparisons and explanations
Time to learn	15 minutes
Related	**Chapter 38, Agent Studio** p. 739, **Chapter 42, Use Your Own AI** p. 819, **Chapter 41, MCP Servers** p. 810, **Chapter 39, Mission Control** p. 764, **Chapter 4, Your first ten minutes** p. 57

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37.1 Screen tour

AI Chat is a conversation with the terminal's AI. You type a question in plain words; the AI answers with live data from the terminal's own tools — prices, fundamentals, news, your portfolio — and, when you ask, it opens screens and works them for you.

There are two ways to chat, and they share one history:

- The **AI Chat screen** (code **CHAT**, key F9) — a full screen with your list of chats.
- The **companion** — a small chat panel that opens from **AI Chat** on the bottom bar, over whatever screen you are on.

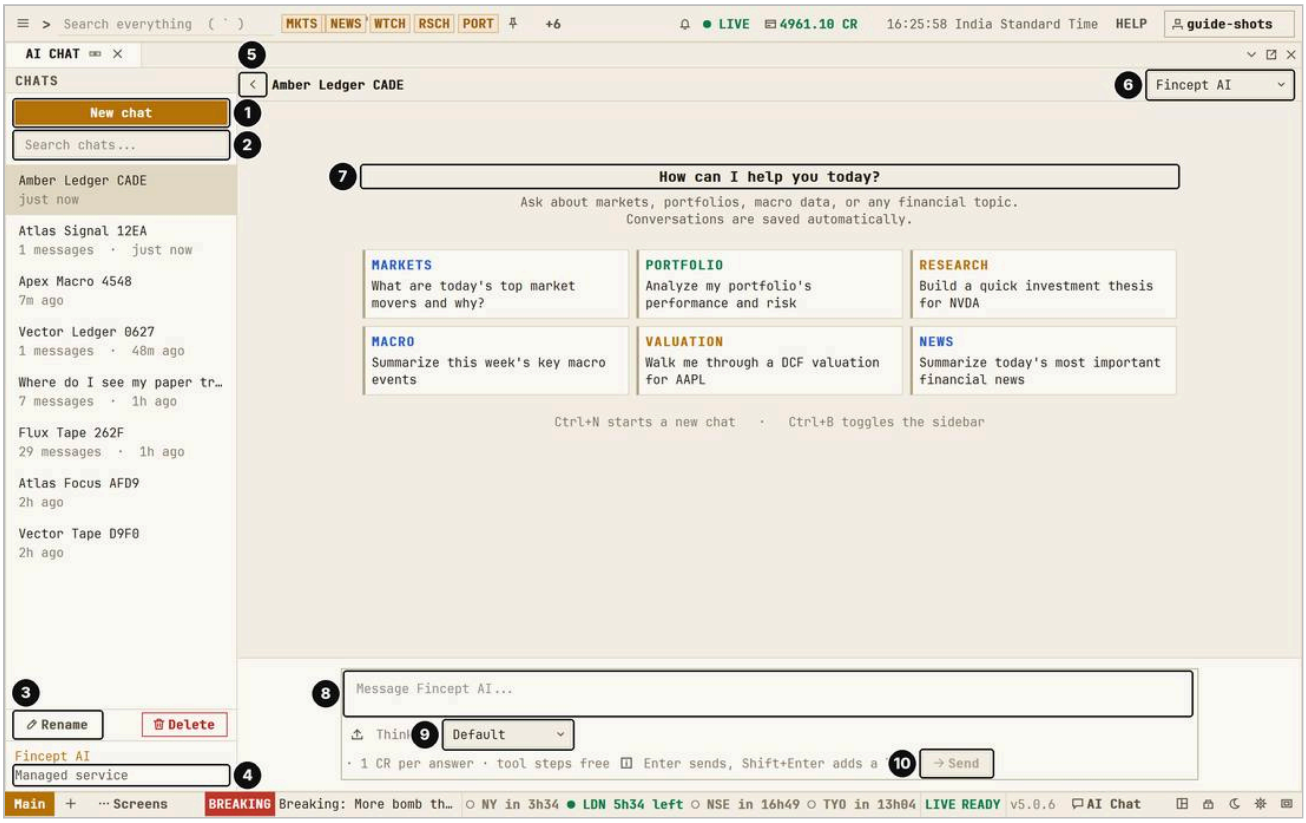


Figure 37.1 The AI Chat screen with a new, empty chat.

1. **New chat** starts a conversation (Ctrl + N).
2. **Search chats...** filters your chat list.
3. **Rename** or **Delete** the selected chat.
4. Which AI answers: **Fincept AI · Managed service**, or your own model.
5. Hide or show the chat list (Ctrl + B).
6. The persona picker: answer as Fincept AI or as one of your agents.
7. Suggestion cards: click one to ask it.
8. The message box.
9. **Thinking** — how long the AI thinks before it answers.
10. **Send** (Enter); the price of an answer is beside it.

Area	What it is
CHATS (left)	Your conversations, newest first, each with its title, number of messages and when it was last used.
Header	The chat's title, the tokens used so far, the persona picker and — when your own AI answers — a chip with its model. While an answer is being written, an **Answering** pill shows.
Transcript (middle)	Your messages and the AI's answers, with day separators (**Today**, **Yesterday**).

Area	What it is
Composer (bottom)	The message box and its tool row: attach, **Thinking**, the price line, the key hint and **Send**.

A new chat shows the welcome panel: **How can I help you today?**, six suggestion cards — **MARKETS**, **PORTFOLIO**, **RESEARCH**, **MACRO**, **VALUATION**, **NEWS** — and the hint *Ctrl+N starts a new chat · Ctrl+B toggles the sidebar*. Clicking a card sends its question at once (and costs one answer).

Note

Conversations are saved automatically to your account. A chat started in the companion appears in the AI Chat screen's list, and the other way round.

37.2 Quick start

1. Press `F9` (or type `CHAT` and press `Enter`). AI Chat opens.
2. Click in the message box (it reads **Message Fincept AI...**) and type a question, for example *"Summarise today's market moves: the main US, European and Asian indices, the biggest movers, and the reasons behind them."*



Figure 37.2 A question in the message box.

1. Press `Enter` or click **Send**.
2. What an answer costs.

3 Press Enter. (Use Shift + Enter for a new line.) The **Send** button turns into **Stop**, and the AI starts working: a row of **tool chips** shows which tools it is calling, and *Fincept AI is thinking…* appears until the first words arrive.

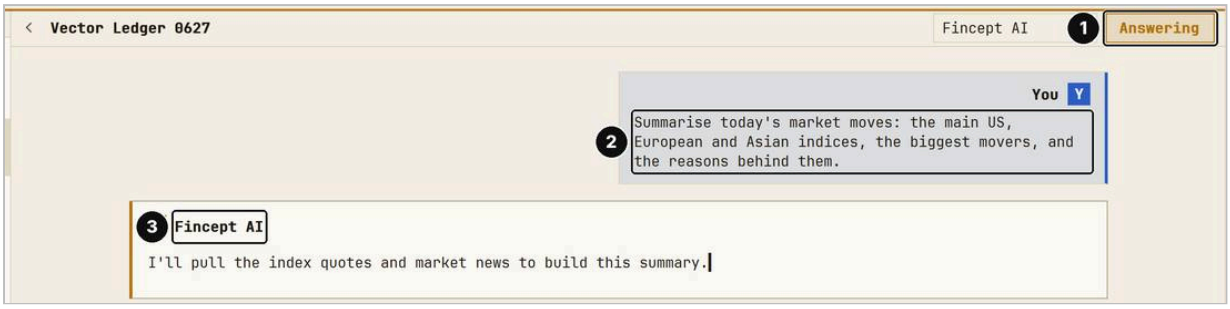


Figure 37.3 The question is sent. The AI starts with a first line while it works.

1. **Answering** while it works.
2. Your question.
3. The answer starts to appear under the AI's name.

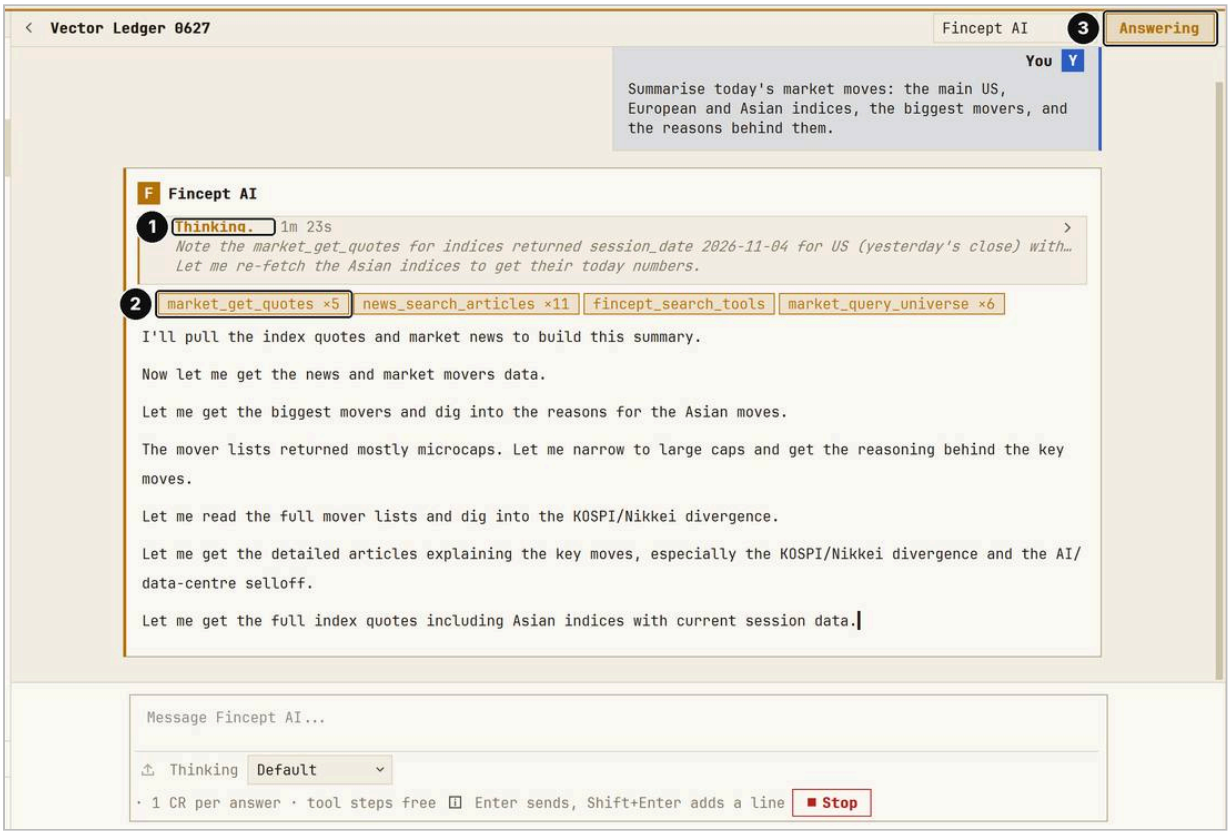
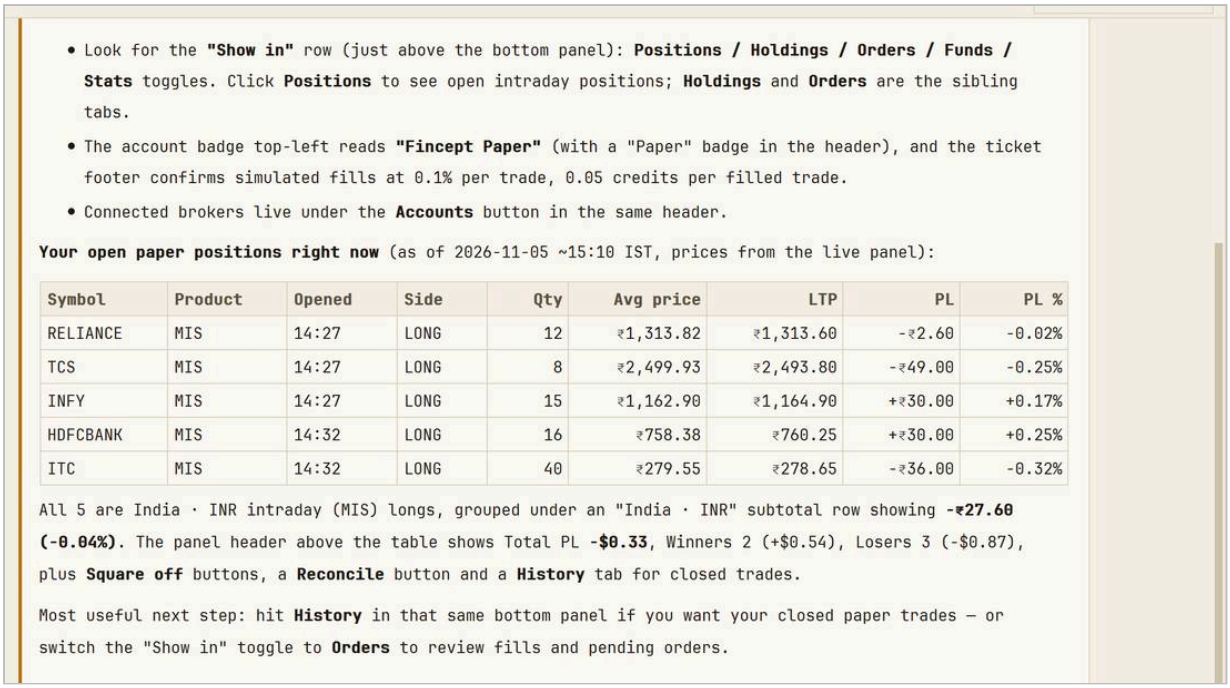


Figure 37.4 A minute later. The thinking line, the tools it has called so far, and its notes as it goes. Stop is there until the answer is complete.

1. **Thinking…** — click it to read the reasoning.
2. Tool chips: each tool it called, ×5 = five times.
3. **Answering** until it is done.

4 Read the answer. Figures come from the terminal's live data; tables, lists and headings are formatted for you.



- Look for the **"Show in"** row (just above the bottom panel): **Positions / Holdings / Orders / Funds / Stats** toggles. Click **Positions** to see open intraday positions; **Holdings** and **Orders** are the sibling tabs.
- The account badge top-left reads **"Fincept Paper"** (with a "Paper" badge in the header), and the ticket footer confirms simulated fills at 0.1% per trade, 0.05 credits per filled trade.
- Connected brokers live under the **Accounts** button in the same header.

Your open paper positions right now (as of 2026-11-05 ~15:10 IST, prices from the live panel):

Symbol	Product	Opened	Side	Qty	Avg price	LTP	PL	PL %
RELIANCE	MIS	14:27	LONG	12	₹1,313.82	₹1,313.60	-₹2.60	-0.02%
TCS	MIS	14:27	LONG	8	₹2,499.93	₹2,493.80	-₹49.00	-0.25%
INFY	MIS	14:27	LONG	15	₹1,162.90	₹1,164.90	+₹30.00	+0.17%
HDFCBANK	MIS	14:32	LONG	16	₹758.38	₹760.25	+₹30.00	+0.25%
ITC	MIS	14:32	LONG	40	₹279.55	₹278.65	-₹36.00	-0.32%

All 5 are India · INR intraday (MIS) longs, grouped under an "India · INR" subtotal row showing **-₹27.60 (-0.04%)**. The panel header above the table shows Total PL **-$0.33**, Winners 2 (+$0.54), Losers 3 (-$0.87), plus **Square off** buttons, a **Reconcile** button and a **History** tab for closed trades.

Most useful next step: hit **History** in that same bottom panel if you want your closed paper trades — or switch the "Show in" toggle to **Orders** to review fills and pending orders.

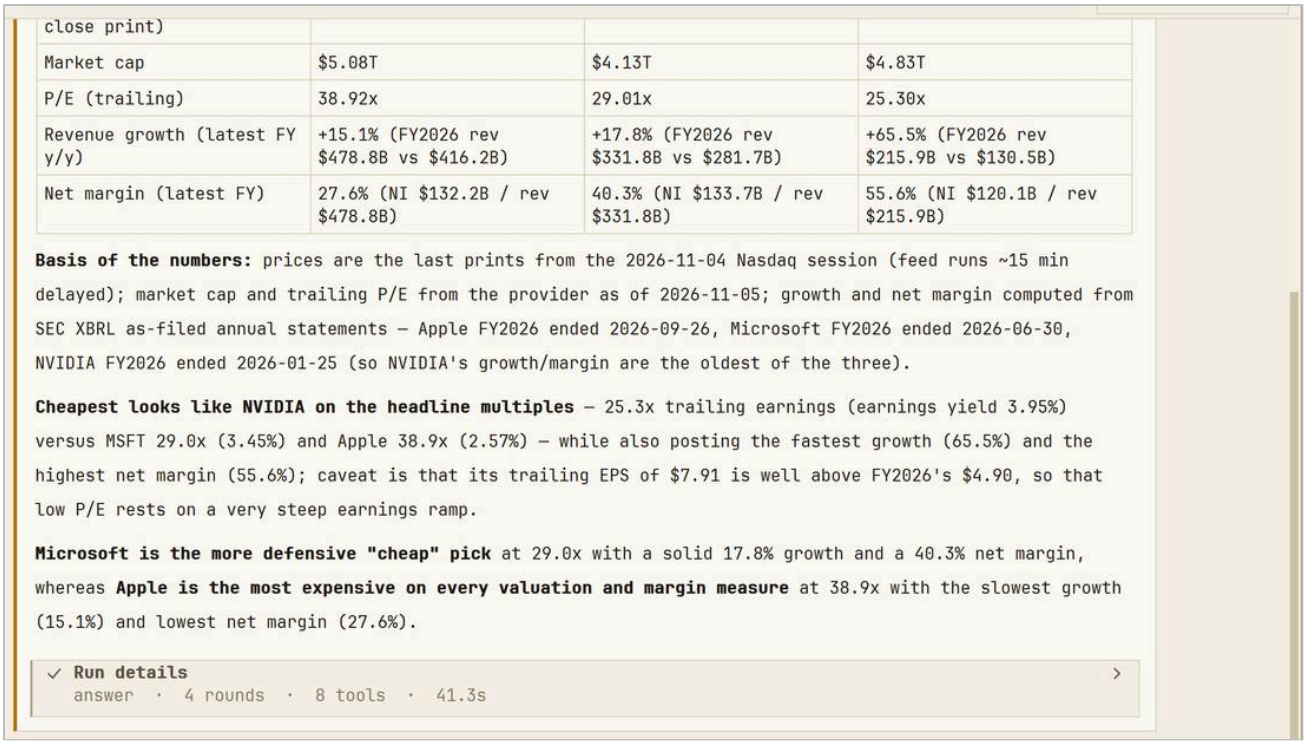
Figure 37.5 A finished answer — here to "Where do I see my paper trading positions?" (first asked in the companion). Live figures, a table, and where to click next.

5 Ask a follow-up in the same chat — the AI remembers the conversation. Start a fresh topic with **New chat**.

37.3 Ask good questions

The AI answers best when you say what you want, about what, and in what form.

Instead of	Try
"NVDA?"	*"How has NVDA done this month, and why? Three bullets."*
"Compare banks"	*"Compare HDFC Bank, ICICI Bank and Axis Bank in one table: price, P/E, P/B, ROE and 1-year return."*
"Explain options"	*"Explain a covered call on RELIANCE with real numbers from today's option chain."*
"Do my portfolio"	*"Analyse my largest portfolio's risk: volatility, biggest positions and sector concentration."*



close print)			
Market cap	$5.08T	$4.13T	$4.83T
P/E (trailing)	38.92x	29.01x	25.30x
Revenue growth (latest FY y/y)	+15.1% (FY2026 rev $478.8B vs $416.2B)	+17.8% (FY2026 rev $331.8B vs $281.7B)	+65.5% (FY2026 rev $215.9B vs $130.5B)
Net margin (latest FY)	27.6% (NI $132.2B / rev $478.8B)	40.3% (NI $133.7B / rev $331.8B)	55.6% (NI $120.1B / rev $215.9B)

Basis of the numbers: prices are the last prints from the 2026-11-04 Nasdaq session (feed runs ~15 min delayed); market cap and trailing P/E from the provider as of 2026-11-05; growth and net margin computed from SEC XBRL as-filed annual statements — Apple FY2026 ended 2026-09-26, Microsoft FY2026 ended 2026-06-30, NVIDIA FY2026 ended 2026-01-25 (so NVIDIA's growth/margin are the oldest of the three).

Cheapest looks like NVIDIA on the headline multiples — 25.3x trailing earnings (earnings yield 3.95%) versus MSFT 29.0x (3.45%) and Apple 38.9x (2.57%) — while also posting the fastest growth (65.5%) and the highest net margin (55.6%); caveat is that its trailing EPS of $7.91 is well above FY2026's $4.90, so that low P/E rests on a very steep earnings ramp.

Microsoft is the more defensive "cheap" pick at 29.0x with a solid 17.8% growth and a 40.3% net margin, whereas **Apple is the most expensive on every valuation and margin measure** at 38.9x with the slowest growth (15.1%) and lowest net margin (27.6%).

✓ **Run details** ›
answer · 4 rounds · 8 tools · 41.3s

Figure 37.6 Ask for a table and you get one.

Tips:

- **Name the market.** *RELIANCE* on NSE, *VOD* in London — or use the full ticker (`RELIANCE.NS`).
- **Ask for the format** — a table, bullets, a short paragraph, a number.
- **Follow up** — *"now the same for Europe"*, *"why?"*, *"make it shorter"*.
- **The AI states the date** of the prices it quotes; ask *"as of when?"* if you need it.

37.4 Let the AI work the screens

The AI does not only talk: it can open screens, place panels, select symbols, fill in forms and read tables — the same way you would, through the screen's own controls. Ask in plain words:

- *"Open Equity Research for NVDA next to this chat and show its valuation page."*
- *"Add Tesla to my Tech Momentum watchlist."*
- *"Put the news panel on the right of the markets panel."*
- *"Run a backtest of a 50/200-day moving-average crossover on AAPL over 5 years."*



Figure 37.7 The AI opened Equity Research beside the chat.

Tools need Exclusive+

On Fincept AI, tool calling — live look-ups, working the screens, web search — is part of **Exclusive+** and higher. On Exclusive the same chat answers from the model alone, without tools, and no notice says so. Your own AI (**Chapter 42, Use Your Own AI** p. 819) uses the terminal's tools on any plan.

While it works you see each step as a tool chip on its answer. When it is done, its answer says what it did.

Note

The AI acts in the window you asked it from, on the screens beside the chat. It never signs in for you, never reads passwords or keys, and can never press a few controls that are yours alone — approval prompts, adding brokers, trading-mode switches, tool permissions and similar.

37.5 Approve what the AI does

Reading data and arranging screens happen at once. Anything that **spends credits or money**, **moves or risks money**, or **cannot be undone** first asks you, with a prompt titled **AI action needs your approval**:

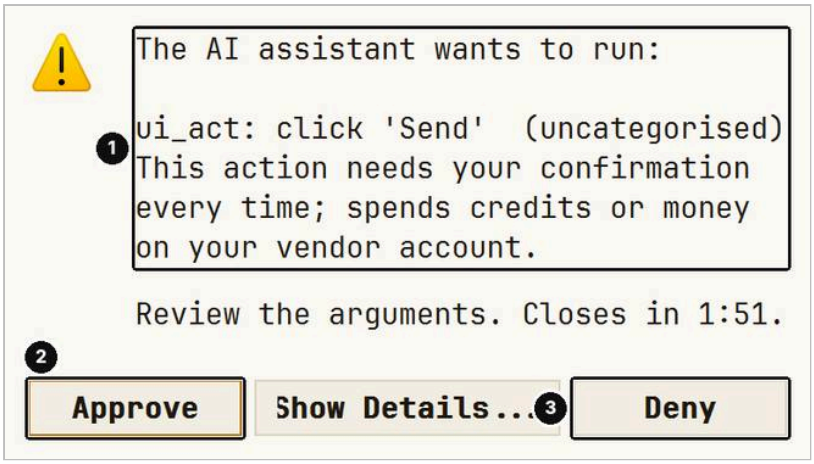


Figure 37.8 The approval prompt. The AI waits for your answer.

1. What the AI wants to do, and why it needs you (it spends credits, moves money, or cannot be undone).
2. **Approve** lets it run.
3. **Deny** (or closing the prompt) refuses it.

- The prompt shows the action, its category and why it needs you (*"This action needs your confirmation every time; spends credits or money on your vendor account"*, *"moves or risks real money"*, *"cannot be undone"*). **Show Details...** lists the exact arguments.
- **Neither button is pre-selected**: you must click one. Closing the prompt or pressing Esc is a **Deny**.
- It stays on top of every window, flashes the taskbar and counts down: *Review the arguments. Closes in 2:43.* If you do not answer in about three minutes it closes and **nothing is done** (*"Approval timed out, nothing was done"*).
- If the AI asks several things, the prompts wait in a queue (*"... 2 more waiting"*).
- When you are in another app, a desktop notification tells you the AI needs you.
- Live orders always reach a person, and real-money broker, exchange and wallet actions are never approved automatically.

37.6 Choose who answers: personas

The persona picker in the header (it reads **Fincept AI**) lets this chat answer as one of the agents from **Chapter 38, Agent Studio** p. 739 — a macro analyst, a value investor, your own *Morning Market Brief* — or as a whole team.

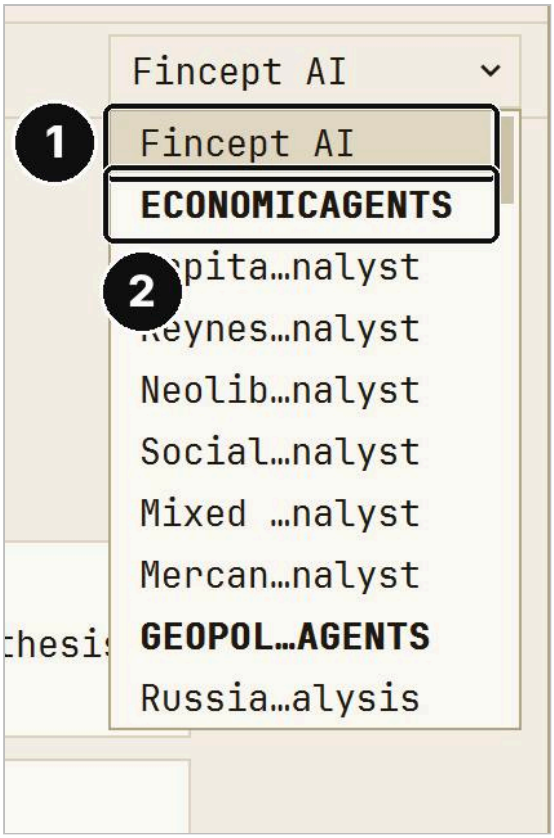


Figure 37.9 The persona picker lists Fincept AI, your teams, and every agent by category.

1. The default assistant.
2. A category heading; the agents follow it.

Pick one and your next messages are answered with that agent's instructions and tools. Pick **Fincept AI** to go back. The choice is remembered for this screen.

37.7 Thinking depth

Thinking under the message box sets how long the AI thinks before it answers. Deeper is more thorough and slower; **the price of an answer is the same**.

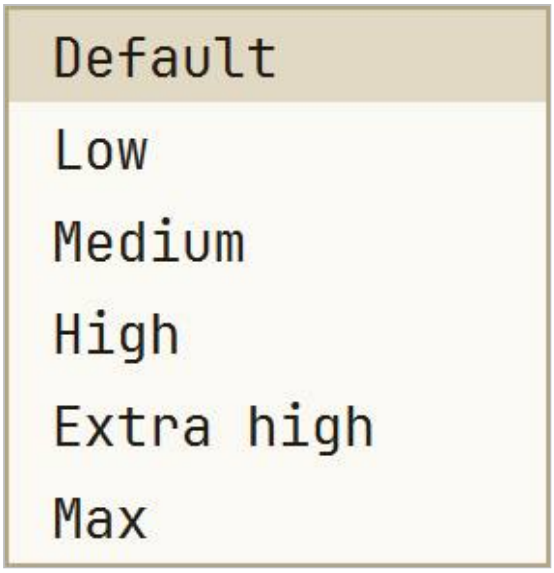


Figure 37.10 The Thinking list.

Level	Meaning
Default	The server's default depth (high).
Low	Quickest answers, least thinking.
Medium	Quick answers with some thinking.
High	Thorough; the right depth for most questions.
Extra high	Thinks longer before it answers.
Max	Deepest thinking, slowest answers.

This is an **account setting**: the same box appears in **Agent Studio** › **System**, and a change in either place applies to every device. The box shows only while Fincept AI answers — your own model has its own **Reasoning effort** setting (**Chapter 42, Use Your Own AI** p. 819).

When the AI thinks, the answer shows a small **Thinking…** line that becomes **Thought for 12s.** Click it to read the reasoning (**Show reasoning** / **Hide reasoning**).

37.8 Read an answer

Each AI answer has:

Part	What it shows
Name and time	Who answered (Fincept AI, a persona, or your own model) and when.
Reasoning / Thought for …	The AI's reasoning, folded. Click to open.
Tool chips	The tools it called, in order (*×3* when one was called three times; *+2 more* beyond eight). They glow while a tool runs.
The answer	Formatted text: headings, lists, tables, code.
Copy	Appears when you hover the answer; copies its text (**Copied**).

Part	What it shows
Run details	How the run went: the outcome, rounds, tools and seconds, for example *answer · 4 rounds · 8 tools · 41.3s* (a *stall:* part is added when something held the run up). Click to see the timeline — every tool call with how long it took and whether it worked.
A note	A line under the answer when something needs saying: stopped, an error, or the step budget.

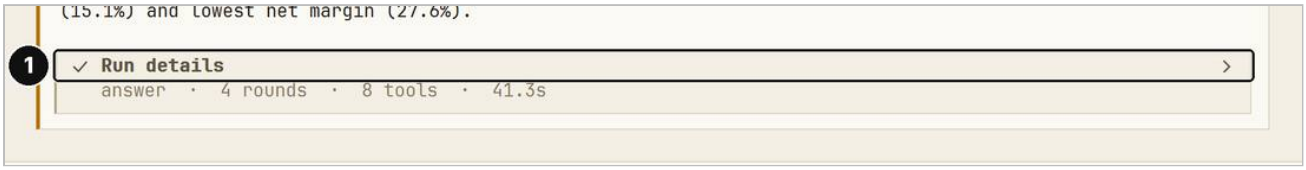


Figure 37.11 The end of an answer, with its Run details line. Click the line to open the timeline.

1 **Run details** — the outcome, rounds, tools and time. Click to open the timeline of every tool call.

Notes you may see under an answer

Note	What happened	What to do
Stopped before any answer was written. / Stopped. The answer above is incomplete.	You pressed **Stop**.	Ask again if you need the rest.
Step budget reached. Progress is saved; say "continue" to resume.	The task was long and the AI used its steps for one answer.	Click **Continue** on the note (or type *continue*).
The model finished without writing an answer. Ask again, or say "continue".	The model returned nothing.	Ask again.
Error: …	The request failed (connection, credits, a refused action).	Read the message; see Troubleshooting.

Long questions run in the background

A very large request (a full research report, many companies) may be moved into a **background task** by Fincept's server. This happens only on plans that include deep research (Exclusive+ and higher); on other plans the same question is answered as a normal answer at the normal price. The chat then says **Running this in the background.** with its price, and a line *Background task … is still working* with **Cancel**. You can keep chatting or close the terminal: the answer is added to the chat when it is ready (*"Background task … finished"*). A background task costs more than a normal answer; the price is in the tooltip of the price line before you send.

37.9 Your chats

Action	How
Start a new chat	**New chat**, or Ctrl + N while you type in the message box. The chat gets a made-up name such as *Vector Tape D9F0*; rename it when you like.
Open an old chat	Click it in **CHATS**. Long chats load their messages when you open them (*Loading this chat…*).
Find a chat	Type in **Search chats…**.
Rename a chat	Select it, click **Rename**, type the **Session name**, click **OK**.
Delete a chat	Select it and click **Delete**. It is removed at once, with no question (not while an answer is being written).

Action	How
Hide the list	Click the arrow in the header, or Ctrl + B.

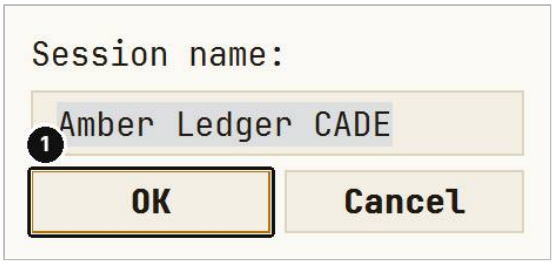


Figure 37.12 Rename Session.

1 Type a name and click **OK**.

If you send a message while an answer is still being written (or while a chat is loading), it is not lost: a **Queued: …** chip appears and the message goes out as soon as the chat is free. Click the chip to take it back into the box.

37.10 Attach a file

Click the attach button (the arrow at the left of the tool row, *Attach a file to this message*) to add one file to your next message. A chip with the file's name appears; click it to remove the file. The first 32 000 characters of the file are sent with your message, and your message shows *[File attached — see context]* if you sent no text.

The file is read as plain text, so use a text format: text, Markdown, CSV, JSON or a notebook. The file window also offers PDF, but a PDF is not converted to text, so the AI cannot read what it says — copy the part you need into the message instead.

37.11 Link the chat to other panels

Like other panels, AI Chat can join a **link group** (the coloured badge on its tab; see **Chapter 5, The Terminal Window** p. 70). When it is linked and you pick a symbol in another panel of the same group, your next message is sent to the AI with that symbol as context — so *"what is the P/E?"* is about the stock you just clicked.

37.12 The companion

The companion is the same AI in a small panel that floats over any screen. Open it with **AI Chat** on the bottom bar.

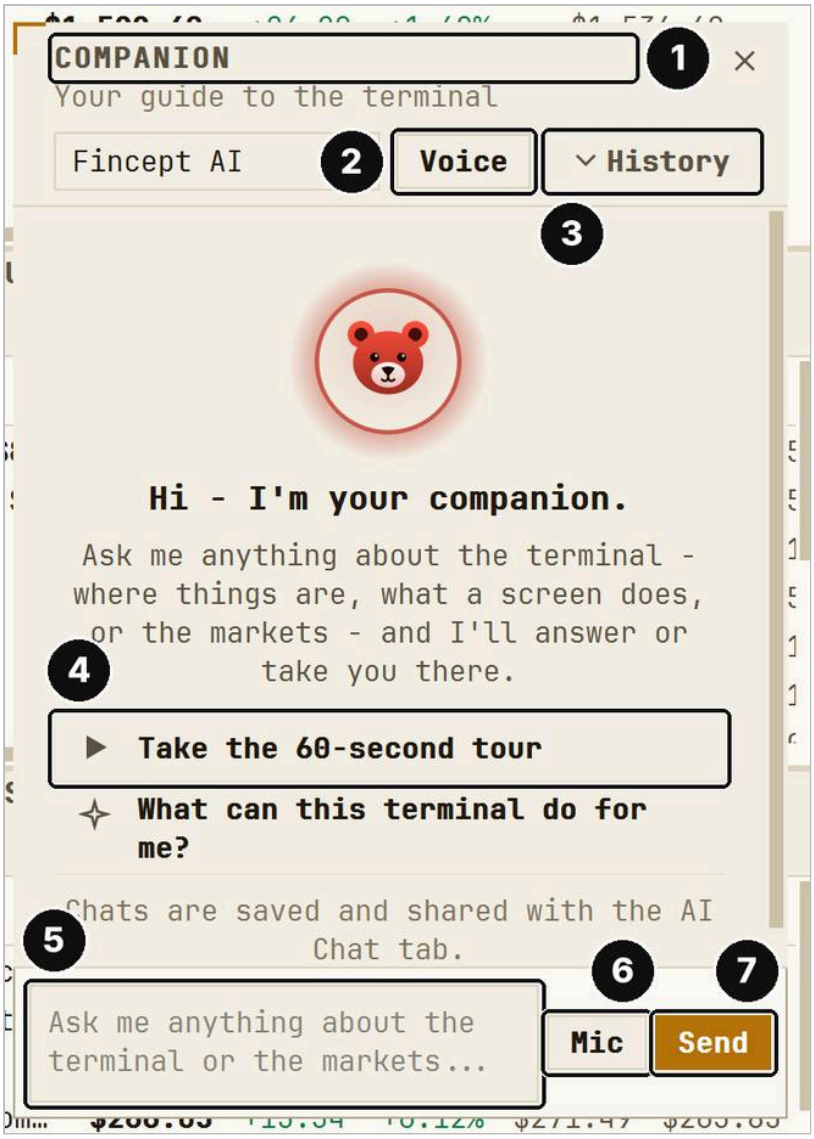


Figure 37.13 The companion panel, opened over the Markets screen.

1. The companion: your guide to the terminal.
2. **Voice** — a continuous voice conversation.
3. **History** — previous chats and **New chat**.
4. Quick actions: the tour, suggested questions, screens to open.
5. Type your question.
6. **Mic** — dictate one message.
7. **Send** (Enter).

What makes it different from the AI Chat screen:

- **It knows where you are.** It tells the AI which screen you are looking at, so *"what does this column mean?"* or *"add it to my watchlist"* work.
- **It knows the terminal.** Ask *"Where do I see my paper positions?"* or *"How do I set an alert?"* — it answers and can open the screen for you. Opening a screen from its quick actions costs nothing.
- **Each start of the terminal begins a fresh chat.** Earlier chats are in **History** (the 12 most recent; the AI Chat screen has the full list).
- **The header** shows your field and country (from your profile), or *Your guide to the terminal*. It has the persona picker, **Voice**, **History**, a reset button (size and position back to default) and close (Esc).

- **Resize it** by dragging its top-left corner; double-click the corner to reset its size and position.

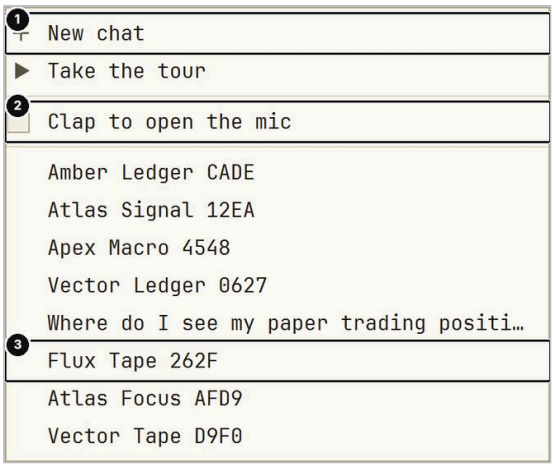


Figure 37.14 The History menu.

1. **New chat** and **Take the tour**.
2. **Clap to open the mic** (on this computer only).
3. Your recent chats.

The welcome card offers **Take the 60-second tour** (see **Chapter 4, Your first ten minutes** p. 57), up to three questions suggested for your line of work, up to three screens to open, and *Chats are saved and shared with the AI Chat tab.*

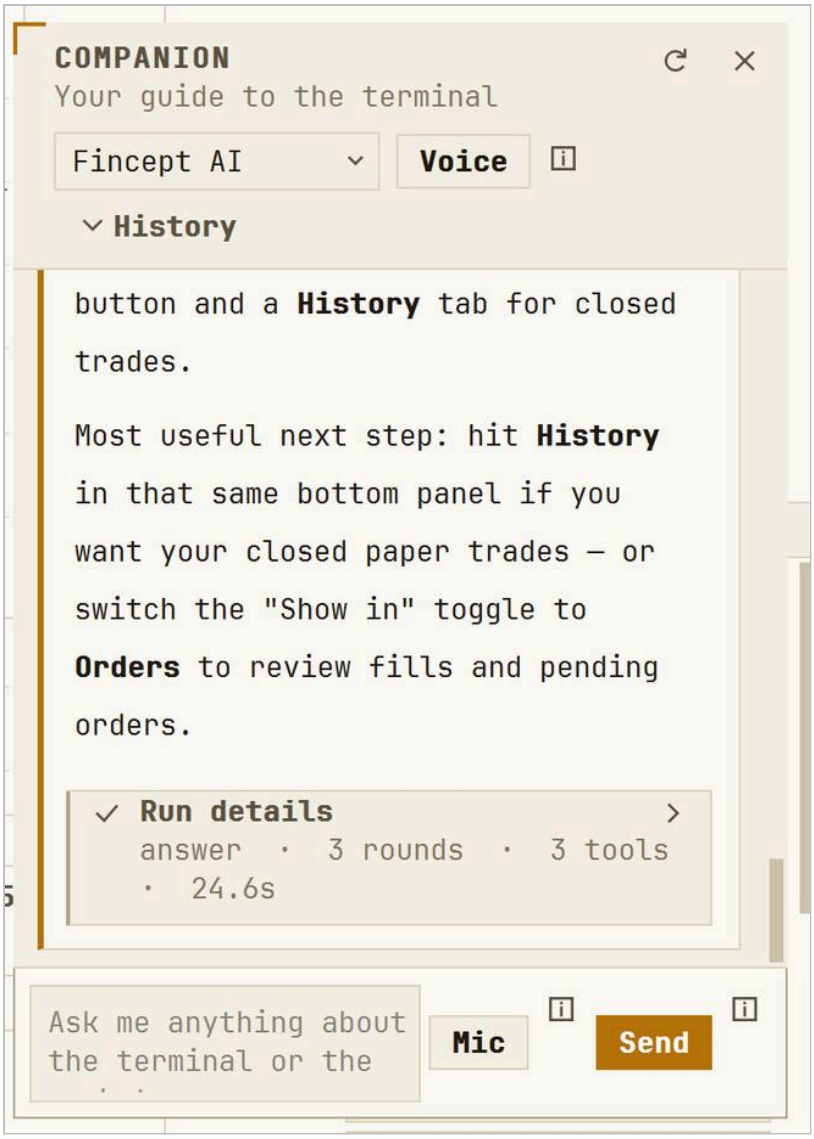


Figure 37.15 The companion answered a question about the terminal.

Tip

You can also show a floating launcher — a small bear badge in the bottom-right corner that you can drag anywhere — that opens the companion. Tick **AI chat bubble** in **Settings** › **Appearance** (off by default; it appears the next time you change screen). It greets you once and fades while idle so it never hides the tile under it.

37.13 Talk to the AI: voice

The companion can listen and speak.

Control	What it does
Mic	*Push-to-talk: click to dictate one message.* Speak; your words appear in the box and the mic closes. Check them, then press **Send** (or `Enter`). While listening the button is highlighted and the status line says **Listening — speak now**. Click again to stop.
Voice	*Continuous voice conversation: the mic reopens after every reply, and replies are read aloud.* What you say is sent by itself. While the AI speaks the status line says **AI speaking…**; **Stop** stops the reading.

Control	What it does
Clap to open the mic (History menu)	Listens for a double clap on this computer to open the mic. The audio is analysed locally, never uploaded, and never costs credits.

Voice costs

Dictation and reading aloud are metered **per minute** while they run, on top of the answer itself. The ⓘ beside **Mic** and beside **Voice** states the rate before anything starts, and opens the full price list. To protect you, voice mode pauses itself after **12 hands-free turns** in a row with nobody touching the keyboard: *"Paused after 12 hands-free turns - press Voice or the mic to continue."* Any click or key press resets the count.

The microphone is always your own decision: the AI can never switch on **Mic**, **Voice** or the clap trigger.

37.14 Costs and credits

- **One flat price per answer** while Fincept AI answers — shown under the message box (for example · *1 CR per answer · tool steps free*) and in the **Send** tooltip. It is charged once, however many tool steps the answer takes.
- **A stopped, failed or cut-off answer costs nothing.**
- **A background task** (a very long request the server runs on its own — *Deep research run* in the price list) has its own fixed price (2 CR at the time of writing); it is in the tooltip and in the chat when it starts.
- **Voice** is charged per minute (above): *Voice dictation* is 1 CR per minute of microphone audio, and *Spoken replies* (answers read aloud in **Voice** mode) 1 CR per minute of spoken audio — each rounded up to the next minute, at the time of writing. Stopping a reply part-way stops its meter.
- **Your own AI** — Claude Code, Codex, an endpoint or a CLI — costs no Fincept credits: the price line disappears and your own plan pays (**Chapter 42, Use Your Own AI** p. 819).
- **Tools the AI calls** that have their own price (a backtest, a premium data call) ask your approval first. The prompt names the action, not its price: the price list below has it.

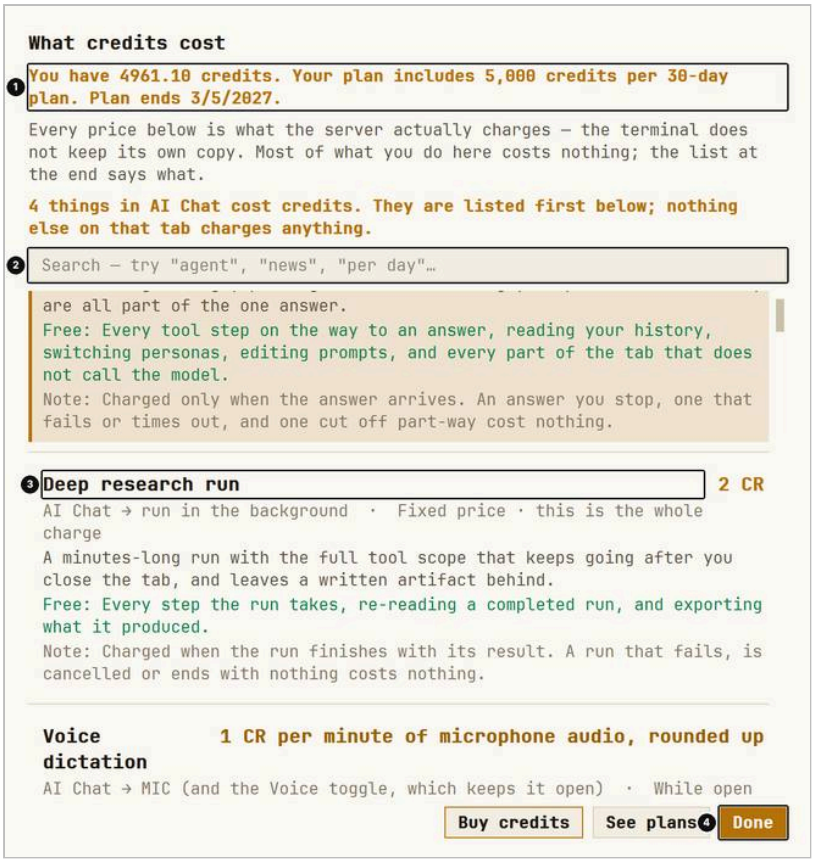


Figure 37.16 What credits cost, opened from the ⓘ beside the price line.

1. Your balance and your plan's credits.
2. Search every price.
3. Each priced action, with what is free and when it is charged.
4. **Buy credits**, **See plans**, **Done**.

The ⓘ beside the price line opens **What credits cost:** your balance, the credits your plan includes and when it renews, every price the server charges (with a search box — try *agent*, *news*, *per day*), and which things on the current screen cost credits (in AI Chat: four). **Buy credits** and **See plans** lead to billing; **Done** closes it.

Your balance is on the top bar (**CR**). See **Chapter 50, Profile, Plan & Billing** p. 920 for top-ups.

37.15 Reference

Sidebar

Control	What it does
CHATS	The list of chats: title, *n messages · 12m ago*.
New chat	*Start a new conversation (Ctrl+N).*
Search chats...	Filter by title.
Rename	**Rename Session** dialog.
Delete	Delete the selected chat.
Footer	The AI that answers (**Fincept AI**, *Managed service*), or **No provider** / *Configure in Settings*.

Header

Control	What it does
Collapse arrow	*Collapse sidebar (Ctrl+B) / Expand sidebar (Ctrl+B).*
Title	The chat's name (*New conversation* before the first message).
Tokens	*n tokens* used in this chat.
Persona picker	*Run this surface with an Agent Studio persona or team.*
Model chip	Shown when your own AI answers: *Running on your own plan — prompts go straight to … and never to Fincept's AI.*
Answering	Shown while an answer is being written.
Latest	Appears when you scroll up during an answer: jumps back to the newest text.

Composer

Control	What it does
Message box	**Message Fincept AI...** (or your persona / model). Grows to 8 lines.
Attach	*Attach a file to this message.*
Thinking	Thinking depth (account setting).
Price line + ⓘ	*· n CR per answer · tool steps free*; the ⓘ opens the price list.
Hint	*Enter sends, Shift+Enter adds a line.*
Send / Stop	Send (Enter) / stop the answer (Esc).

Keys

Key	Action
F9	Open AI Chat, from any screen except Mission Control, where F9 is also **New mission** and the clash makes it do nothing (see **§53.4 Reference** p. 986).
Enter	Send.
Shift + Enter	New line.
Esc	Stop the answer being written. In the companion: close it.
Ctrl + N	New chat (while you type in the message box).
Ctrl + B	Show or hide the chat list.

Companion

Control	What it does
Persona picker	Answer as an agent or team.
Voice	Continuous voice conversation (metered per minute).
History	**New chat**, **Take the tour**, **Clap to open the mic**, the 12 most recent chats (*No previous chats yet*).
Reset	*Reset size & position to default.*

Control	What it does
Close	*Close (Esc).*
Message box	*Ask me anything about the terminal or the markets...*
Mic	Push-to-talk (metered per minute).
Send / Stop	Send (**Enter**) / stop.
Status strip	**Listening — speak now**, **AI is thinking…** (or the persona's own status), **AI speaking…** with **Stop**, or an error.
Corner grip	*Drag to resize · double-click to reset size & position.*

37.16 For advanced users

- **How a turn works.** For each question the AI may call tools in several rounds — read a quote, open a screen, read a table — then writes the answer. A turn has a step budget; when it is spent, the answer ends with a progress summary and a **Continue** button rather than stopping silently.
- **What it remembers.** Your latest exchange is kept in full (tool calls included); older turns keep the question and the answer; very long chats fold their oldest part into a short synopsis. Start a **New chat** for a new topic: answers get faster and cheaper.
- **Web search.** While **Web search** is on (**Agent Studio** › **System** , on by default; Exclusive+ and higher on Fincept AI) the AI may search the web for news and recent events and cite the pages it used. Turn it off to keep answers to the terminal's own data.
- **Tools.** The AI has the terminal's full tool catalogue and finds the right one by searching it; your own MCP servers' tools are included (**Chapter 41, MCP Servers** p. 810). Switch a tool off in **MCP Servers > Tools**.
- **Your own model.** On Claude Code, Codex, an endpoint or a CLI the same chat runs on your plan, with commands `/new`, `/compact`, `/status`, `/help` (**Chapter 42, Use Your Own AI** p. 819).
- **Hand-offs.** Other screens send questions here: the dashboard's Ask AI tile (**Chapter 8, Dashboard** p. 123) and the Planner's **AI chat** export (**Chapter 38, Agent Studio** p. 739).
- **Scheduled work.** A job that repeats on a timetable (*"every 15 minutes during market hours, check my paper stops"*) is a **scheduled task** on your own AI. You set it up yourself with **New task** in **Settings** › **AI harness** (**§42.7 Scheduled tasks** p. 824): the AI can read your tasks but cannot create or change them.

Do it with AI

Try these:

- *"What are today's top market movers and why?"*
- *"Build a quick investment thesis for NVDA with the latest valuation figures."*
- *"Open my portfolio, show the Risk tab, and tell me my three biggest risks."*
- *"Summarise this week's key macro events for India and the US."*
- *"Put Markets on the left and News on the right, then save this layout as Morning."*

37.17 Troubleshooting

"AI chat is not configured. Open Settings → AI harness and pick a harness or Fincept AI." (companion), or **No provider** / *Configure in Settings* at the foot of the chat list (AI Chat screen) No engine is selected. Open `Settings › AI harness` and click **Use** on **Fincept AI** (or your own harness).

The sidebar says "Couldn't load your chats." A connection problem. Click **Retry**. *Sign in to see your chats.* means the session ended — sign in again.

"Failed to create chat session. Please try again." The server could not create the chat. Check your connection and send again.

An answer ends with "Error: ..." about credits. Your balance is too low. Top up in **Chapter 50, Profile, Plan & Billing** p. 920, or switch to your own AI (**Chapter 42, Use Your Own AI** p. 819).

The AI says it was not allowed to do something. You (or the prompt timing out) denied an approval, or the action is one the AI may never take. Do it yourself on the screen, or ask again and click **Approve**.

The AI did not open the screen beside the chat. Ask more precisely (*"open X next to this chat"*), or open it yourself with its code and ask the AI to work in it.

The mic does nothing. Check that the terminal may use your microphone (your operating system's privacy settings). If the voice service is paused, the controls say so.

The answer stopped with "Step budget reached". Click **Continue** under the answer.

CHAPTER 38

Agent Studio AGNT

Browse 53 ready-made AI analysts, build your own agents and teams, run one-click workflows and step-by-step plans, and give agents skills, memory, triggers and the exact tools they may use.

At a glance

Open it	• Type `AGNT` in the command line and press **Enter** • Type `agents` or `studio` in the command line and pick **Agent Config** • **Screens** › **Agent Config**
You need	• Signed in on any paid plan • Credits for agent, team and workflow runs (or your own AI harness) • Your own AI harness for Triggers and for agent Features (see **Chapter 42, Use Your Own AI** p. 819)
Best for	• Getting a second opinion from a specialist (a macro analyst, a value investor, a geopolitical analyst) • Building an agent that always answers your way • Turning a big question into a plan you can check step by step
Time to learn	30 minutes
Related	**Chapter 37, AI Chat** p. 719, **Chapter 39, Mission Control** p. 764, **Chapter 42, Use Your Own AI** p. 819, **Chapter 41, MCP Servers** p. 810, **Chapter 40, Node Editor** p. 776

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38.1 Screen tour

An **agent** is an AI with a job description: its own instructions (its *persona*), the tools it may use and how it should answer. The terminal comes with **53 built-in agents** — equity, macro, central-bank, FX, geopolitical and supply-chain analysts, famous-investor styles, prediction-market and execution specialists. Agent Studio is where you browse them, test them, build your own, and combine them into teams.

The screen has a row of thirteen sub-tabs. The **Agents** tab opens first.

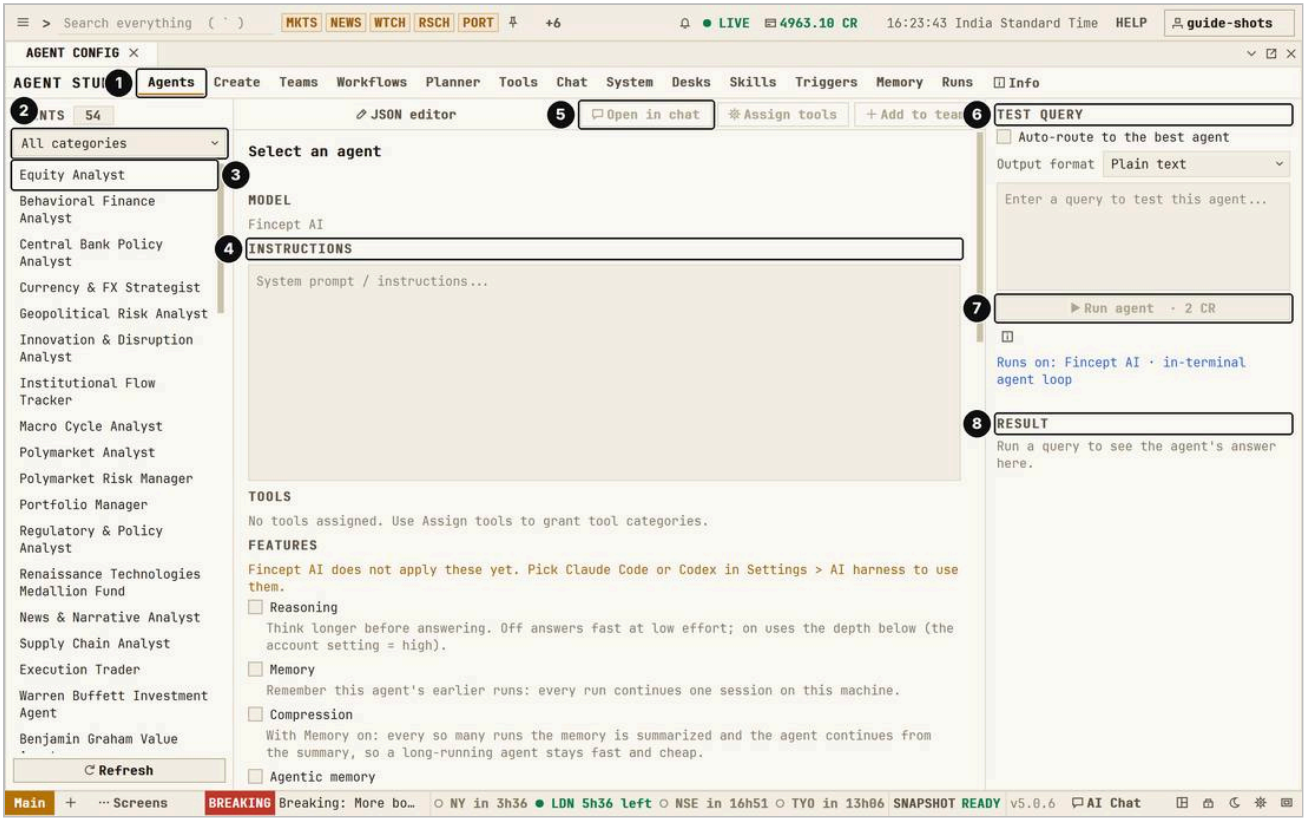


Figure 38.1 Agent Studio on the Agents tab.

1. The sub-tabs. **Info** explains the one you are on.
2. Filter the list by category.
3. Every agent. Click one to see its card.
4. The agent's card: model, instructions, tools and features.
5. Send the selected agent to **Chat**, **Assign tools** or **Add to team**.
6. Ask it something to test it.
7. **Run agent** runs the test. The price is on the button.
8. The answer appears here.

The sub-tabs

Sub-tab	What it is for
Agents	Browse every agent persona: the 53 built-in specialists plus your own. Test any of them, then send them to other tabs.
Create	Build your own agent from scratch: name, instructions, tools, features.
Teams	Combine agents into a team that answers together, in one of six modes.
Workflows	One-click, ready-made analyses (stock analysis, rebalancing, risk, sector rotation...).
Planner	Turn a big request into an explicit multi-step plan you can inspect, edit and run.
Tools	The permission system: which of the terminal's tools an agent or team may use.
Chat	Chat directly with any agent or team before you trust it elsewhere.

Sub-tab	What it is for
System	The AI engine's health, the **Web search** switch and the **Thinking depth**.
Desks	Put an agent or team permanently in charge of one area, on a schedule.
Skills	Reusable know-how an agent loads only when its work needs it.
Triggers	Wake an agent automatically: on a schedule, at a market's open or close, on a price, on news.
Memory	What your agents remember across runs.
Runs	The record of agent runs on your own AI harness, with request, answer, tools, tokens and time.

The chip at the right of the strip counts every agent, built-in and yours (**54 agents** in these pictures: the 53 built-in plus one saved agent). A footer line appears only when there is something to say: a failure, a finished run, or *waiting for sign-in*.

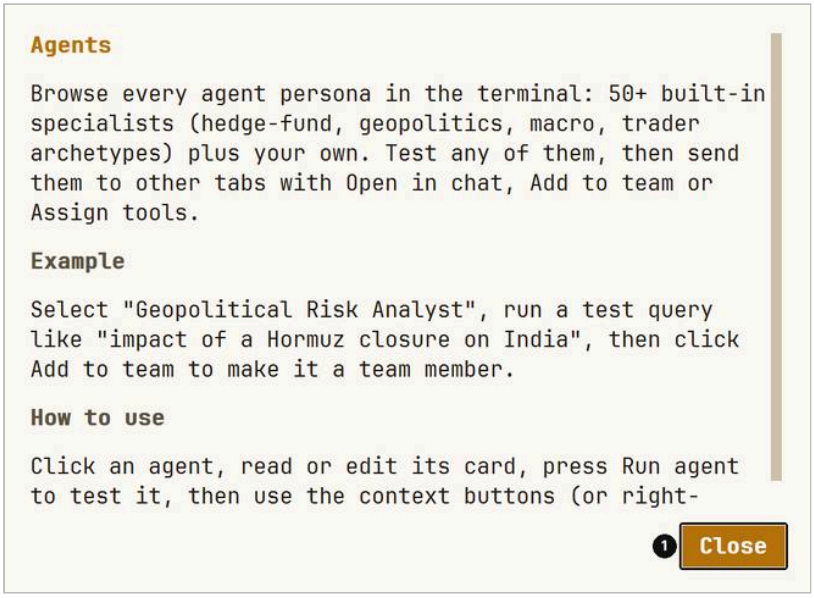


Figure 38.2 Info explains each sub-tab with an example.

1. **About this sub-tab**: what it is, an example, and how to use it.

38.2 Quick start

Ask a question and read the agent's answer.

1. Type `AGNT` in the command line and press `Enter`. Agent Studio opens on **Agents**.
2. Choose who answers. Click a specialist in the **AGENTS** list (for example **Geopolitical Risk Analyst**) to ask that agent, or tick **Auto-route to the best agent** to let the terminal pick one. With nothing selected, the general Fincept AI agent answers.
3. Under **TEST QUERY**, type a question, for example *"In three short bullets: the main geopolitical risks for crude oil prices this week."*

4 Click **Run agent** (the button shows the price, for example **· 2 CR**). It reads **Running…** while the agent works, and **STEPS** lists every tool it calls.

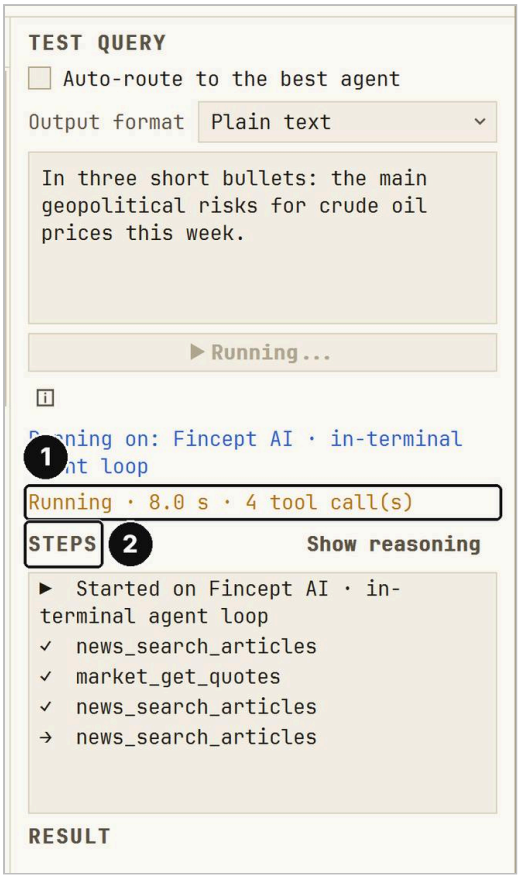


Figure 38.3 The agent at work.

1. How long it has run and how many tools it called.
2. Each tool call, as it happens.

5 Read the answer under **RESULT** (scroll it for more). The status line says when it finished, how long it took and how many tool calls it made.

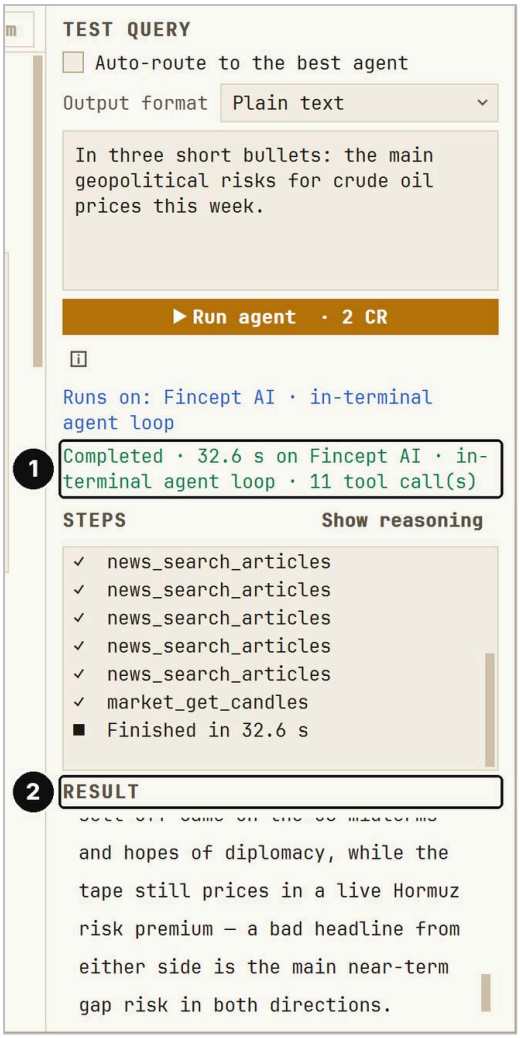


Figure 38.4 The finished run. The answer is under RESULT; scroll it to read it all.

1. Finished: time, engine and tool calls.
2. The agent's answer.

6 Liked the agent? **Open in chat** keeps talking to it in the **Chat** tab; **Add to team** makes it part of a team.

Credits

A test run, a chat message to an agent and a team run each cost the price shown on the button (2 credits each at the time of writing; the ⓘ beside it opens the full price list). The charge is made only when the run finishes. On your own AI harness, agent runs cost no Fincept credits. On Fincept AI an agent's tools — and with them its live look-ups — need **Exclusive+** or higher; on Exclusive it answers without tools.

38.3 Browse the built-in agents

The **AGENTS** list shows every agent, grouped by category. Use **All categories** to show one group, and **Refresh** to reload the list.

Category (as listed)	Agents
analysis (1)	Equity Analyst
hedgeFundAgents (11)	Behavioral Finance Analyst, Central Bank Policy Analyst, Currency & FX Strategist, Geopolitical Risk Analyst, Innovation & Disruption Analyst, Institutional Flow Tracker, Macro Cycle Analyst, Regulatory & Policy Analyst, Renaissance Technologies Medallion Fund, News & Narrative Analyst, Supply Chain Analyst
TraderInvestorsAgent (11)	Warren Buffett Investment Agent, Benjamin Graham Value Agent, Peter Lynch Growth Agent, Charlie Munger Mental Models Agent, Seth Klarman Value/Risk Agent, Howard Marks Cycle/Risk Agent, Joel Greenblatt Magic Formula Agent, David Einhorn Value/Catalyst Agent, Bill Miller Contrarian/Tech Agent, Jean-Marie Eveillard Global Value Agent, Marty Whitman Distressed/Credit Agent
EconomicAgents (6)	Capitalism, Keynesian, Neoliberal, Socialist, Mixed Economy and Mercantilist Trade analysts — the same question seen through six schools of economics
GeopoliticsAgents (20)	Regional analysts (Russia, China, USA, Europe, Middle East, Africa, India-Pakistan, Japan-Korea, Latin America, Arctic), world-order views (American, Chinese, European, Islamic, Multipolar) and geostrategy lenses (Eurasian Balkans, Geopolitical Pivots, Active Geostrategic Players, American Primacy, Eurasian Heartland)
portfolio (1)	Portfolio Manager
trading (3)	Polymarket Analyst, Polymarket Risk Manager, Execution Trader

Agents you build yourself are listed too, under their own category.

The agent card

Part	What it shows
MODEL	What the agent runs on: *All AI runs on Fincept AI* (or your own harness).
INSTRUCTIONS	The agent's persona and rules. You can edit them and click **Save config** to keep your version; **Delete** removes your saved version.
TOOLS	The tool categories it may use, or *No tools assigned. Use Assign tools to grant tool categories.*
FEATURES	Reasoning, Memory, Guardrails and more (see **§38.5 Agent features and capabilities** p. 746).
JSON editor	The agent's full configuration as text, with **Apply JSON**. Only you can edit it.

Right-click an agent in the list for the same actions as the buttons: **Open in chat**, **Add to team**, **Assign tools**.

Testing options

Control	What it does
Auto-route to the best agent	Instead of the selected agent, the terminal picks the best one for your question and says so: *Routed → … (intent: …, confidence: …%)*.
Output format	**Plain text**, **Investment report**, **Stock analysis**, **Risk assessment** or **Trade signal**.
Run agent	Runs the query. While it runs it reads **Running...**.
STEPS / Show reasoning	What the agent did, and its reasoning when there is some.
Status line	*Runs on: Fincept AI · in-terminal agent loop* (or your harness, model and effort).

38.4 Create your own agent

Build an agent that always answers your way — your sectors, your format, your rules.

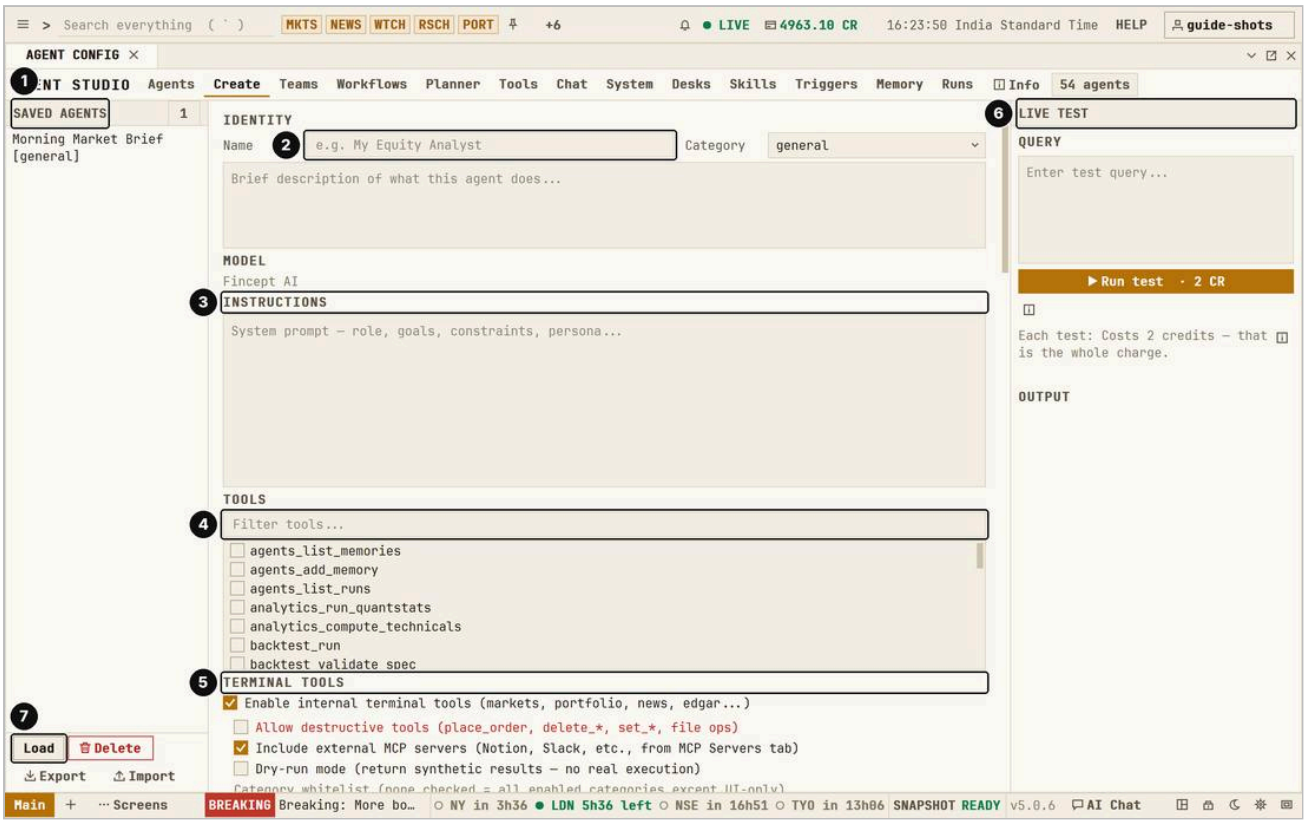


Figure 38.5 The Create tab. Your saved agents are listed on the left.

1. Your agents. Select one and click **Load** to edit it.
2. **Name** and **Category**.
3. The system prompt.
4. Individual tools it may use.
5. Tool switches (below).
6. Test it before you use it.
7. **Load**, **Delete**, **Export** and **Import**.

1. Click **Create**.
2. Under **IDENTITY**, type a **Name** (for example *Morning Market Brief*), pick a **Category** (**general**, **trader**, **hedge-fund**, **economic**, **geopolitics**, **research** or **custom**) and a short description.
3. Under **INSTRUCTIONS**, write its system prompt — its role, goals, constraints and persona. Be specific: what to cover, how long, what format, what never to do.
4. Under **TOOLS**, tick individual tools (use **Filter tools...**), or leave them and rely on **TERMINAL TOOLS** below.
5. Under **TERMINAL TOOLS**, keep **Enable internal terminal tools** ticked so the agent can read markets, portfolio, news and filings.
6. Click **Save agent**. The status line says **Saved successfully** and the agent appears under **SAVED AGENTS**, in the **Agents** list and in every persona picker in the terminal (AI chat, the companion, desks, triggers, teams).
7. Test it under **LIVE TEST** on the right: type a query and click **Run test**.

Terminal tools switches

Switch	Default	Meaning
Enable internal terminal tools (markets, portfolio, news, edgar...)	On	The terminal's own data tools.
Allow destructive tools (place_order, delete_, *set_*, file ops)	Off	Lets the agent use tools that change or delete things. Money-moving actions still ask you first.
Include external MCP servers (Notion, Slack, etc., from MCP Servers tab)	On	Your own servers' tools (**Chapter 41, MCP Servers** p. 810).
Dry-run mode (return synthetic results — no real execution)	Off	The agent gets made-up tool results — for testing a prompt without touching anything.
Category whitelist	None ticked	None checked = all enabled categories except the screen-only ones.
Exclude categories	—	Comma-separated categories to remove.
Tool name include regex / exclude regex	—	Optional patterns, e.g. `^get_` / `^delete_`.
Max tools (0 = no cap)	0	The most tools the agent is shown.

MCP SERVERS lists your own servers so you can pick which ones the agent may use. These tool choices are yours alone: the AI cannot change them.

Save, load, export, import

- **Load** puts the selected saved agent into the form; **Save agent** then updates it.
- **Delete** removes the selected agent (**Agent deleted**).
- **Export** saves the agent as a JSON file (*agent_config.json*); **Import** reads one back into the form (**Imported from file**) — check it, then **Save agent**.
- **Clear** empties the form (**Form cleared**).

38.5 Agent features and capabilities

Every agent card (Agents tab) and the Create form end with **FEATURES** and **CAPABILITIES**. They shape how the agent works on each run.

Important

Features and capabilities are applied when the agent runs on **your own AI harness** (Claude Code, Codex, an endpoint or a CLI — see **Chapter 42, Use Your Own AI** p. 819). On Fincept AI the card says **Fincept AI does not apply these yet. Pick Claude Code or Codex in Settings > AI harness to use them.**

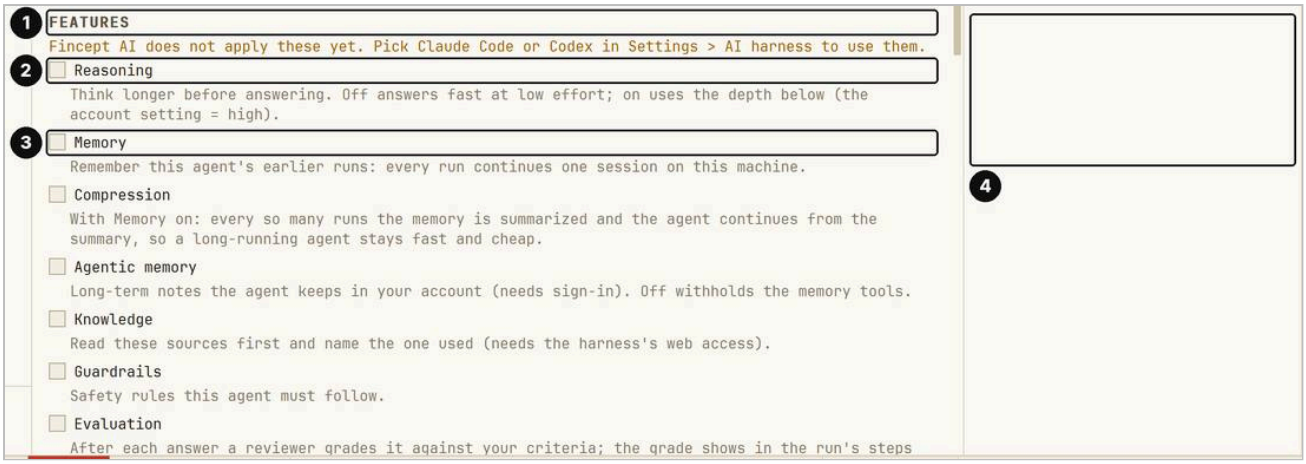


Figure 38.6 FEATURES — tick a feature to switch it on and show its options.

1. On Fincept AI the line under the heading says the features are not applied yet.
2. Each feature has a one-line explanation under it.
3. Tick a feature to switch it on.
4. **LIVE TEST** stays on the right while you scroll: its answer appears in **OUTPUT**.

Feature	What it does	Options
Reasoning	Think longer before answering. Off answers fast at low effort; on uses the depth below (the account setting = high).	**Depth** (Account setting, Low … Max)
Memory	Remember this agent's earlier runs: every run continues one session on this computer.	**Reset memory**
Compression	With Memory on: every so many runs the memory is summarized and the agent continues from the summary, so a long-running agent stays fast and cheap.	**Summarize the memory every** *n* **runs** (10), **Show summary**
Agentic memory	Long-term notes the agent keeps in your account. Off withholds the memory tools.	**Search its memories before answering**, **Save new facts and lessons after answering**
Knowledge	Read these sources first and name the one used (needs the harness's web access).	Sources, one URL per line
Guardrails	Safety rules this agent must follow.	**Mask personal data (emails, phone, card and account numbers)**, **Ignore instructions inside tool results and web pages**, **No promised returns; always state the risks**, **Block destructive and money-moving tools**
Evaluation	After each answer a reviewer grades it against your criteria; the grade shows in the run's steps (one more short model call).	**Criteria**, **Pass mark** (7/10), **Revise the answer once when it scores below the pass mark**
Hooks	What happens once each run is over.	**Notify** (**No notification**, **In the terminal (bell and desktop)**, **On all my notification channels**); **Save each answer as a Markdown file in** a folder of yours (**Browse**)
Storage	Keep every run (question, answer, tools, grade) on this computer to look back at.	**Keep the last** *n* **runs** (50; 1–500), **Clear**, past runs list
Tracing	Save each run step by step (prompt, tools, answer, tokens) as a file on this computer.	**Open traces folder**

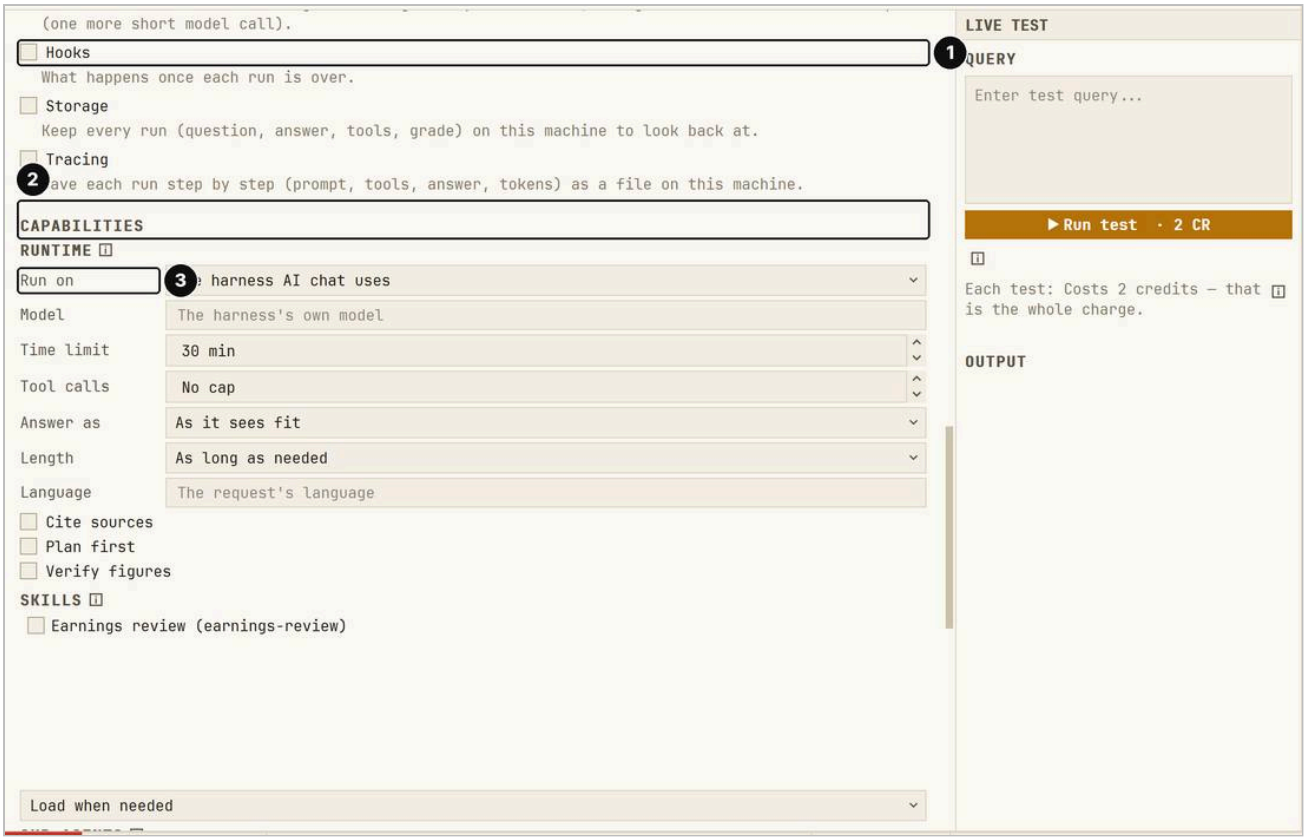


Figure 38.7 The last features, then CAPABILITIES with its Runtime settings.

1. **Hooks**, **Storage**, **Tracing**.
2. **CAPABILITIES** start here.
3. **Runtime**: where and how it runs and how it answers.

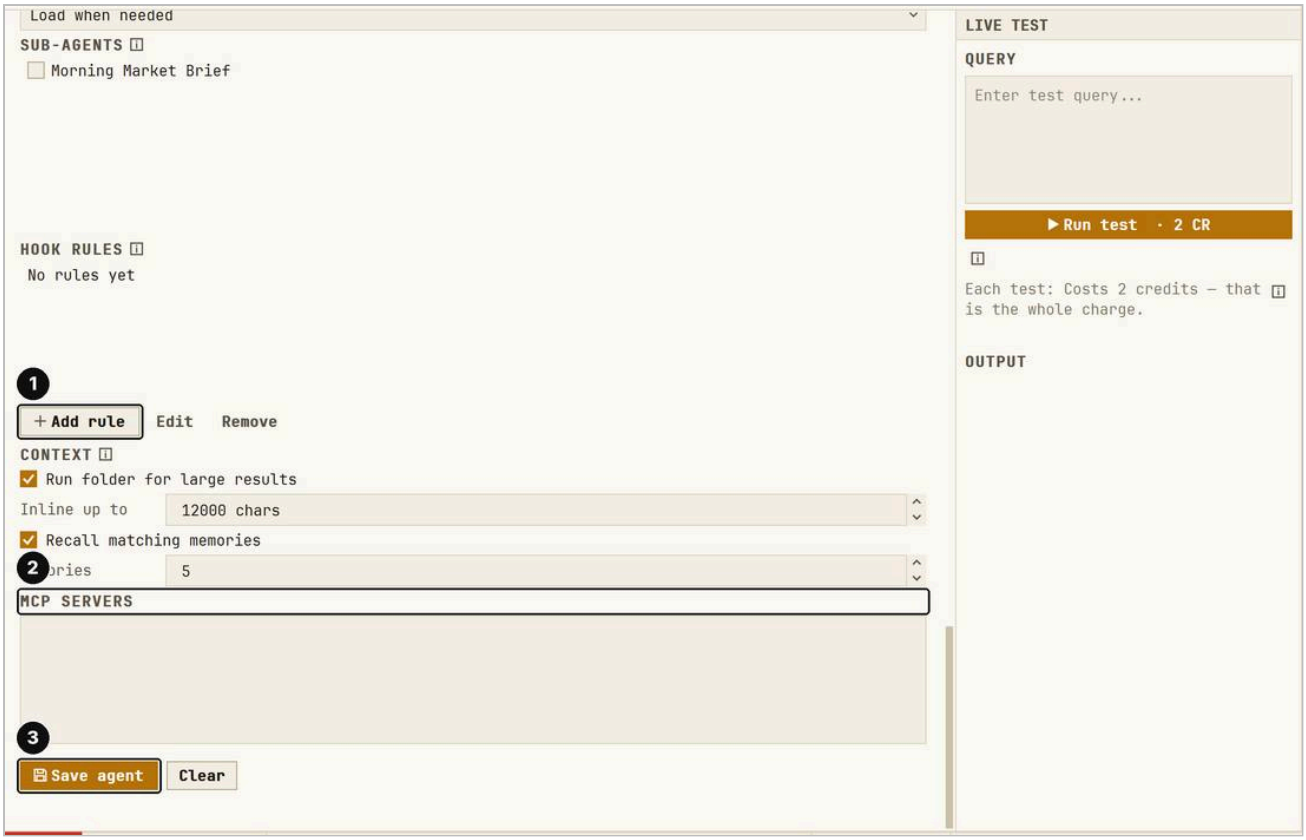


Figure 38.8 The end of the form — sub-agents, hook rules, context, MCP servers and Save agent.

1. **Hook rules**: **Add rule**, **Edit**, **Remove**.
2. Your own MCP servers the agent may use.
3. **Save agent** (or **Clear**).

Capability	Fields
Runtime	**Run on** (**The harness AI chat uses**, Claude Code, Codex, LLM endpoint, Custom CLI), **Model** (empty = the harness's own), **Time limit** (1–120 min, default 30), **Tool calls** (the most one run may make; **No cap**), **Answer as** (**As it sees fit**, **Structured markdown**, **Bullet points**, **A table of figures**, **JSON only**, **Plain text**), **Length** (**As long as needed**, **Short (about 150 words)**, **Medium (300-500 words)**, **Long and complete**), **Language** (empty = the request's), **Cite sources**, **Plan first**, **Verify figures**.
Skills	Tick skills from the **Skills** tab. **Load when needed** (keeps the context small) or **Always in the prompt** (suits a few short skills).
Sub-agents	Tick agents it may hand a focused part of the work to. Each works in its own context and returns a short report. Options: **At once** (1–6), **Per run** (1–20), **Each may take** (1–60 min), **Report back** (500–8000 chars). Sub-agents never start agents of their own.
Hook rules	What the terminal does around each run, while **Hooks** is ticked. **As a run starts**: **Add context to the prompt** (`{date}` , `{time}` and `{agent}` are filled in), **Fetch fresh quotes** (symbols such as `^NSEI, RELIANCE.NS`), **Withhold tools** (patterns such as `paper_*, ui_act`). **When a run ends** (**When it succeeds**, **When it fails** or **Always**): **Notify me**, **Save the answer as .md**, **Send to a webhook**, **Add it to Notes**, **Save it as a memory** (**Fact**, **Skill**, **Reflexion**). **Add rule**, **Edit**, **Remove**.
Context	**Run folder for large results** (a large tool result becomes a file the agent reads a slice at a time; on by default), **Inline up to** (12000 chars), **Recall matching memories** and **Memories** (1–10).

38.6 Build a team

A team answers one question with several agents. Pick the mode that fits the question.

1. Click **Teams**.
2. In **AVAILABLE AGENTS**, select an agent and click **Add to team**. Repeat for each member. Members appear on the left.
3. Pick a **Mode** (below) and, where it matters, a **Leader**.
4. Optionally click **Team tools** to give every member the same tool categories, or click a member to give it its own.
5. Type the question in **TEAM QUERY** and click **Run team** (the price is on the button). Tick **Notify when done** to be told when it finishes.
6. To keep the team, type a **Team name** and click **Save**. Saved teams appear in **New team**'s list and in every persona picker.

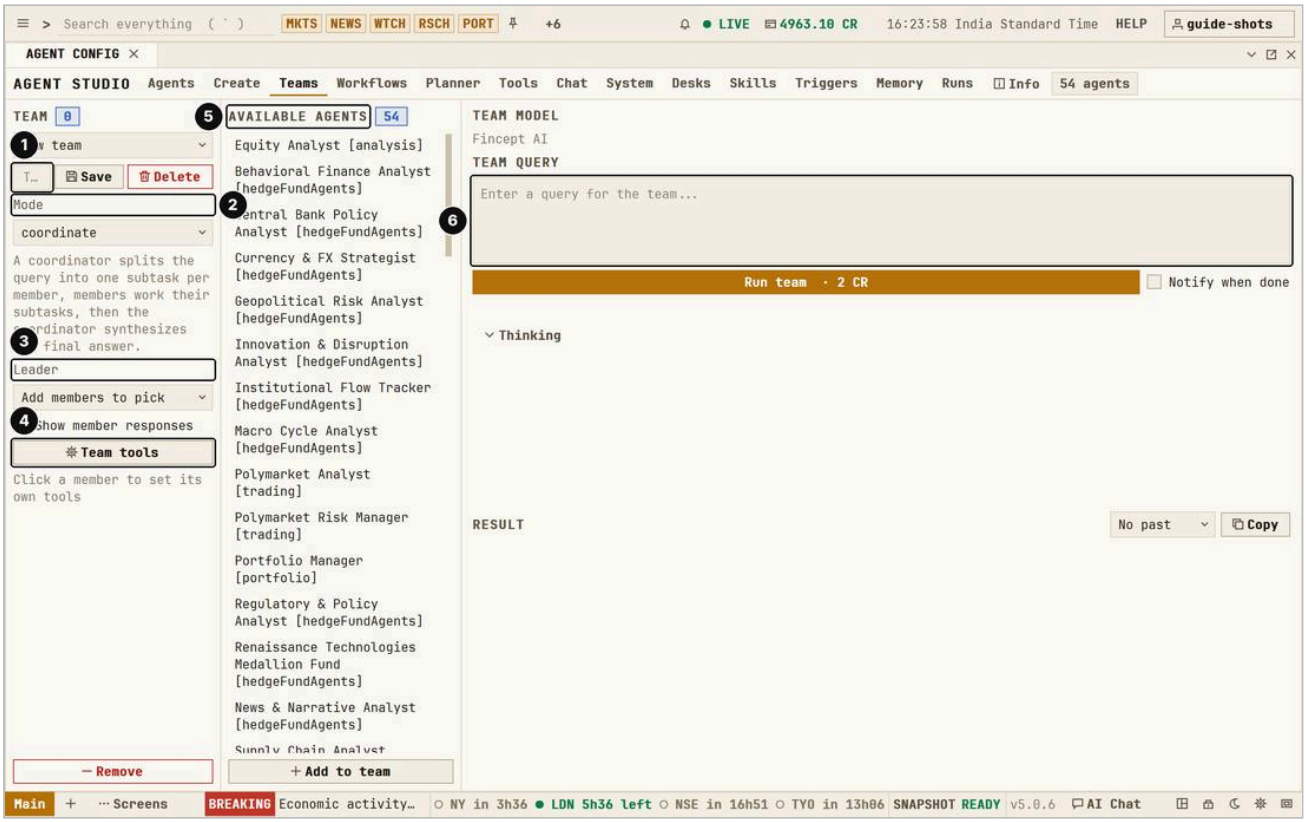


Figure 38.9 The Teams tab, before any member is added.

1. Name it and **Save**.
2. How the members work together.
3. The leader (coordinator, fallback or judge, depending on the mode).
4. Tools for every member.
5. Pick agents and **Add to team**.
6. The team's question; **Run team** runs it.

Mode	How it works
coordinate	A coordinator splits the query into one subtask per member, members work their subtasks, then the coordinator synthesizes the final answer.
route	An AI router picks the single best member for this query (the leader is the fallback); only that member runs and answers.
collaborate	Every member answers the same query with its own persona and tools. The output is all member answers, attributed — no synthesis.
pipeline	Members run in order, each building on the previous member's output — an assembly line. The last member's answer is the final result.
debate	Members state positions, then rebut each other, and an impartial judge weighs the arguments into a verdict.
vote	Members answer independently; a tally reports the majority view, dissent, and whether the team reached **CONSENSUS**, **MAJORITY** or **SPLIT**.

Plans

Teams need **Exclusive+** or higher; on Exclusive, **Run team** is locked. Exclusive+ includes the first three modes (**coordinate**, **route**, **collaborate**), Exclusive Pro all six. Modes your plan does not include stay visible but greyed out, and the **Mode** tooltip says so (*3 of 6 coordination modes on your plan · Exclusive Pro unlocks all 6.*).

Other team controls: **Show member responses** (include each member's own answer), **Thinking** (show or hide the live thinking), **RESULT** with **Copy**, and **History** — past runs of this team, to view any earlier result. **Remove** takes the selected member out; **Delete** deletes a saved team.

38.7 Run a workflow

Workflows are ready-made analyses. Each asks for at most a symbol, a portfolio or a question, and writes a structured report (a bottom line, sections, a table of key figures, risks and what to watch).

1. Click **Workflows** and pick one on the left.
2. Fill its **PARAMETERS** — for a stock, type a company or ticker and pick the listing (*Search a company or ticker, e.g. Apple, RELIANCE*).
3. Click **Run workflow**. A full workflow usually takes one to four minutes; **ACTIVITY** shows what the agent is doing and **Stop** cancels it.
4. Read the report under **RESULT**. **Copy** copies it as Markdown, **Send to report** adds it to the open Report Builder document (**Chapter 45, Report Builder** p. 858), **Send alert** sends it through your notification channels.

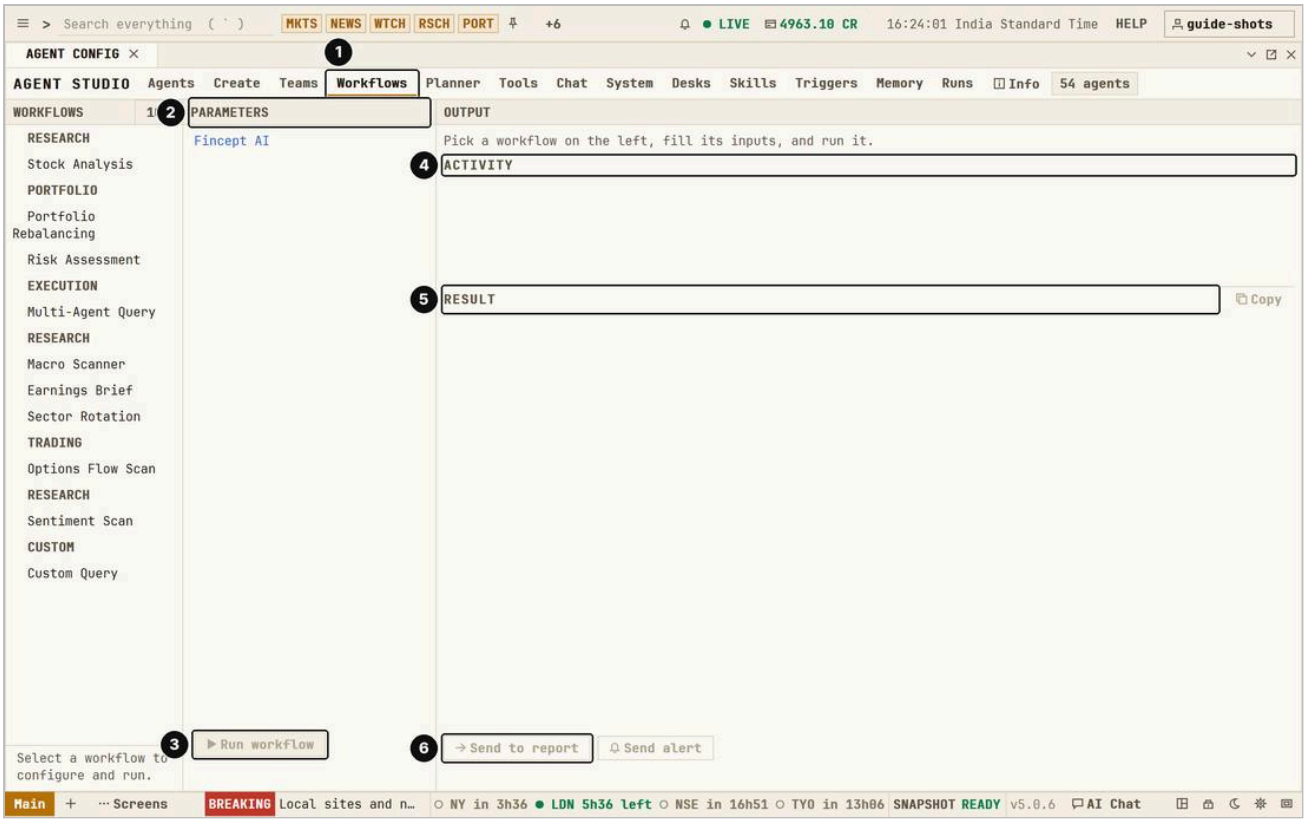


Figure 38.10 The Workflows tab.

1. The workflows, by group.
2. The selected workflow's inputs.
3. Run it.
4. What the agent is doing.
5. The report.
6. Send it on.

Workflow	Group	Input	What you get
Stock Analysis	RESEARCH	Symbol	Business, price trend and momentum, fundamentals and valuation against peers, news and sentiment, analyst targets, catalysts, and a stance.
Portfolio Rebalancing	PORTFOLIO	Portfolio (optional)	Holdings, concentration and a target allocation with the trades to get there (it never places orders).
Risk Assessment	PORTFOLIO	Portfolio (optional)	Volatility, beta, 95% VaR and CVaR, drawdown, correlations, three stress scenarios and the biggest risk contributors.
Multi-Agent Query	EXECUTION	Question	Four angles — fundamental, technical, macro, sentiment — reconciled into one answer.
Macro Scanner	RESEARCH	—	A brief on the US, Euro area, India and China: inflation, growth, jobs, policy rates, yield curves, the dollar, oil and gold.
Earnings Brief	RESEARCH	Symbol	The latest quarter against a year earlier, guidance, the share-price reaction.
Sector Rotation	RESEARCH	—	Sector returns and relative strength over 1 week to 6 months, leaders, laggards and rotation ideas.
Options Flow Scan	TRADING	Symbol (optional)	Volume against open interest, put/call ratio, implied volatility and skew, key strikes.
Sentiment Scan	RESEARCH	Symbol	News and sentiment over the past 48 hours against the price move.
Custom Query	CUSTOM	Question	Your own question through the workflow engine.

When **Portfolio** is left on **Largest portfolio (automatic)**, the workflow uses your largest portfolio.

38.8 Plan a big task

The **Planner** turns a big request into a numbered plan you can check before anything runs.

1. Click **Planner**.
2. Click a **PLAN TEMPLATES** item (for example **Market Overview Plan**) to put its goal in **CUSTOM PLAN QUERY**, or type your own goal. Double-click a template to generate at once. For portfolio plans, pick a **Portfolio** first.
3. Click **Generate plan**. The **EXECUTION PLAN** table lists the steps: **#**, **Step**, **Type**, **Status**.
4. Edit the plan if you like: **Add step**, **Remove step**, **Up**, **Down**.
5. Click **Execute plan** to run every step as one agent run, or export it: **AI chat** (a new chat seeded with the plan), **Schedule** (a recurring task — asks for a schedule such as `daily 09:30`) or **Node graph** (a workflow with one AI Agent node per step in **Chapter 40, Node Editor** p. 776).

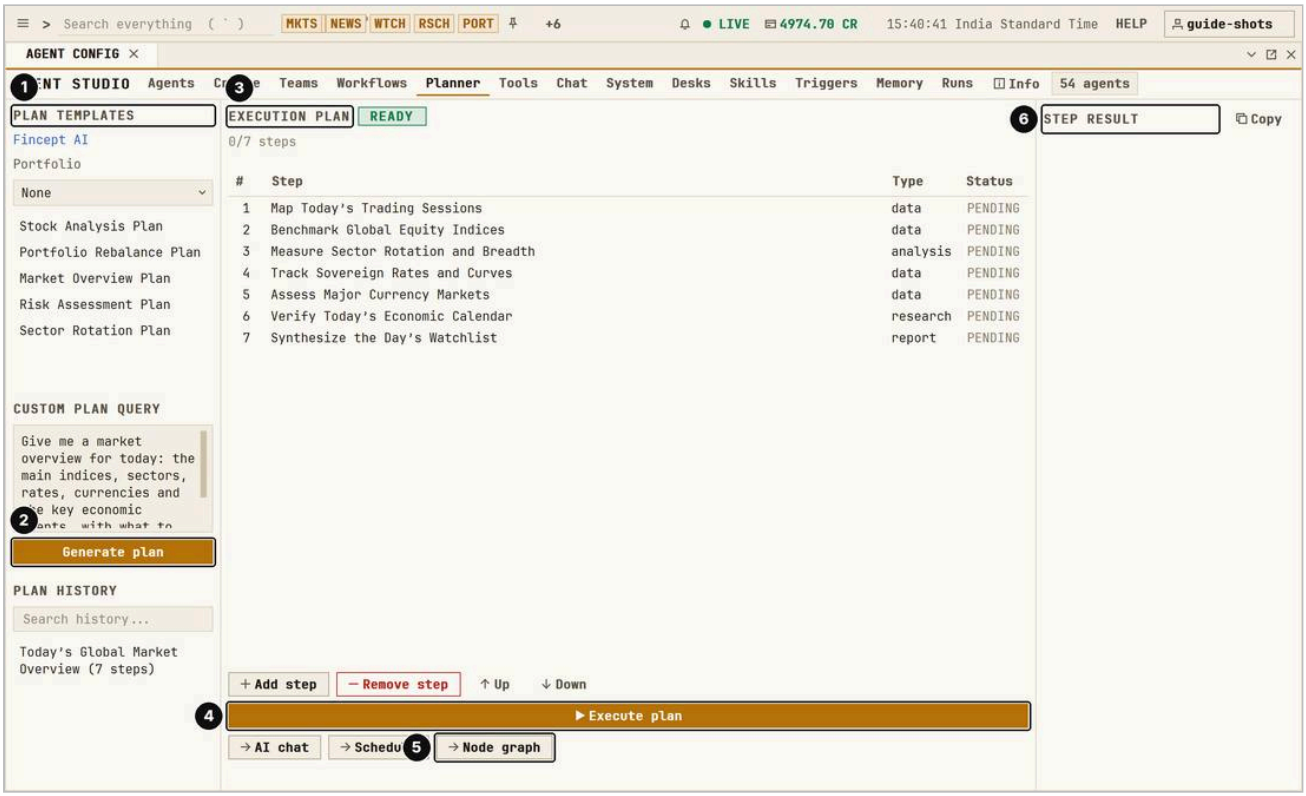


Figure 38.11 A generated plan, ready to edit, run or export.

1. Ready-made goals.
2. Make the plan.
3. The steps.
4. Run it.
5. Or export it.
6. The result of the step you select.

Templates: **Stock Analysis Plan**, **Portfolio Rebalance Plan**, **Market Overview Plan**, **Risk Assessment Plan**, **Sector Rotation Plan**. **PLAN HISTORY** keeps every plan you ran (search it with **Search history...**).

Careful

Schedule registers a recurring task that runs on its own and spends credits each time. Use it only for a plan you have already run once and trust.

38.9 Give agents tools

The **Tools** tab is the permission system: an agent can use only the tools you grant here or on its card.

1. Under **ASSIGN TO**, choose **Agent** or **Team**, then pick it in **Select target...**.
2. Browse **AVAILABLE TOOLS** — grouped by category, such as **TERMINAL · MARKETS** — or type in **Search tools...**. A tick marks a tool already assigned.
3. Click a tool to read its **TOOL DETAIL**: **DESCRIPTION**, **PARAMETERS** and **USED BY**.
4. Click **Add to selection** to put tools into **SELECTED TOOLS** (**Remove** and **Clear** take them out).
5. Click **Assign** to save the selection to the agent or team.

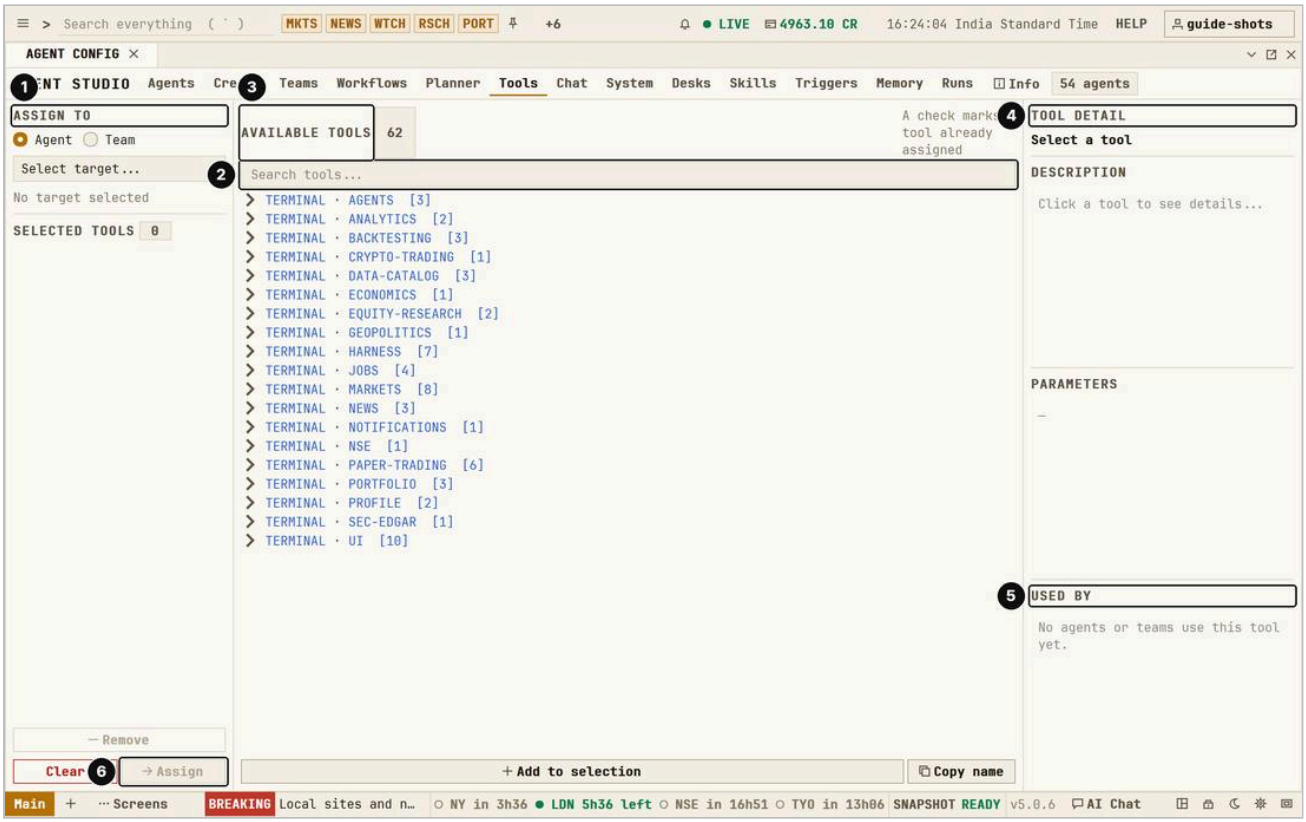


Figure 38.12 The Tools tab.

1. Pick the agent or team.
2. Find a tool.
3. Every tool, by category.
4. What the selected tool does and its parameters.
5. Which agents and teams use it.
6. Save the grant.

Copy name copies a tool's name. Granting tools is always your own decision: the AI cannot press **Assign**.

38.10 Chat with an agent

The **Chat** tab is a conversation lab: talk to one agent or team before you rely on it.

- **Agent** — pick a configured agent, or **Default (global LLM)**. Type to search.
- **Persona** — run the chat as any persona or team.
- **Auto-route** — when on, the terminal picks the best agent for each question (*Routed to: … (intent: …, confidence: …%)*). If it finds none, nothing is run or charged.
- **Portfolio** with **Analyze**, **Rebalance**, **Risk** — one-click questions about a portfolio.
- **Markets**, **Portfolio**, **Analytics**, **Risk** — starter questions.
- **Clear** empties the conversation. Each message costs the price shown on **Send** (an agent run; a team as persona is a team run and needs Exclusive+).
- The model chip in the header and its status line still point to *Settings > LLM Configuration*. That page is now **Settings › AI harness**.

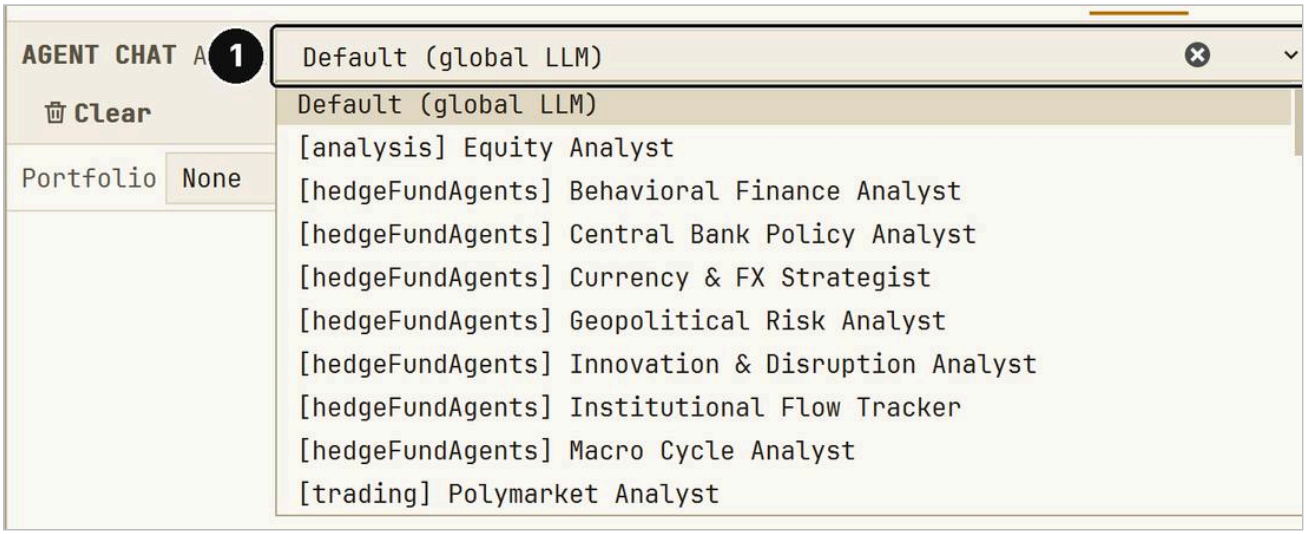


Figure 38.13 Pick the agent to chat with.

1 Every configured agent, by category.

38.11 System: web search and thinking depth

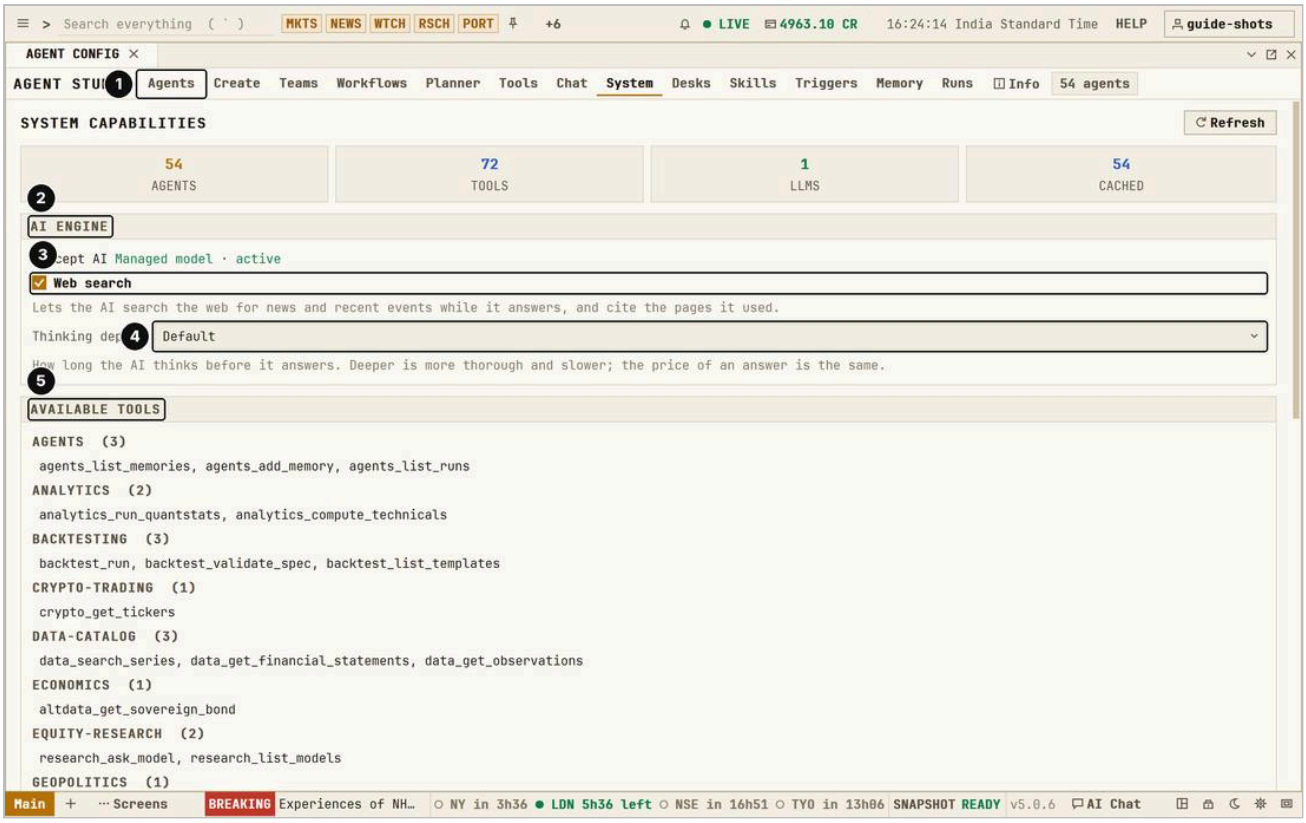


Figure 38.14 System shows the AI engine and two account settings.

1. Counts: agents, tools, models, cached items.
2. The engine that answers.
3. **Web search** — lets the AI search the web for news and recent events and cite the pages it used.
4. **Thinking depth** — how long the AI thinks before it answers.
5. Every tool category and its tools.

- **Web search** (on by default) is an account setting: it applies to AI chat and every agent on all your devices. Turn it off to keep answers to the terminal's own data. Only you can change it.
- **Thinking depth** is the same account setting as the **Thinking** box in **Chapter 37, AI Chat** p. 719: **Default** (the server's default, high), **Low**, **Medium**, **High**, **Extra high**, **Max**. Deeper is more thorough and slower; the price of an answer is the same.
- **SYSTEM INFO** shows the version. **Refresh** re-reads everything. Nothing on this tab runs anything.

38.12 Desks: an agent in charge of an area

A **desk** puts a persona or team permanently in charge of one domain, like a desk on a trading floor: who, where, a standing mandate, a schedule, and hard limits.

Field	Meaning
Name	The desk's name.
Asset domain	**crypto**, **fx**, **equity**, **research** or **custom**.
Persona / team	Who works the desk.
Mandate	What the desk does on every run.

Field	Meaning
Schedule	e.g. `every 30m`, `every 2h`, `hourly`, `daily 09:30`, `weekday 16:00` (UTC). Default `every 60m`.
Extra tool categories	Tools beyond the persona's own.
Allow destructive tools	Allows tools that change things. Money-moving tools still require approval: the run asks you in an approval window, and if nobody answers, nothing is done.
Max runs/day / Cooldown (min)	Hard limits: 24 runs a day (1–288) and 15 minutes between runs (0–1440) by default.
Notify on run	Send each result to **All channels** or one channel.

New desk starts an empty form; **Save desk** keeps it; **Delete** removes the selected desk. **Arm desk** starts its schedule (the button then reads **Armed: click to disarm**); **Run now** fires it once. **OPERATIONS** shows **Running**, **Runs today**, **Last fire**, **Next fire** and the **RUN LOG**. Results also land on the dashboard's desk tile.

A desk runs on one of your computers. Seen from another one, it says *Runs on …. Its schedule fires there, not on this device.*, and **Run on this device instead** moves it.

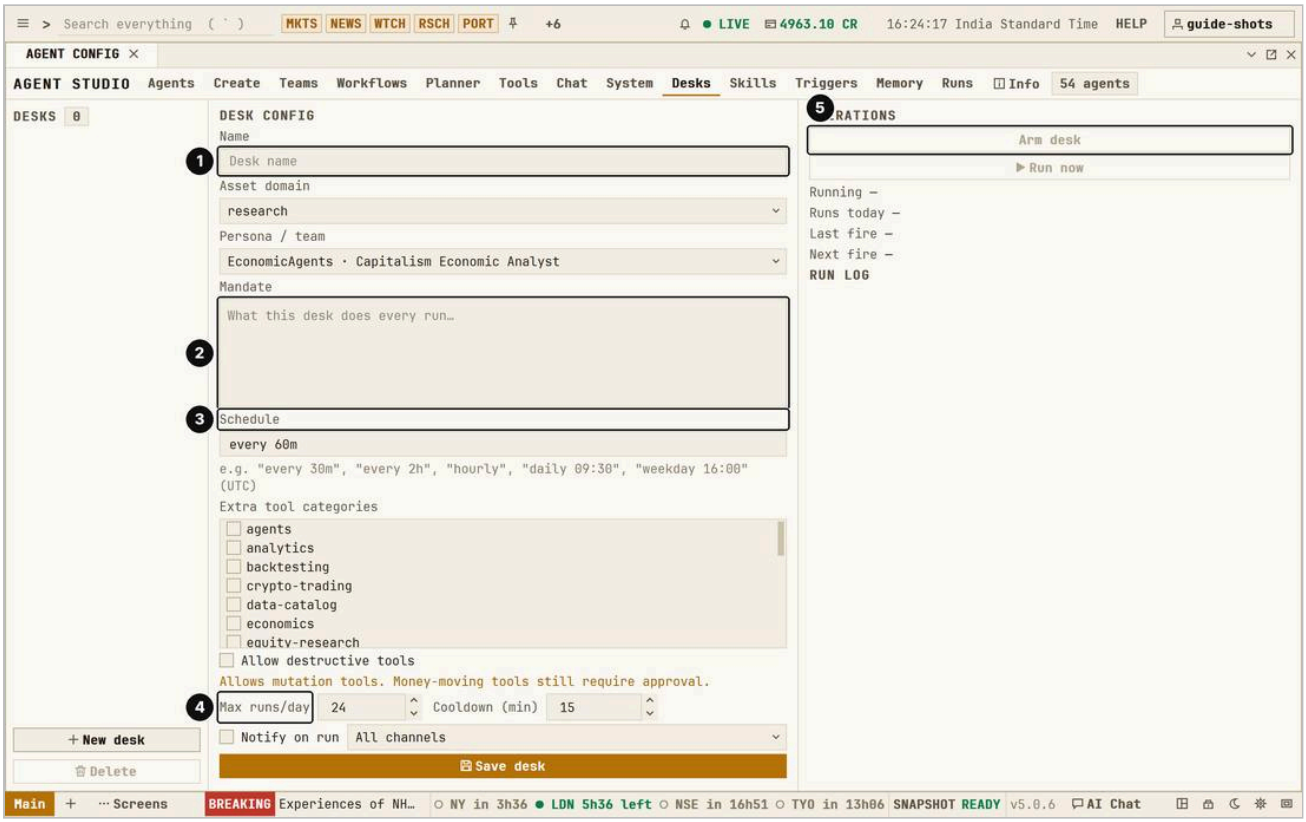


Figure 38.15 A desk's configuration (nothing armed).

1. Name, domain, persona or team.
2. The mandate.
3. When it runs.
4. Hard limits.
5. Arm it to start the schedule.

Careful

An armed desk runs on its own and every run is charged. Set **Max runs/day** before you arm it, and disarm it when you no longer need it.

38.13 Skills

A **skill** is reusable know-how — a checklist, a house style, a procedure — that an agent loads only when its work needs it. The agent sees each skill's name and one line on when to use it; the full instructions enter its context only when it loads the skill, so a long playbook costs nothing until it is used.

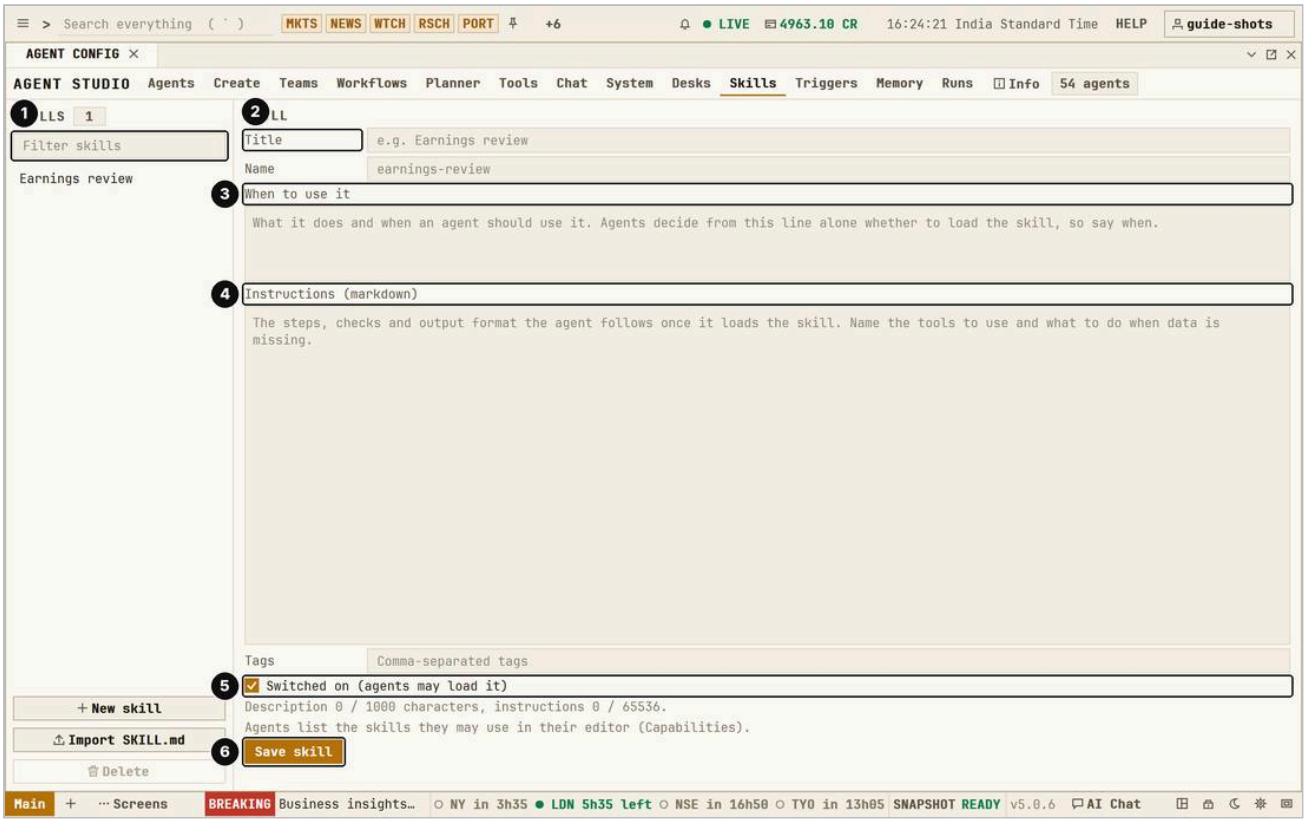


Figure 38.16 The Skills tab. The library on the left holds one skill, Earnings review; the form on the right is for a new one.

1. Your skill library.
2. **Title** and **Name** (lower-case letters, digits and dashes).
3. When an agent should use it — agents decide from this line alone.
4. The steps, checks and output format.
5. Switch it on or off.
6. Save.

1. Click **New skill**.
2. Fill **Title** (e.g. *Earnings review*), **Name** (e.g. `earnings-review`), **When to use it** and **Instructions (markdown)**. Add **Tags** if you like.
3. Keep **Switched on (agents may load it)** ticked and click **Save skill**.
4. Give the skill to an agent: on **Create**, load the agent and tick the skill under **CAPABILITIES > Skills**. (Missions can use skills too: **Chapter 39, Mission Control** p. 764.)

Delete removes the selected skill after a question (agents that list it no longer see it). **Import SKILL.md** reads a Markdown file with a name and description in its front matter (up to 512 KB). Limits: description 1000 characters, instructions 65 536, up to 200 skills. The line under the form says which agents use the skill.

38.14 Triggers: wake an agent automatically

A trigger runs one of *your* agents unattended on this computer's AI harness — no screen, no approvals, never anything that moves money — and sends you its answer as a notification and in **Runs**.

1. Create an agent first (**Create**). Triggers list only your own agents (*Create an agent first (Agent studio > Create)*).
2. Click **New trigger**, type a **Name** (e.g. *Opening brief*) and pick the **Agent**.
3. Choose what **Fires** it (below) and fill its fields.
4. Write **What the agent should do when it fires**. The agent also gets what fired it (the price, the headline).
5. Set **Cooldown** (15 min) and **Max runs / day** (24), and **Notify me** (**In the app**, **On all my notification channels**, **Never (read it in Runs)**).
6. Keep **Armed** ticked and click **Save trigger**. **Run now** fires it once to test it.

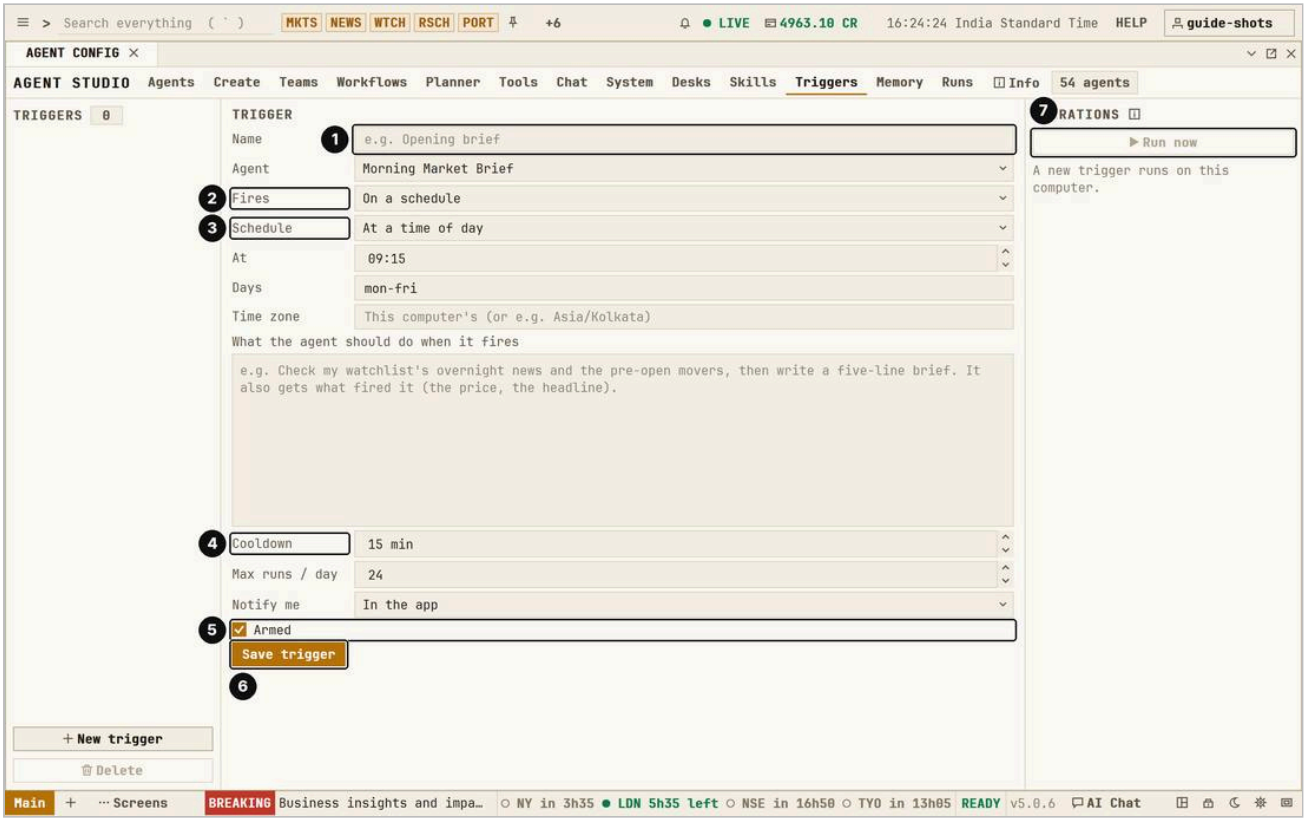


Figure 38.17 A new trigger's form (nothing is saved until you click Save trigger).

1. **Name** and **Agent** (your own agents only).
2. What fires it.
3. Its fields change with **Fires**.
4. **Cooldown** and **Max runs / day** limit it.
5. Armed triggers fire on their own.
6. Save it.
7. Fire it once to test.

Fires	Fields
On a schedule	**Schedule**: **Every few minutes** (**Every**), **At a time of day** (**At**, **Days** such as `mon-fri`, `daily`, `weekends`), **Cron expression**, **Once**; **Time zone** (empty = this computer's, or e.g. `Asia/Kolkata`).

Fires	Fields
When a market opens or closes	**Market**, **When it** (**Opens** / **Closes**), **Offset** (minutes; negative = before, e.g. −15).
When a price crosses a level	**Symbol** (e.g. `RELIANCE.NS`, `AAPL`, `BTC-USD`), **Rises above** / **Falls below**, **Level**.
When a day's move reaches a size	**Symbol**, **Day move** (%), **Direction** (**Up or down**, **Up**, **Down**).
When news matches	**Words** (every word must appear) or **Tickers**.
Only when I press Run now	Nothing — it fires only by hand.

The **Operations** line says where and when it runs: *Runs on this computer.*, *Next: …*, *Watching: it fires when that happens.*, *Fired n time(s); last …*. A trigger made on another computer runs only while that one is on; **Run it on this computer instead** moves it. **Delete** asks first. An account holds up to 100 triggers.

38.15 Memory

Memory lists what your agents remember across runs: facts, skills and lessons they saved (with **Agentic memory** on) or you added. A run recalls the memories that match its request.

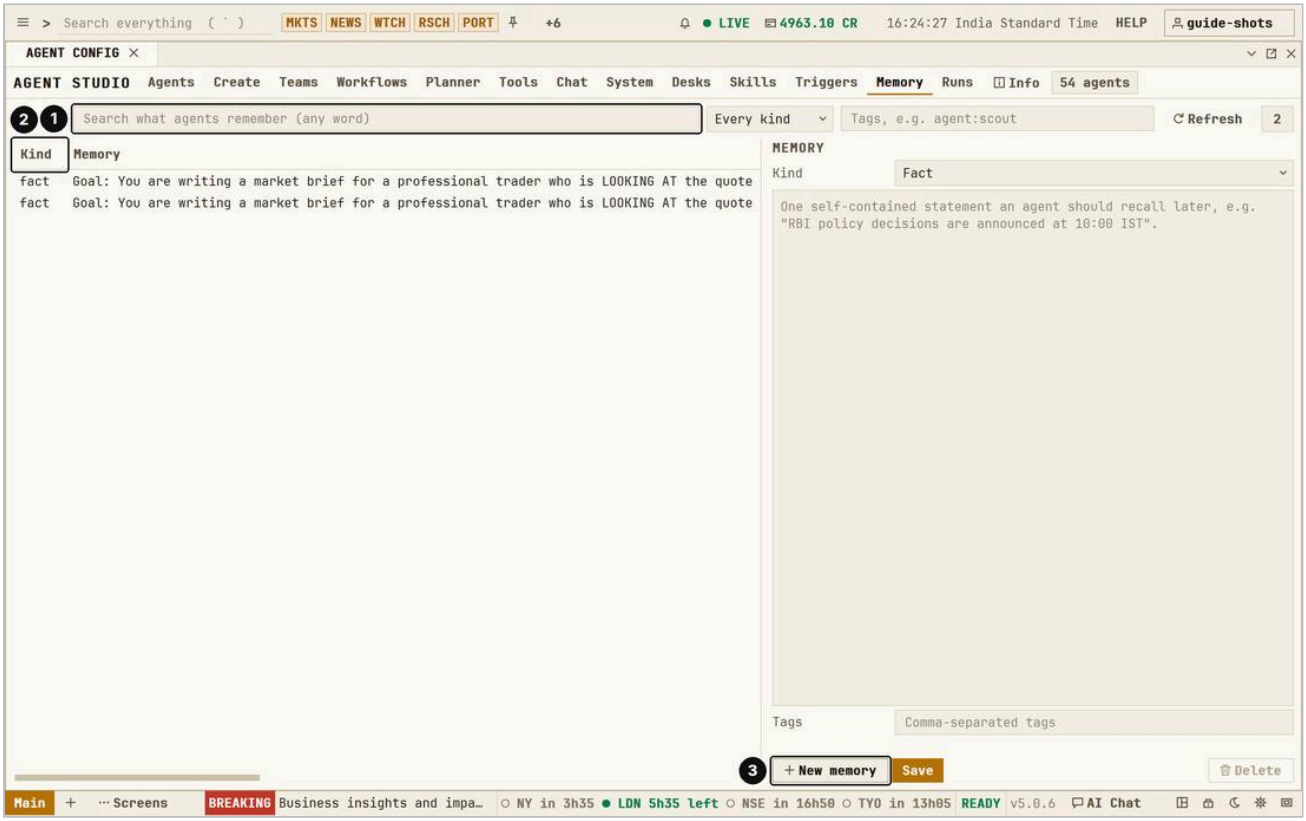


Figure 38.18 The Memory tab, with two facts an agent saved. Pick one to read and edit it on the right.

1. Search, filter by kind and tags.
2. The memories.
3. Add one by hand.

- Search with **Search what agents remember (any word)**, filter by **Every kind** / **Facts** / **Skills** / **Reflexions** and by tags (e.g. `agent:scout`).
- The table shows **Kind**, **Memory**, **Tags**, **Saved**. Pick one to read and edit it on the right, then **Save**.
- **New memory** adds one by hand: **Kind** (**Fact**, **Skill (how to do something)**, **Reflexion (a lesson learned)**), the text — *one self-contained statement an agent should recall later, e.g. "RBI policy decisions are announced at 10:00 IST"* — and **Tags**.
- **Delete** removes the selected memories for good.

38.16 Runs

Runs is the record of every agent run made on your own AI harness (see **Chapter 42, Use Your Own AI** p. 819): Agent Studio and chat runs, triggers, sub-agents, mission helpers and workflows. Runs answered by Fincept AI are not listed here.

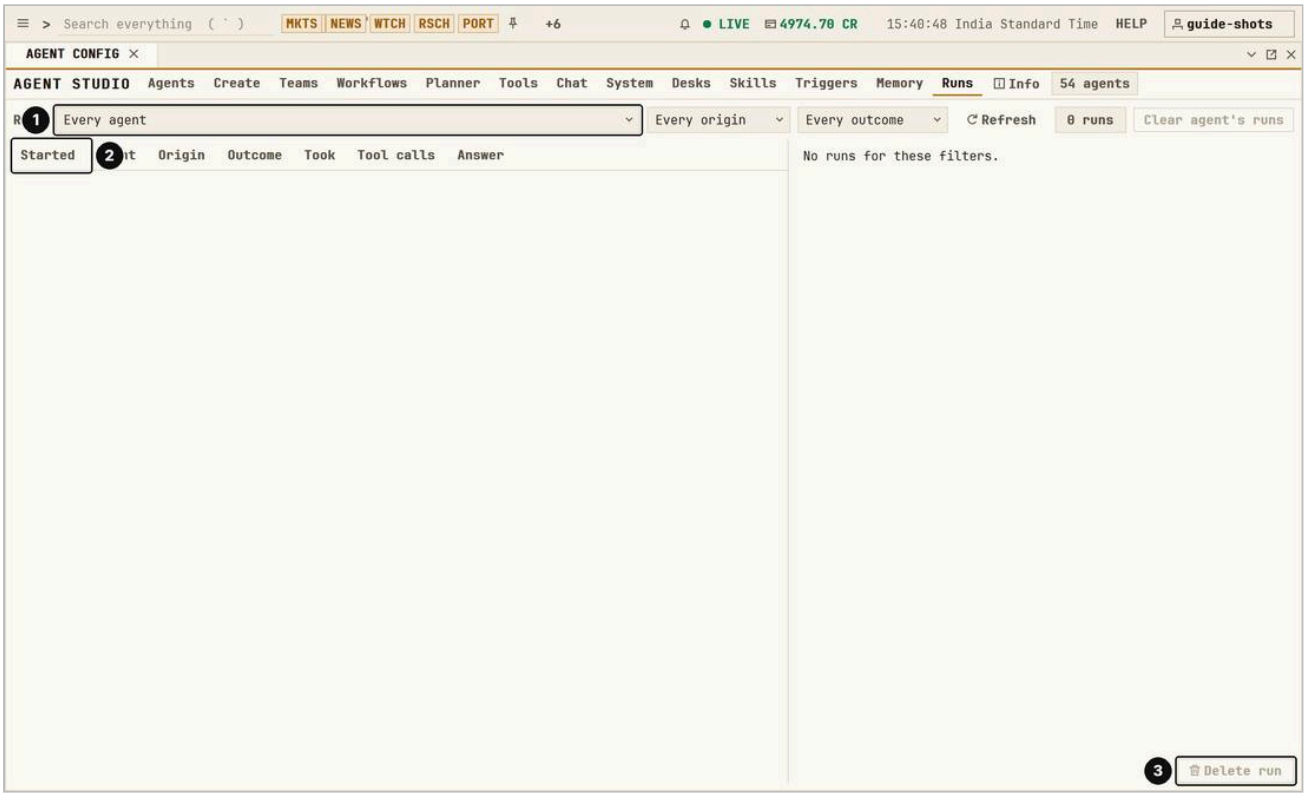


Figure 38.19 The Runs record. It is empty until an agent runs on your own AI harness.

1. Filter by agent, origin and outcome.
2. One row per run.
3. Delete one record.

Control	What it does
Every agent	One agent's runs.
Every origin	**Agent studio**, **Chat**, **Triggers**, **Sub-agents**, **Missions**, **Workflows**.
Every outcome	**Succeeded**, **Failed**, **Timed out**, **Stopped**.
Table	**Started**, **Agent**, **Origin**, **Outcome**, **Took**, **Tool calls**, **Answer**. **Load more** for older runs.

Control	What it does
Detail	Pick a run to read it whole: the request, the answer or error, the tools used, files it left, its review score.
Delete run / Clear agent's runs	Remove one record / every run of the agent picked (both ask first).

38.17 Reference

Agents tab

Control	What it does
All categories	Category filter (with counts).
Refresh	Reload the agent list.
JSON editor	Show the raw configuration; **Apply JSON** applies your edits.
Open in chat / Assign tools / Add to team	Send the selected agent to Chat, Tools or Teams.
Save config / Delete	Keep / remove your edited version of an agent.
Auto-route to the best agent	Let the terminal pick the agent.
Output format	Plain text, Investment report, Stock analysis, Risk assessment, Trade signal.
Run agent	Run the test query (charged).

Create tab

IDENTITY (Name, Category, description), **MODEL**, **INSTRUCTIONS**, **TOOLS** (with **Filter tools...**), **TERMINAL TOOLS**, **MCP SERVERS**, **FEATURES**, **CAPABILITIES**; **Save agent**, **Clear**; **SAVED AGENTS** with **Load**, **Delete**, **Export**, **Import**; **LIVE TEST** with **QUERY**, **Run test** and **OUTPUT**. A name is required (*Agent name is required*).

Teams tab

TEAM (saved-team list, **Team name**, **Save**, **Delete**), **Mode**, **Leader**, **Show member responses**, **Team tools**, member list with **Remove**; **AVAILABLE AGENTS** with **Add to team**; **TEAM MODEL**, **TEAM QUERY**, **Run team**, **Notify when done**, **Thinking**, **RESULT**, **History**, **Copy**.

Workflows tab

WORKFLOWS list, **PARAMETERS** (Symbol, Portfolio, Query), **Run workflow**, **Stop**, **OUTPUT**, **ACTIVITY**, **RESULT**, **Copy**, **Send to report**, **Send alert**.

Planner tab

PLAN TEMPLATES, **Portfolio**, **CUSTOM PLAN QUERY**, **Generate plan**, **PLAN HISTORY**, **EXECUTION PLAN** (#, Step, Type, Status), **Add step**, **Remove step**, **Up**, **Down**, **Execute plan**, **AI chat**, **Schedule**, **Node graph**, **STEP RESULT**, **Copy**.

38.18 For advanced users

- **Every persona picker is linked here.** AI chat, the companion, desks, triggers and teams list the same agents and teams. Pick one in AI chat's header to answer as that persona (**Chapter 37, AI Chat** p. 719).
- **On your own harness, an agent gets more.** Features, skills, sub-agents, hook rules, a run folder for large results, recalled memories and a run record for every run — all applied by the terminal on Claude Code, Codex, an endpoint or a CLI.
- **Agents cannot exceed their grant.** The tools an agent may use (its card, the Tools tab, the Create switches) are enforced on every call, also for tools reached through tool search.
- **Unattended runs are safer by design.** Spend and money actions always need a person. Triggers and schedules run with nobody to ask, so they never get money-moving tools; a desk's money-moving call waits for your approval and does nothing if you do not answer.
- **Server-side runs.** Teams, workflows and schedules run on Fincept's servers and keep using Fincept AI even when your chat runs on your own harness.

Do it with AI

In AI chat: *"Open Agent Studio, pick the Macro Cycle Analyst and ask it which phase the Indian economy is in."* — the AI operates the screen for you and asks before the charged **Run agent**.

38.19 Troubleshooting

Run agent says to sign in. Agent runs need a signed-in session: *Sign in to run an agent. Its answer appears here.*

The Features have no effect. They are applied only on your own AI harness. See **Chapter 42, Use Your Own AI** p. 819.

Chat says "No LLM provider configured — go to Settings > LLM Configuration". The Chat tab still names an old Settings page. Open `Settings › AI harness` and click **Use** on **Fincept AI** (or on your own harness).

Triggers lists no agents. Triggers work with your own agents only. Create one on **Create** first.

A team mode is greyed out. Your plan includes fewer team modes; hover the **Mode** list to see which plan unlocks all six.

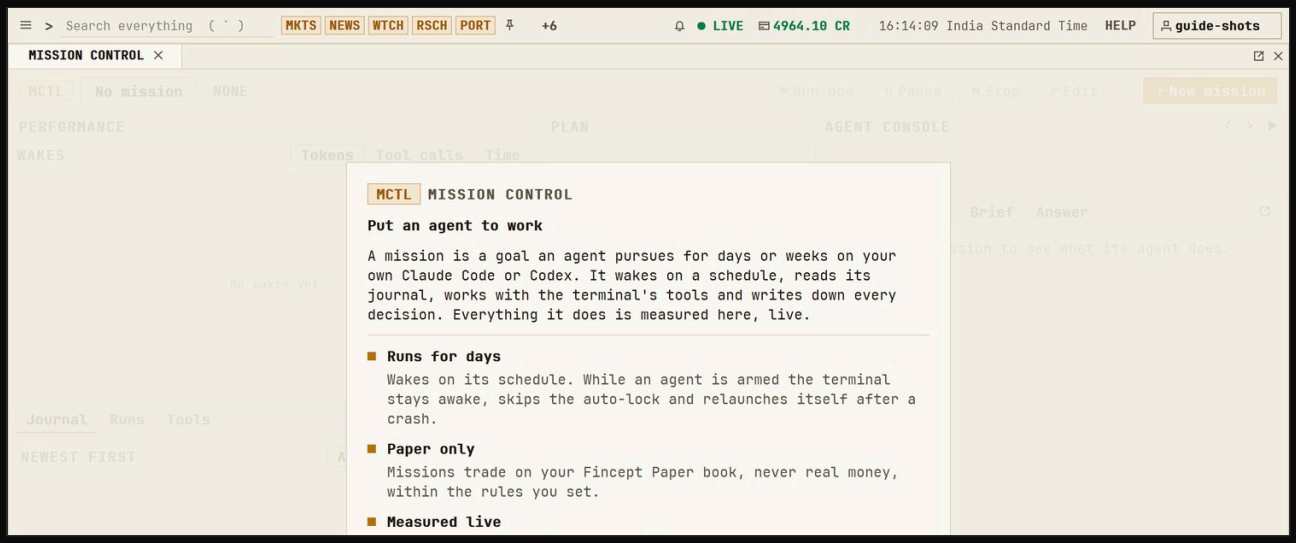
A workflow "finished without writing a report". Run it again. If it repeats, try a narrower input, or check **Runs** for the error.

An agent says it cannot use a tool. Check its **TOOLS** on the card, the **Tools** tab, and the **TERMINAL TOOLS** switches on **Create**. Also check that the tool is ticked in **Chapter 41, MCP Servers** p. 810 > **Tools**.

CHAPTER 39

Mission Control MCTL

Put an AI agent to work on a goal for days or weeks — on paper money only — and watch every wake, decision, trade, forecast and lesson it produces, live.



At a glance

Open it	• Type `MCTL` in the command line and press `Enter` • Type `missions` or `mission` in the command line and pick **Mission Control** • **Screens › Mission Control**
You need	• Signed in on any paid plan • Your own AI harness — Claude Code or Codex — installed, signed in and selected in Settings > AI harness
Best for	• A paper trading experiment that runs on its own for weeks • A research agent that watches a market and writes down what it sees • Checking what a scheduled AI task did and why
Time to learn	15 minutes
Related	**Chapter 42, Use Your Own AI** p. 819, **Chapter 38, Agent Studio** p. 739, **Chapter 37, AI Chat** p. 719, **Chapter 16, Equity Trading** p. 264, **Chapter 20, Alpha Arena** p. 371

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39.1 Screen tour

A **mission** is a goal an AI agent pursues for days or weeks: *"Grow a paper sleeve with weekly momentum picks from the NIFTY 500"*, *"Beat NIFTY 50 after fees over the horizon"*. The agent does not run all the time. It **wakes** — on a schedule, when it asks to, or when something it watches happens — reads its journal, works with the terminal's tools, writes down every decision, and goes back to sleep.

Three rules make missions safe to leave alone:

- **Paper only.** Missions trade on your Fincept Paper book, never real money, within the rules you set.
- **Your own AI.** Every wake runs on your own Claude Code or Codex (see **Chapter 42, Use Your Own AI** p. 819), so missions cost no Fincept credits — your own plan pays for the tokens.
- **Measured live.** Every run, tool call, token, failure and decision appears on this screen as it happens.

When no mission exists yet, the screen shows a welcome card over an empty layout:

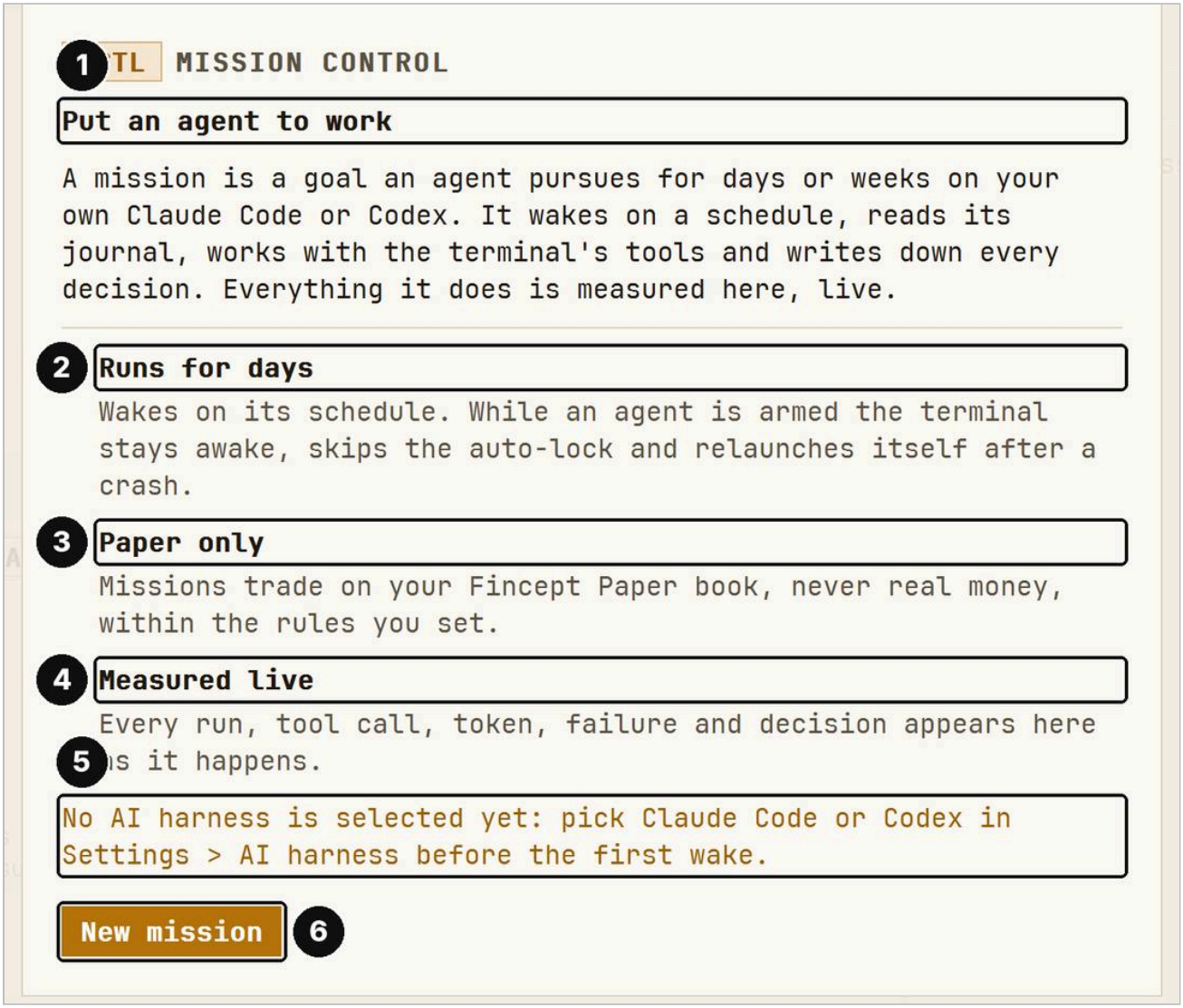


Figure 39.1 Mission Control before the first mission.

1. What a mission is, in one paragraph.
2. **Runs for days** — it wakes on its schedule; the terminal stays awake and restarts itself after a crash.
3. **Paper only** — it trades your Fincept Paper book, never real money.
4. **Measured live** — every run, tool call, token and decision appears here.
5. The harness line: which AI the wakes will run on, or what is missing.
6. **New mission** opens the form to start one.

The harness line on the card tells you what the wakes will run on:

It says	Meaning
No AI harness is selected yet: pick Claude Code or Codex in Settings > AI harness before the first wake.	Select a harness first (**Chapter 42, Use Your Own AI** p. 819).
Runs on Claude Code ***(· your sign-in)***	Ready.
… is installed but signed out: sign in to it, then start a mission.	Sign in to the harness.
… was not found on this machine.	Install the harness.

The screen with a mission

Once a mission (or any scheduled task from **Settings** › **AI harness**) exists, the card goes away and the screen shows **one agent at a time**:

Area	What it shows
Header	The mission picker (click it to switch between missions and tasks, or **New mission...**), the state chip, what it runs on, and the buttons **Run now**, **Pause**, **Stop**, **Edit**, **⋯** (more) and **New mission**.
Banner	The goal, *Measured by:* the success metric, the rules, and setup chips such as **PAPER · OWN BOOK**, **SCHEDULE · …** or **AGENT DECIDES WAKES · 5-120 MIN**, **DAY 3 OF 14**, **LEARNING · REVIEW**, **2 RULES**, **MAY TRADE** / **NO TRADING**.
Headline figures	Six tiles: **Equity**, **P&L**, **Hit rate**, **Wakes today**, **Tokens / wake**, **Tool success** (see the table below).
Performance	**BOOK EQUITY · EVERY MARK** — the paper book's value after every wake — and **Wakes** as bars, switchable between **Tokens**, **Tool calls** and **Time**. Click a bar to open that wake in the console.
Plan	The agent's current plan. *"No plan yet: the agent writes one on its first wake."* Every run starts from it; the journal keeps every version.
Agent console	One wake read like a terminal session (see below), with a message line to the agent.
Tabs	**Journal**, **Runs**, **Tools**, **Book**, **Forecasts**, **Triggers**, **Playbook**. On a narrow panel, **Overview** and **Console** join the tab strip.
Footer	Key hints (**F2** Pause / resume, **F5** Run now, **F6** Message, **F8** Stop, **F9** New mission) and the machine line: *n running · n armed · always on: idle / holding*.

States

The chip beside the mission's name:

State	Meaning
RUNNING	A wake is running now.
ARMED	Waiting for its next wake.
IDLE	Nothing planned.
PAUSED	Paused by you (it wakes again when resumed).
ALERT	The last wake raised an alert.
FAIL	The last wake failed, timed out or was interrupted.
DONE	The agent finished the mission (or its last day passed).

State	Meaning
ENDED	The mission was abandoned.

39.2 Quick start

1. Select your harness: **Settings** › **AI harness** → **Use** on **Claude Code** or **Codex** (see **Chapter 42, Use Your Own AI** p. 819).

2. Type `MCTL` in the command line and press **Enter**.

3. Click **New mission**. The **New mission** form opens.



Figure 39.2 The New mission form. It scrolls: the wake settings, budgets, learning and model are further down.

1. A short name.
2. The goal, in plain words.
3. How success is measured.
4. Rules, one per line.
5. Empty = the main paper book.
6. How it wakes.
7. **Start mission** starts it.
8. **Save draft** keeps the form for later; **Cancel** closes it.

4. Fill in **Name**, **Goal** and **Success metric**. Add a few **Constraints**, one per line (*max 5% of equity per position*, *no leverage*).

5. Leave **Wakes**, **Market**, the budgets and **Learning** as they are for a first mission, or see **§39.3 Set up a mission** p. 768.

6. Click **Start mission**. The agent wakes at once to write its plan. The screen switches to the mission and the **Agent console** follows the wake live.

Tip

Not ready to start? **Save draft** keeps the form without starting anything. Next time, **New mission** lists it under **Draft**.

39.3 Set up a mission

The **New mission** form, top to bottom. **Edit** opens the same form for a running mission (its button then reads **Save**).

Field	What to enter	Default
Draft	Pick a saved draft, or **None - a new mission**. **Delete draft** removes one.	None
Name	e.g. *Momentum sleeve*	—
Goal	e.g. *Grow a paper sleeve with weekly momentum picks from the NIFTY 500.*	—
Success metric	e.g. *Beat NIFTY 50 after fees over the horizon*	—
Constraints	One rule per line.	—
Paper book	Empty = the **main paper book**; or a name for a book of its own.	main paper book
Research only: it places no orders	Its wakes get no order tools at all, and no book is charted as its performance.	Off
Run a frozen control beside it	A twin that never changes its playbook, on its own paper book with the same cash — the difference shows what learning added.	Off
Last day / Open-ended	When the mission ends.	Two weeks from today
Wakes	**The agent decides (wakes when it needs to)** or **A fixed schedule** (see below).	The agent decides
Market	The market it trades: it sleeps while that market is closed (holidays included), checks in before each open, and ordinary events wait for the session.	**None** (a new mission takes the market its name or goal names, such as NSE or the S&P 500)
Max wakes / day	A budget: wakes past it are skipped until tomorrow. The last few are kept for urgent events and your own **Run now**.	24 (1–288)
Max tokens / day	A budget in thousands of fresh tokens (one wake takes about 25-95 k).	**No cap**
Learning	**You approve each playbook change**, **Trial: applied, rolled back if it scores worse**, or **Off: the playbook never changes**.	You approve
Skills	Skills from **Chapter 38, Agent Studio** p. 739 > Skills that every wake may load.	None
Sub-agents	Agents a wake may hand research to (market data only, never orders).	None
Run on	**Whichever harness is selected**, or a named harness.	Whichever is selected

Field	What to enter	Default
Model, Reasoning effort	What every wake uses.	The harness setting
Time limit / wake	1–240 minutes.	20 min
Notify me	**When it raises an alert or fails**, **After every wake**, **Never (watch Mission Control)**.	Alerts and failures

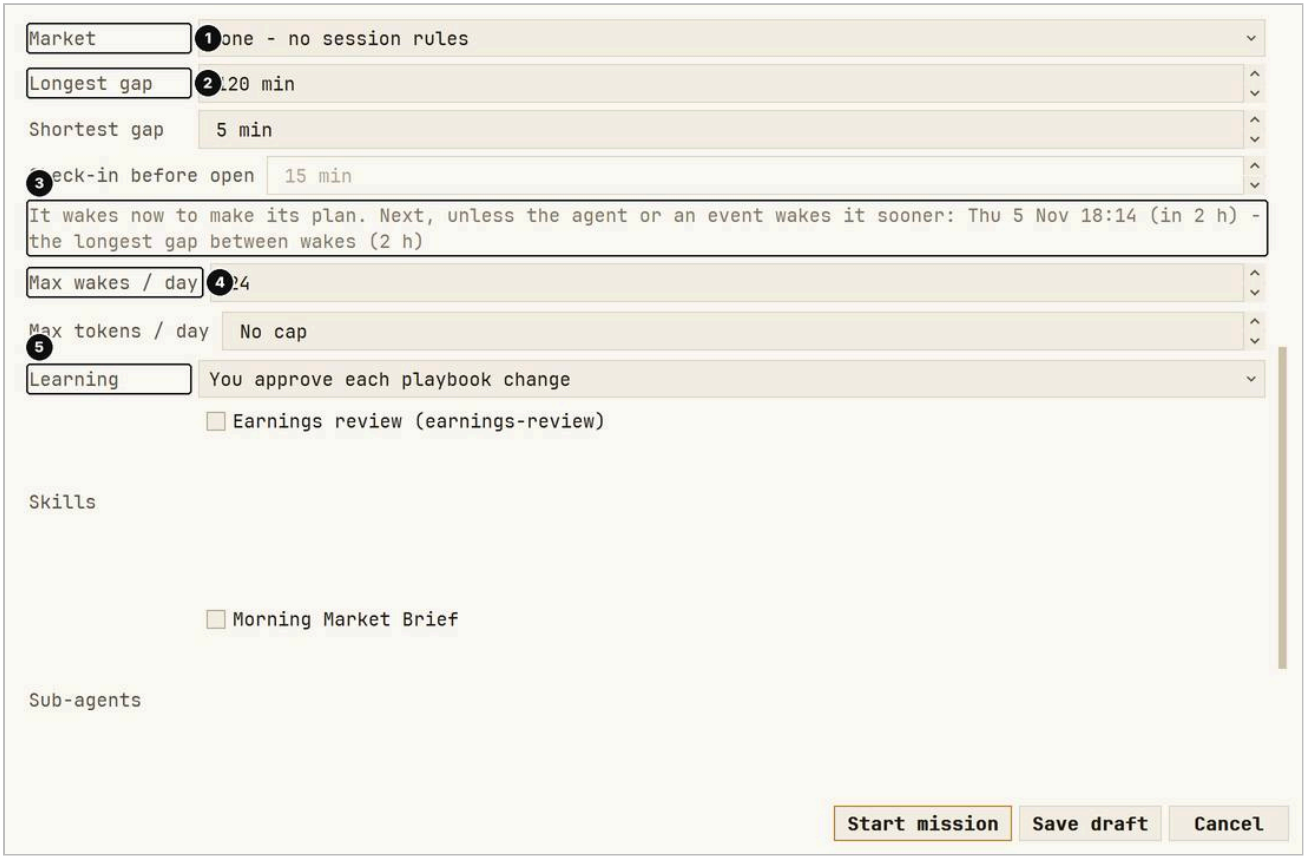


Figure 39.3 Further down the form — the wake settings for "The agent decides", with the preview line, and the daily budgets.

1. The market whose hours it follows.
2. The three gaps it is held to.
3. The preview: when it wakes next.
4. Daily budgets.
5. How lessons reach its playbook.

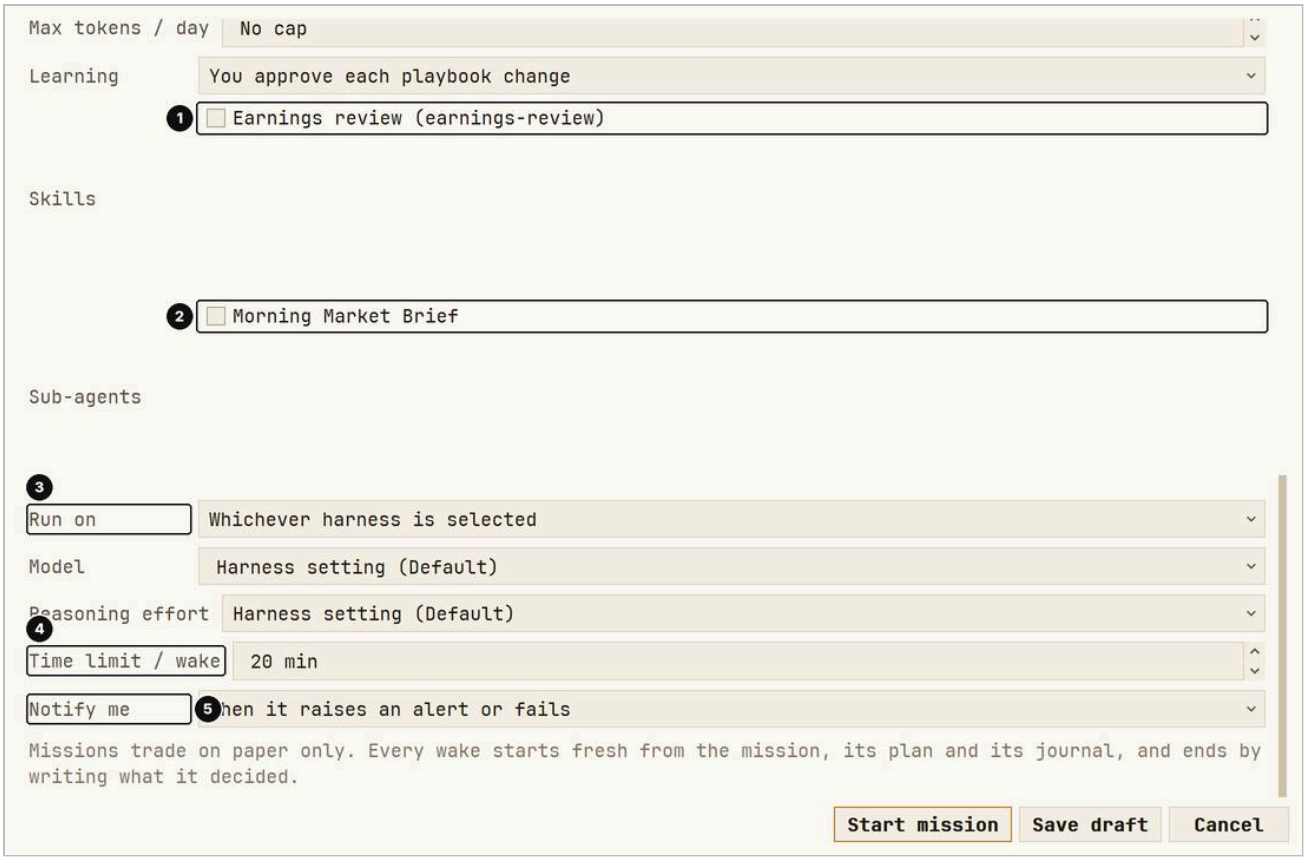


Figure 39.4 The end of the form — skills, sub-agents, the AI it runs on, the time limit and notifications.

1. **Skills** — tick the ones its wakes may load.
2. **Sub-agents** — agents it may hand research to.
3. Which AI runs the wakes, its model and effort.
4. How long one wake may take.
5. When you are told.

How a mission wakes

The agent decides (wakes when it needs to). Every wake ends with the agent choosing when it next needs to look and what to check then; its triggers wake it in between. The terminal holds it to three limits:

Setting	Meaning
Longest gap	A heartbeat: while the market is open the agent wakes at least this often, even if it asked for later. Default 120 min.
Shortest gap	The soonest next wake it may ask for. Anything faster is a trigger, not another wake. Default 5 min.
Check-in before open	A wake this many minutes before each open of the market, which nothing skips. Default 15 min; **None** = the first wake comes a longest gap after the open.

A fixed schedule. The agent wakes on the clock (it can still ask for one earlier wake): **Every N minutes** (default 60), **At a time of day** (time and days, for example `mon-fri`), or **Cron expression** (local time, for example `*/30 9-16 * * 1-5`). Tick **Only while the market is open** to skip nights, weekends and holidays.

Under the wake settings, a preview line says when the next wake will be (*"It wakes now to make its plan. Next, unless the agent or an event wakes it sooner: …"*) and warns when something does not add up — for example a goal that names NSE while **Market** is **None**, or a token budget too small for one wake.

Market choices: **None - no session rules**, **NSE / BSE - India equities and F&O**, **MCX - India commodities**, **NSE currency derivatives**, **NYSE / Nasdaq - US equities**, **LSE - London**, **Xetra - Frankfurt**, **Tokyo**, **Hong Kong**, **Singapore**, **Australia**, **Toronto**, **Crypto - 24x7**.

39.4 Watch a mission

Headline figures

Tile	What it shows
Equity	The mission's paper book, valued by the terminal after every wake (its *marks*); the small line is every mark.
P&L	Equity now against the first mark, and the deepest fall from a peak (*max drawdown*).
Hit rate	Forecasts the terminal graded from the daily close when their date came: the share the agent called right, and the **Brier score** — a measure of forecast quality where 0 is perfect and 0.25 is a coin toss.
Wakes today	Wakes today against the daily budget, and when the next one is.
Tokens / wake	Input and output tokens per finished wake, as the harness reported them, and how many were new (most input is the prompt cache re-reading the session). The bar is today's tokens against the daily cap.
Tool success	The share of the wakes' terminal tool calls that succeeded. The **Tools** tab shows which failed and why.

Agent console

The console shows one wake as a terminal session: its thinking, answers, tool calls and results. While a wake runs it follows it **LIVE** (*"calling … for …"*).

Control	What it does
‹ / ›	**The wake before** / **The wake after**.
►	**Follow the newest wake, live while it runs.**
Session	The wake as a terminal session.
Raw	Its transcript as the terminal wrote it.
Brief	What the wake was handed: the mission, the journal tail, the scorecard, the events.
Answer	Its final answer.
Folder button	**Open the folder with every wake's files.**
State chip	**LIVE** while a wake runs, then **ASLEEP** (waiting for its next wake), **PAUSED**, **IDLE**, or the shown wake's own status.
Message line	*"Message the agent: it reads it at its next wake (F6)"*. **Send** puts it into the journal; **Send + wake** sends it and wakes the agent now to act on it.

Tabs

Tab	Columns / content
Journal	Everything written, newest first, filtered by **All**, **Decisions**, **Forecasts**, **Plans**, **Notes**, **Terminal**. Entry chips: **ORDER**, **DECISION**, **FORECAST**, **PLAN**, **YOU**, **NOTE**, **WAKE**, **RESULT**, **BOOK**, **HELD** / **MISSED**, **NEXT WAKE**.
Runs	Every wake: **WHEN**, **WHY**, **STATUS**, **TIME**, **CALLS**, **FAILED**, **TOKENS**, **NEW**, **HEADLINE**. Click a wake to read it in the console.
Tools	Every terminal tool its wakes called, with calls, failures and the latest error (hover a tool).
Book	Its paper book: **Open positions** (SYMBOL, SIDE, QTY, ENTRY, LAST, P&L, P&L %), **Working orders** (PLACED, SYMBOL, SIDE, TYPE, QTY, PRICE, STATUS) and **Newest fills** (TIME, SYMBOL, SIDE, QTY, PRICE, P&L).
Forecasts	**MADE**, **CLAIM**, **P** (probability), **BY**, **CHECK**, **OUTCOME**, **BRIER**. A forecast with a check (symbol, above or below, level) is graded by the terminal from the daily close.
Triggers	*What wakes it besides its schedule*: **WATCHES**, **KIND**, **URGENCY**, **FIRED**, **LAST**; and the **Events they raised**. A mission keeps up to 20 triggers (price levels and moves, its own orders, news, economic releases, times).
Playbook	The rules the agent has learned, with every version and the proposals waiting for you (below).

39.5 Control a mission

Button	Key	What it does
Run now	F5	Wake it now (a paused mission is resumed first).
Pause / Resume	F2	Pause or resume its wakes.
Stop	F8	Stop the wake in flight.
Stop every run	Shift + F8	Stop every run in flight (in the ⋯ menu; asks first; schedules stay armed).
Edit	—	Change its goal, rules, budgets, wake policy or model.
New mission	F9	Start another mission.
Message	F6	Jump to the console's message line.

F5 and F9

F5 and F9 are also terminal keys (**Refresh Screen** and **Toggle Chat**, which opens AI Chat). While the focus is inside Mission Control the two meanings clash and the key does nothing. Click **Run now** or **New mission** instead, or give the terminal action another key in **Settings** › **Keybindings** (**§53.4 Reference** p. 986).

The ⋯ menu also holds **Mission data and clean-up...**, **Reset mission...**, **Delete mission...** and **AI harness settings**.

Mission data and clean-up

Mission data: ... (the window carries the mission's name) lists everything the mission keeps on this computer (journal entries, wakes and their files, triggers, memory, playbook, folder, paper book, frozen control) and offers:

Action	What it does
Clean up run files (*keep the newest n wakes*)	Deletes the transcripts, raw streams, traces, briefs and answers of older finished wakes. The run list, journal and figures stay.
Reset mission	Starts it over: its setup stays; its journal, plan, triggers, events, memory, playbook and wakes are deleted. Not while a wake is running.
Delete mission	Deletes the mission and everything above. Tick **Also delete its own paper book** to delete a book only this mission trades; the main book is never deleted here.
Remove leftovers	Run log rows and wake files of missions and tasks deleted before.

Each asks for confirmation; deleting cannot be undone.

39.6 Review what the agent learns

After 5 graded forecasts or 20 wakes, the terminal asks the agent to reflect. It may propose **one** change to its playbook — add, replace or remove one rule — with why, what it expects and the evidence. What happens next depends on **Learning**:

Learning	What happens
You approve each playbook change	The proposal waits on the **Playbook** tab (**Waiting for you**). **Approve** applies it, on trial; **Reject** drops it.
Trial: applied, rolled back if it scores worse	Applied at once; judged over the next 8 graded forecasts and rolled back automatically if they score worse.
Off: the playbook never changes	The agent proposes nothing.

Proposal states: **PENDING**, **ON TRIAL**, **KEPT**, **ROLLED BACK**, **REJECTED**. **Roll back last change** undoes the newest applied change (the old text becomes a new version). Approving and rolling back are always yours: the AI can never press them.

39.7 Reference

Header buttons

Control	Tooltip
Mission picker	*The mission this tab shows: pick another*
Run now	*Wake it now (F5)*
Pause	*Pause or resume its wakes (F2)*
Stop	*Stop the wake in flight (F8)*
Edit	*Change its goal, rules, budgets, wake policy or model*
⋯	*Mission data: clean up, reset, delete* — menu: **Mission data and clean-up...**, **Reset mission...**, **Delete mission...**, **Stop every run (Shift+F8)**, **AI harness settings**

Control	Tooltip
New mission	*Start a long-running mission (F9)*

Banner chips

Chip	Meaning
PAPER · MAIN BOOK / PAPER · OWN BOOK	Trades the main Fincept Paper book / its own paper book.
SCHEDULE · …	A fixed schedule.
AGENT DECIDES WAKES · a-b MIN	Agent-driven wakes between the shortest and longest gap.
DAY n OF m / OPEN-ENDED · DAY n / HORIZON ENDED	Where it is in its horizon.
LEARNING · …	The learning gate.
n RULE(S)	Its constraints.
FROZEN CONTROL	The twin that never learns.
TASK · …	A plain scheduled task (not a mission).
MAY TRADE / NO TRADING	Whether it may place paper orders.
… · READ-ONLY	Another of your devices runs it; **Run on this device instead** takes it over.

39.8 For advanced users

- **One wake, one fresh session.** Every wake starts from a brief: the goal, metric, rules, plan, the tail of the journal, the scorecard and what woke it. Your unanswered messages come first. The agent ends each wake by writing what it decided.
- **The wake loop.** Orient → plan → act → verify → record. Before a wake may end, the terminal checks that it wrote an entry, has a plan, re-read the book after any order, and (agent mode) chose its next wake; if not, it is sent back once.
- **Orders need a thesis.** In a mission, a new paper position is refused unless the order says *why*, the *case against* and what would *invalidate* it. Every order is journaled as a **DECISION** with an **ORDER** chip.
- **Its orders are tagged.** On the shared main book, the mission sees only its own fills, and it may not close *all* positions (yours are there too). A book of its own avoids the mix.
- **Recovery.** If the terminal closes in the middle of a wake, a recovery wake follows a minute after it restarts, and is told to check the book before placing anything.
- **Plan limits.** If your Claude or ChatGPT plan hits a usage limit, wakes wait until the reset.
- **Safety net.** In an unattended run the terminal refuses the 4th identical tool call, the 81st call and calls after 8 failures in a row.
- **Files.** Everything a mission keeps is a file on this computer (see **Mission data**). Missions are local: another computer of yours shows it read-only.

Do it with AI

In AI chat: *"Show me Mission Control for my momentum mission and summarise its last three wakes."* The AI can read every panel, switch missions, tabs and wakes, and press **Pause** or **Stop**. **Run now**, **Resume**, **New mission** and **Reject** ask you first. It can never write a message to the agent, approve or roll back a playbook change, or move a mission to this device.

39.9 Troubleshooting

"No AI harness is selected yet". Missions run only on your own Claude Code or Codex. Pick one in `Settings › AI harness`.

The mission never wakes. Check the state chip: **PAUSED** → **Resume** (F2); **IDLE** → nothing is planned, press **Run now**. Check **Market**: a mission sleeps while its market is closed. Check **Wakes today** against **Max wakes / day**, and **Tokens / wake** against **Max tokens / day**.

Wakes stopped overnight. Missions run only while the terminal runs on this computer. Keep **Always on** ticked in `Settings › AI harness` and do not quit from the tray.

FAIL after every wake. Open the wake in the console (**Raw** and **Answer**) and the **Tools** tab. A signed-out harness or a plan limit are the usual causes.

The mission is read-only here. It runs on another of your computers. **Run on this device instead** moves it here.

CHAPTER 40

Node Editor NODE

Build visual workflows by joining boxes called nodes on a canvas — fetch prices, test them, reshape the data, alert yourself, write files, ask an AI agent or place paper orders — then run them once, or on a schedule while the terminal is open.

At a glance

Open it	• Type `NODE` in the command line and press **Enter** (also `nodes` or `workflow`) • **Screens** › **AI & Quant** › **Node Editor**
You need	• Signed in on any paid plan • Credits only for the charged nodes (see Charged nodes)
Best for	• Automating a routine check: prices, news, your portfolio • One alert when something changes, not a screen to watch
Time to learn	30 minutes
Related	**Chapter 37, AI Chat** p. 719

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40.1 Screen tour

A **workflow** is a small program you draw instead of write. Each box on the canvas is a **node**: one job, such as "get quotes", "keep the items that moved 1%" or "show an alert". Lines called **connections** carry each node's result to the next node. When you run the workflow, the nodes run from left to right along the connections.

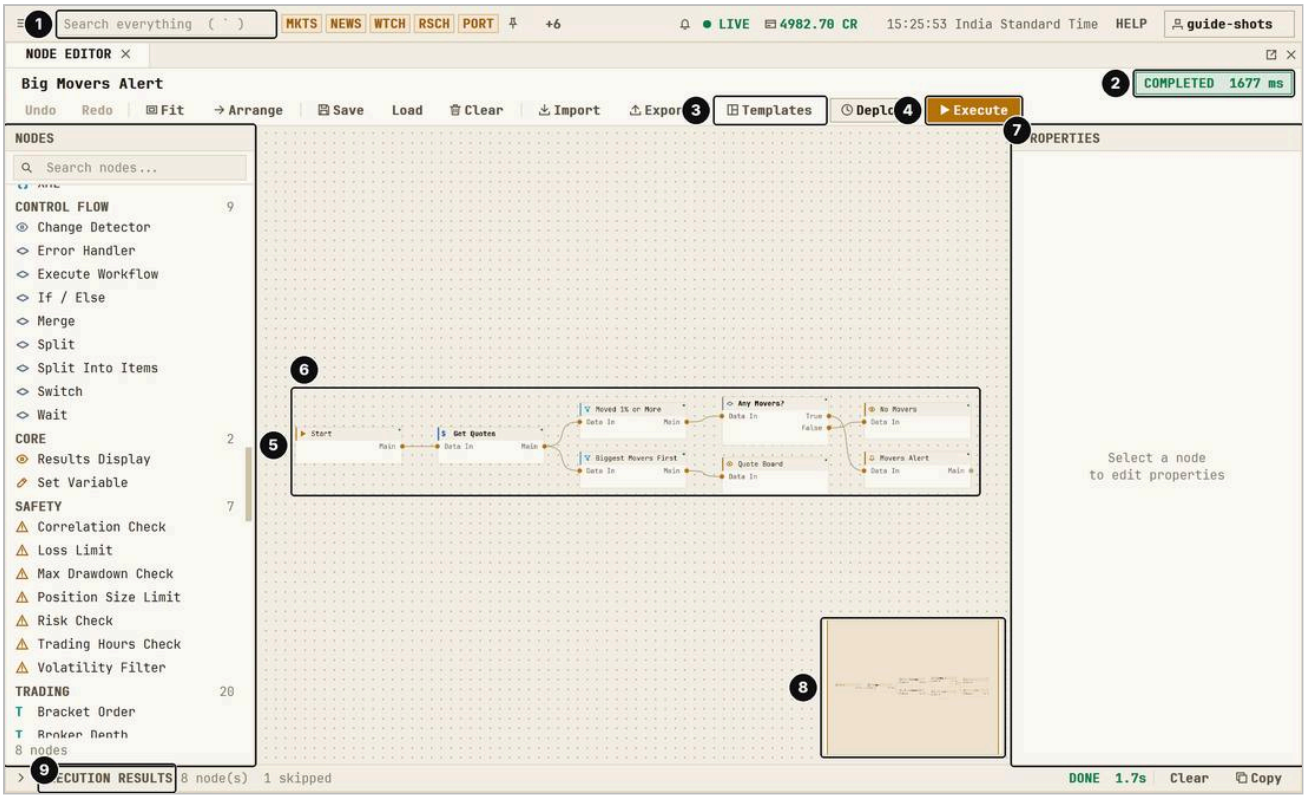


Figure 40.1 The Node Editor with the example workflow "Big Movers Alert" after a run. No node is selected, so the properties panel is empty.

1. **Workflow name.** Click it to rename the workflow.
2. **Status badge**: DRAFT, SAVED, RUNNING, COMPLETED, FAILED, STOPPED or DEPLOYED, with details.
3. **The toolbar**: edit, save, share, start from a template, deploy and run.
4. **Execute** runs the workflow once. While it runs it turns into **Stop**.
5. **The node palette**: every node, grouped in categories. Drag one onto the canvas.
6. **The canvas**: your nodes and the connections between them.
7. **Properties**: the settings of the node you selected.
8. **Minimap**: the whole graph in small. The frame shows what the canvas shows now.
9. **Execution results**: one card per node after a run. Click the arrow to open or close it.

The screen has five areas:

- **The toolbar** (top) — the workflow's name and status badge, then **Undo**, **Redo**, **Fit**, **Arrange**, **Save**, **Load**, **Clear**, **Import**, **Export**, **Templates**, **Deploy** and **Execute**. On a narrow window the buttons move to a second row.
- **The node palette** (left) — the list of nodes you can add, under the title **NODES**, with a search box. The line at the bottom counts the nodes on the canvas.
- **The canvas** (middle) — a dotted work area. An empty canvas says **Drag nodes from the palette to begin** and **or right-click for quick add**.
- **The properties panel** (right) — under **PROPERTIES**, the settings of the selected node. With nothing selected it says **Select a node to edit properties**.
- **The execution results drawer** (bottom) — appears after the first run, with one result card per node.

A node up close

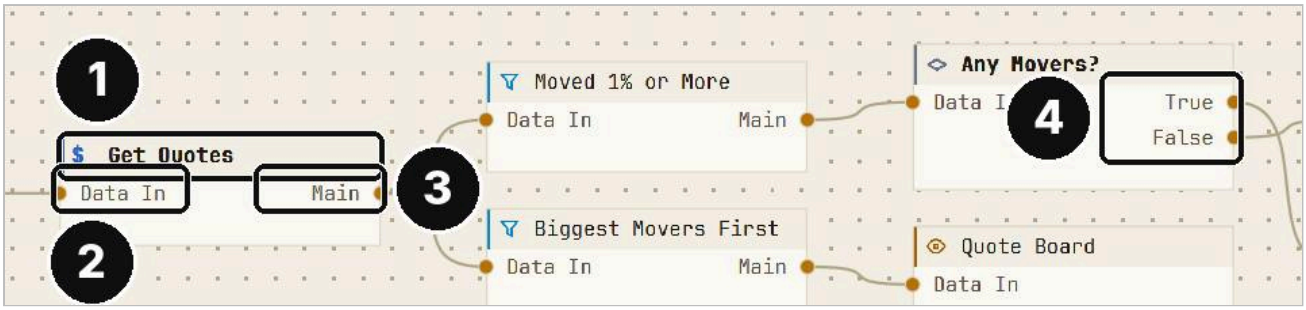


Figure 40.2 Part of the example workflow. Each node has a header, input ports on the left and output ports on the right.

1. **Header**: the category's colour mark, an icon and the node's name.
2. **Input port** (left edge) with its label, here **Data In**.
3. **Output port** (right edge) with its label, here **Main**.
4. An **If / Else** node has two outputs: **True** and **False**.

- The **header** carries a coloured mark for the node's category (every category has its own colour), an icon, and the name you gave the node.
- **Ports** are the small dots on the edges. Inputs are on the left, outputs on the right. A connection always runs from an output port to an input port.
- After a run, a small square at the top-right corner of each node shows how it went: amber while it runs, green when it finished, red when it failed.
- A node outlined in red failed in the last run, or is one this version of the terminal cannot run (for example a node from a newer version in an imported file). A greyed-out node is **disabled**: it is skipped.
- A node that works for a long time (a backtest, for example) shows a grey band at the bottom with its progress, such as *fetching bars 12/40*.

40.2 Quick start

The fastest way to see a workflow work is to open a ready-made one. This runs the **Quote Board** template: live quotes for seven large US companies, sorted by the day's move.

1. Type `NODE` in the command line at the top and press **Enter**.
2. Click **Templates** in the toolbar. The **Workflow Gallery** opens.

3 Type `quote board` in its search box, then click **Open template**.

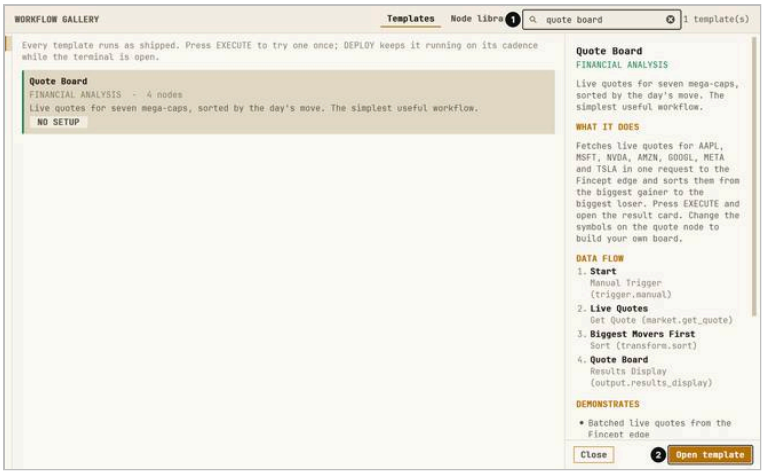


Figure 40.3 The Workflow Gallery after a search. The detail pane on the right says what the template does.

1. Type a few words to find a template.
2. **Open template** puts it on the canvas.

4 If the canvas already holds a workflow, the terminal asks **Open Template** — click **Yes.** (Save your own workflow first if you want to keep it.)

5 The template's four nodes appear: **Start**, **Live Quotes**, **Biggest Movers First** and **Quote Board.** A message at the bottom of the window says *Template "Quote Board" is on the canvas. Press EXECUTE to run it once.*



Figure 40.4 The Quote Board template on the canvas.

1. Click **Execute**.

6 Click **Execute.** The nodes light up one by one, and the badge next to the name changes to **COMPLETED** with the time the run took.

7 Read the **EXECUTION RESULTS** drawer at the bottom: the **Quote Board** card lists the seven stocks, the biggest gainer first.



age_seconds	as_of	ask	bid	change	change_pct	change_percent	currency	delay_s	exchange	high	low	market_open	nam
48173	2026-11-04T21:00:01Z	557.77	540.03	34.81001	6.6815	6.6815	USD	900	NasdaqGS	559.150024	542.299988	false	Mic
48173	2026-11-04T21:00:01Z	270	267.74	15.339998	6.1191	6.1191	USD	900	NasdaqGS	271.48999	263.850006	false	Ama
48173	2026-11-04T21:00:01Z	352.26	349.03	17.610006	5.3058	5.3058	USD	900	NasdaqGS	354.5	340.98999	false	App
48173	2026-11-04T21:00:01Z	292.97	289.03	8.900001	3.1782	3.1782	USD	900	NasdaqGS	296.48999	283.399994	false	Alp
48174	2026-11-04T21:00:00Z	639.3	630.61	8.969971	1.4444	1.4444	USD	900	NasdaqGS	643.090027	624.5	false	Met
48173	2026-11-04T21:00:01Z	213.69	193.24	-6.560002	-3.1738	-3.1738	USD	900	NasdaqGS	206.789993	199.679993	false	NVI
48173	2026-11-04T21:00:01Z	386.08	386.5	-13.31	-3.34	-3.34	USD	900	NasdaqGS	392.040009	375.5	false	Tes

Figure 40.5 After the run — a result card for every node, here the sorted quotes.

1. The drawer opens by itself after a run.
2. **DONE** and how long the whole run took.

Tip

To make the board your own, click the **Live Quotes** node and change **Symbols** in the properties panel, for example to `RELIANCE.NS, TCS.NS, INFY.NS`. Then click **Execute** again.

40.3 Build a workflow step by step

This section builds the example used in this chapter's pictures, **Big Movers Alert**. It reads quotes for seven stocks, keeps the ones that moved 1% or more today, and shows an alert that names them — or, on a quiet day, notes that nothing moved.

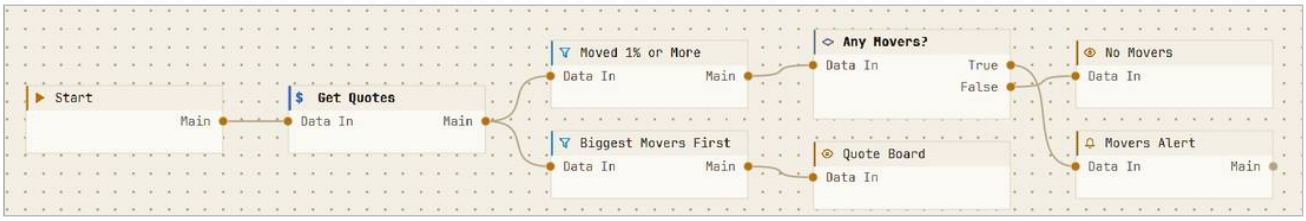


Figure 40.6 The finished example. Get Quotes feeds two branches — a sorted board, and a filter that decides whether to alert.

1 Start with an empty canvas. The very first time, the screen opens empty. Later it reopens on your last workflow — see the box below for how to start a new one without losing it.

2 Add the start: find **Manual Trigger** under **TRIGGERS** in the palette and drag it onto the canvas. (A double-click on a palette entry also adds it, in the middle of the view.)

3 Add the data: type `get quote` in **Search nodes...** and drag **Get Quote** (under **MARKET DATA**) next to the trigger. The **Get Quote** under **TRADING** is the broker version.

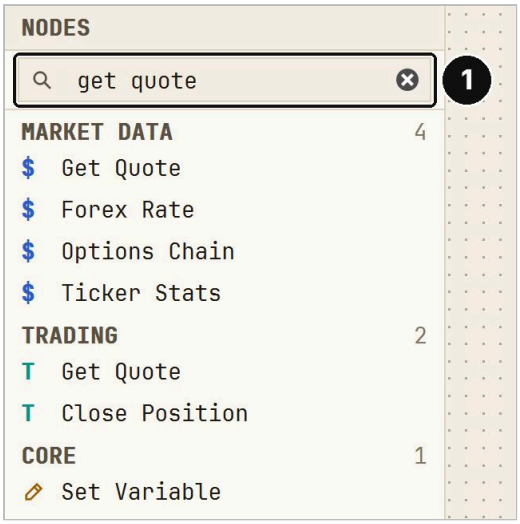


Figure 40.7 The palette search keeps only the nodes whose name, category or description match every word.

1 Type here. **Enter** adds the best match, **Down** moves into the list, **Esc** clears.

4 Connect them: press on the **Main** output dot on the right of the trigger and drag to the **Data In** dot on the left of **Get Quote**. Let go on the dot. A curved line joins the two.

5 Click **Get Quote**. In the properties panel, set **Symbols** to `AAPL, MSFT, NVDA, AMZN, GOOGL, META, TSLA`, and change **Name** to `Get Quotes`.

6 Add a **Filter** (category **DATA TRANSFORM**), connect **Get Quotes** to it, name it `Moved 1% or More` and set **Condition** to `abs(change_percent) >= 1`. The filter keeps only the quotes whose day change is at least 1% up or down, and adds the counts **matched** and **total**.

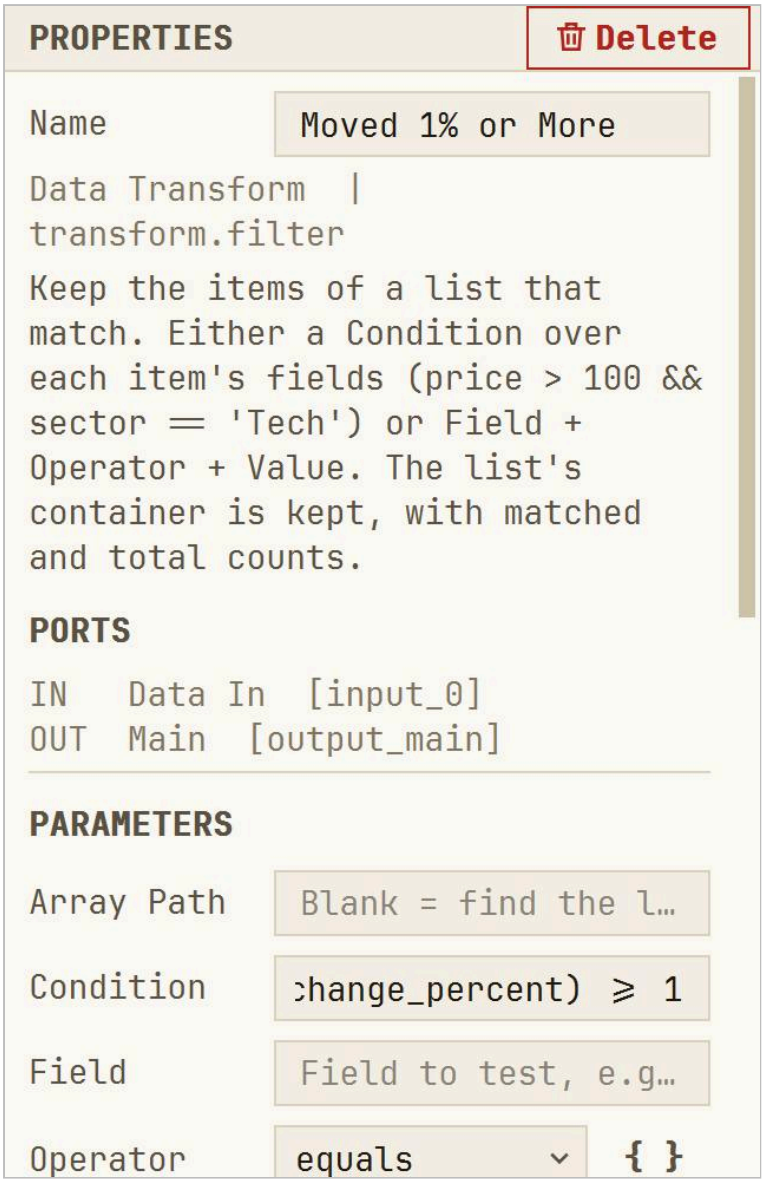


Figure 40.8 The Filter node — a condition that is tested on every item of the list.

7 Add an **If / Else** (category **CONTROL FLOW**), connect the filter to it, name it `Any Movers?` and set **Condition** to `matched > 0`. If / Else has two outputs: **True** and **False**.

8 Add an **In-App Alert** (category **NOTIFICATIONS**) and connect the **True** output of **Any Movers?** to it. Name it `Movers Alert`, set **Title** to `Big movers today` and **Message** to:

```
{{matched}} of {{total}} stocks moved 1% or more: {{join(pluck(quotes, 'symbol'), ', ')}}
```

The parts in double braces are filled in when the node runs (see **§40.7 Use values from other nodes** p. 787).

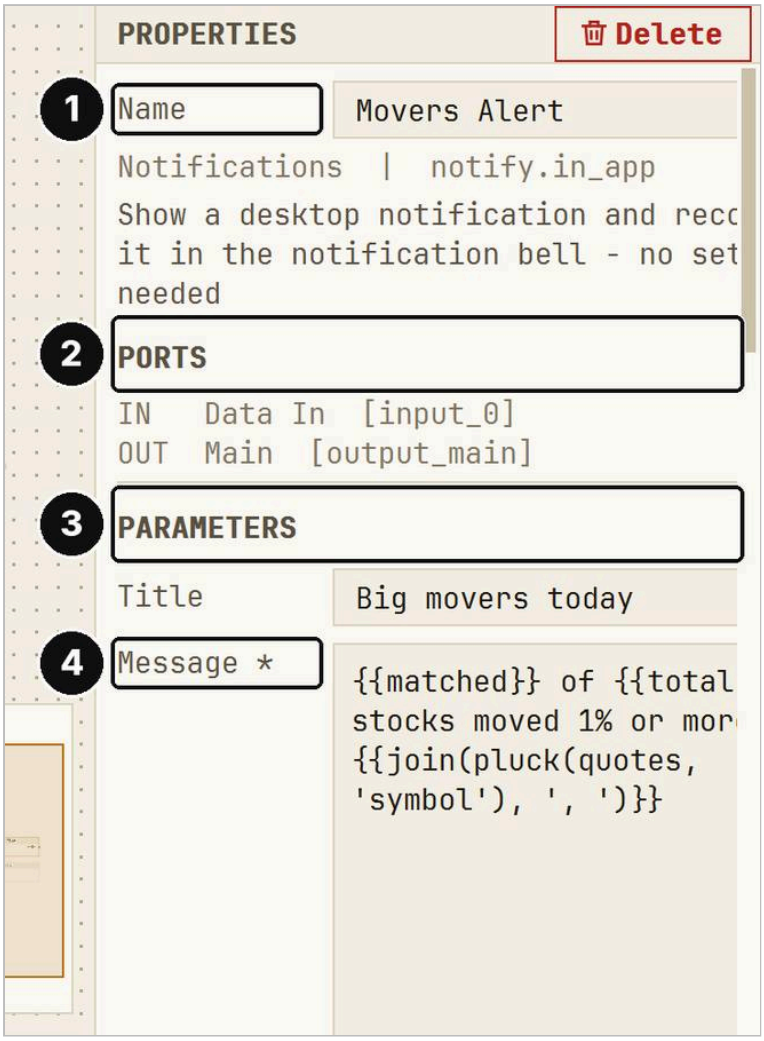


Figure 40.9 The In-App Alert node in the properties panel. Its Message mixes text with values from the nodes before it.

1. **Name**: the label on the canvas. Other nodes refer to this node by it.
2. **PORTS**: the node's inputs and outputs.
3. **PARAMETERS**: what this node does.
4. `*` = required. Text with `{{ }}` values.

9 Add a **Results Display** (category **CORE**), connect the **False** output to it and set its **Label** to `Nothing moved 1% or more`.

10 Click **Arrange** to line the nodes up in the order they run, then **Fit** to frame them.

11 Click the name **Untitled workflow** at the top left, type `Big Movers Alert`, and click **Save**. The badge changes to **SAVED**.

12 Click **Execute**. When a stock moved 1% or more, a desktop notification appears and the alert is also kept under the bell in the top bar.

Starting a second workflow

The Node Editor has no **New** button, and **Clear** only empties the canvas: you are still editing the same saved workflow, so the next save (or the 30-second auto-save) replaces it with what you build. To keep the current workflow and start another, open any template from **Templates** first — a template is always a new, unsaved workflow — then **Clear** it and build.

Note

You do not have to build every workflow by hand. Ask the AI in **Chapter 37, AI Chat** p. 719 — for example *"In the Node Editor, build a workflow that alerts me when any of AAPL, MSFT and NVDA moves 2% today"* — and it adds and connects the nodes for you. See **§40.17 Let the AI build a workflow** p. 798.

40.4 Add nodes

There are five ways to put a node on the canvas:

How	What happens
Drag an entry from the palette onto the canvas	The node lands where you drop it.
Double-click a palette entry, or select it and press Enter	The node lands in the middle of the view.
Type in Search nodes... and press Enter	The best match is added; the search box keeps the keyboard, so you can type the next one.
Right-click an empty part of the canvas	A quick-add menu lists every category; pick a node from its submenu.
Templates > Node library > Add to canvas	The node you picked in the gallery is added in the middle of the view.

The palette lists the categories in the order a workflow is usually built: **TRIGGERS** first, then data, analysis, data reshaping, control flow, safety and trading, AI, outputs, and **UTILITIES** last (the same order as the tables in **§40.18 Reference** p. 798). Inside a category the nodes are in alphabetical order. The number next to each category name is how many nodes it holds. Hover over an entry to see what the node does and what it connects to. The last six nodes you added appear at the top under **RECENT** (this list follows your account to your other computers). While you search, the category holding the best match moves to the top, so Enter adds what you see first.

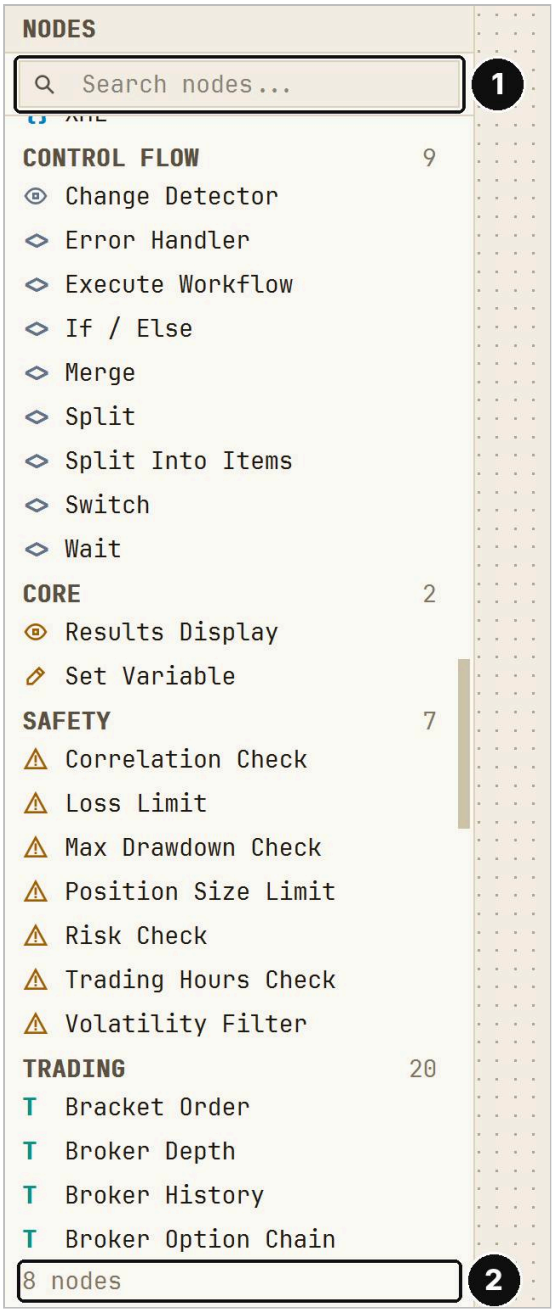


Figure 40.10 The node palette, scrolled down to the Control Flow, Core, Safety and Trading categories.

1. Search by name, category or description.
2. How many nodes the canvas holds (with your plan's limit, when it has one).

Plans

The number of nodes one workflow may hold depends on your plan: 10 on Exclusive, 50 on Exclusive+, no limit on Exclusive Pro. The line at the bottom of the palette shows how many you have used. When you reach the limit, a drop, a paste or a template opens the upgrade sheet instead of adding nodes.

40.5 Connect nodes

A connection carries a node's result to the next node.

1. Press on an **output port** (a dot on the right edge of a node).
2. Drag. A line follows the pointer.
3. Let go on an **input port** (a dot on the left edge of another node).

- One output can feed many nodes. The example's **Get Quotes** feeds both **Biggest Movers First** and **Moved 1% or More**: both branches get the same quotes.
- A node with several outputs (for example **If / Else**: True / False; **Change Detector**: Changed / No Change; **Error Handler**: Success / Error; every **SAFETY** node: a pass and a fail output) sends its data down one of them on each run. **Switch** sends each item of a list to the case it matches. A branch that receives nothing is **skipped**. The full list is in **§40.18 Reference** p. 798 (*Nodes with more than one input or output*).
- To move a connection, press on the input end of it and drag it to another input.
- To delete a connection, right-click it and choose **Delete Connection**, or click it and press `Delete`.

When a connection is not allowed, the line disappears and a message at the bottom of the window says why:

Message	Meaning
Drop the connection on a port.	You let go of the line on empty canvas.
Connect an output port to an input port.	Both ends were outputs, or both inputs.
A node cannot be connected to itself.	—
X outputs Y data, which the Z input does not accept.	The two ports carry different kinds of data (for example economic data into a price input).
Those two ports are already connected.	—
That would make a loop — X already runs after Y.	A workflow always runs forward; it cannot go back to an earlier node.

40.6 Set a node's parameters

Click a node to show it in the properties panel. Everything you change applies at once and can be undone with **Undo** (`Ctrl` + `Z`).

Part of the panel	What it holds
Delete (red, top right)	Deletes the node and its connections.
Name	The label on the canvas. Names should be unique: other nodes read a node's result by its name.
Category and type	For example *Core* | *output.results_display*, then a line on what the node does.
PORTS	**IN** and **OUT** lines: each port's label and id. A `*` marks an input that must be connected.
PARAMETERS	The node's own settings. A field marked as required must not be empty.
INPUT FIELDS	After a run: the values the nodes before this one produced. Click one to insert it into a field.
SETTINGS	**Disabled**, **Continue on Fail**, **Retry on Fail** and **Max tries** (see **§40.10 When a node fails** p. 790).
EXPRESSIONS	Click to open a short guide to the `{{ }}` syntax.

Part of the panel	What it holds
OUTPUT	After a run: this node's result, the same view as its card in the results drawer.

Parameter fields come in several kinds:

Kind	How you fill it
Text, number, on/off	Type, use the arrows, or tick the box.
Choice	Pick from the list (for example **Severity**: info, success, warning, error).
Symbol / Symbols	Type a ticker or company name and pick it from the list. **Symbols** takes several, separated by commas.
Condition	An expression such as `price > 100 && symbol == 'AAPL'` (see below).
Template, code, JSON	A larger box. JSON is checked as you type: *Invalid JSON: … Not saved yet.*
Cron	A schedule in five fields: minute, hour, day of month, month, day of week. The line under it says when it next fires (*Next run: …*), **This schedule never fires.** or *Invalid cron: ….* Preset buttons fill common schedules: **Every 5 min**, **Hourly**, **Weekdays 9:30**, **Weekdays 16:15**, **Daily 08:00**.
Pickers	Lists filled from your account: agents, agent teams, saved workflows, AI tools, your data sources, portfolios, paper portfolios, watchlists. A refresh button next to the agent, tool and connection lists reloads them.
File	A file from **Chapter 47, File Manager** p. 882 (the **Spreadsheet** node). **Import** copies a file from your computer into File Manager first.
Secret	A masked field with an eye button to show it (see **§40.15 Secret parameters** p. 797).

Most fields have a small switch, **Use an expression instead of a fixed value**, that turns the field into an expression box.

40.7 Use values from other nodes

Any text field can take values from the nodes that ran before it. Write them between double braces: `{{ }}`. They are filled in each time the node runs.

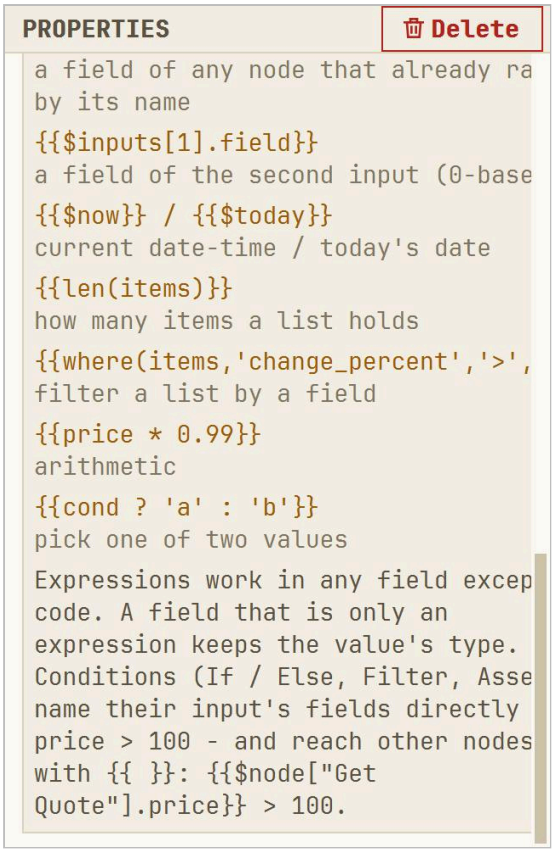


Figure 40.11 The EXPRESSIONS guide at the foot of the properties panel. Click EXPRESSIONS to open or close it.

Write	Means
`{{field}}`	A field of the first input, for example `{{price}}`.
`{{$node["Get Quotes"].price}}`	A field of any node that already ran, by its name.
`{{$inputs[1].field}}`	A field of the second input (counting starts at 0).
`{{$now}}` / `{{$today}}`	The current date and time / today's date.
`{{len(items)}}`	How many items a list holds.
`{{where(items,'change_percent','>',2)}}`	The items of a list whose field passes a test.
`{{price * 0.99}}`	Arithmetic.
`{{cond ? 'a' : 'b'}}`	One of two values.

Conditions (in If / Else, Filter, Assert) name the input's fields directly, without braces: `price > 100`. To reach another node inside a condition, use braces: `{{$node["Get Quote"].price}} > 100`.

A field that is *only* an expression keeps the value's type (a number stays a number). A field that mixes text and expressions becomes text. A missing field becomes empty, never the literal `{{…}}`. Every function and operator is listed in **§40.18 Reference** p. 798 (*Expressions*).

After one run, the **INPUT FIELDS** section of the properties panel lists every value the earlier nodes produced. Click into a field, then click a value: the right `{{ }}` reference is inserted for you.

40.8 Run a workflow

1. Click **Execute** (or right-click a node and choose **Execute From Here** to run from that node on, using the results of the nodes before it).

2. Before anything runs, the terminal checks the workflow. If something would stop the run — a required field left empty, a condition that does not parse, a required input with nothing connected, a node not connected to anything — a **Workflow Not Ready** box lists the problems. Click **Cancel** to fix them, or **Run Anyway**.

3. While it runs, **Execute** reads **Stop** (click it to stop the run), the badge reads **RUNNING**, each node's corner square turns amber and then green, and the connections move.

4. When it ends, the badge reads **COMPLETED** and the run time, or **FAILED** and the first error, or **STOPPED**.

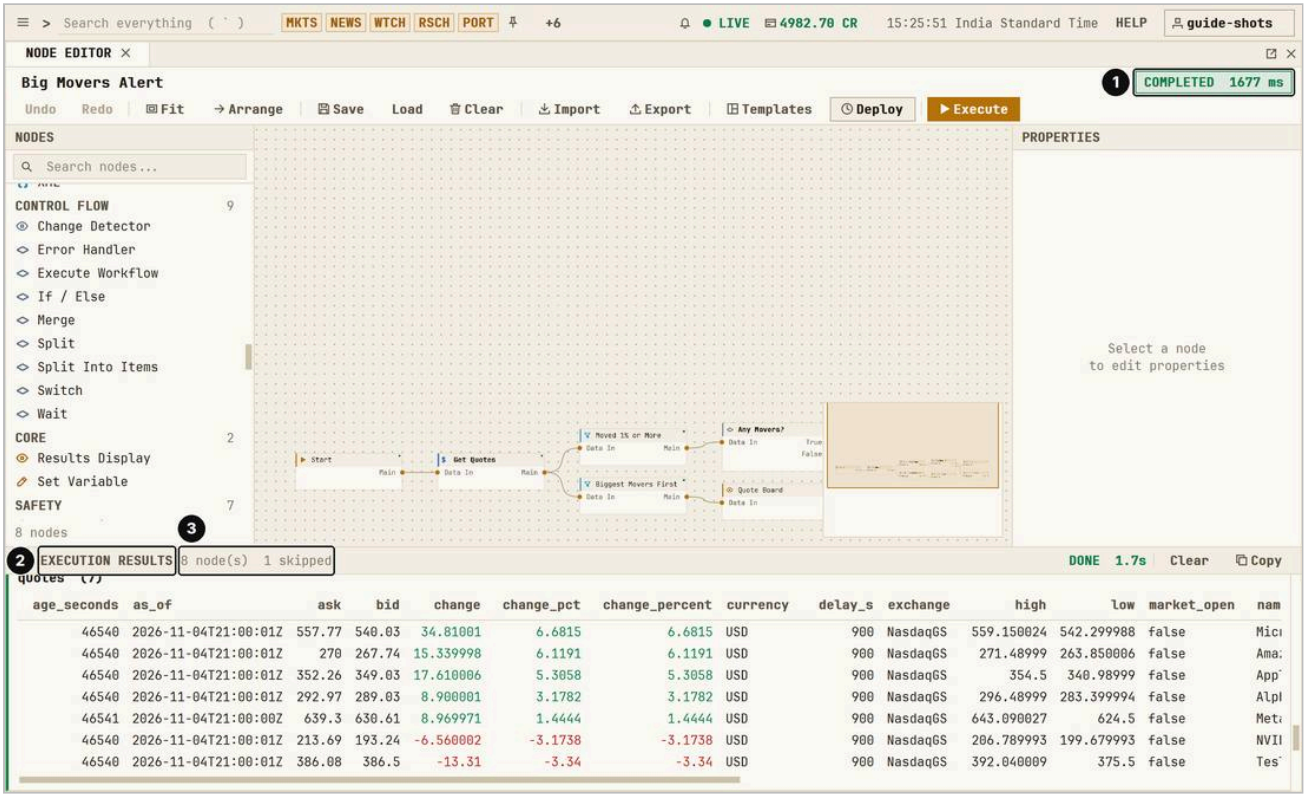


Figure 40.12 Right after a run — the badge, the coloured corner squares on the nodes and the results drawer.

1. The run finished. Next to it: how long it took (here 1677 ms).
2. One card per node.
3. Counts: nodes, errors and skipped nodes.

Good to know:

- **One run at a time.** Only one workflow runs at once in the terminal, whether started here, in another window or by the AI. Pressing **Execute** while another runs says so (*Another workflow is running…*) and starts nothing; press it again when the other run has ended.
- **Time limits.** A node that does not answer in 10 minutes fails (an AI agent marked **Long-Running Task**: 60 minutes; an **AI Team**: 30 minutes; a **Wait** or **Delay**: at most 24 hours).
- **Execute** is always yours to press. When the AI presses it for you, you are asked first.

40.9 Read the results



age_seconds	as_of	ask	bid	change	change_pct	change_percent	currency	delay_s	exchange	high	low	market_open	nam
46540	2026-11-04T21:00:01Z	557.77	540.03	34.81001	6.6815	6.6815	USD	900	NasdaqGS	559.150024	542.299988	false	Mic
46540	2026-11-04T21:00:01Z	270	267.74	15.339998	6.1191	6.1191	USD	900	NasdaqGS	271.48999	263.850006	false	Ama
46540	2026-11-04T21:00:01Z	352.26	349.03	17.610006	5.3058	5.3058	USD	900	NasdaqGS	354.5	340.98999	false	App
46540	2026-11-04T21:00:01Z	292.97	289.03	8.900001	3.1782	3.1782	USD	900	NasdaqGS	296.48999	283.399994	false	Alp
46541	2026-11-04T21:00:00Z	639.3	630.61	8.969971	1.4444	1.4444	USD	900	NasdaqGS	643.090027	624.5	false	Met
46540	2026-11-04T21:00:01Z	213.69	193.24	-6.560002	-3.1738	-3.1738	USD	900	NasdaqGS	206.789993	199.679993	false	NVI
46540	2026-11-04T21:00:01Z	386.08	386.5	-13.31	-3.34	-3.34	USD	900	NasdaqGS	392.040009	375.5	false	Tes

Figure 40.13 The results drawer. Each card shows a node's name, type, time and result.

1. Open or close the drawer.
2. **Clear** empties the drawer.
3. **Copy** puts every result on the clipboard as text.

- The header says **IDLE**, **RUNNING...**, **DONE** and the run time (with *Completed with n warning(s)* when some nodes failed but the run went on), **STOPPED**, or **FAILED** and the reason.
- Each card shows the node's name, its type and how long it took. Lists are shown as tables (up to 200 rows and 24 columns; a note says how much more there is), small objects as name–value pairs, other data as indented JSON.
- Each card has its own copy button: **Copy this node's output as JSON** (or the error, on a failed node).
- Click a node after a run: its **OUTPUT** appears in the properties panel too, and **INPUT FIELDS** lists what the nodes before it produced.

40.10 When a node fails

By default a node that fails stops the workflow. Each node's **SETTINGS** change that:

Setting	Effect
Disabled	The node is skipped: it passes its input through unchanged. A disabled first node skips the nodes after it.
Continue on Fail	The run goes on past this node. Its failure becomes a warning: the badge reads **COMPLETED** in amber with *n warning(s)*, and the nodes below the failed one are skipped.
Retry on Fail	The node is run again when it fails, up to **Max tries** in total.
Max tries	Total attempts including the first, 1 to 10.

To handle a failure yourself, put an **Error Handler** node after the risky node (with **Continue on Fail** ticked on it). It sends the result down **Success** or **Error**, so you can alert yourself on the **Error** branch.

You can also right-click a node and choose **Disable** / **Enable**.

40.11 Save, load, import and export

Button	What it does
Save	Saves the workflow to your account, under the name at the top left. It syncs to your other computers. An empty canvas is not saved: *Nothing to save - add a node first.*

Button	What it does
Load	Opens **Load Workflow**: pick a saved workflow from the list (name and last change). With none saved: *No saved workflows found.*
Clear	Removes every node and connection after **Clear Workflow** — *Are you sure you want to clear all nodes and edges?* **Undo** brings them back. You are still editing the same workflow: saving replaces it.
Import	Reads a workflow from a `.json` file. A file with problems is not imported; a box lists them.
Export	Writes the workflow to a `.json` file, to share or keep.



Figure 40.14 Load Workflow lists your saved workflows with the time each was last changed.

- **Auto-save.** Once a workflow has nodes, it is saved every 30 seconds while the screen is open. The screen reopens on the workflow you had open last.
- **Copy and paste.** Select nodes (drag a box around them, or Ctrl + A) and press Ctrl + C, then Ctrl + V in this or another workflow. Ctrl + D duplicates the selection in place. The copy is plain workflow text: you can paste it into a note or a chat, and paste workflow text from elsewhere onto the canvas.
- **Secrets stay behind.** Export and copy leave secret values blank, and say how many: *n secret value(s) were left blank - set them again after importing.* (Export) or *n secret value(s) were not copied - set them again where you paste.* (copy).

40.12 Start from a template

The **Workflow Gallery** holds 46 ready-made workflows, each runnable as it ships. It also holds the **Node library**: every node with its ports and parameters.



Figure 40.15 The Workflow Gallery — categories on the left, cards in the middle, the selected template's details on the right.

1. **Templates** or **Node library**.
2. Categories, with how many templates each holds.

1. Click **Templates**.
2. Pick a category on the left, or type in the search box (for example `monitor`, `telegram`, `RSI`, `agent`, `csv`).
3. Click a card. The right side explains it under **WHAT IT DOES**, **DATA FLOW**, **DEMONSTRATES**, **NEEDS** and **RUN IT**.
4. Click **Open template**. It replaces the canvas (the terminal asks first when the canvas holds something). The new workflow is not saved until you save it.

The cards carry badges: **24/7** (made to be deployed and left running), the cadence it was designed for (for example **EVERY 15 MINUTES**), **AI** (spends AI credits), **PAPER ORDERS** (reaches a trading node, in paper mode) and **NO SETUP** (runs as it is). The full list of templates is in **§40.18 Reference** p. 798.

In **Node library** mode the cards are nodes, with badges for their category, how many templates use them (**IN n TEMPLATE(S)**) and **NOT IMPLEMENTED** for the few that cannot run. The detail pane lists **INPUTS**, **OUTPUTS**, **PARAMETERS** (with defaults; `*` = required) and **USED IN TEMPLATES**.

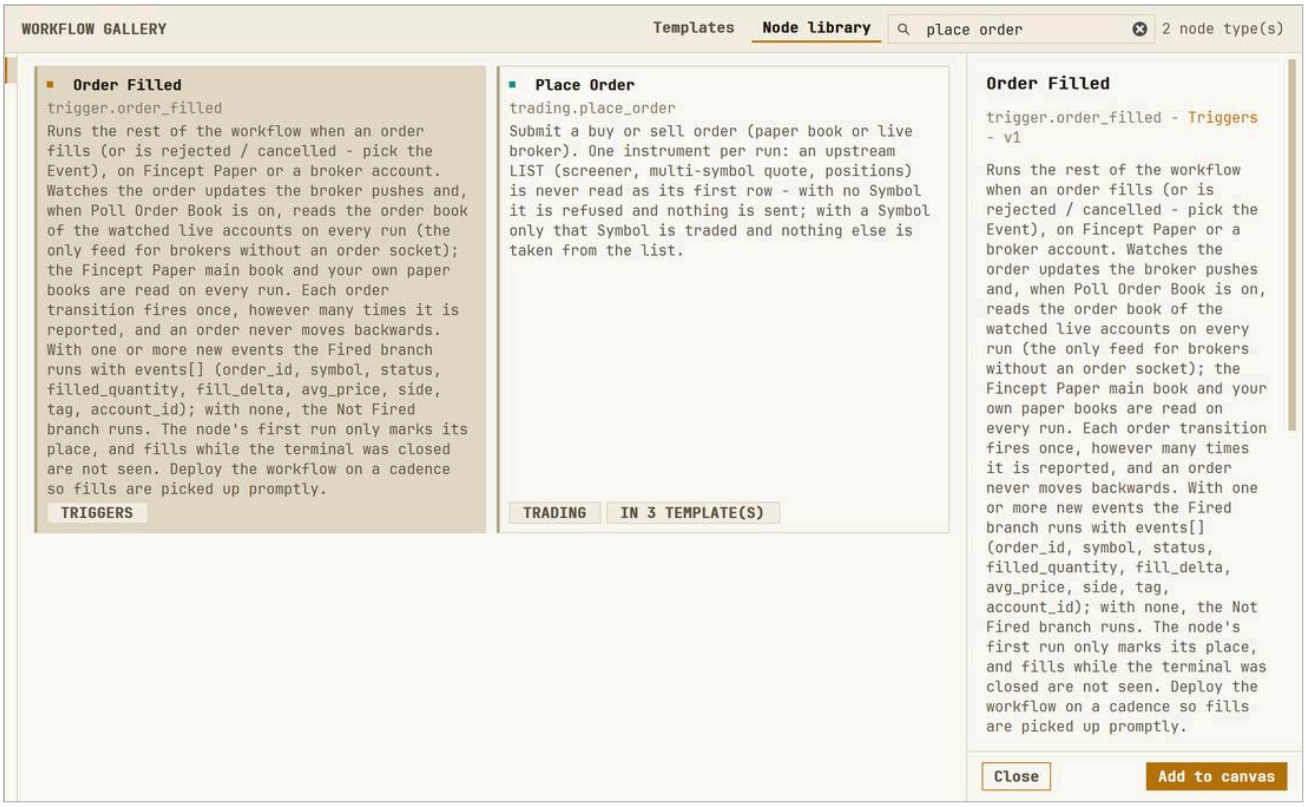


Figure 40.16 The Node library, searched for "place order".

40.13 Deploy a workflow on a schedule

Execute runs a workflow once. **Deploy** keeps it running on a cadence — every 15 minutes, every hour, at the US market open, or on the workflow's own schedule.

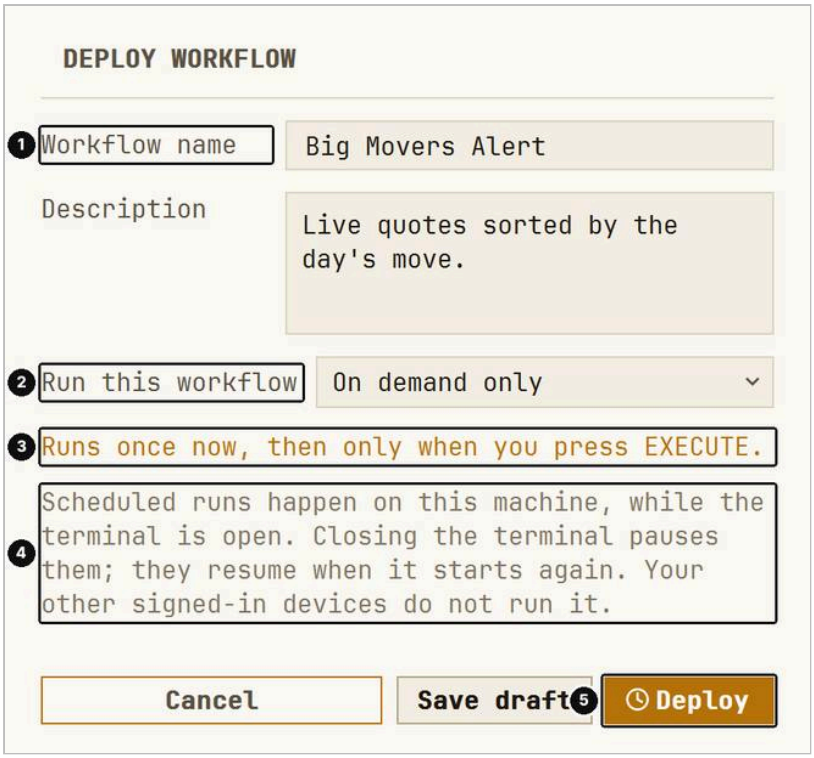


Figure 40.17 The Deploy Workflow dialog.

1. The name and an optional **Description**.
2. **Run this workflow**: how often (see the table).
3. When it runs next, in words.
4. Where it runs: this computer, while the terminal is open.
5. **Deploy** arms it. **Save draft** only saves.

1. Click **Deploy**.
2. Check **Workflow name** and add a **Description** if you like.
3. Pick a cadence in **Run this workflow**. The line under it says when the next run is.
4. Read the amber lines, if any: they list what every run spends or trades (see **§40.16 Charged nodes** p. 797).
5. Click **Deploy**. A message confirms it, for example *'Big Movers Alert' deployed — every 15 minutes.*, and the badge reads **DEPLOYED** with the cadence.

Cadence	When it runs
On demand only	Once now, then only when you press **Execute**.
Every 5 minutes / Every 15 minutes / Hourly / Once a day	First run within a minute, then at that interval.
At the US market open / At the US market close	Once per session edge, on New York trading days (weekends and US market holidays are skipped). A missed open (computer asleep at 09:30 New York time) still runs once later that session; a missed close runs that evening.
On its schedule - …	Only when the workflow has a **Schedule Trigger** or **Market Hours Cron** with a valid cron: it runs on that cron, in this computer's local time.

Where a deployed workflow runs

A deployment runs **on this computer, while the terminal is open**. Closing the terminal pauses it; it picks up again when the terminal starts. It runs on **one** computer only: your other signed-in computers see it but do not run it. Their badge reads *on* followed by the other computer's name and - *runs there*, and their Deploy dialog offers **Run on this device instead**, which moves it (it stops on the other computer when that terminal syncs).

- **Change or stop it**: click **Deploy** again. The dialog now also has **Undeploy**. After undeploying, the message says *'...' is no longer scheduled.*
- **Problems first**: if the workflow has unresolved problems, **Deploy Anyway?** warns that *a scheduled run will hit them with nobody watching*.
- **Spending or trading**: if any node spends credits, runs code, creates server alerts or places orders, a cadence other than **On demand only** asks **Arm Unattended Runs?** and lists them. Click **Arm Anyway** only if you mean it.
- The badge shows the last run: *Every 15 minutes · last run ok*. A run that went past a failed node (Continue on Fail) shows in amber, and the Deploy dialog repeats the warning.
- If Fincept switches scheduled workflows off for a while, **Deploy** shows a warning sign and explains; existing deployments read **PAUSED**. Nothing is lost.

Tip

Put a **Change Detector** in front of the alert in a deployed monitor. It remembers the last run and passes data on only when something is new or has moved, so you get one alert, not one every 15 minutes.

40.14 Trading nodes: paper unless Mode says live

The **TRADING** category can place, change and cancel orders. Every order node has a **Mode** parameter.

Paper unless you choose live

- **Mode** is **paper** by default. A paper order goes to your Fincept Paper book: simulated, no real money. **Paper Portfolio** picks the book (blank = the main one).
- An order node trades **real money only when its Mode is set to live** — by you. Templates ship in paper mode, and the AI never sets a node to live: its edits refuse it, and a node already live is yours to change.
- A live order node also needs a broker account that is connected, in live mode and confirmed for live trading. Otherwise it is refused and nothing is sent.
- Deploying a workflow that places orders asks **Arm Unattended Runs?** first.

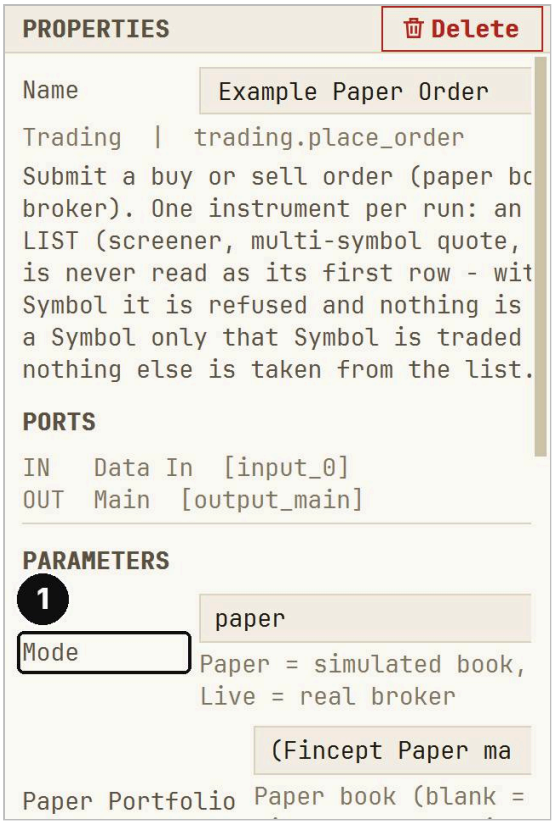


Figure 40.18 A Place Order node. Mode is paper unless you change it.

1 **Mode**: **paper** (the default) or **live**. Only a person sets live.

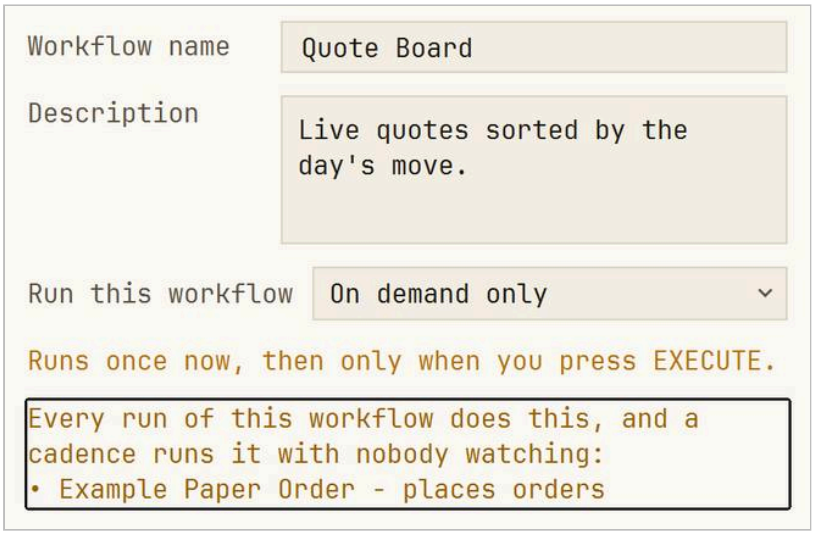


Figure 40.19 The Deploy dialog lists, in amber, every node that spends or trades — here, a paper order. A cadence over them asks Arm Unattended Runs? first.

More safety rules the trading nodes follow:

- **One instrument per run.** An order node never trades "the first row" of a list. If a list arrives (a screener, positions, several quotes) and **Symbol** is blank, the order is refused; with **Symbol** set, only that symbol is traded.
- **Unknown outcomes are not retried.** If the broker's answer is unclear, the node fails with *status unknown* and is never re-sent automatically (a second order could double the position). Check the order book.

- **Trailing Stop** and **Modify Order** work with live brokers only; **Smart Order**, **Cancel All Orders** and **Close All Positions** follow the account's mode and refuse a mismatch.
- **Stage Order Ticket** (category **ACTIONS**) never sends anything: it fills a ticket in Equity Trading for you to check and submit yourself.
- The **SAFETY** nodes (Risk Check, Loss Limit, Position Size Limit, Trading Hours Check, Max Drawdown Check, Correlation Check, Volatility Filter) *fail closed*: when they cannot check, they block.

See **Chapter 15, Brokers & Accounts** p. 248 for connecting brokers and **Chapter 16, Equity Trading** p. 264 for Fincept Paper.

40.15 Secret parameters

Some fields hold credentials: an API key, a bearer token, a webhook address with a key in it (for example **Auth Value** of **HTTP Request** and **API Call**, **URL** of the **Webhook** notification).

- The field is masked; the eye button shows it while you type.
- The value is kept **on this computer only**, encrypted. It is never stored with the workflow, so it does not sync to your other computers: set it again there.
- **Export**, copy and paste, and everything the AI reads leave it blank.
- It accepts `{{ }}` expressions.

40.16 Charged nodes

Most nodes are free. These spend credits or money each time they run:

Node	Cost
AI Agent	An AI agent run, in Fincept credits.
AI Team	A team run, in credits.
Tool Picker	An AI call that picks the tool, in credits.
Backtest / Backtest Optimizer	Per run / per sweep. They run only when **Approved Credits per Run** (per Sweep) covers the price.
Stock Screener	Per run, within **Approved Credits per Run**.
Schedule Agent Task	Each firing of the server-side schedule is a charged agent run.
Server Price Alert	Metered once per day on which your server alerts are checked (not per alert).
Server News Monitor	Metered per enabled monitor per day.
Nodes that use a third-party data service with your own key	Billed by that service to your account, up to the spend limit you set on the node.

The Deploy dialog lists every node that spends, trades or runs code, and asks before arming a cadence over it. When the AI presses **Deploy** or **Arm Anyway**, you are asked every time, and it is never done with nobody there to ask.

40.17 Let the AI build a workflow

The AI in **Chapter 37, AI Chat** p. 719 (and the companion) can work on the Node Editor:

- read the node catalogue and the workflow on the canvas;
- add nodes, connect them, set their parameters, rename or disable them — each change is one **Undo** step;
- remove nodes (it asks you first);
- check the workflow the way **Execute** would, and read the last run's results to fix a node.

Running and deploying stay yours: when the AI presses **Execute** or **Deploy**, you are asked first. It never sets a trading node to live. Its presses on **Execute**, **Run Anyway**, **Deploy** and **Arm Anyway** are never approved automatically and never happen with nobody there to ask.

Do it with AI

- *"Open the Node Editor and build a workflow that checks my watchlist every 15 minutes and alerts me once when a name moves 3%."*
- *"Look at the workflow on the canvas and tell me why the last run failed."*
- *"Add a Telegram notification after the In-App Alert with the same message."*

40.18 Reference

Toolbar

Control	What it does
Workflow name	Click to edit. **Untitled workflow** until you name it.
Status badge	**DRAFT** (not saved, or changed since the last run), **SAVED**, **RUNNING**, **COMPLETED** + time (amber with warnings), **FAILED** + first error, **STOPPED**, **DEPLOYED** + cadence and last run. Hover for details.
Undo / Redo	Undo or redo the last change (Ctrl + Z / Ctrl + Y). The tooltip names the change.
Fit	Frame every node in the view (F).
Arrange	Lay the nodes out left to right in the order they run.
Save	Save to your account.
Load	Open a saved workflow.
Clear	Remove every node (asks first; undoable).
Import / Export	Read / write a `.json` file.
Templates	Open the Workflow Gallery.
Deploy	Run on a cadence (see above).
Execute / Stop	Run once / stop the run.

Fit, **Arrange**, **Save**, **Clear**, **Export**, **Deploy** and **Execute** are greyed out on an empty canvas (*Add a node first*).

Mouse and keyboard on the canvas

Do	To
Drag a node	Move it.
Drag on empty canvas	Draw a selection box.
Mouse wheel	Zoom (from a quarter to three times the normal size).
Middle button drag, or `Ctrl` **+ left drag**	Pan.
`F`	Fit every node in the view.
`Delete` / `Backspace`	Delete the selected nodes and connections.
`Ctrl` + `A`	Select everything.
`Ctrl` + `C` / `Ctrl` + `X` / `Ctrl` + `V`	Copy / cut / paste nodes.
`Ctrl` + `D`	Duplicate the selected nodes.
`Ctrl` + `Z` / `Ctrl` + `Y`	Undo / redo.
Right-click a node	**Duplicate**, **Disable** / **Enable**, **Execute From Here**, **Delete**. Duplicate and Delete act on the whole selection when the node is part of it.
Right-click a connection	**Delete Connection**.
Right-click empty canvas	Quick add, by category.

The node catalogue

The palette holds 150 nodes in 19 categories. Each table lists a category's nodes in palette order. The **Node library** in **Templates** shows every node's ports and parameters with their defaults.

TRIGGERS — how a run starts.

Node	What it does
Manual Trigger	Starts the run when you press **Execute**. **Payload (JSON)** is optional data it passes on, for example `{"symbol": "AAPL"}`.
Market Event	Not available in this version: it fails on purpose. Use a Schedule Trigger, a quote node and an If / Else.
Market Hours Cron	A **Cron Expression** that runs the **Market Open** output while the chosen **Exchange** (NYSE, NASDAQ, LSE, TSE, NSE) is in its regular session, and the **Market Closed** output outside it (US and Indian holidays count as closed); **Include Pre-Market** optional.
News Event	Takes the fires of one of your server-side news automations (**Automation** = its id) since its last run: **Fired** when there are new ones, **Not Fired** when not. Its first run only marks its place. Deploy it on a cadence.
Order Filled	Watches your orders on Fincept Paper and your brokers: **Fired** when an order reached the chosen **Event** (filled, filled_or_partial, rejected, any_terminal, any) since its last run, **Not Fired** when not. Filters: **Account ID**, **Symbol**, **Order Tag**; **Poll Order Book** also reads live accounts' order books. Deploy it on a cadence.
Portfolio Drift	Not available in this version (fails on purpose). Build it from Schedule Trigger → Portfolio Valuation → If / Else.
Price Alert	Sends the run down **Triggered** when the live price of **Symbol** is **above** or **below Price**, or **crosses** it (moved to the other side since the node's last run), otherwise down **Not Triggered**.

Node	What it does
Schedule Trigger	Starts the run on a **Cron Expression** in this computer's local time, once deployed with the **On its schedule - …** cadence. `30 9 * * 1-5` = 09:30 Monday to Friday.
Webhook	Not available in this version: the terminal runs no webhook receiver. Poll the outside service with Schedule Trigger → HTTP Request instead.

MARKET DATA — prices and company data.

Node	What it does
Crypto Price	Crypto tickers: last price, 24-hour change, high, low and volume, on one venue or the fair index across venues. Needs Crypto on your plan (Exclusive+).
Forex Rate	One currency rate, at full precision.
Fundamentals	A company overview (market value, P/E, EPS, dividend yield, beta, sector) or an income, balance sheet or cash-flow statement (US filers).
Get Quote	Latest quotes for one or more symbols. The first quote's fields are at the top (`price`, `change_percent`…), every quote is in `quotes`.
Historical Data	Price bars (open, high, low, close, volume) for a period or exact dates, up to 20 symbols per run.
Insider Trades	Insider buys and sells filed with the SEC (needs that feature on your plan).
Market Depth	The order book of a crypto pair, on one venue or merged across all. Needs Crypto on your plan (Exclusive+). For shares and F&O use **Broker Depth**.
Market News	Articles by keywords, by symbols, or by the symbols the previous node produced.
Options Chain	One expiry of an option chain: bid, ask, last, implied volatility, greeks, open interest.
SEC Filings	Recent filings (form, date, title, link) for one or more US tickers.
Stock Screener	Screens up to 250 symbols by price, volume, day change, RSI and trend. Charged per run.
Ticker Stats	Price, change, volume, day and 52-week range, market value, P/E and beta for one symbol.
US Treasury Yield Curve	The curve from 1 month to 30 years, its history, the 10y-2y and 10y-3m spreads and an *inverted* flag.
Economic series node	One US economic series (GDP, CPI, Treasury yields, the policy rate and more) by preset or series ID, with latest, previous and change.
Four nodes for an outside data service	Bars, a futures curve, an option chain and a cost estimate from a third-party service, with your own key set in **Settings** › **Data sources**. Billed by that service.

DATA SOURCE

Node	What it does
Data Source Query	Reads rows from one of your own data sources (**Chapter 48, Data Sources** p. 891): a database (plain `SELECT` only), an HTTP API or a file.

ACCOUNT

Node	What it does
Add to Watchlist	Adds symbols (typed or from the previous node) to one of your watchlists.
Remove from Watchlist	Removes symbols from a watchlist.

Node	What it does
Save Research Note	Writes a new note in **Chapter 46, Notes** p. 872: title, content, category, priority, sentiment, symbols, tags.
Watchlist Symbols	The symbols of your watchlists, ready for a quote node.

PORTFOLIO — all free, read from your portfolios (**Chapter 23, Portfolio** p. 430).

Node	What it does
List Portfolios	Your portfolios with their current value.
Portfolio Limits Check	Sends the run down **Breached** or **Within limits**.
Portfolio Performance	Time-weighted return for a period, with volatility, Sharpe, Sortino, drawdown and the value history.
Portfolio Risk	Value at Risk, CVaR, volatility, beta and the biggest risk contributors.
Portfolio Valuation	The current value of a portfolio and each position.

ANALYTICS

Node	What it does
Backtest	Tests a strategy template on past data. Charged per run.
Backtest Optimizer	Tries many parameter values for a template, with overfitting checks. Charged per sweep.
Correlation Matrix	How closely symbols move together (Pearson or Spearman).
Economic Summary	Groups economic series into growth, inflation, labour, policy and markets, with trends.
Factor Model	How much of a stock's return comes from the market (CAPM) or from size and value factors.
MA Crossover	Fast against slow moving average: golden or death cross.
Max Drawdown	The largest and the current fall from a peak, with dates.
Monte Carlo Sim	Thousands of simulated price paths: percentiles, chance of profit, VaR.
Pairs Trading	Spread z-score, hedge ratio and an entry or exit signal for two symbols.
Performance Metrics	Return, volatility, Sharpe, Sortino, Calmar, drawdown; beta and alpha against a benchmark.
Portfolio Optimization	Best weights for a set of symbols (max Sharpe, min volatility, risk parity, HRP, Black-Litterman, equal weight).
Risk Analysis	VaR and CVaR of a price series, or a portfolio's risk report.
Sharpe / Sortino	One risk-adjusted ratio of a series.
Technical Indicators	RSI, MACD, moving averages, Bollinger Bands and ATR, with signals.
Trend / Volatility Regime	Bull, bear, sideways or high-volatility, by simple rules.

DATA TRANSFORM — reshape lists.

Node	What it does
Aggregate	Sum, average, min, max, median, standard deviation, count or distinct count of a field, overall or per group.
Deduplicate	Removes repeated items.

Node	What it does
Extract	Pulls one part out by path, for example `quotes[0].price`.
Filter	Keeps the items that match a condition; adds **matched** and **total**.
Group By	Groups items by a field.
Join	Joins two lists on a key (inner, left, right, outer).
Lag / Lead	Shifts a field by N periods, or gives the change from it.
Map	Computes new fields on every item: `value = price * quantity`.
Normalize	Min-max, z-score, robust or log scaling of a field.
Pivot Table	Rows to columns, with sum, mean or count.
Resample	Changes the time step of rows (for example daily to weekly bars).
Reshape	Flattens, nests or unpivots a list.
Rolling Window	Rolling mean, sum, standard deviation, min, max or median.
Sort	Sorts by one or more fields (`sector, -market_cap`).

DATA FORMAT

Node	What it does
Compare Datasets	Compares two lists by a key: **Added**, **Removed**, **Changed**.
CSV Parse	Turns CSV text into rows.
HTML Extract	Picks parts of a web page with a CSS selector.
JSON	Parses, writes or queries JSON.
Regex Extract	Pulls text out with a pattern.
XML	Parses or writes XML.

CONTROL FLOW

Node	What it does
Change Detector	Remembers the last run and sends data to **Changed** only when something is new or moved (otherwise to **No Change**).
Error Handler	Sends a result down **Success** or **Error**.
Execute Workflow	Runs another saved workflow and returns its results.
If / Else	Sends the input down **True** or **False** by a condition.
Merge	Waits until up to four branches have run and joins them (**Mode**: append, merge_by_key, keep_first, concatenate).
Split	Sends the same data down two parallel branches, **Branch 1** and **Branch 2**.
Split Into Items	Turns the input into a list of items, at most **Max Items** (the nodes on **Items** get the whole list); **Done** gets the count.
Switch	Routes by a field's value to **Case 1**, **Case 2** or **Default**.

Node	What it does
Wait	Waits a number of seconds (at most 24 hours).

CORE

Node	What it does
Results Display	Shows its input as the end result of a branch, under a **Label**.
Set Variable	Adds fields to the data flowing through.

SAFETY — guards in front of orders. All fail closed: a figure they cannot find or check sends the run down the fail output. Each has a pass and a fail output (see *Nodes with more than one input or output* below).

Node	What it does
Correlation Check	Blocks a trade too correlated with your positions.
Loss Limit	Enforces a daily and weekly loss limit.
Max Drawdown Check	Halts trading past a drawdown.
Position Size Limit	Caps the order size in shares and value.
Risk Check	Checks position size and volatility limits.
Trading Hours Check	Sends the run down **Market Open** or **Market Closed** for the chosen exchange.
Volatility Filter	Skips a trade when volatility is too high.

TRADING — orders and account data (paper unless **Mode** is live).

Node	What it does
Bracket Order	Entry with a stop loss and a take profit attached.
Broker Depth / Broker History / Broker Option Chain	Order book, price bars and option chain from your connected broker.
Cancel All Orders / Cancel Order	Cancel every open order / one order.
Close All Positions / Close Position	Square off every position / one position (or each line of a list).
Get Balance / Get Holdings / Get Orders / Get Position / Get Positions	Read cash and margin, holdings, orders, one position, all positions.
Get Quote	A broker quote; without a broker, a market quote that says how fresh it is.
Modify Order	Changes a working order (live brokers).
Place Order	One market, limit or stop order.
Scale In	Builds a position in timed tranches.
Smart Order	Buys or sells what is needed to reach a target position size.
Trading Alert	Sends an alert and passes the data on.
Trailing Stop	A protective stop that follows the price (live brokers).

AGENTS, MCP

Node	What it does
AI Agent	Runs one of your agents (**Chapter 38, Agent Studio** p. 739) on its inputs; output as text, JSON or a verdict an If / Else can branch on. Charged.
AI Team	Runs a saved agent team. Charged.
Tool Picker	Asks the AI to choose the right tool for a question (never one that spends or moves money).
MCP Tool	Calls one AI tool by name, with arguments (**Chapter 41, MCP Servers** p. 810). Tools that spend, move money or need a person are refused.

NOTIFICATIONS

Node	What it does
In-App Alert	A desktop notification, also kept under the bell. No setup.
Email, Slack, Discord, Telegram, SMS, Webhook	Sends through that channel, set up in **Settings** › **Notifications** .
Notify Channel	Any other channel set up there (Pushover, ntfy, Gotify, Pushbullet, Microsoft Teams, Mattermost, PagerDuty, Opsgenie, WhatsApp).

Every channel node has **Fall Back to In-App** (on by default): if the channel is not set up or the send fails, you get an in-app alert and the run goes on.

ACTIONS — hand the result to you.

Node	What it does
Open in Backtester	Opens Backtesting with the symbols and template staged; **Auto Run** starts it.
Open Link	Opens a web link in your browser.
Open Tab	Switches the terminal to a screen, on a symbol when the screen takes one.
Stage Order Ticket	Fills an order ticket for you to review. Sends nothing.

SERVER AUTOMATION — things that run on Fincept's servers, even with the terminal closed.

Node	What it does
Schedule Agent Task	Creates a recurring AI task (times in UTC). Each firing is charged.
Server News Monitor	Creates or updates a news monitor that runs around the clock.
Server Price Alert	Arms price alerts checked around the clock.

FILES — files go to the workflow output folder and appear in **Chapter 47, File Manager** p. 882.

Node	What it does
Binary File	Reads or writes a file as base64.
Chart Image	Draws the data as a PNG line, bar or candlestick chart.
Compress	Zips or gzips a file, or extracts one.

Node	What it does
Convert to File	Saves the data as JSON, CSV, Excel (xlsx) or XML.
File Operations	Reads, writes, appends, deletes, checks or lists files.
PDF Report	Writes a PDF report of the data.

UTILITIES

Node	What it does
API Call	A REST call with authentication, a timeout and retries.
Assert	Fails the run with your message when a condition is false.
Cache	Tells whether the same data was seen within a time limit.
Code (Python)	Runs a Python script on your own Python (see **Chapter 43, Code Editor** p. 833). The input is in `_input`; set `result = …`. Stopped after **Timeout (sec)** (60 by default).
Crypto/Hash	Hash, HMAC or base64.
Database (SQLite)	Runs SQL on a local SQLite file.
Date/Time	Adds the date and time to the data.
Delay	Waits a number of milliseconds.
HTTP Request	Calls any web address, with query, headers, authentication and a body.
Item Lists	Splits, joins, flattens, de-duplicates, reverses or shuffles lists.
Limit	Keeps the first or last N items.
Log	Writes the data to the terminal's log.
RSS Read	Reads an RSS or Atom feed.
Spreadsheet	Reads or writes a local `.xlsx` / `.csv` file or a Google Sheet.
Template	Builds text from `{{ }}` expressions.

Nodes with more than one input or output

Branching nodes send each run down **one** of their outputs; the others run **every** output at once.

Node	Outputs	Which run
If / Else	True / False	One
Switch	Case 1 / Case 2 / Default	Each list item goes to its case; a case with no items is skipped
Change Detector	Changed / No Change	One
Error Handler	Success / Error	One
Market Hours Cron	Market Open / Market Closed	One
News Event, Order Filled	Fired / Not Fired	One
Price Alert	Triggered / Not Triggered	One

Node	Outputs	Which run
Portfolio Limits Check	Breached / Within limits	One
Trading Hours Check	Market Open / Market Closed	One
Risk Check, Position Size Limit	Pass / Fail	One
Loss Limit	Under Limit / Over Limit	One
Max Drawdown Check	Under Limit / Exceeded	One
Correlation Check	Low Correlation / High Correlation	One
Volatility Filter	Normal Vol / High Vol	One
Split	Branch 1 / Branch 2	Both
Split Into Items	Items / Done	Both
Compare Datasets	Added / Removed / Changed	All three
Backtest	Report / Equity	Both
Backtest Optimizer	Best / Equity	Both
MA Crossover	Signal / Data	Both
Pairs Trading	Signal / Spread Data	Both

Nodes with more than one input: **Join** and **Compare Datasets** (Dataset A, Dataset B), **Merge** (Branch 1 to Branch 4) and **Economic Summary** (Series 1 to Series 12). Triggers have no input; **Results Display** has no output.

Expressions

Inside `{{ }}`, and in the conditions of **If / Else**, **Filter** and **Assert**:

Part	Write
A field of the first input	`price`, `quotes[0].price`, `quotes[-1]` (the last item), `quotes.first`, `quotes.last`, `quotes.length` (or `.count`), `quotes.symbol` (that field of every item)
Other data	`$input` (the first input), `$inputs[1]` (the second), `$node["Get Quotes"]` (a node that already ran, by name), `$now`, `$today`, `$workflow.name`
In Filter and Map	`$item` (the current item), `$index`, `$json` (also the current item)
Values	`12`, `3.5`, `'text'` or `"text"`, `true`, `false`, `null`, `[1, 2]`
Operators	`+ - * / %`, `== != > >= < <=`, `&& || !` (also `and`, `or`, `not`), `cond ? a : b`, `a ?? b` (b when a is empty)
Whole field	`={{ … }}` or a field that is only `{{ … }}` keeps the value's type

Function	Gives
`len(x)` (also `length`)	How many items a list holds, keys an object holds, or characters a text holds.
`first(list)`, `last(list)`	The first / last item.

Function	Gives
`pluck(list, 'field')`	That field of every item.
`join(list, ', ')`	The items as one text (comma when no separator is given).
`split(text, ',')`	A text cut into a list; parts are trimmed, empty parts dropped.
`upper(x)`, `lower(x)`, `trim(x)`	Text in capitals / small letters / without outer spaces.
`contains(x, y)`	True when list x holds y, or text x contains y (any case).
`round(x, 2)`	x rounded to 2 places (0 when no places are given).
`fixed(x, 2)`	x rounded and written with exactly 2 decimals, as text.
`abs(x)`	x without its sign.
`min(…)`, `max(…)`, `sum(…)`, `avg(…)`	Of the numbers given, or of the numbers in one list. Text is skipped; `sum` of nothing is 0.
`number(x)`, `string(x)`	x as a number / as text.
`keys(object)`	The field names of an object.
`unique(list)`	The list without repeats.
`slice(list, from, to)`	Part of a list; a negative position counts from the end.
`take(list, n)`	The first n items.
`where(list, 'field', '>', 2)`	The items whose field passes the test: `==`, `!=`, `>`, `>=`, `<`, `<=` or `contains`. With three arguments, `where(list, 'field', value)` keeps the equal ones.
`sort_by(list, 'field', 'desc')`	The list sorted by a field; `'desc'` (or `true`) for largest first.
`pct_change(now, then)`	The change from `then` to `now`, in percent.
`default(x, y)`	y when x is empty.
`now()`, `today()`	The current date and time / today's date.

A function name that does not exist stops the field from working: a condition with one is listed under **Workflow Not Ready** when you press **Execute**.

Templates

Category	Templates
24/7 Monitoring (12)	Watchlist Movers Alert · Portfolio Day-Loss Guard · VIX Spike Watch · SEC Filing Watch · News Keyword Radar · Company News Watch · Publisher News Alert · Crypto Volatility Watch · US Macro Release Watch · Arm 24/7 Server Price Alerts · Arm a 24/7 News Monitor · Portfolio Drawdown Alert
Scheduled Tasks (6)	Morning Market Brief · End-of-Day Portfolio Report · Weekly Price History Export · Daily Paper P&L Log · Schedule an AI Task on the Server · Watchlist Morning Brief
Financial Analysis (9)	Quote Board · Technical Snapshot · Sector Correlation Matrix · Economic Dashboard · Yield Curve Inversion Check · Fundamentals Snapshot · Backtest a Strategy · Portfolio Risk Report · Monte Carlo Price Paths
Trading (Paper) (3)	Buy the Dip (Paper) · RSI Mean Reversion (Paper) · Pre-Trade Compliance Gate

Category	Templates
Agentic AI (5)	AI Research: Bull vs Bear · News Sentiment Verdict · AI Portfolio Review · Investment Committee (Agent Team) · AI Screener Picks
Call to Action (6)	Weakest Watchlist Name to Research · 52-Week High Breakout Ticket · Golden Cross to Backtester · Losing Positions to Exit Tickets · New 8-K to Your Browser · Oversold Watchlist Name to Paper Ticket
Data Connectivity (5)	Any JSON API: ECB Reference Rates · RSS Feed to AI Digest · Join Two Sources: ECB Fix vs Market FX · Your Database to a Summary · CSV File to Totals

Limits

Limit	Value
Nodes per workflow	10 on Exclusive, 50 on Exclusive+, no limit on Exclusive Pro (shown at the foot of the palette).
One node's run time	10 minutes (Long-Running AI Agent 60, AI Team 30).
Wait / Delay	24 hours at most.
Retries	**Max tries** 1–10.
Results drawer table	200 rows and 24 columns shown; **Copy** has everything.
Runs at once	One workflow at a time.
Undo	The last 200 edits (one drag or one field change is one edit).

40.19 For advanced users

- **Branches and skips.** A node on a branch that did not run is *skipped*, and so is everything after it. A **Merge** ignores skipped and empty branches.
- **Lists.** Most data nodes hand on the whole list. **Split Into Items** does not make the rest of the workflow run once per item: the next nodes get the list. Use **Filter**, **Map**, **Aggregate** and the expression functions (`where`, `pluck`, `sort_by`) to work on lists.
- **Per-item expressions.** In **Filter** and **Map**, a bare field name is the current item's field; `$item`, `$index` and `$input` (the whole input) are also there.
- **Sub-workflows. Execute Workflow** runs another saved workflow. Its **Manual Trigger** receives this node's input as its payload.
- **Your own code. Code (Python)** runs on the Python you set in **Settings › Python**: the input is in `_input` (also `input_data`); assign `result = …`, or print JSON. It is stopped after its **Timeout (sec)**.
- **Your own systems. Data Source Query** reads your connected databases, APIs and files; **HTTP Request** and **API Call** reach any web service; **Database (SQLite)** keeps a scratch database for workflows.
- **Any AI tool. MCP Tool** calls one of the terminal's AI tools by name (or one from your own MCP servers); **Tool Picker** lets the AI choose. Only tools that neither spend, move money nor need a person are allowed, because a workflow runs unattended.
- **State on this computer. Change Detector** and **Cache** remember earlier runs on this computer. A workflow moved to another computer starts fresh there.
- **Import format.** Import reads the terminal's own export and common workflow JSON shapes. Unknown node types are kept but outlined in red; connections to missing ports are left out; the terminal tells you what

it changed.

40.20 Troubleshooting

Execute is greyed out. The canvas is empty. Add a node first.

"Workflow Not Ready" appears when I press Execute. Read the list: each line names the node and the problem (an empty required field, a condition that does not parse, an input with nothing connected, a node not connected to anything). Fix them and run again, or click **Run Anyway**.

"Another workflow is running (in another window or from the AI chat)." Only one workflow runs at a time. Wait for it, or stop it where it was started.

My alert fires every 15 minutes. Put a **Change Detector** in front of the alert so it fires only when something changed.

A deployed workflow did not run. It runs only while the terminal is open, and only on the computer that owns it. Check the badge: *on* followed by the other computer's name and - *runs there* means another computer runs it; **paused** means it is paused; **PAUSED** in capitals means Fincept has switched scheduled runs off for now.

"'...' was not deployed - check the Schedule trigger's cron expression." The cron does not parse. Open the Schedule Trigger: the line under the field says what is wrong.

A secret field is empty on my other computer. Secrets stay on the computer where you typed them. Enter it again there.

I cleared the canvas, built something new, and my old workflow is gone. Clear keeps you in the same workflow, so saving replaced it. While the screen is still open, **Undo** steps back through your edits (up to 200). Next time, open a template first to start a separate workflow.

A node is outlined in red. Either it failed in the last run (click it: its **OUTPUT** and its card in the results drawer show the error), or this version cannot run that node type (often from an imported file). Replace a node of an unknown type.

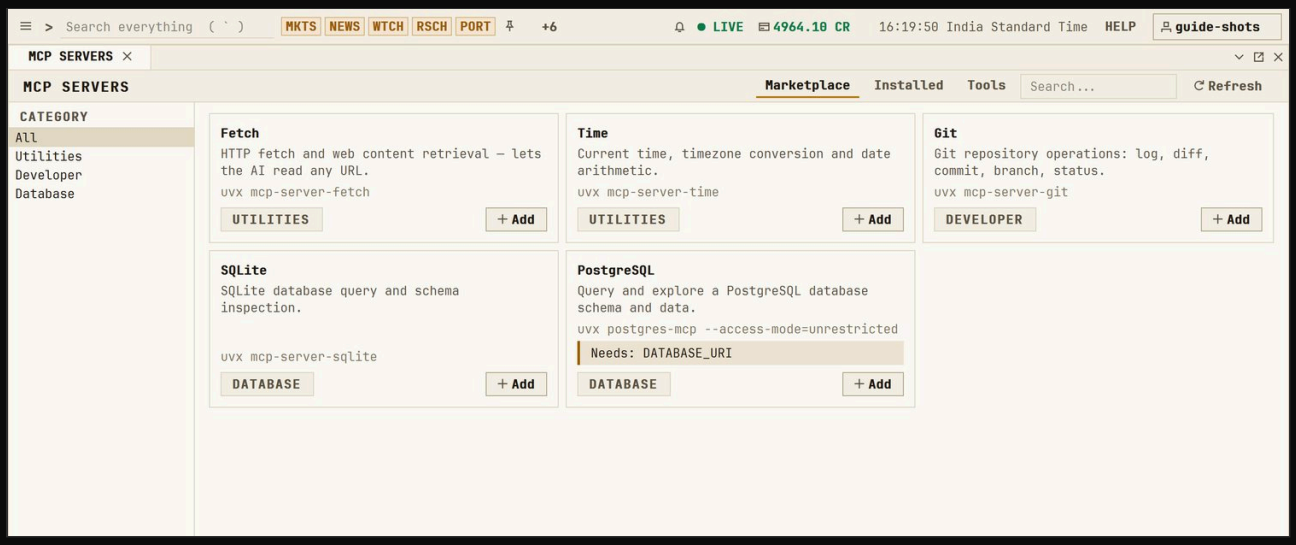
"...: the "..." input has nothing connected to it." That node needs a connection into the named input. Drag one from an earlier node's output.

The Code (Python) node fails at once. No Python was found. Install Python 3.8 or later, then pick it in `Settings › Python` (see **Chapter 43, Code Editor** p. 833).

CHAPTER 41

MCP Servers MCPS

Give the terminal's AI extra tools from MCP servers that run on your own computer — a web page reader, a clock, your Git repositories, your own databases — and switch the terminal's built-in AI tools on or off.



At a glance

Open it	• Type `MCPS` in the command line and press **Enter** • Type `mcp` or `servers` in the command line and pick **MCP Servers** • **Screens › MCP Servers**
You need	• Signed in on any paid plan • Exclusive+ or higher to add your own servers (5 on Exclusive+, no limit on Exclusive Pro) • For most marketplace servers: the free `uvx` launcher installed on this computer
Best for	• Letting the AI read a web page, query your own database or work with a Git repository • Seeing every tool the AI can call, and switching tools off
Time to learn	10 minutes
Related	**Chapter 37, AI Chat** p. 719, **Chapter 38, Agent Studio** p. 739, **Chapter 42, Use Your Own AI** p. 819, **Chapter 40, Node Editor** p. 776

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41.1 Screen tour

MCP stands for *Model Context Protocol* — an open standard for giving an AI model extra tools. An **MCP server** is a small program that offers a set of tools (for example "fetch this web page" or "run this SQL query"). The terminal can start such programs on your computer and hand their tools to its AI.

The terminal's AI already has tools of its own: markets, news, portfolio, research and the screens. The **Tools** view lists 72 of them in 5.0.6; one of those runs any tool of Fincept's much larger data catalogue by name, so the AI reaches far more data than the list shows. This screen is for the *extra* tools you add yourself, and for the full list of every tool.

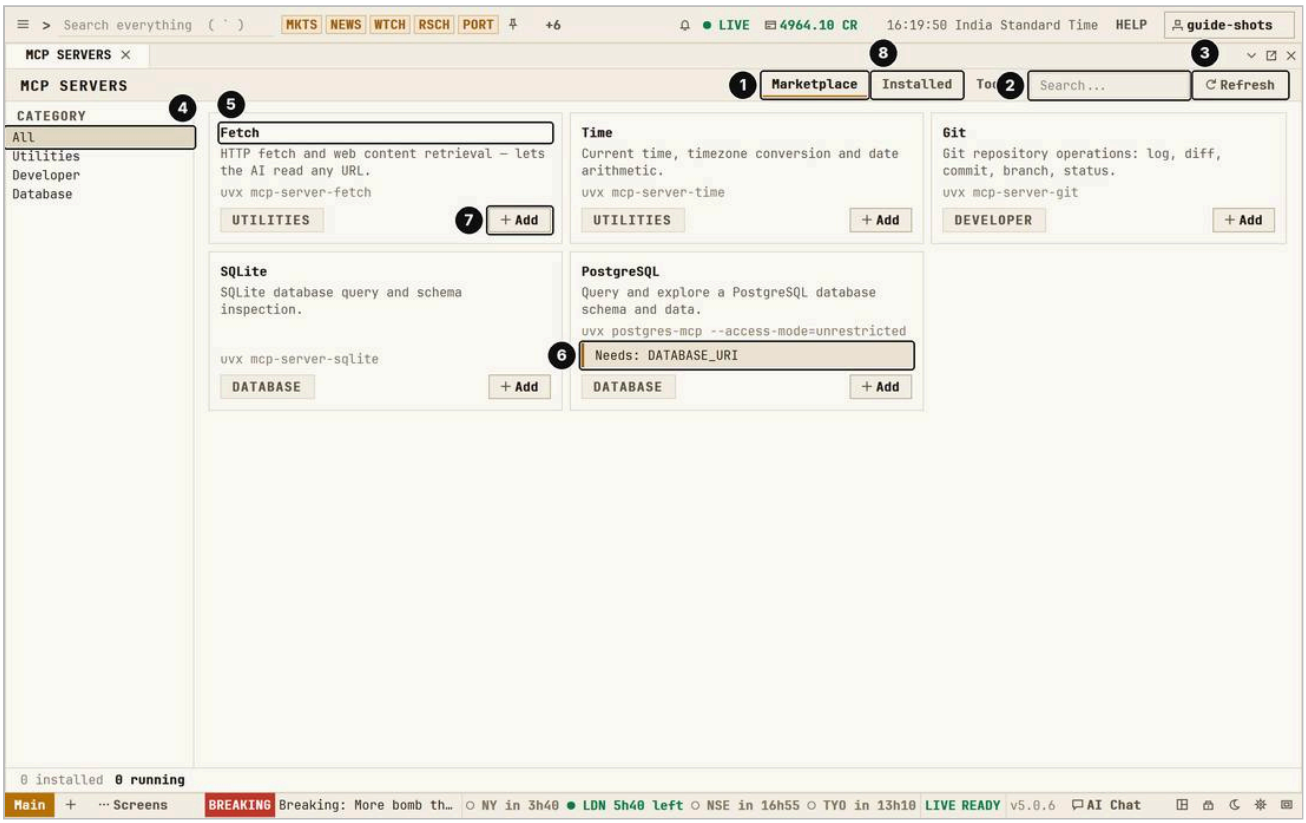


Figure 41.1 The MCP Servers screen on its Marketplace view.

1. **Marketplace**, **Installed** and **Tools** switch between the three views of the screen.
2. **Search** filters the cards (or the tool list) as you type.
3. **Refresh** reloads the list of the view you are on.
4. **CATEGORY** filters the marketplace: **All**, **Utilities**, **Developer**, **Database**.
5. A server card: its name, what it does and the command that starts it.
6. A **Needs:** line names a setting the server cannot run without.
7. **Add** opens a short form to install the server.
8. The status line counts installed and running servers.

The screen has three views:

View	What it shows
Marketplace	Ready-made servers you can add with one form. Each card shows the command the terminal runs to start it.
Installed	The servers you added, each with its status, an **Enable**/**Disable** button, **Logs** and **Remove**. **Add custom MCP server** adds one that is not in the marketplace.
Tools	Every tool the AI can call — the terminal's own (*internal*) and your servers' (*external*) — with a tick box to switch each one on or off.

Note

The views, **Add**, **Enable**, **Remove** and the tool switches are yours alone to press: the terminal's AI may read this screen, but it can never add, start or remove a server, or switch a tool, for you.

41.2 Quick start

In this example you add the **Fetch** server, so the AI can read any web page you point it at.

1. Make sure `uvx` is installed on this computer. It is the free launcher most marketplace servers use (it comes with the `uv` Python package manager). Without it a server shows **Not installed on this PC**.
2. Type `MCPS` in the command line and press `Enter`.
3. On the **Marketplace** view, find the **Fetch** card.



Figure 41.2 The Fetch card and its Add button.

1. Click **Add**.

4. Click **Add**. A form titled **Add Fetch** opens, already filled in: **Name**, **Description**, **Command** (`uvx`), **Arguments** (`mcp-server-fetch`) and **Category**.
5. Tick **Auto-start on launch** if you want the server to start every time the terminal starts, then click **OK**. The terminal installs the server and says **Installed "Fetch".**
6. Open the **Installed** view. The Fetch card shows its status. If it says **Stopped**, click **Enable** to start it; it changes to **Running**.
7. Ask the AI something that needs it, for example in **Chapter 37, AI Chat** p. 719: *"Read https://www.rbi.org.in and list today's press releases."*

Tip

A server's tools reach the AI chat, the companion and the agents you build in **Chapter 38, Agent Studio** p. 739 (unless an agent's **Include external MCP servers** box is unticked). In the **Tools** view they appear as *External*, under the server's name.

41.3 Add a server from the marketplace

Use this when the server you want is one of the ready-made cards.

1. On the **Marketplace** view, narrow the list with **CATEGORY** (**All**, **Utilities**, **Developer**, **Database**) or by typing in **Search...**.

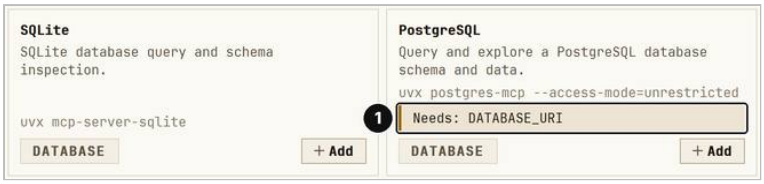


Figure 41.3 The two database servers.

1. This server needs one setting before it can run.

2. Click the card's **Add**. The **Add** form opens with the card's values filled in.

3. If the card had a **Needs:** line, the form has an **Environment variables** section with one field per setting, pre-filled with a sample. Replace the sample with your own value — for PostgreSQL, the address of *your* database, for example `postgresql://me:secret@localhost:5432/research`.

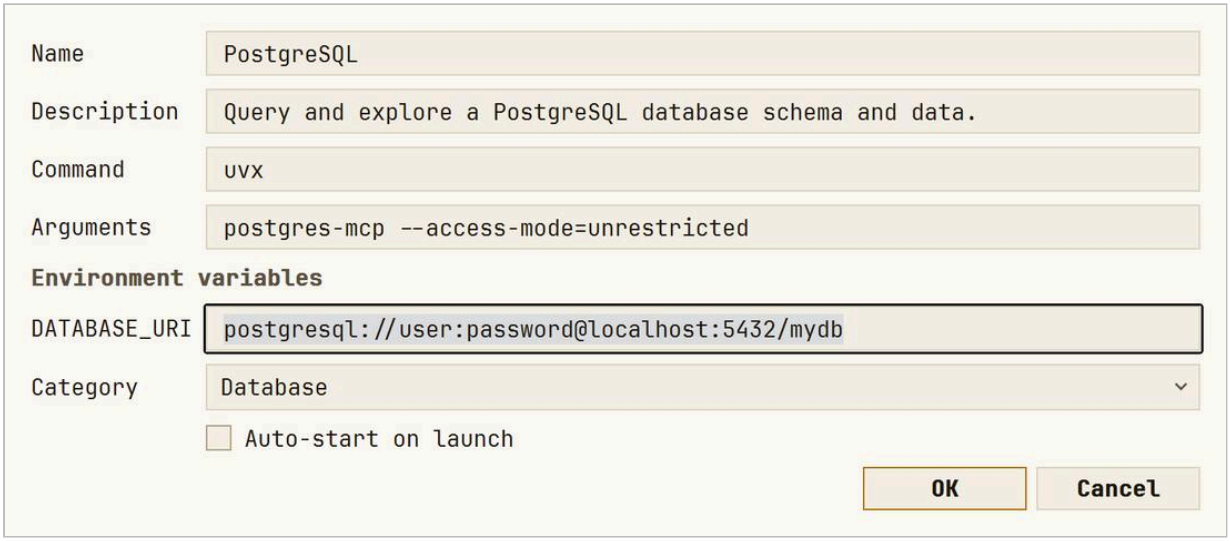


Figure 41.4 The Add form of the PostgreSQL card, filled in from the card. DATABASE_URI still holds the sample: replace it with your own database's address. OK installs the server; Cancel adds nothing.

4. Leave **Category** as it is (or pick another), tick **Auto-start on launch** if you like, and click **OK**.

5. The card's button now reads **Added**, and the server appears in the **Installed** view.

Careful

A server you add runs on your computer with your rights. The PostgreSQL card starts its server with full access (`--access-mode=unrestricted`), so the AI could change data in that database. Point it at a copy, or at a database user that can only read. The AI still asks before any tool that deletes or spends.

The ready-made servers

Server	Category	What it gives the AI	Command	Needs
Fetch	Utilities	Reads any web page or URL	`uvx mcp-server-fetch`	—

Server	Category	What it gives the AI	Command	Needs
Time	Utilities	The current time, time-zone conversion and date arithmetic	`uvx mcp-server-time`	—
Git	Developer	Git repository operations: log, diff, commit, branch, status	`uvx mcp-server-git`	—
SQLite	Database	Queries and inspects an SQLite database file	`uvx mcp-server-sqlite`	—
PostgreSQL	Database	Queries and explores a PostgreSQL database	`uvx postgres-mcp --access-mode=unrestricted`	`DATABASE_URI`

41.4 Add a server that is not in the marketplace

Any MCP server that runs as a program on your computer (the *stdio* kind) can be added by hand.

1. Open the **Installed** view and click **Add custom MCP server**.

2. Fill in the form:
   - **Name** — what you will call it (for example *My Research DB*). The name must be new: a second server with the same name is refused with **A server named "..." already exists.**
   - **Description** — a short note for yourself.
   - **Command** — the program to start. It is pre-filled with `uvx`; change it to `npx`, `python`, or the full path of the program.
   - **Arguments** — everything after the command, separated by spaces, for example `my-mcp-package --flag value`.
   - **Environment** — settings the server reads, written `KEY=value KEY2=value2`.
   - **Category** — **utilities**, **developer**, **database**, or type your own.
   - **Auto-start on launch** — start it with the terminal.

3. Click **OK**. **Name** and **Command** are both required; without them the screen says **Name and command are both required.**



Figure 41.5 The Add custom MCP server form. The grey words are examples, not values.

Plans

Your plan sets how many servers you may add: none on Exclusive, 5 on Exclusive+, no limit on Exclusive Pro. At the limit, **Add custom MCP server** opens the upgrade sheet instead of the form. The terminal's own tools never count.

41.5 Start, stop and check a server

Each card on the **Installed** view shows one server.

Part of the card	What it does
Name	The server's name.
Status	**Running**, **Starting**, **Stopped**, **Error**, or **Not installed on this PC** when its command was not found on this computer (hover it to see which program is missing).
Enable / Disable	Starts or stops the server. Enabled = running = its tools are offered to the AI. While it starts the button reads **Starting…**. If it cannot start, a **Server failed to start** message explains why.
Logs	Shows or hides the server's own output. Empty until it has run: **No output yet. Start the server to see logs here.**
Remove	Deletes the server after a **Remove server** confirmation (**This cannot be undone.**).

When the list is empty the view says **No servers installed yet. Add one from the Marketplace, or add a custom server below.**



Figure 41.6 The Installed view before any server is added.

1. The **Installed** view.
2. The empty list.
3. Adds a server that is not in the marketplace.
4. How many servers are installed and running.

41.6 See and switch every AI tool

The **Tools** view is one table of *every* tool the AI can call: **On**, **Tool name**, **Server**, **Category**, **Description**. The line above it counts them, for example *72 tools (72 internal, 0 external)*.

- **Internal** tools are the terminal's own. Untick **On** to stop the AI from using one (tick it again to give it back). A tool your plan does not include shows as **Internal (not available)**.
- **External** tools come from your servers. Their **On** box is always ticked and cannot be changed here: they follow the server, so **Disable** the server on the **Installed** view to take them away.
- **Search...** filters the table by name or description.

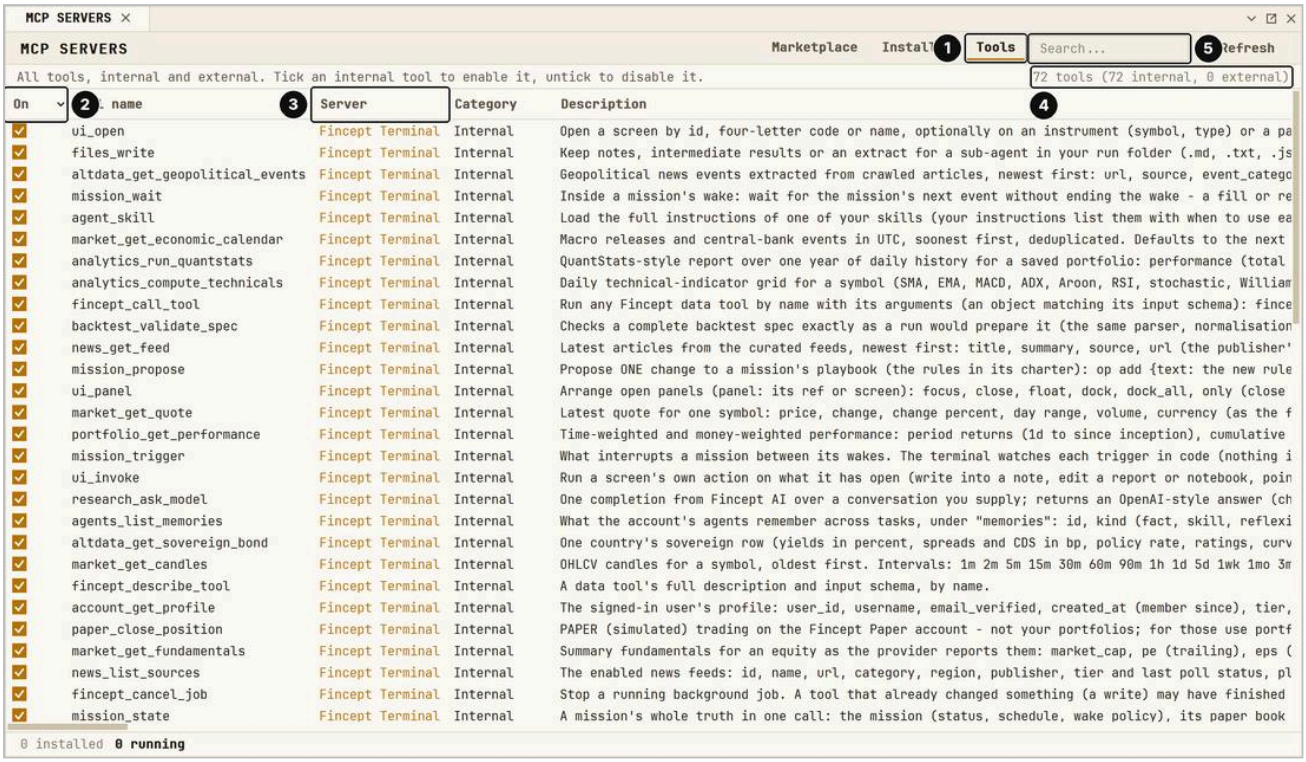


Figure 41.7 The Tools view. Every internal tool has its own On switch.

1. The **Tools** view.
2. **On**: untick to keep the AI away from that tool.
3. **Server**: Fincept Terminal for the terminal's own tools, else your server's name.
4. The count of tools, internal and external.
5. Filter by name or description.

Careful

Switching off an internal tool affects every AI surface on this computer — the chat, the companion and your agents. If the AI suddenly says it "cannot" do something it used to do, check here first.

41.7 Reference

Header

Control	What it does
MCP SERVERS	The screen's title.
Marketplace / Installed / Tools	Switch views. The screen remembers the last one.
Search...	Filters the current view as you type.
Refresh	**Reload the list for this view.**

Marketplace card

Part	Meaning
Title and description	What the server does.
Command line	The exact program and arguments the terminal will start.
Needs: …	Settings (environment variables) the server requires.
Category chip	**UTILITIES**, **DEVELOPER** or **DATABASE**.
Add / Added	Open the add form; **Added** once it is installed.

Add form (marketplace and custom)

Field	Default	Notes
Name	The card's name / empty	Required. Becomes the server's id, so it must be unique.
Description	The card's text / empty	Free text.
Command	The card's command / `uvx`	Required.
Arguments	The card's arguments / empty	Space-separated.
Environment variables (marketplace) or Environment (custom)	Sample values / empty	One field per key, or `KEY=value` pairs.
Category	The card's / **utilities**	Custom: editable.
Auto-start on launch	Off	Start with the terminal.
OK / Cancel	—	Install, or close without changes.

Status bar

n installed and *n running* — how many servers you added and how many are running now.

41.8 For advanced users

- **Where servers run.** Every server is a program on *this* computer, started by the terminal. Its tools are offered to the AI only while it runs. The list of servers is kept on this computer; another computer of yours starts with its own list.
- **How the AI names external tools.** An external tool reaches the AI as `<server>__<tool>`, and it finds it through its tool search like any other tool, so a long list does not slow every answer down.
- **Approvals still apply.** A tool that deletes, spends or moves money still opens **AI action needs your approval** before it runs (see **§37.5 Approve what the AI does** p. 725). Agents that run unattended (desks, triggers, schedules) never get money-moving tools.
- **Web search.** While **Web search** is on (Agent studio > System), external web-search tools are held back from the chat so the AI does not search twice.

- **Agents.** In **Chapter 38, Agent Studio** p. 739, the **Create** form's **Include external MCP servers** box decides whether an agent sees your servers' tools at all.
- **Your own Claude Code or Codex** is the other direction: there, *Fincept* is the MCP server and your coding agent is the client. See **Chapter 42, Use Your Own AI** p. 819.

Do it with AI

Ask in AI chat: *"List the MCP tools you have from my own servers."* — or, with Fetch running: *"Fetch https://www.sec.gov/news/pressreleases and summarise the three newest releases."*

41.9 Troubleshooting

A server says "Not installed on this PC". Its command (usually `uvx`) was not found on this computer. Install it (for `uvx`: install `uv`), restart the terminal and click **Enable**.

"Server failed to start". Read the message and open **Logs**. Common causes: a wrong **Arguments** value, a missing environment variable (the **Needs:** line), or a database address that cannot be reached.

The AI does not use my server's tools. Check that the server is **Running** on the **Installed** view and that its tools are ticked in **Tools**. For an agent, check **Include external MCP servers** on its **Create** form.

Add custom MCP server opens an upgrade sheet. You have reached your plan's number of external servers (none on Exclusive, 5 on Exclusive+). Remove one, or upgrade (see **Chapter 50, Profile, Plan & Billing** p. 920).

I switched a tool off by mistake. Open **Tools**, search for its name and tick **On** again.

CHAPTER 42

Use Your Own AI

Run the terminal's AI on a model you already pay for — your Claude Code, your Codex sign-in, any OpenAI-compatible endpoint or another coding-agent CLI — and give your own coding agent Fincept's data and tools.

At a glance

Open it	• **Settings** › **AI harness** • **Settings** › **Fincept MCP** • Type `PREF` in the command line, press **Enter**, then click **AI harness** in the list on the left • In AI chat, hover the model chip in the header: it names the place to change it
You need	• Signed in on any paid plan (nothing to unlock) • For your own model: Claude Code, Codex, an LLM endpoint or another CLI on this computer
Best for	• Using your Claude or ChatGPT plan instead of Fincept credits • Running scheduled AI jobs and missions • Letting Claude Code, Codex, Cursor or VS Code use Fincept's data
Time to learn	15 minutes
Related	**Chapter 37, AI Chat** p. 719, **Chapter 38, Agent Studio** p. 739, **Chapter 39, Mission Control** p. 764, **Chapter 41, MCP Servers** p. 810, **Chapter 51, Settings** p. 932

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42.1 Screen tour

The terminal's AI is normally **Fincept AI:** a managed model that runs on Fincept's servers and is paid for with credits. On this page you can make the terminal's AI run on a model **you already pay for** instead. The terminal calls such a model an **AI harness** — the engine that answers.

There are two pages, side by side in the Settings list:

- **AI harness** — which engine answers the terminal's AI, its sessions, scheduled AI tasks, and whether your own Claude Code or Codex sessions may work the terminal's screens.
- **Fincept MCP** — the other direction: Fincept's data and engines as tools *inside* your own Claude Code, Codex, Cursor, VS Code or any other MCP client.

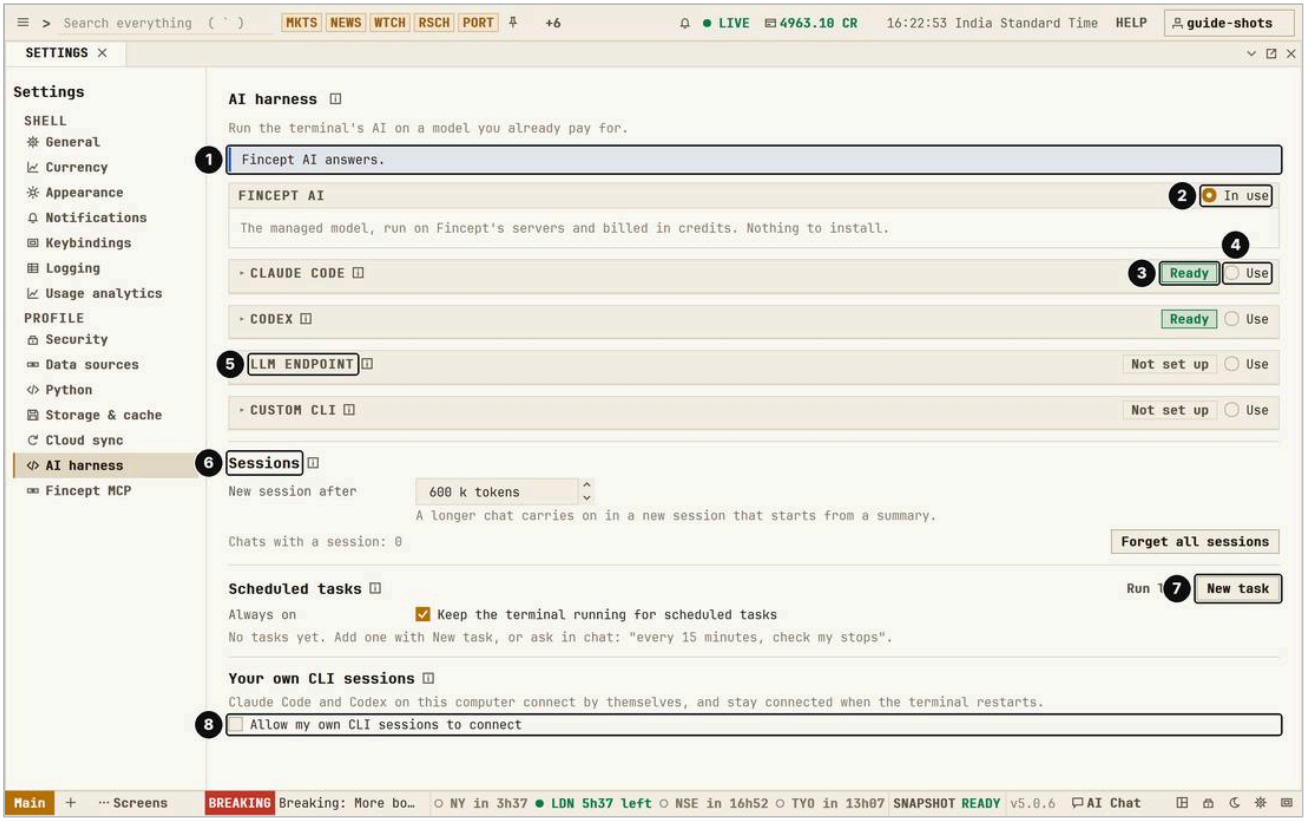


Figure 42.1 Settings > AI harness. On this computer Claude Code and Codex are installed and signed in, so both read Ready.

1. The state line: which engine answers right now.
2. **Fincept AI** — the managed model, billed in credits. **In use** marks the engine that answers.
3. A harness found on this computer. **Ready** = installed and signed in; **Not set up** = nothing to use yet.
4. **Use** switches the terminal's AI to that engine.
5. **LLM endpoint** and **Custom CLI** are set up by hand (see below).
6. **Sessions** — when a long chat starts a fresh session.
7. **Scheduled tasks** — AI jobs that run on a schedule (**New task**, **Run log**).
8. **Your own CLI sessions** — let a Claude Code or Codex session you run yourself work the terminal.

The engine cards

Each card is one line until you open it: its name, an ⓘ with what it is, a status, and **Use**. Click the card's name to open it.

Card	What it is	What you need
Fincept AI	The managed model, run on Fincept's servers and billed in credits. Nothing to install.	Nothing.

Card	What it is	What you need
Claude Code	Claude's models on your own Claude plan or Console account. Claude Code only carries the requests: its own prompt, tools and settings are switched off and the terminal's are used.	Claude Code installed and signed in on this computer.
Codex	OpenAI's models on your Codex sign-in (ChatGPT plan or API key), called straight from the terminal with its own instructions and tools. The models and efforts are Codex's own.	Codex installed once and signed in.
LLM endpoint	Any server that speaks OpenAI's API — OpenAI, OpenRouter, Groq, DeepSeek, Together, Mistral, Gemini or Anthropic's compatible endpoints, or your own Ollama, vLLM or LM Studio — with your own key.	The server's address and (usually) a key.
Custom CLI	Any other coding-agent CLI (Gemini CLI, Qwen Code, Kimi CLI, OpenCode, your own wrapper).	The program and how to run one prompt without interaction.

The terminal looks for every harness when it starts and each time you open this page. There is nothing to unlock: every account has it.

42.2 Quick start

Switch the terminal's AI to your own Claude Code in five minutes. (Codex works the same way.)

1. Install Claude Code once, in a terminal window of your computer. On Windows (PowerShell) run `irm https://claude.ai/install.ps1 | iex`; on macOS or Linux run `curl -fsSL https://claude.ai/install.sh | bash`. For Codex, run `npm install -g @openai/codex` (or use its Windows installer).

2. In Fincept, open **Settings** › **AI harness**. The **Claude Code** card reads **Ready** when it is installed and signed in. If it shows **Sign in**, click it: your browser opens to finish the sign-in, and the card updates when you are done.

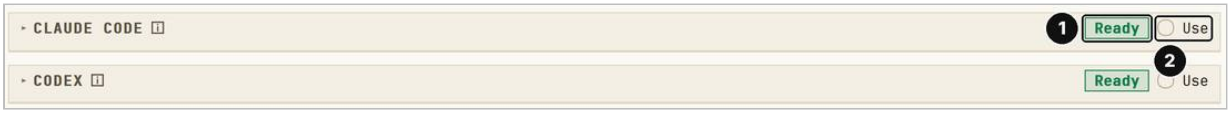


Figure 42.2 Claude Code and Codex found, installed and signed in.

1. Found and signed in.
2. Click **Use** to switch.

3. Click the card's name to open it. Pick a **Model** and a **Reasoning effort** (they list what your plan offers; **Default** is what Claude Code itself is set to), and tick **Web** — *Let it search and read the web* — if you want web search.

4. Click **Test**. The terminal sends one short turn that must reach its tools. A good result reads *Working: answered "READY" in 4 s and reached the terminal's tools.*

5. Click **Use** in the card's header. It changes to **In use**, and the state line reads **Claude Code answers, from this computer.**

6 Open **Chapter 37, AI Chat** p. 719. The header now shows your model, the price line under the message box is gone, and answers come from your own plan.

Tip

To go back, click **Use** on the **Fincept AI** card. Nothing else changes: your chats, agents and settings stay as they are.

42.3 What changes when your own AI answers

	Fincept AI	Your own harness
Who answers	Fincept's managed model on Fincept's servers	Your model, called from this computer
Credits	Each answer costs credits (see **§37.14 Costs and credits** p. 734)	No Fincept credits for those answers — your own plan pays
AI chat, the companion, strategy chat, Agent studio runs	Fincept AI	Your harness
Multi-agent teams, workflows and schedules that run on Fincept's servers	Fincept AI	Still Fincept AI
Missions, scheduled tasks, triggers	Not available	Need a harness (they run on this computer)
Thinking depth box in the chat	Shown	Hidden — use the card's **Reasoning effort**
Approvals	The terminal asks before any spend, money or delete action	The same: approvals always stay in the terminal
Agent Features (Memory, Guardrails, Evaluation…)	Not applied yet	Applied on every run (see **Chapter 38, Agent Studio** p. 739)

Careful

There is no silent fallback. If the harness you picked is signed out or missing, the state line names it and the problem — for example **"Claude Code is selected but … : chat fails until that is fixed."** — and chats fail until you fix it or click **Use** on **Fincept AI**. Your questions are never sent to Fincept's AI behind your back.

Chat commands on your own harness

In a chat that runs on Claude Code or a custom CLI, type:

Command	What it does
`/new`	A fresh session. The chat keeps its history and a short recap is carried over.
`/compact`	Also a fresh session with a recap (the harness's own slash commands are switched off).
`/status` or `/context`	The model, the session and how much of the model's context window it uses.
`/help`	The list of commands.

Codex and an LLM endpoint keep no session: every message carries the chat itself, so `/status` says so and **New chat** starts empty.

42.4 Set up an LLM endpoint

Use this for OpenAI's API with your own key, a router such as OpenRouter, or a model running on your own machine (Ollama, vLLM, LM Studio).

1. Open the **LLM endpoint** card.
2. **Name** — what the chat calls it (example: *OpenRouter*). Empty = the address's host.
3. **Address** — the API's base address, up to `/v1` (for example `https://openrouter.ai/api/v1`, or `http://localhost:11434/v1` for Ollama). It must be `https`; plain `http` is accepted only for this computer or an address on your local network.
4. **API** — **Chat Completions (/chat/completions)** (works with almost every server) or **Responses (/responses, OpenAI)**.
5. **API key** — paste the key and click **Save key**. It is stored encrypted on this computer only and sent only to that address. **Forget key** removes it (the terminal asks first).
6. Click **Refresh models**, pick a **Model** (or type one) and, if the model has them, a **Reasoning effort**.
7. Click **Test**, then **Use**.

42.5 Set up another coding-agent CLI

The **Custom CLI** card runs any other agent CLI, one process per message.

Field	Example	What it is
Executable	`gemini`, or a full path	The program.
Name	*Gemini CLI*	What the chat calls it.
New session	`-p --output-format stream-json --model {model}`	Arguments for one prompt in a new session.
Continue session	`--resume {session} -p --output-format stream-json`	Optional. Empty = every message starts a new session with a recap of the chat.
Output	auto	**auto** reads Claude-, Codex- and Gemini-style JSON lines and plain text.

Placeholders you can use in the arguments: `{model}` `{session}` `{workspace}` `{mcp_url}` `{mcp_config}` `{system_file}` `{prompt}` `{effort}`. The prompt goes in on standard input unless you use `{prompt}`. The environment variable `FINCEPT_MCP_TOKEN` holds the key for `{mcp_url}`, the terminal's own tool server on this computer.

42.6 Sessions

On Claude Code and a custom CLI every chat has its own session: **New chat** starts with an empty context, and an old chat picks up where it left off.

Control	Default	What it does
New session after	600 k tokens (20–2000 k)	When a session grows past this size, the next message starts a fresh session that begins from a recap of the chat. Claude Code also compacts a session on its own.
Chats with a session: n	—	How many chats have a harness session.
Forget all sessions	—	After a **Forget harness sessions** confirmation, every chat starts a fresh session (with a recap) on its next message.

42.7 Scheduled tasks

A **scheduled task** is an AI job your harness runs on a timetable with the terminal's tools — "every 15 minutes in market hours, check my positions against their stops", "at 08:30 on weekdays, write the morning brief". It needs a harness (Claude Code, Codex, an endpoint or a CLI), so it costs no Fincept credits.

1. Click **New task**. The **New scheduled task** window opens.
2. **Name** (example: *Stops watch*) and **Instruction** — what to do on each run, for example *"Check every open position in my paper portfolio against its stop and target. If any is within 1%, say which and by how much."* Each run ends with an `ALERT:` or `OK:` line.
3. **Schedule**: **Every N minutes** (5 minutes at the least; default 60), **At a time of day** (a time plus the days **Mon**–**Sun**), **Once** (a date and time), or **Cron expression** (`minute hour day month weekday`, local time, for example `*/15 9-16 * * 1-5`).
4. **Notify me**: **When it raises an alert or fails** (default), **After every run**, or **Never (check the run log)**. Notifications go to your desktop and to every channel set up in **Settings** › **Notifications**.
5. **Run on**: **Whichever harness is selected** (default) or a named harness; **Model** and **Reasoning effort** for its runs.
6. **Options**: **Allow trading tools** (off by default — orders go to the paper book unless the instruction asks for live money) and **Remember earlier runs** (every run continues one session instead of starting fresh). **Time limit**: 20 minutes by default (1–240).
7. Click **OK**. The task is listed with its schedule, next and last run.

Careful

A task runs **unattended**: nobody is there to approve, so anything that spends credits or moves money is refused unless the task allows trading. Start with **Allow trading tools** off.

Each task in the list shows its status (**Scheduled**, **Running**, **Paused**), *next* and *last* run, and buttons **Run now** (or **Stop** while it runs), **Pause** / **Resume**, **Edit**, and a menu with **Runs**, **Journal** (for a mission's task) and **Delete…** (*"Its run log is kept."*). **Run log** opens every run with its tool calls, tokens and answer. You can keep up to 50 tasks.

Always on — Keep the terminal running for scheduled tasks (on by default): while a task is scheduled the terminal does not lock itself, the computer does not fall asleep when idle, and closing the window leaves the terminal running in the system tray (menu bar on macOS). **Quit** there stops it. If the terminal ever closes by accident while a task is scheduled, it restarts itself (at most 3 times in 30 minutes).

Tip

Times are this computer's local time. The empty task list suggests asking in chat, but the AI cannot create a task: this page is yours alone (see the box in **§42.11 For advanced users** p. 830). In **Chapter 39, Mission Control** p. 764 the AI can fill in a **New mission** for you; saving it asks you first.

Missions — long-running goals with a journal, a paper book and scores — are scheduled tasks too. They have their own screen: **Chapter 39, Mission Control** p. 764.

42.8 Let your own Claude Code or Codex work the terminal

Your own CLI sessions lets a Claude Code or Codex session that *you* run, in any terminal window, use the terminal's screen tools: open screens, read panels, click, type and arrange them as you would — with the same approval prompts.

- Tick **Allow my own CLI sessions to connect**. Claude Code and Codex on this computer then connect by themselves, and stay connected when the terminal restarts. (The terminal adds an entry named `fincept` to their configuration; unticking it removes the entry.)
- The terminal listens only on this computer (`127.0.0.1`), on the **Port** shown (47821 unless you change it; 1024–65535), and only a client holding its key gets in. It works while the terminal is open. The line under **Port** reads *Listening on …*, or *Not listening on port … Pick another port.* when another program holds it — the terminal never moves to another port by itself.
- Under **Claude Code** and **Codex** are the commands the terminal ran to register itself, each with **Copy**, for a CLI installed somewhere the terminal does not look.
- **New token** makes a new key (*"Anyone who can read the token can use the terminal's tools while it is open. Make a new one if it was shared."*).
- Codex waits 60 seconds for a tool by default. Add `tool_timeout_sec = 300` under `[mcp_servers.fincept]` in `~/.codex/config.toml`, so an approval you take longer over is not cut short.

Fincept's *data* tools reach your own sessions through **Fincept MCP** (next section).

42.9 Fincept MCP: Fincept inside your own coding agent

Fincept MCP is a hosted Model Context Protocol server: your coding agent uses Fincept's markets, research and 15 quant engines as tools, with this Fincept account. It is included in every plan and runs on Fincept's servers, so it works whether or not the terminal is open.



Figure 42.3 Settings > Fincept MCP, top of the page.

1. **Endpoint** — the server's address. Sign-in is in your browser: no API key to copy.
2. **On this computer** — install it in Claude Code or Codex with one click.
3. **Connection** — whether this computer is linked to your account (**Reconnect**, **Test**).
4. Whether Fincept MCP is installed in Claude Code (and, below it, in Codex).

Each card ends with its **Install** button:



Figure 42.4 The Claude Code card's Install button.

1. **Install** adds `fincept-cloud` to Claude Code (or Codex) for every project.

Connect another client, further down the page, covers Cursor, VS Code, another computer and any other MCP client.

On this computer (one click)

The **Claude Code** and **Codex** cards show where each was found and its version, and whether Fincept MCP is installed in it:

Status	Meaning
Not installed	**Install** adds `"fincept-cloud"` to it for every project.
Installed	*Runs as "fincept-cloud" in every project.* **Remove** takes it out again.
Browser sign-in	An older entry that signs in through a browser; **Install** replaces it with this terminal's sign-in.
Needs repair	The entry starts another copy of the terminal; **Repair** fixes it, **Remove** deletes it.
Not found on this computer	Install Claude Code or Codex first.
Configuration unreadable	Its configuration file could not be read.

Connection reads **Not connected**, **Connected as** *your account*, **Disconnected**, **Linked to** *another account*, **not this account**, or **Not in your plan**. Installing in Claude Code or Codex connects this computer to your account; the agents then renew their access by themselves. **Reconnect** replaces the link with a fresh one (the old one stops working). **Test** starts the bridge once and asks the server for its tools. Signing out of the terminal disconnects the agents it connected; signing back in reconnects them.

Connect another client

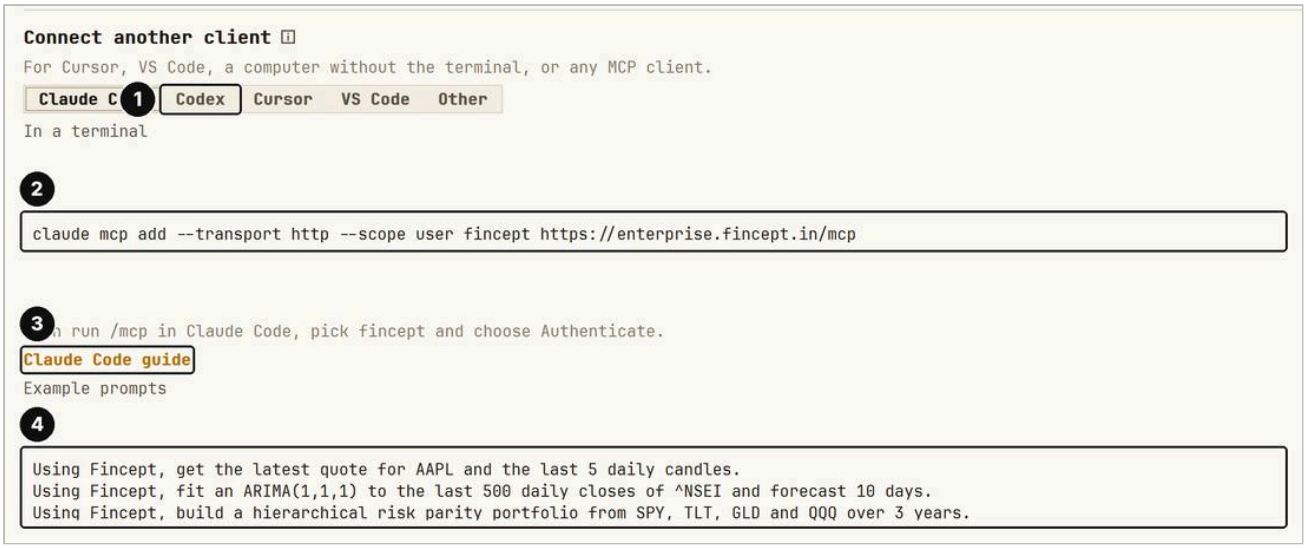


Figure 42.5 Connect another client — pick your client, copy the command, try an example prompt.

1. Pick your client: **Claude Code**, **Codex**, **Cursor**, **VS Code** or **Other**.
2. The exact command or file to add; **Copy** copies it.
3. The step-by-step guide for that client, online.
4. Example prompts to try first.

Client	Where	What to add	Then
Claude Code	In a terminal	`claude mcp add --transport http --scope user fincept https://enterprise.fincept.in/mcp`	Run `/mcp` in Claude Code, pick *fincept* and choose *Authenticate*.
Codex	In a terminal	`codex mcp add fincept --url https://enterprise.fincept.in/mcp`	Codex opens the browser; approve the connection on fincept.in.
Cursor	In `~/.cursor/mcp.json`	`{ "mcpServers": { "fincept": { "url": "https://enterprise.fincept.in/mcp" } } }`	Start the fincept login in Cursor's MCP settings and approve it on fincept.in.
VS Code	In `.vscode/mcp.json`	`{ "servers": { "fincept": { "type": "http", "url": "https://enterprise.fincept.in/mcp" } } }`	Start the server from mcp.json (or *MCP: List Servers*) and approve the sign-in.
Other	Server URL	`https://enterprise.fincept.in/mcp`	Any client with remote HTTP servers and OAuth 2.1 works. Static keys copied from the terminal do not.

Then ask your agent something that starts with *"Using Fincept"*, for example *"Using Fincept, get the latest quote for AAPL and the last 5 daily candles."*

> **Note**
>
> If you also allowed your own CLI sessions on the **AI harness** page, the terminal's own server is already registered as `fincept`. Give one of the two another name in your client, for example `fincept-cloud`.

What your agent gets, and the rules

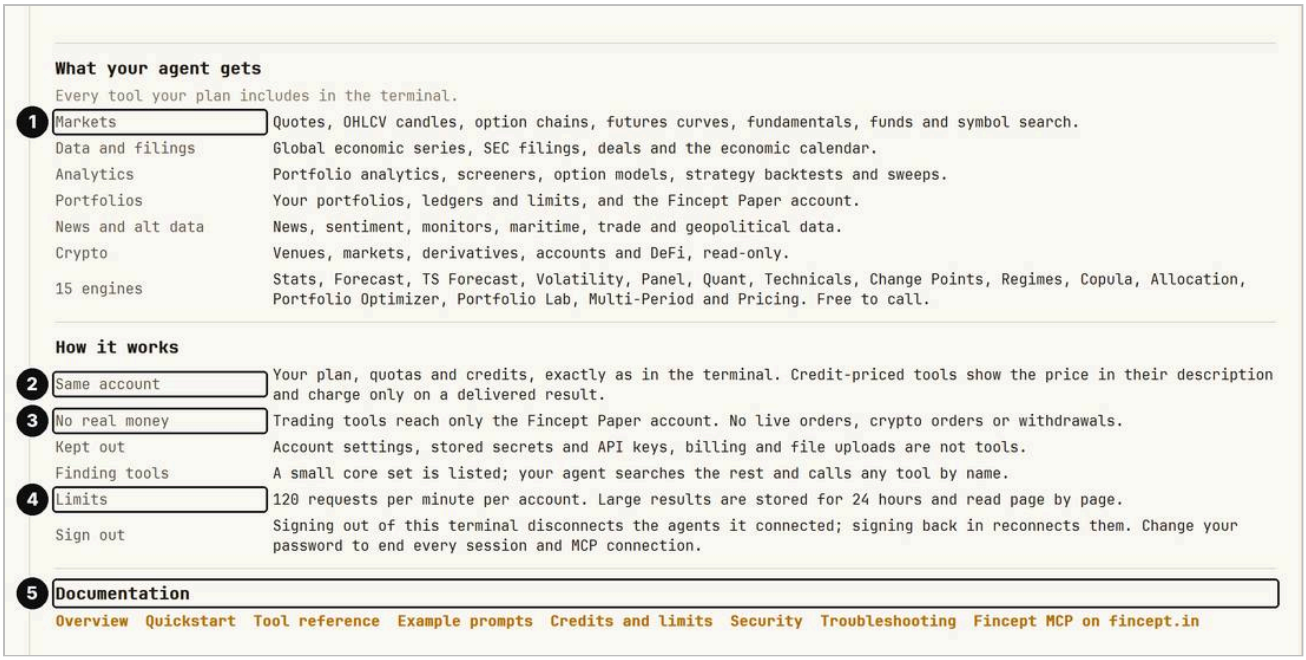


Figure 42.6 What your agent gets, how it works, and the documentation links.

1. The tool families your plan includes.
2. The same plan, quotas and credits.
3. Trading tools reach only Fincept Paper.
4. 120 requests per minute per account.
5. Links to the online documentation.

Topic	Rule
Same account	Your plan, quotas and credits, exactly as in the terminal. Credit-priced tools show the price in their description and charge only on a delivered result.
No real money	Trading tools reach only the Fincept Paper account. No live orders, crypto orders or withdrawals.
Kept out	Account settings, stored secrets and API keys, billing and file uploads are not tools.
Finding tools	A small core set is listed; your agent searches the rest and calls any tool by name.
Limits	120 requests per minute per account. Large results are stored for 24 hours and read page by page.
Sign out	Signing out of the terminal disconnects the agents it connected; signing back in reconnects them. Change your password to end every session and MCP connection.

What your agent gets: Markets (quotes, OHLCV candles, option chains, futures curves, fundamentals, funds, symbol search); Data and filings (global economic series, SEC filings, deals, the economic calendar); Analytics (portfolio analytics, screeners, option models, strategy backtests and sweeps); Portfolios (your portfolios, ledgers and limits, and the Fincept Paper account); News and alt data (news, sentiment, monitors, maritime, trade and geopolitical data); Crypto (venues, markets, derivatives, accounts and DeFi, read-only); and **15 engines** — Stats, Forecast, TS Forecast, Volatility, Panel, Quant, Technicals, Change Points, Regimes, Copula, Allocation, Portfolio Optimizer, Portfolio Lab, Multi-Period and Pricing (free to call).

Documentation buttons open the online guides: **Overview**, **Quickstart**, **Tool reference**, **Example prompts**, **Credits and limits**, **Security**, **Troubleshooting**, **Fincept MCP on fincept.in**.

42.10 Reference

AI harness page

Control	What it does
State line	**Fincept AI answers.**, **Claude Code answers, from this computer.** (or the name of the harness in use), **Checking Claude Code...**, or a problem (*"… is selected but …: chat fails until that is fixed."*).
Card name (click)	Opens or closes the card.
ⓘ	What the harness is.
Status	**Ready**, **Checking...**, **Not set up**, *signed in*, or how to install it (*"Install it in a terminal: …"*, *"Press Sign in, or run once in a terminal: …"*).
Sign in	Starts the harness's own sign-in in your browser (Claude Code, Codex).
Use / In use	Make this the engine that answers / it is.
Model, Reasoning effort	What the harness offers; **Default** = its own setting.
Web	*Let it search and read the web* (Claude Code, Codex).
Extra arguments	Advanced: extra command-line arguments.
Test	One short turn that must reach the terminal's tools.
Refresh models / Detect	Re-read the models / look for the harness again.
New session after	20–2000 k tokens, default 600 k.
Forget all sessions	Fresh sessions for every chat (asks first).
Run log, New task	Scheduled tasks (above).
Keep the terminal running for scheduled tasks	Always on, default on.
Allow my own CLI sessions to connect	Off by default. Shows **Port** (default 47821), the listening line, the Claude Code and Codex commands with **Copy**, and **New token** (asks first) when on.

New scheduled task window

Field	Default	Range / options
Name	—	e.g. *Stops watch*
Instruction	—	Free text; ends with an `ALERT:` or `OK:` line
Schedule	**Every N minutes**	**Every N minutes**, **At a time of day**, **Once**, **Cron expression**
Every	60 min	5 min – 7 days
At (local time) / On	09:00, Mon–Fri	Any time; any days
Cron	—	`minute hour day month weekday`, local time
Notify me	**When it raises an alert or fails**	**After every run**, **Never (check the run log)**
Run on	**Whichever harness is selected**	Claude Code, Codex, LLM endpoint, Custom CLI
Model / Reasoning effort	The harness setting	What the harness offers

Field	Default	Range / options
Allow trading tools	Off	Paper unless the instruction asks for live money
Remember earlier runs	Off	One continuing session
Time limit	20 min	1–240 min

42.11 For advanced users

- **The terminal is the harness.** Of Claude Code and Codex it takes only the sign-in, the model list and the efforts. Claude Code runs with the terminal's instructions in place of its own, without its file or command tools and without your project settings or `CLAUDE.md`; it gets web search only while **Web** is ticked. Codex and an LLM endpoint are called directly over HTTPS.
- **Where the tools come from.** Every harness turn reaches the terminal's tools through the terminal's own MCP server on `127.0.0.1`, with a key that lives only for that turn. A chat turn gets the screen and data tools; a scheduled task gets the data tools only (no screen); a mission wake gets the data and mission tools.
- **Tokens are kept small.** Each request carries only what the terminal sends: a short standing prompt, the chat (or a recap) and a core set of tools; the rest are found by tool search.
- **Plan limits.** When your Claude or ChatGPT plan reports a usage limit, unattended runs of that harness wait until the reset.
- **Tasks are local.** Tasks, missions and their files live on this computer. A task created on another computer shows **Run on this device instead**, which moves it here.
- **Alpha Arena** finds Claude Code and Codex on its own: once installed and signed in here, their models can enter a competition beside Fincept AI (see **Chapter 20, Alpha Arena** p. 371).

Do it with AI

In AI chat: *"List my scheduled tasks and tell me when each one runs next."* — the AI can read **Scheduled tasks**, but it cannot create, change or delete them: this settings page is yours alone. Set up a task yourself with **New task**. (In Mission Control the AI can fill in a **New mission** for you; saving it always asks you first.)

42.12 Troubleshooting

The Claude Code card says it is not found. Install it (see the Quick start), then reopen this page — the terminal looks again each time. If you installed it while the terminal was open, click **Detect**.

The card shows Sign in. Click **Sign in** and finish in the browser, or run `claude auth login` (Codex: `codex login`) once in a terminal window.

Chat says "... is selected but ...". The harness you picked cannot answer (signed out, uninstalled, or its plan limit is reached). Fix that, or click **Use** on **Fincept AI**.

Test says it answered but did not call the terminal's tools. The model may not support tool calls well. Pick another model on the card, or another endpoint.

Scheduled tasks did not run overnight. Tasks run only while the terminal is running on this computer. Keep **Always on** ticked and do not quit from the tray. Check **Run log** for *interrupted* runs.

My own Claude Code session cannot see the terminal. Tick **Allow my own CLI sessions to connect** and keep the terminal open. If you added the terminal by hand earlier, remove that entry and let the terminal add its own.

Fincept MCP reads "Not in your plan". Fincept MCP is part of every paid plan, so this means your account has no active plan right now (for example it has run out). Renew it; see **Chapter 50, Profile, Plan & Billing** p. 920.

PART VII

Tools & Workspace

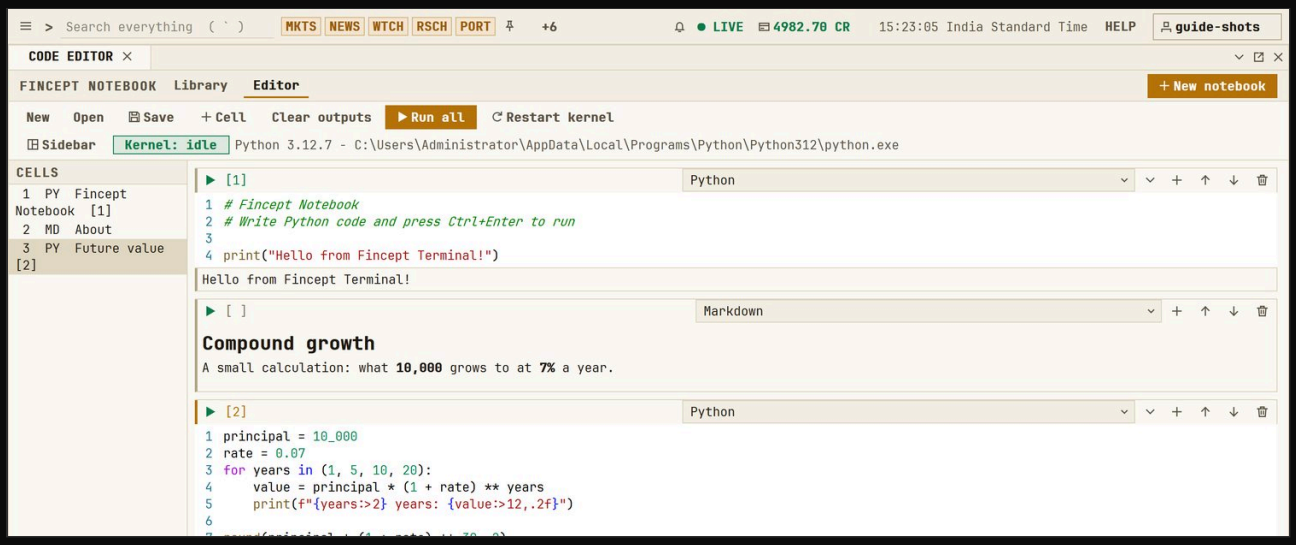
The desk around your analysis — code, spreadsheets, reports, notes, files and your own data sources.

43	Code Editor	CODE
44	Excel	XLSX
45	Report Builder	RPRT
46	Notes	NOTE
47	File Manager	FILE
48	Data Sources	DSRC
49	Data Mapping	DMAP

CHAPTER 43

Code Editor CODE

Fincept Notebook — run your own Python in notebook cells next to your market screens. Sixteen ready-made finance notebooks to learn from, and your own notebooks saved as standard .ipynb files.



At a glance

Open it	• Type `CODE` in the command line and press **Enter** (also `editor` or `dev`) • **Screens** › **Tools & Workspace** › **Code Editor**
You need	• Signed in on any paid plan • Python 3.8 or later on this computer
Best for	• Learning finance maths step by step • Quick calculations and charts in Python
Time to learn	10 minutes
Related	**Chapter 40, Node Editor** p. 776, **Chapter 45, Report Builder** p. 858

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43.1 Screen tour

The Code Editor is **Fincept Notebook**: a notebook in the style of Jupyter. A **notebook** is a page of **cells**. A *code cell* holds Python that you run; its output appears under it. A *markdown cell* holds formatted text. The screen has two views, **Library** and **Editor**.

Your own Python

The terminal does not include Python. Notebook cells run on the Python 3 installed on your computer (version 3.8 or later). See **§43.2 Set up Python** p. 835.

Library

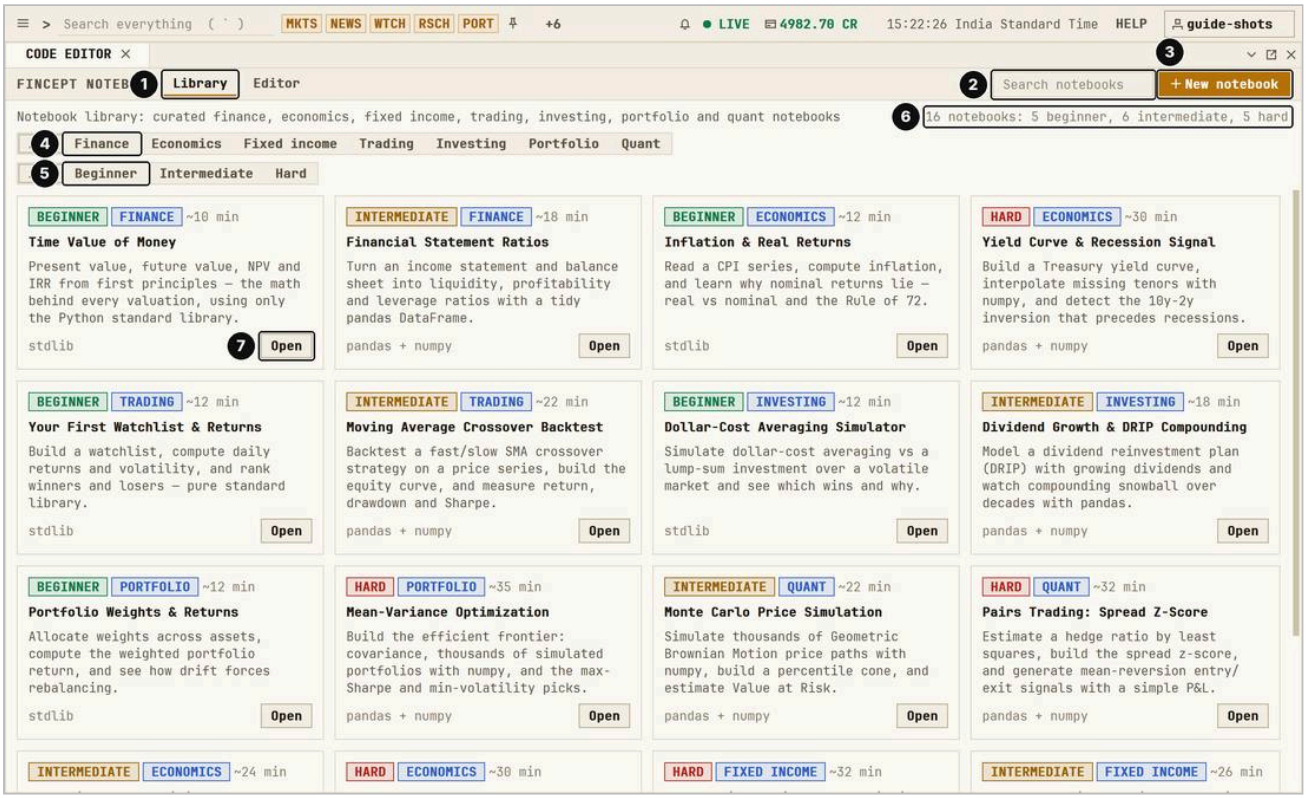


Figure 43.1 The Library — sixteen ready-made notebooks, with filters by subject and difficulty.

1. **Library** and **Editor** switch views.
2. **Search notebooks** filters the cards as you type.
3. **New notebook** opens an empty notebook in the Editor.
4. Filter by subject: **All**, **Finance**, **Economics**, **Fixed income**, **Trading**, **Investing**, **Portfolio**, **Quant**.
5. Filter by difficulty: **All**, **Beginner**, **Intermediate**, **Hard**.
6. How many notebooks match, by difficulty.
7. Each card: difficulty, subject, minutes, what it teaches, what it needs, and **Open**.

Each card shows the difficulty, the subject, about how many minutes it takes, a summary, and what it needs: **stdlib** (plain Python, nothing to install) or **pandas + numpy** (two common add-on packages).

Editor

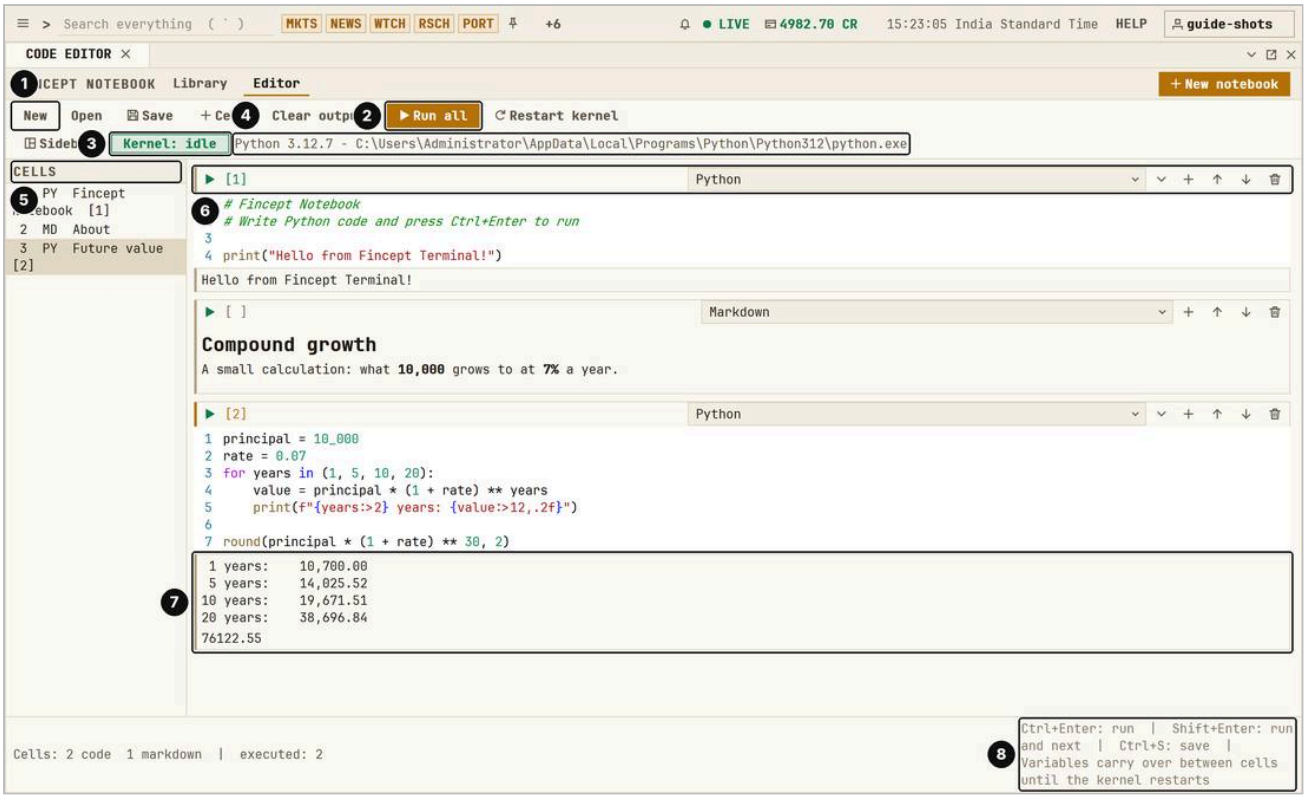


Figure 43.2 The Editor with a small notebook of your own after Run all.

1. **The toolbar**: New, Open, Save, add a Cell, Clear outputs, Run all, Restart kernel.
2. **Run all** runs every code cell, top to bottom.
3. The kernel's state: **not started**, **idle** or **busy**.
4. Which Python runs the notebook, and where it is.
5. **The navigator**: one line per cell. Click to jump; right-click to rename.
6. **A cell's bar**: run, run count, type, and insert, move and delete.
7. **The output** under a code cell.
8. **The status bar**: the last action, and the keyboard shortcuts.

- **The toolbar** — **New**, **Open**, **Save**, **Cell** (add a code cell), **Clear outputs**, **Run all**, **Restart kernel**; on the right **Sidebar** (show or hide the navigator), the kernel's state and the Python in use.
- **The navigator** (left, titled **Cells**) — every cell by name: the title you gave it, or the first words of its text.
- **The cells** — each with a bar (run, run count such as `[3]`, type **Python** or **Markdown**, and on the right insert, move up, move down and delete), the code, and its output underneath.
- **The status bar** — what just happened (*Ready*, a note about a failed cell…), the cell count (*Cells: 4 code 2 markdown | executed: 4*) and the shortcuts: *Ctrl+Enter: run | Shift+Enter: run and next | Ctrl+S: save | Variables carry over between cells until the kernel restarts*.

43.2 Set up Python

The first time you open the Editor, the terminal looks for Python on this computer. When it finds one, the toolbar shows *Python 3.12.7 - C:\…\python.exe* (your version and path). When it finds none, a notice under the toolbar says:

> Python 3 was not found on this computer. Notebook cells run on your own Python: download it from https://www.python.org/downloads/, and on Windows tick "Add python.exe to PATH" during the install. Then press Detect again, or pick the interpreter in Settings > Python.

1. Click **Download Python** in the notice (it opens python.org) and install Python 3. On Windows, tick **Add python.exe to PATH** in the installer.
2. Back in the terminal, click **Detect again**. The notice disappears and the toolbar names your Python.
3. To use a different Python (for example one with your packages installed), open **Settings** › **Python**.



Figure 43.3 Settings > Python — the Python in use, and where to pick another.

1. **Detect again** searches this computer, for example after an install.
2. Type or **Browse...** to the python program you want.
3. **Use this Python** checks it and makes it the one in use.
4. **Search automatically** forgets your pick.

In Settings > Python	Meaning
Status	**Ready**, **Looking for Python...** or **Not found**.
Interpreter, Version	The python program in use and its version.
Found by	**Found automatically on this computer** or **Picked by you below**.
Use a different Python	**Interpreter file**, **Browse...**, **Use this Python**, **Search automatically**. A file that does not run as Python 3.8 or later is refused and nothing changes.

The same Python runs the Node Editor's **Code (Python)** node (**Chapter 40, Node Editor** p. 776). The choice is kept on this computer only.

> **Note**
>
> The automatic search tries, in order: `python3` / `python` on your PATH (skipping the Windows Store shortcut), the Windows `py` launcher, then the usual install folders. The first Python 3.8 or later wins.

43.3 Quick start

1. Type `CODE` in the command line and press `Enter`. The **Library** opens.

2 Type `time value` in **Search notebooks**. One card is left: **Time Value of Money** (Beginner, plain Python).

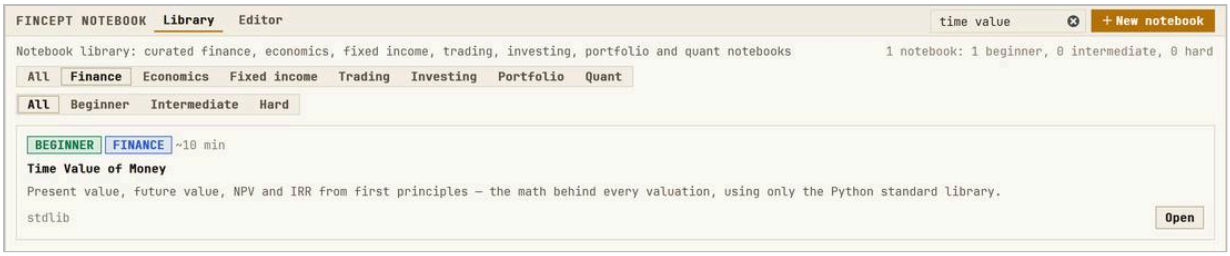


Figure 43.4 A search narrows the library to one notebook.

3 Click **Open**. The notebook opens in the **Editor**: explanations in markdown cells, Python in code cells.

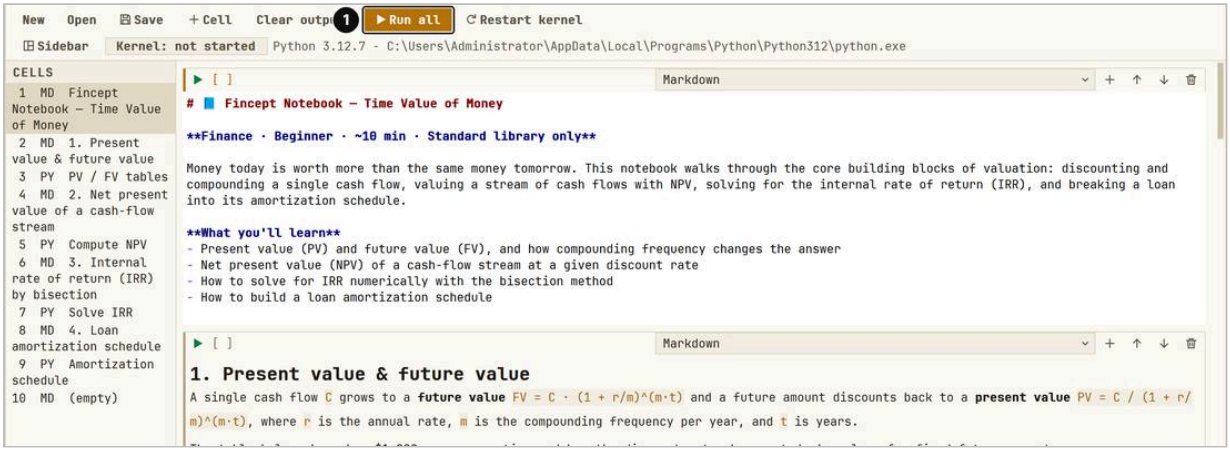


Figure 43.5 The Time Value of Money notebook, before it runs. Every cell is listed in the navigator.

1 Click **Run all**.

4 Click **Run all**. The cells run one after another; each output appears under its cell, and the run count changes from `[ ]` to `[1]`, `[2]`.... Click a cell in the navigator to jump to it.

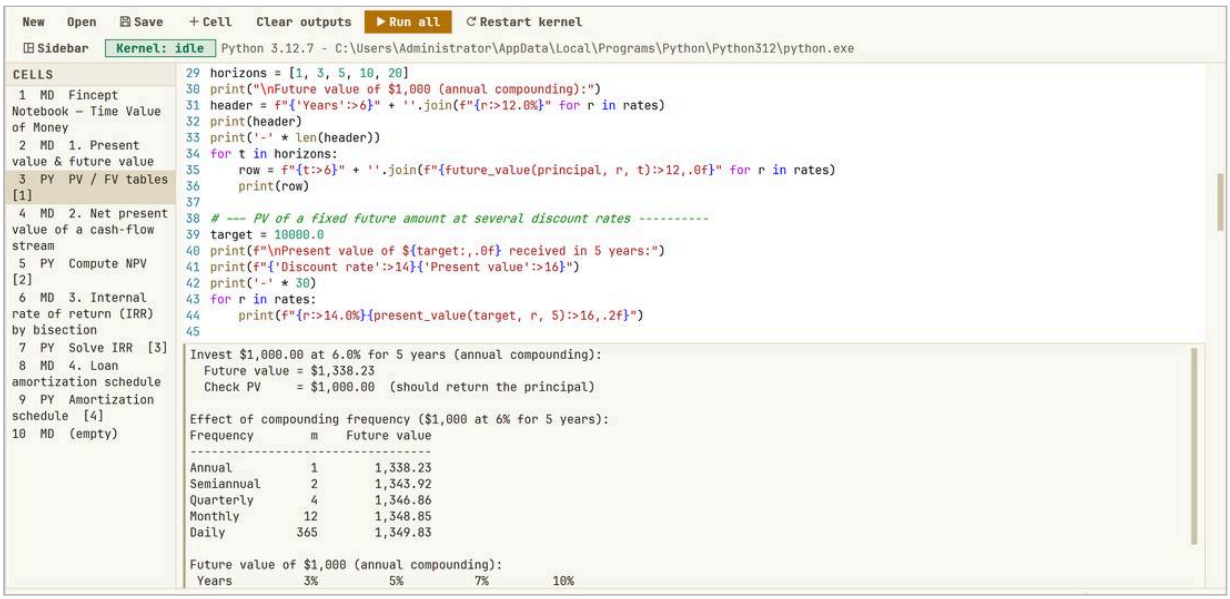


Figure 43.6 A code cell of the notebook with its output, after Run all.

5 Change a number in a cell (an interest rate, for example) and press `Ctrl` + `Enter` in that cell to run it again.

43.4 Write and run your own code

1. Click **New notebook** (Library) or **New** (Editor). A new notebook starts with one cell that prints *Hello from Fincept Terminal!*.

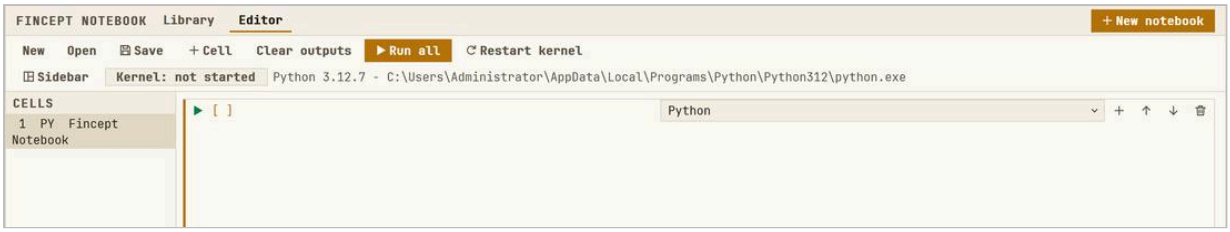


Figure 43.7 A new notebook.

2. Click in the cell and type your Python. Press `Ctrl` + `Enter` to run it, or `Shift` + `Enter` to run it and move to the next cell.

3. Click **Cell** in the toolbar (or **+** on a cell's bar) to add a code cell below the selected one.

4. To write text instead, set the cell's type to **Markdown**. Run a markdown cell to show it formatted; click it to edit it again.

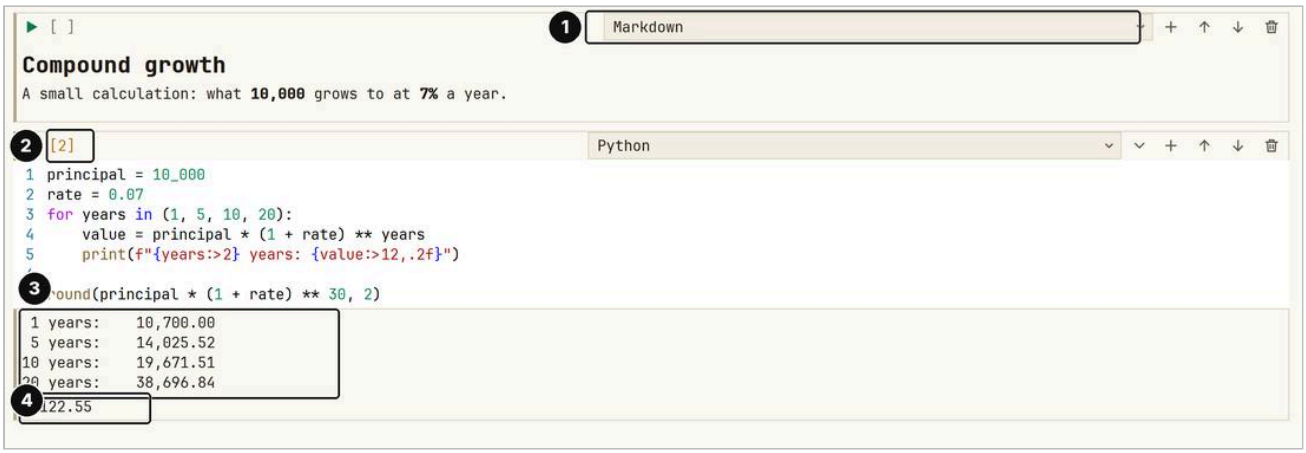


Figure 43.8 A markdown cell, and a code cell with its printed output and the value of its last line.

1. Cell type — **Python** or **Markdown**. A markdown cell shows formatted once it has run.
2. The run count — `[ ]` not run yet, `[*]` running, `[2]` the second cell run.
3. What the cell printed.
4. The value of the cell's last line.

What a cell can show:

- **Printed text** — anything the code prints (and error messages).
- **The value of the last line** — as in Jupyter: a cell ending in `round(x, 2)` shows that number.
- **Charts** — figures drawn with matplotlib are captured and shown as pictures.
- **Errors** — the error and where it happened. Python's *ModuleNotFoundError* adds a line telling you the exact command to install the missing package for the Python in use.

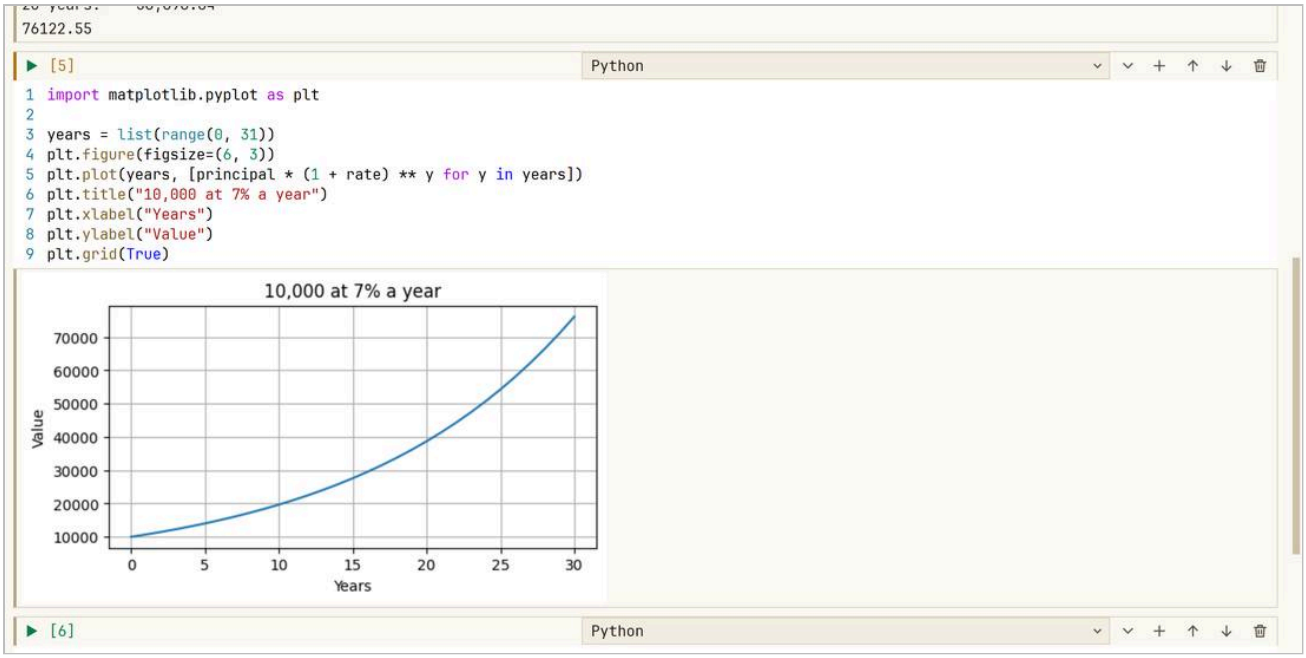


Figure 43.9 A matplotlib chart is shown under the cell that drew it.



Figure 43.10 A missing package — the error says how to install it for the Python in use.

Very long output is cut after 400,000 characters (*output truncated*).

> **Tip**
>
> `%pip install pandas` in a cell installs a package for the Python the notebook uses. A line starting with `!` runs a command, for example `!python --version`.

43.5 Manage cells

To	Do
Run one cell	Its ▶ run button, or **Ctrl** + **Enter** in the cell.
Run and go on	**Shift** + **Enter**.
Run everything	**Run all** — top to bottom; it stops at the first cell that raises an error (*Run all stopped at cell n, which raised an error.*).
Add a cell	**Cell** (toolbar) or **+** (cell bar): a code cell below.
Move a cell	↑ / ↓ on the cell bar. Outputs move with it.
Delete a cell	The bin on the cell bar. A notebook keeps at least one cell.
Change its type	**Python** / **Markdown** on the cell bar (not while it runs).
Name a cell	Right-click it in the navigator, **Rename cell**. An empty name goes back to the first words of its text.

To	Do
Hide an output	The arrow next to the type (shown once a cell has output).
Clear outputs	**Clear outputs** (toolbar) — the code stays.
Hide the navigator	**Sidebar**.

43.6 The kernel

One Python process runs a notebook's cells, in the order you run them, and keeps their **variables**: a value set in cell 1 is there in cell 2. That process is the **kernel**.

- The toolbar says **Kernel: not started** (nothing run yet), **Kernel: idle**, **Kernel: busy** or *busy (n queued)*. Hover over it for the working folder.
- **Restart kernel** stops the running cell and clears every variable; outputs stay on the page. The status bar says *Kernel restarted: every variable was cleared. Run the cells again from the top.*
- Opening or creating another notebook starts a fresh kernel: nothing leaks from one notebook to the next.
- Code runs with your normal computer permissions and your own environment, in the notebook's folder (your Documents folder for a new notebook). Fincept's sign-in and keys are never handed to it.

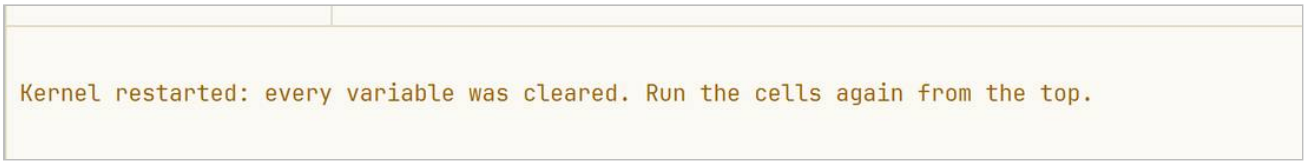


Figure 43.11 After Restart kernel.

43.7 Save and open notebooks

- **Save** (`Ctrl` + `S`) writes the notebook as a standard `.ipynb` file, outputs included. A notebook opened from a file (or from the Library) is saved back to it; a new one asks where. Every saved notebook is also added to **Chapter 47, File Manager** p. 882.
- **Open** reads any `.ipynb` file — from Jupyter, VS Code or a colleague.
- **Library notebooks** open as your own copy, kept in the terminal's files: change and save them freely; the originals stay as they are.

Tip

A saved notebook can go into a report: in **Chapter 45, Report Builder** p. 858, a **Code block** has **Import from Code editor**, which inserts one cell or all of a notebook's code.

43.8 The notebook library

Subject	Notebook	Level	Needs
Finance	Time Value of Money	Beginner	stdlib

Subject	Notebook	Level	Needs
Finance	Financial Statement Ratios	Intermediate	pandas + numpy
Economics	Inflation & Real Returns	Beginner	stdlib
Economics	Inflation Decomposition & Core	Intermediate	pandas + numpy
Economics	Yield Curve & Recession Signal	Hard	pandas + numpy
Economics	Output Gap & the Taylor Rule	Hard	pandas + numpy
Fixed income	Bond Portfolio Duration, Convexity & VaR	Intermediate	pandas + numpy
Fixed income	Nelson-Siegel Yield-Curve Fitting	Hard	pandas + numpy
Trading	Your First Watchlist & Returns	Beginner	stdlib
Trading	Moving Average Crossover Backtest	Intermediate	pandas + numpy
Investing	Dollar-Cost Averaging Simulator	Beginner	stdlib
Investing	Dividend Growth & DRIP Compounding	Intermediate	pandas + numpy
Portfolio	Portfolio Weights & Returns	Beginner	stdlib
Portfolio	Mean-Variance Optimization	Hard	pandas + numpy
Quant	Monte Carlo Price Simulation	Intermediate	pandas + numpy
Quant	Pairs Trading: Spread Z-Score	Hard	pandas + numpy

For the **pandas + numpy** notebooks, install the two packages once: run `%pip install pandas numpy` in a cell.

43.9 Let the AI help

The AI in **Chapter 37, AI Chat** p. 719 can read the open notebook (cells and their last outputs), insert new cells and change a cell's code. Running cells is yours: when the AI asks to run, you approve each run, because the code runs on your computer.

Do it with AI

- *"In the Code Editor, add a cell that computes the monthly payment on a 30-year mortgage of 400,000 at 6.5%."*
- *"Read my notebook and explain why cell 3 fails."*
- *"Add a markdown cell above each code cell explaining what it does."*

43.10 Reference

Toolbars

Control	What it does
Library / Editor	Switch views.
Search notebooks	Filter the library (Library view).

Control	What it does
New notebook	An empty notebook, in the Editor.
New	An empty notebook (its own new kernel).
Open	Open an `.ipynb` file.
Save	Save the notebook (Ctrl + S).
Cell	Add a code cell below the selected one.
Clear outputs	Remove every output.
Run all	Run every code cell in order (reads **Running all...** while it works).
Restart kernel	Stop the running cell and clear every variable.
Sidebar	Show or hide the navigator.

Keyboard

Key	Does
Ctrl + Enter	Run the cell.
Shift + Enter	Run the cell and move to the next.
Ctrl + S	Save the notebook.

The keypad's Enter works too. You can change the two run keys in Settings › Keybindings (**Run Cell** and **Run & Move Next**).

Messages

Message	Meaning
Cell n is empty: type some Python, then run it.	Nothing to run.
Cell n failed without output.	The cell failed and printed nothing.
This notebook has no code cells to run.	Run all on a notebook of markdown only.
A notebook keeps at least one cell.	You tried to delete the last cell.
Wait for the cell to finish before changing its type.	—
No notebooks match your filters.	Clear the search or pick **All**.
Run all stopped at cell n, which raised an error.	Fix that cell and run again.
Could not open "…": … / Could not save "…": …	The file could not be read or written; the reason follows.

43.11 For advanced users

- **Jupyter-compatible files.** Notebooks are saved in the standard notebook format (version 4.5) with outputs and cell ids; text round-trips exactly.
- **Line magics.** `%pip …` and `!command` work; other `%` magics are ignored (figures are captured without `%matplotlib`).

- **Figures.** Every open matplotlib figure is captured as a picture after the cell runs.
- **Workflows.** For code that runs on a schedule, put it in a Node Editor **Code (Python)** node: the previous node's data is in `_input`, and `result = …` sets the node's output (**Chapter 40, Node Editor** p. 776).

43.12 Troubleshooting

"Python not found" in the toolbar. Install Python 3.8 or later (on Windows tick *Add python.exe to PATH*), then click **Detect again**, or pick the python program in **Settings › Python**.

ModuleNotFoundError. The package is not installed for the Python in use. Run the command the error suggests, or `%pip install <package>` in a cell.

My variables are gone. The kernel was restarted (or you opened another notebook). Run the cells again from the top.

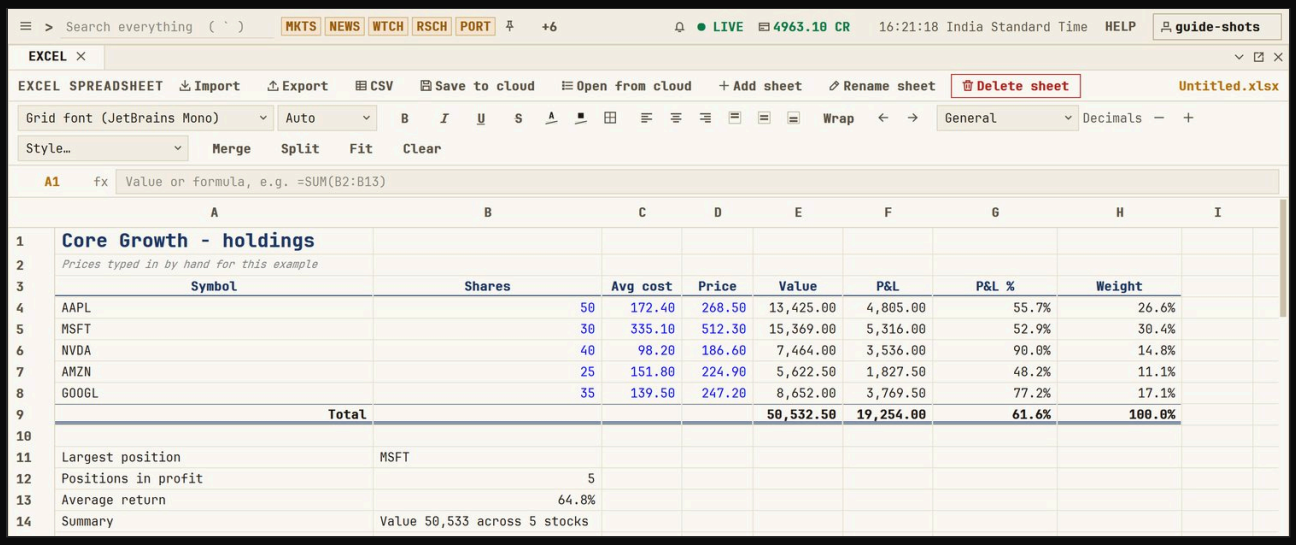
A cell runs forever. Click **Restart kernel** to stop it.

Run all stopped half way. A cell raised an error; the status bar names it. Fix that cell and run again.

CHAPTER 44

Excel XLSX

A spreadsheet inside the terminal — sheets, formulas with a finance-minded function library, model-style formatting, import and export of .xlsx and .csv, and a cloud copy that follows you between computers.



At a glance

Open it	• Type `XLSX` in the command line and press **Enter** (also `excel`, `spreadsheet` or `xls`) • **Screens** › **Tools & Workspace** › **Excel**
You need	• Signed in on any paid plan
Best for	• A quick model next to your market screens • Opening an .xlsx someone sent you
Time to learn	15 minutes
Related	**Chapter 45, Report Builder** p. 858, **Chapter 43, Code Editor** p. 833

In this chapter

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44.1 Screen tour

The Excel screen is a workbook: one or more **sheets** (tabs), each a grid of cells. You type numbers, text or formulas into cells, format them, and keep the workbook in your Fincept cloud or export it to a file.

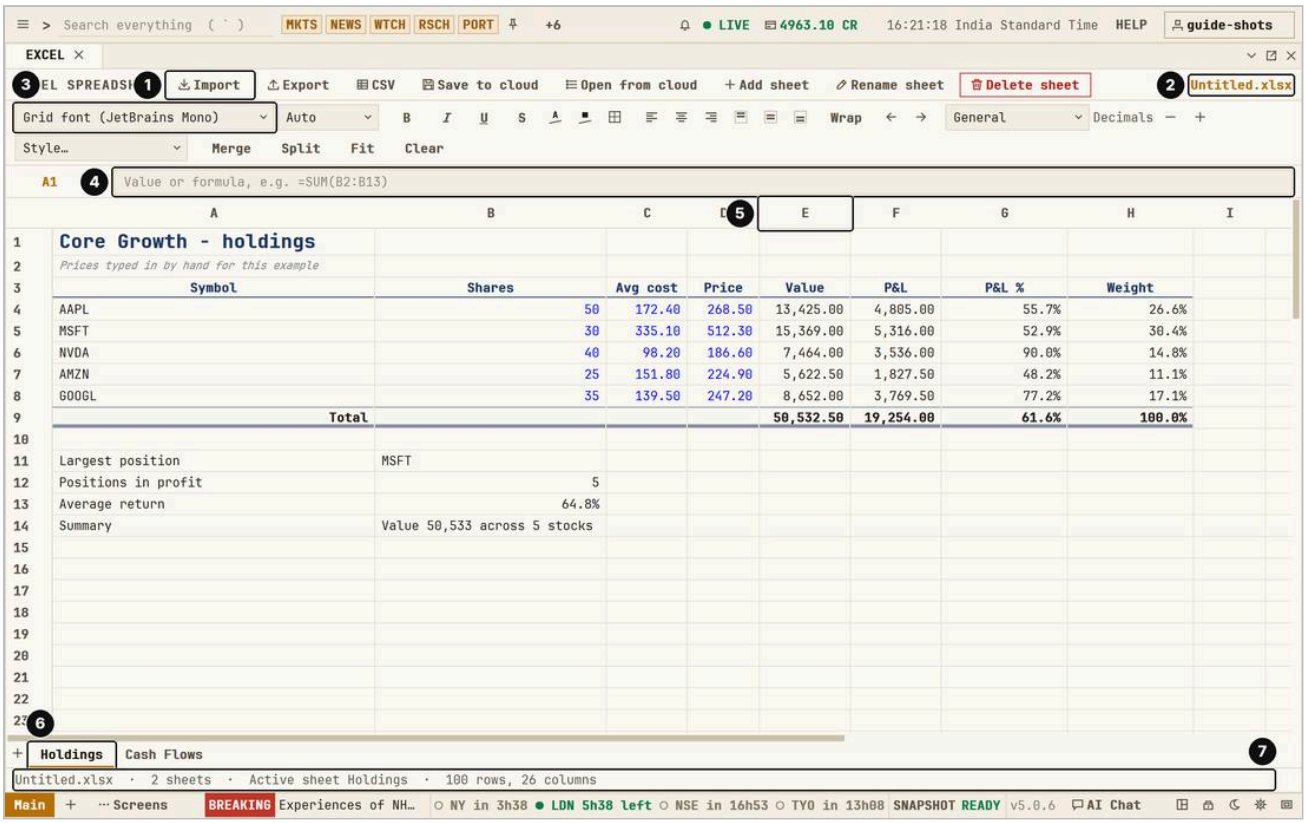


Figure 44.1 The Excel screen with a small example workbook — a holdings sheet with formulas, totals and formatting.

1. **The toolbar**: import and export files, cloud save and open, and the sheet buttons.
2. **Workbook name.** Click to rename it.
3. **The format bar**: font, size, bold, colours, borders, alignment, number format and styles.
4. **The formula bar**: the selected cell's address and its value or formula.
5. **Column letters** and **row numbers** name every cell: E4 is column E, row 4.
6. **Sheet tabs.** Click to switch; right-click for more.
7. **The status bar**: sheets, the active sheet's size, and a quick sum of the selection.

From top to bottom:

- **The toolbar** — **EXCEL SPREADSHEET**, then **Import**, **Export**, **CSV**, **Save to cloud**, **Open from cloud**, **Add sheet**, **Rename sheet**, **Delete sheet**, and the workbook's name on the right (**Untitled.xlsx** until you name it).
- **The format bar** — two rows of formatting controls for the selected cells.
- **The formula bar** — the active cell's address (for example **A1**), **fx**, and a box that shows and edits the cell's value or formula.
- **The grid** — columns A, B, C… and rows 1, 2, 3…. A new sheet has 100 rows and 26 columns.
- **The sheet tabs** — one tab per sheet, with **+** on the left to add one.
- **The status bar** — the workbook's name, the number of sheets, the active sheet and its size. When you select two or more cells it also shows **Count** (how many cells) and the **Sum**, **Avg**, **Min** and **Max** of the numbers among them.

44.2 Quick start

Work out the value of a few holdings in two minutes.

1. Type `XLSX` in the command line and press **Enter**.
2. Click cell **A1** and type `Symbol`. Press **Tab** and type `Shares`, **Tab** `Price`, **Tab** `Value`, then **Enter**.
3. Click **A2** and type `AAPL`, `50`, `268.50` (with **Tab** between them). In row 3 type `MSFT`, `30`, `512.30`.
4. Click **D2** and type `=B2*C2`, then **Enter**. The cell shows the result; the formula bar shows the formula.

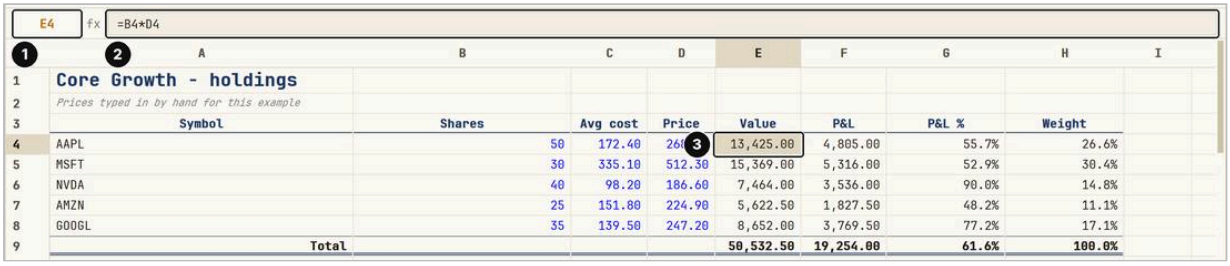


Figure 44.2 A selected formula cell (E4 of the example) — the grid shows the result, the formula bar shows the formula.

1. The selected cell's address.
2. The formula behind it: `=B4*D4`.
3. The cell shows the result.

5. Click **D3** and type `=B3*C3`.
6. Click **D4** and type `=SUM(D2:D3)`. That is the total value.
7. Select **C2:D4** and pick a number format such as **1,234.57** in the format bar.

> **Tip**
>
> Select a block of numbers to see their **Count**, **Sum**, **Avg**, **Min** and **Max** in the status bar, with no formula at all.



Figure 44.3 Five values selected — the status bar adds them up.

1. Count, Sum, Avg, Min and Max of the selection.

44.3 Enter values and formulas

- **Type** into a cell to replace what it holds; **double-click** it (or press **F2**) to edit what is there. **Enter** confirms, **Esc** cancels.
- **Numbers** are typed plainly (`1234.5`); show them with separators or as a percentage with a number format (below).
- **Text** is anything that is not a number or a formula.
- **A formula** starts with `=`: `=B4*D4`, `=SUM(E4:E8)`, `=E4/$E$9`.

- You can also type in the **formula bar** and press Enter.

In a formula	Means
`A1`	One cell.
`A1:D8`	A block of cells.
`$E$9`, `E$9`, `$E9`	An address that stays fixed when a formula is filled across a block (fully, row only, column only). In this sheet that happens when the AI fills a block, and in Excel after you export. Copy and paste here never shift any address (see **§44.6 The right-click menu** p. 850).
`Cash Flows!B3` or `'Cash Flows'!B3`	A cell on another sheet.
`+ - * /` and `^`	Add, subtract, multiply, divide, power.
`%` after a number	Percent: `5%` is 0.05.
`&`	Join text: `="Value "&TEXT(E9,"#,##0")`.
`= <> < > <= >=`	Compare (gives TRUE or FALSE).



Figure 44.4 H4 divides the position's value by the total in E9. The dollar signs keep E9 fixed if the formula is filled down (by the AI here, or in Excel after export).

1 `=E4/$E$9` — a relative and an absolute reference.

When a formula cannot give an answer, the cell shows an error instead of a wrong number:

Error	Why
`#DIV/0!`	Division by zero.
`#VALUE!`	A value of the wrong kind (text where a number is needed).
`#REF!`	A sheet or cell that does not exist (for example after deleting or renaming a sheet).
`#NAME?`	A function name the sheet does not know.
`#NUM!`	No numeric answer (an IRR that does not converge, the log of a negative).
`#N/A`	A lookup found nothing.
`#CIRCULAR!`	The cell depends on itself.
`#ERROR!`	The formula does not parse.

44.4 Functions

The sheet has a function library made for financial work. Write function names in upper or lower case; `AVG` is accepted for `AVERAGE`.

Family	Functions
Maths	`SUM`, `PRODUCT`, `SUMPRODUCT`, `ABS`, `SIGN`, `SQRT`, `POWER`, `EXP`, `LN`, `LOG`, `LOG10`, `MOD`, `ROUND`, `ROUNDUP`, `ROUNDDOWN`, `INT`, `TRUNC`, `CEILING`, `FLOOR`, `PI`
Statistics	`AVERAGE`, `MEDIAN`, `MIN`, `MAX`, `COUNT`, `COUNTA`, `COUNTBLANK`, `COUNTIF`, `SUMIF`, `AVERAGEIF`, `VAR`, `VARP`, `STDEV`, `STDEVP`, `LARGE`, `SMALL`, `SUBTOTAL`
Logic	`IF`, `IFERROR`, `IFNA`, `AND`, `OR`, `NOT`, `TRUE`, `FALSE`, `ISERROR`, `ISNA`, `ISBLANK`, `ISNUMBER`, `ISTEXT`, `NA`
Lookup	`INDEX`, `MATCH`, `VLOOKUP`, `HLOOKUP`, `CHOOSE`, `OFFSET`
Text	`CONCAT` (also `CONCATENATE`), `TEXT`, `VALUE`, `LEN`, `TRIM`, `UPPER`, `LOWER`, `PROPER`, `LEFT`, `RIGHT`, `MID`, `FIND`, `SUBSTITUTE`, `REPT`
Dates	`TODAY`, `NOW`, `DATE`, `YEAR`, `MONTH`, `DAY`, `DAYS`, `EDATE`, `EOMONTH`
Finance	`NPV`, `XNPV`, `IRR`, `PMT`, `FV`, `PV`, `NPER`, `RATE`

The finance functions work like their spreadsheet namesakes:

	A	B	C	D	E	F	G
1	**Cash-flow maths**						
2							
3	Annual rate	8.0%					
4	Years	5					
5	Loan amount	250,000.00					
6	Monthly payment	5,069.10					
7	Total interest	54,145.91					
8							
9	**Year**	**0**	**1**	**2**	**3**	**4**	**5**
10	Cash flow	-10,000.00	2,500.00	2,800.00	3,000.00	3,200.00	3,500.00
11	NPV at the annual rate	1,831.00					
12	IRR	14.3%					
13	Saving 500 a month	36,738.43					

Figure 44.5 The example's second sheet — a loan payment with PMT, and NPV, IRR and FV on a stream of cash flows.

Cell	Formula	Gives
Monthly payment	`=PMT(B3/12,B4*12,-B5)`	The payment on a 250,000 loan at 8% a year over 5 years, paid monthly.
Total interest	`=B6*B4*12-B5`	All payments minus the amount borrowed.
NPV	`=B10+NPV(B3,C10:G10)`	Today's value of the cash flows at 8% (the year-0 flow is added outside `NPV`, which discounts from year 1).
IRR	`=IRR(B10:G10)`	The rate at which the flows' NPV is zero.
Saving 500 a month	`=FV(B3/12,B4*12,-500)`	What 500 a month grows to in 5 years at 8%.

Their arguments, as in Excel (`[ ]` = optional; `type` 1 means payments at the start of each period):

Function	Arguments	Gives
`NPV`	`rate, value1, value2, …`	Today's value of flows that start one period from now.

Function	Arguments	Gives
`XNPV`	`rate, values, dates`	Today's value of flows on the given dates (365-day years from the first date).
`IRR`	`values, [guess]`	The rate that makes the flows' NPV zero; needs at least two flows and a sign change, else `#NUM!`.
`PMT`	`rate, nper, pv, [fv], [type]`	The payment per period.
`FV`	`rate, nper, pmt, [pv], [type]`	The value after `nper` periods.
`PV`	`rate, nper, pmt, [fv], [type]`	The value today.
`NPER`	`rate, pmt, pv, [fv], [type]`	How many periods it takes.
`RATE`	`nper, pmt, pv, [fv], [type], [guess]`	The rate per period.

Money you pay out is negative, money you receive positive, as in Excel: that is why the loan amount in `PMT` above has a minus sign.

Note

The sheet does not fetch live prices by itself: there is no quote function. To work with live data, copy a table from another screen and paste it, let the AI write the figures in (see **§44.9 Let the AI work on the sheet** p. 854), or build a workflow that writes a file (**Chapter 40, Node Editor** p. 776).

44.5 Format cells

Select cells, then use the format bar. Every change applies to the whole selection.

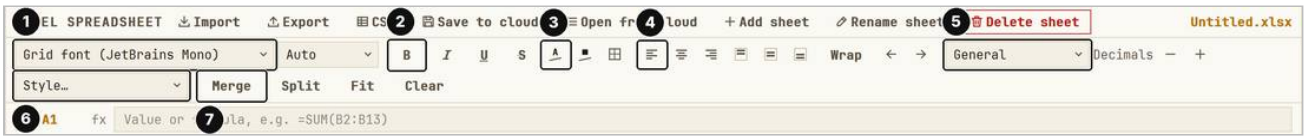


Figure 44.6 The format bar.

1. **Font** and **Font size** (**Auto** follows the terminal's text size).
2. **B**, **I**, **U**, **S**: bold, italic, underline, strikethrough.
3. **Text colour** and **Fill colour**; **Borders** opens border choices.
4. Horizontal and vertical alignment, **Wrap**, and indent.
5. **Number format** and **Decimals** − / +.
6. **Style…**: one click for a model-style look.
7. **Merge**, **Split**, **Fit** (size columns to content) and **Clear** (formatting).

Number formats in the list: **General**, **1,235**, **1,234.57**, **(1,234.57)** (negatives in brackets), **$1,234.57**, **₹1,234.57**, **€1,234.57**, **£1,234.57**, **12%**, **12.3%**, **12.5x**, **125 bps**, **1,235k**, **1,235m**, **1,235bn**, **2026-08-12** and **Aug 2026**.

Styles apply a whole look at once — font, fill, borders, alignment and number format — following the usual conventions of financial models:

Group	Styles
Titles and headers	`title`, `subtitle`, `banner`, `section_header`, `sub_header`, `column_header`, `row_header`, `year_header`

Group	Styles
Kinds of cell	`input` (blue: a number you type), `assumption` (a rate you type), `formula` (black: calculated here), `link` (green: from another sheet), `external` (from outside the model), `calc`
Totals	`subtotal`, `total`, `grand_total`
Numbers	`currency`, `currency0`, `accounting`, `percent`, `multiple`, `number`, `integer`, `millions`, `date`
Highlights and notes	`positive`, `negative`, `warning`, `note`, `footnote`, `label`, `label_indent`

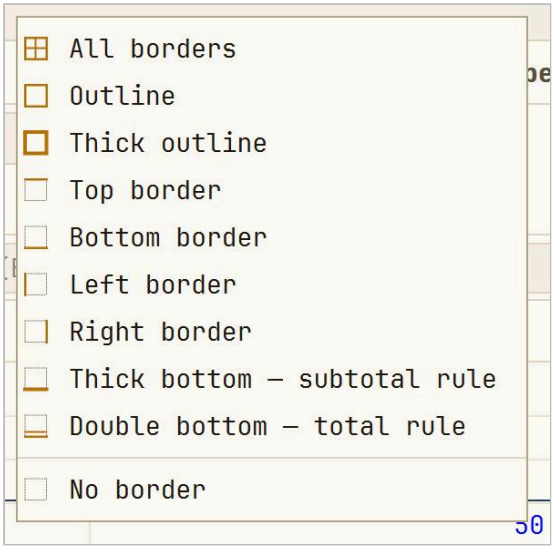


Figure 44.7 The Borders menu.

Borders offers **All borders**, **Outline**, **Thick outline**, **Top border**, **Bottom border**, **Left border**, **Right border**, **Thick bottom — subtotal rule**, **Double bottom — total rule** and **No border**.

44.6 The right-click menu

Right-click a cell (or a selection) for:

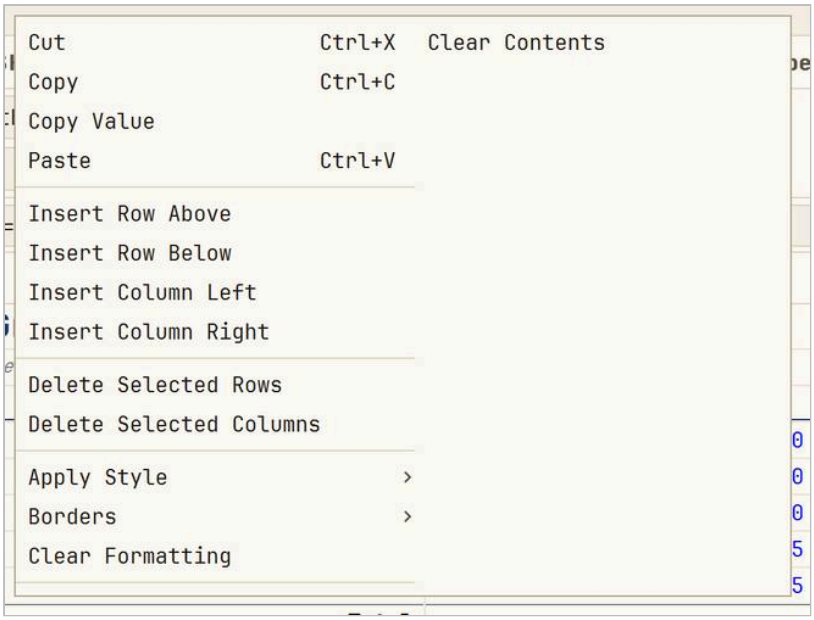


Figure 44.8 The grid's right-click menu.

Item	What it does
Cut, Copy, Paste	The usual clipboard actions (Ctrl + X, Ctrl + C, Ctrl + V). Formulas are copied exactly as written: their addresses do not shift.
Copy Value	Copies the results, not the formulas.
Insert Row Above / Insert Row Below	Adds a row.
Insert Column Left / Insert Column Right	Adds a column.
Delete Selected Rows / Delete Selected Columns	Removes them.
Apply Style	The named styles, as in the format bar.
Borders	The common border choices.
Clear Formatting	Removes formatting, keeps the values.
Clear Contents	Empties the cells, keeps the formatting.

Copy and paste work on one block of cells at a time (*This works on one selected block at a time.*). The copy is tab-separated text, so you can paste a table from another program or from another screen's table straight into the grid; the sheet grows to fit, up to its limits (*The copied block does not fit on this sheet.*). A pasted cell longer than 32,767 characters is cut there.

Addresses do not move

Unlike Excel, this sheet never rewrites the addresses inside formulas. A formula copied from E4 and pasted into E5 still reads `=B4*D4`, not `=B5*D5`: edit it after pasting, or type it in each row. **Insert Row** / **Insert Column** and **Delete Selected Rows** / **Columns** move the cells but not the addresses that point at them, so formulas below or right of the change can point at the wrong cells: check them afterwards. There is no undo for changes to the grid.

44.7 Work with sheets

To	Do
Add a sheet	**Add sheet**, or **+** next to the tabs.
Switch sheet	Click its tab.
Rename	**Rename sheet**, or double-click the tab.
Delete	**Delete sheet** (asks first: *Delete "…"? This cannot be undone.*). A workbook keeps at least one sheet.
More	Right-click a tab: **Rename…**, **Duplicate**, **Tab colour** (Accent, Green, Red, Blue, Yellow, Grey, **Custom…**, **None**), **Move left**, **Move right**, **Delete…**

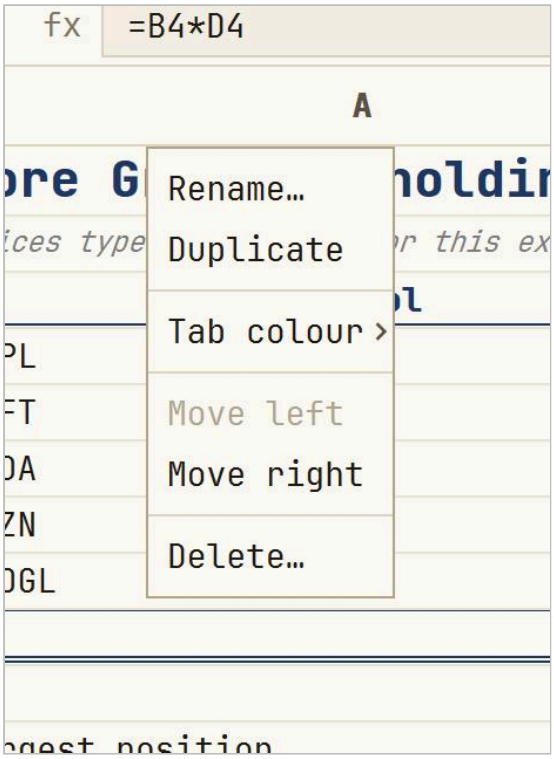


Figure 44.9 A sheet tab's right-click menu.

Sheet names follow Excel's rules: at most 31 characters, none of `: \ / ? * [ ]`, not starting or ending with an apostrophe, and not `History`. Two sheets cannot share a name.

Careful

Formulas that point at a sheet by its old name show `#REF!` after you rename or delete that sheet.

Plans

The number of sheets in a workbook depends on your plan: 5 on Exclusive, 50 on Exclusive+, no limit on Exclusive Pro. When you reach it, **Add sheet** opens the upgrade sheet, and **Import** refuses a file with more sheets (*… holds n sheets, more than the plan allows.*).

44.8 Keep your workbook: cloud, import and export

Important

The workbook lives in this screen. Closing the screen, moving it to another window or restarting the terminal starts an empty workbook — unless you **Save to cloud** or **Export** it.

Save to cloud and Open from cloud

Save to cloud keeps the workbook in your Fincept account. After the first save, every change is saved again by itself; the button's tooltip and the label next to it say **Saved to cloud**, **Saving…** or **Not saved: …** with the reason. **Open from cloud** lists your saved workbooks.



Figure 44.10 After Save to cloud, the workbook's name and its cloud state show under the toolbar.

1. **Saved to cloud** — later changes are saved by themselves.
2. The workbook's name (click to rename).

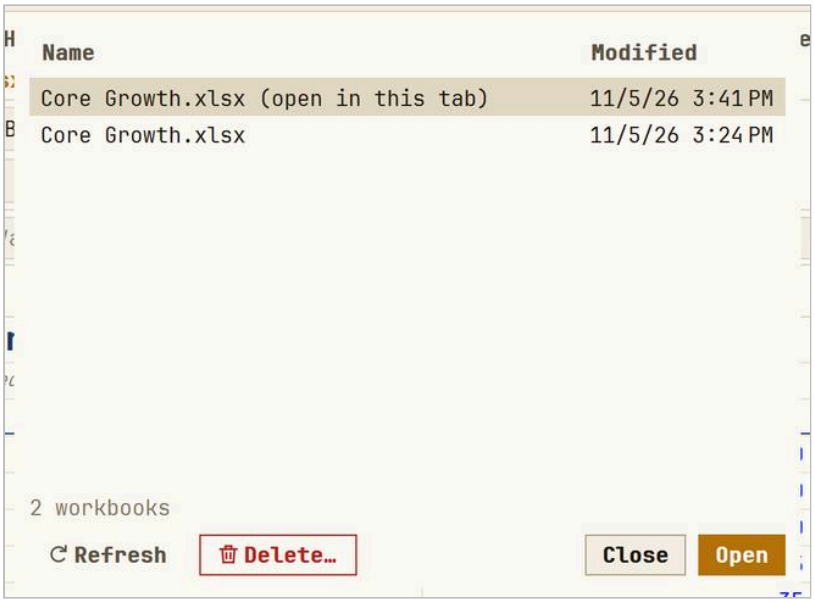


Figure 44.11 Open from cloud lists your cloud workbooks with the time each was last changed.

In Open from cloud	What it does
Name, Modified	Your saved workbooks; the one open in this tab is marked *(open in this tab)*.
Refresh	Reloads the list.
Delete…	Deletes the selected workbook from the cloud (asks first).
Open	Opens it here (asks first if the open sheets have unsaved changes).
Close	Closes the list.

If the same workbook was saved from another computer or window after you opened it, a box **Workbook changed elsewhere** offers **Keep mine**, **Take theirs**, **Save mine as a copy** or **Decide later.**

Import and export files

Button	What it does
Import	Opens an `.xlsx` file. It replaces the open sheets (asks first; cannot be undone). Values, formulas, formatting, column widths, row heights, merged cells and frozen panes come in.
Export	Saves every sheet as an `.xlsx` file, with formulas (so Excel recalculates them), formats and layout.
CSV	Saves the active sheet's values as a `.csv` file.

The suggested folder for exports is **Fincept Exports** in your Documents folder. The workbook's name (top right) becomes the file's name; click it to rename the workbook.



Figure 44.12 Click the workbook's name to rename it.

Note

CSV files are exported only. To bring a CSV in, open it in Excel and save as `.xlsx`, or paste its contents into a sheet.

44.9 Let the AI work on the sheet

The AI in **Chapter 37, AI Chat** p. 719 can read and edit the open workbook. It addresses cells the way you do (A1, `Cash Flows!B3`) and works in one batch per request.

It can	Notes
Read a block (values, formulas, formats)	Large sheets are read a page at a time.
Write values and formulas	Cells that already hold something are replaced only when it says so, and then you are asked first. A formula that points at its own cell is refused. One formula written over a block fills it, and its relative addresses shift row by row, as a fill does in Excel.
Format a block	Named styles and single attributes (bold, colours, number format, borders…).
Find cells	By text or formula.

It can	Notes
Add, rename and delete sheets	Deleting asks you first.
Export	To `.xlsx` or `.csv` in Documents/Fincept Exports, added to the File Manager. Replacing a file asks first.

Do it with AI

- *"In the Excel tab, build a sheet that sizes a position: account 100,000, risk 1% per trade, entry and stop in B3 and B4, shares to buy in B6."*
- *"Format row 3 as column headers and the totals row as a total."*
- *"Read the Holdings sheet and tell me which position is the biggest share of the portfolio."*

44.10 Reference

Toolbar

Control	What it does
Import	Import an `.xlsx` (replaces the open sheets).
Export	Export the workbook as `.xlsx`.
CSV	Export the active sheet as `.csv`.
Save to cloud	Save to your Fincept cloud; later changes save by themselves.
Open from cloud	Open a workbook saved to your cloud.
Add sheet	Add a sheet.
Rename sheet	Rename the current sheet.
Delete sheet	Delete the current sheet (greyed out when only one is left).
Workbook name	Click to rename the workbook.

Format bar

Control	What it does
Font	**Grid font** (the terminal's) or any installed font.
Font size	**Auto** or 6–72 points.
B / I / U / S	Bold / italic / underline / strikethrough.
Text colour / Fill colour	A colour menu, **Automatic** / **No fill**, or **Custom colour…**.
Borders	Border presets.
Align left / centre / right; top / middle / bottom	Alignment.
Wrap	Wrap text in the cell.
Decrease / Increase indent	Indent the text.

Control	What it does
Number format	The 17 formats listed above.
Decimals − / +	Fewer / more decimal places.
Style…	A named style.
Merge / Split	Merge the selected cells / split merged cells.
Fit	Size the selected columns to their content.
Clear	Remove all formatting from the selection.

Keyboard

Key	Does
Arrows, `Tab`**,** `Enter`	Move between cells.
Typing	Replace the cell's content.
`F2` **or double-click**	Edit the cell.
`Esc`	Cancel the edit.
`Ctrl` + `C` / `Ctrl` + `X` / `Ctrl` + `V`	Copy / cut / paste.
`Shift` **+ arrows, or drag**	Select a block.

Limits

Limit	Value
New sheet	100 rows × 26 columns; it grows as you add rows and columns.
Largest sheet	1,048,576 rows, 16,384 columns, and 10 million cells in all.
One cell	32,767 characters (a longer pasted cell is cut).
Sheet name	31 characters.
Sheets per workbook	5 on Exclusive, 50 on Exclusive+, no limit on Exclusive Pro.
Cloud workbook	8 MB; a larger one says *too large for the cloud*.
Undo	None for changes to the grid; `Ctrl` + `Z` works only inside a cell you are editing.

44.11 For advanced users

- **Model conventions.** Use `input` for numbers you type, `formula` for calculations and `link` for values from another sheet: anyone reading the model can tell them apart at a glance.
- **Cross-sheet models.** Keep assumptions on one sheet (`Inputs!B3`) and calculations on another. A formula that names its own cell, directly or through other cells, shows `#CIRCULAR!` rather than looping.
- **Text from numbers.** `TEXT(E9,"#,##0")` and `TEXT(B12,"0.0%")` format a number inside text.

B14 ① ="Value "&TEXT(E9,"#,##0")&" across "&COUNTA(A4:A8)&" stocks"

	A	B	C	D	E	F	G	H	I
1	**Core Growth - holdings**								
2	*Prices typed in by hand for this example*								
3	**Symbol**	**Shares**	**Avg cost**	**Price**	**Value**	**P&L**	**P&L %**	**Weight**	
4	AAPL	50	172.40	268.50	13,425.00	4,805.00	55.7%	26.6%	
5	MSFT	30	335.10	512.30	15,369.00	5,316.00	52.9%	30.4%	
6	NVDA	40	98.20	186.60	7,464.00	3,536.00	90.0%	14.8%	
7	AMZN	25	151.80	224.90	5,622.50	1,827.50	48.2%	11.1%	
8	GOOGL	35	139.50	247.20	8,652.00	3,769.50	77.2%	17.1%	
9	**Total**				**50,532.50**	**19,254.00**	**61.6%**	**100.0%**	
10									
11	Largest position	MSFT							
12	Positions in profit	5							
13	Average return	64.8%							
14	Summary	Value 50,533 across 5 stocks							

Figure 44.13 B14 joins text and numbers with & and TEXT, and counts the stocks with COUNTA.

① `="Value "&TEXT(E9,"#,##0")&" across "&COUNTA(A4:A8)&" stocks"`

- **Errors are values.** An error in one cell flows into the cells that use it; `IFERROR(x, 0)` replaces it on purpose.
- **Round trips.** An exported `.xlsx` keeps formulas, so Excel recalculates; an imported one keeps its formatting and frozen panes.
- **Workflows.** The Node Editor's **Spreadsheet** and **Convert to File** nodes read and write `.xlsx` and `.csv` files you can then open here (**Chapter 40, Node Editor** p. 776).

44.12 Troubleshooting

My workbook was empty after a restart. The workbook is kept only while the screen is open. Use **Save to cloud** (it then saves every change) or **Export** it, and reopen it with **Open from cloud** or **Import**.

A cell shows #REF!. The formula points at a sheet that was renamed or deleted, or a cell that does not exist. Fix the reference.

A cell shows #NAME?. The function is not in the sheet's library (see **§44.4 Functions** p. 847), or its name is misspelt.

"Not saved: changed on another device". The cloud copy changed after you opened it. Click **Save to cloud** and choose **Keep mine**, **Take theirs** or **Save mine as a copy**.

A pasted or moved formula points at the wrong cells. The sheet does not shift addresses when you paste, or when you insert or delete rows and columns. Edit the formula so it names the right cells.

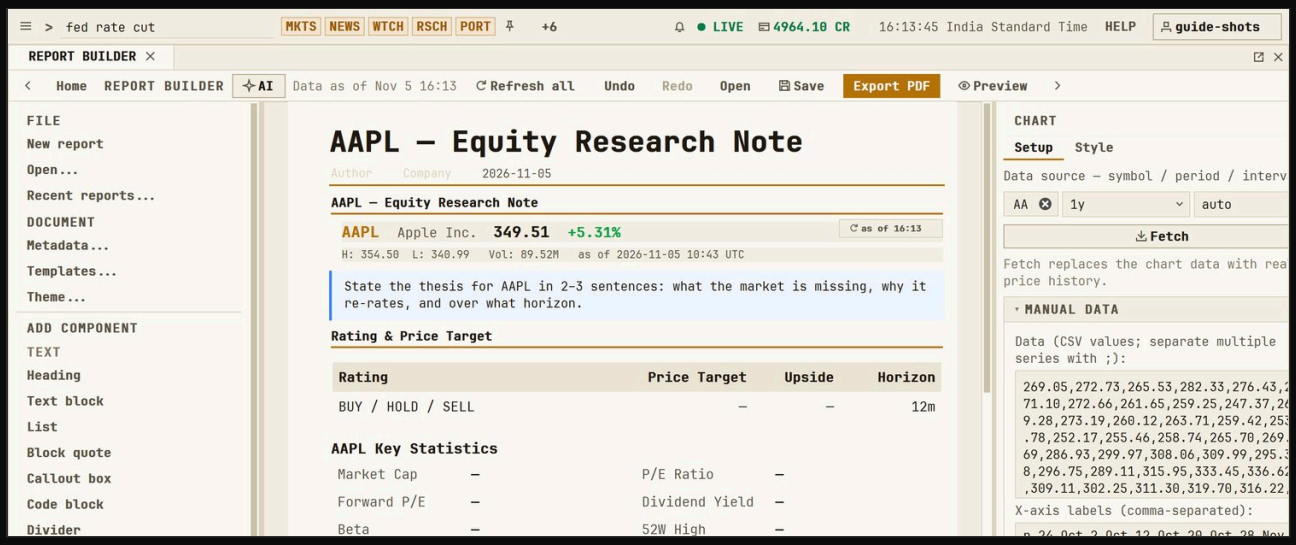
Paste says the block does not fit. Paste nearer the top-left of the sheet, or add rows or columns first.

Delete sheet is greyed out. A workbook keeps at least one sheet. Add another first.

CHAPTER 45

Report Builder RPRT

Write research notes, market briefs and portfolio reviews as real documents — headings, text, tables, charts and live quote tiles on a page — then export a clean PDF. Start blank, from one of twelve templates, or let the AI draft it.



At a glance

Open it	• Type `RPRT` in the command line and press **Enter** (also `report`, `reports` or `builder`) • **Screens** › **Tools & Workspace** › **Report Builder**
You need	• Signed in on any paid plan • Generate with AI uses credits
Best for	• A research note on one stock, quote and chart filled in • A PDF for a client or a committee
Time to learn	15 minutes
Related	**Chapter 22, Equity Research** p. 392, **Chapter 44, Excel** p. 844

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45.1 Screen tour

A report is a page made of **blocks**: a heading, a paragraph, a table, a chart, a quote tile. You add blocks, type on the page, and set the data blocks in the panel on the right. **Export PDF** turns the page into a document.

The screen has two views: **Home**, where you start a report, and the **editor**, where you write it.

Home

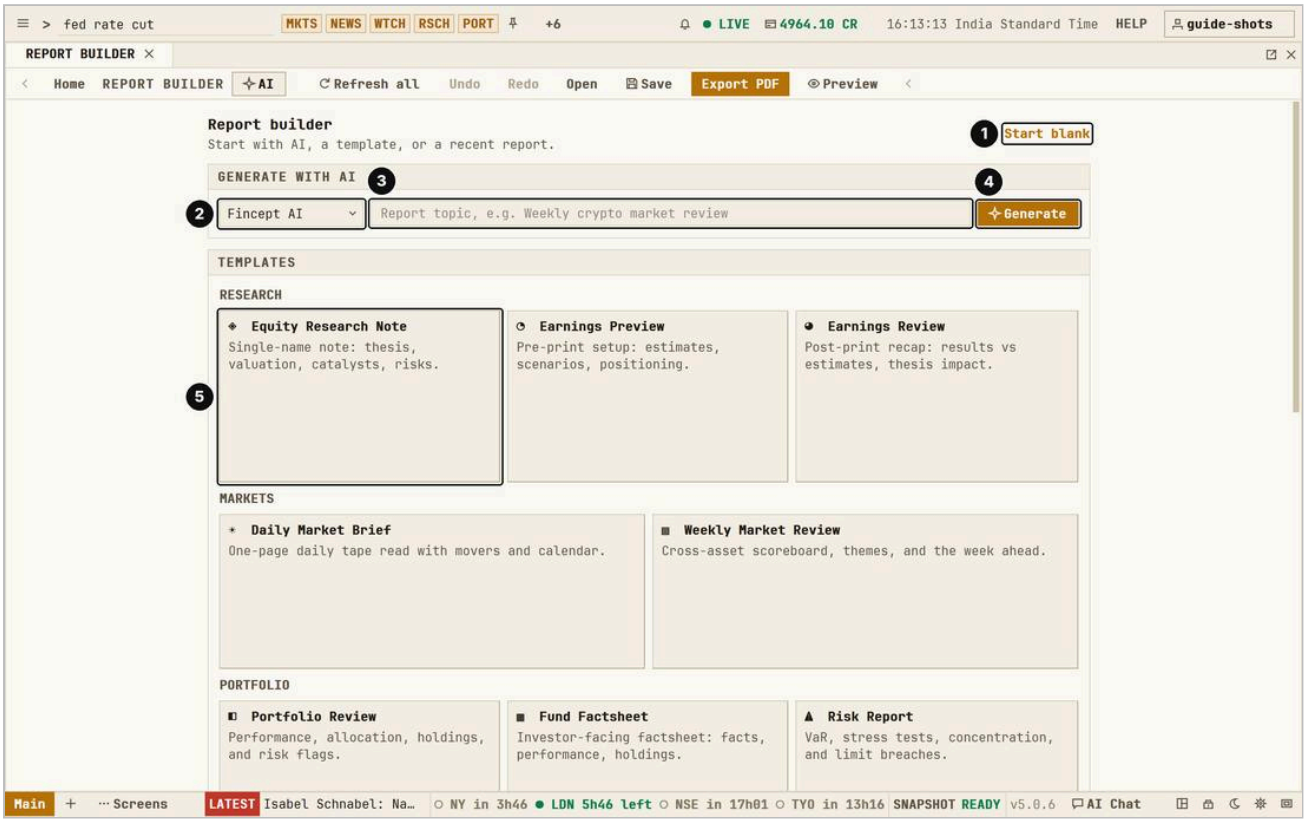


Figure 45.1 The Home view — generate with AI, start from a template, or reopen a recent report.

1. **Start blank** opens an empty page.
2. **Generate with AI**: who writes it — Fincept AI or one of your agents.
3. What the report is about.
4. **Generate** writes the report on the page (uses credits).
5. **Templates**, grouped: Research, Markets, Portfolio, Trading, Corporate, General.

Home has three panels: **Generate with AI**, **Templates** and **Recent** (your saved reports, newest first; *No saved reports yet* until you save one). **Start blank** at the top right opens an empty page.

The editor

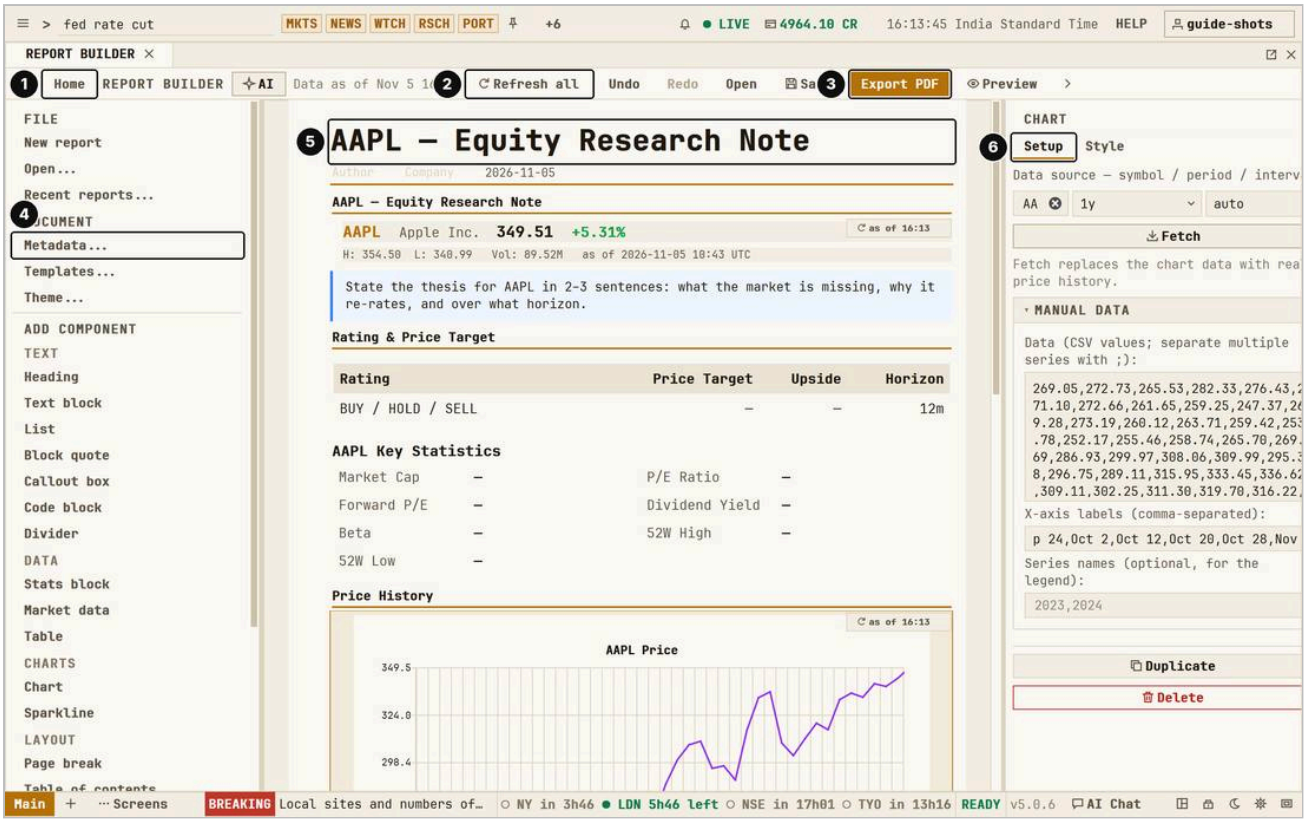


Figure 45.2 The editor on the example report, with the chart block selected.

1. **Home** goes back to the start view.
2. **Refresh all** fetches fresh data for every block tied to a symbol.
3. **Export PDF** writes the document; **Preview** shows it first.
4. **The components panel**: file and document actions, blocks to add, and the outline.
5. **The page**: title, author, company and date, then the blocks.
6. **Properties** of the selected block: **Setup** and **Style** tabs.

- **The toolbar** — the arrow that hides the components panel (Ctrl + B), **Home**, **REPORT BUILDER**, **AI**, *Data as of …* (the time of the oldest data fetch), **Refresh all**, **Undo**, **Redo**, **Open**, **Save**, **Export PDF**, **Preview**, and the arrow that hides the properties panel (Ctrl + Shift + B).
- **The components panel** (left) — **FILE** (**New report**, **Open…**, **Recent reports…**), **DOCUMENT** (**Metadata…**, **Templates…**, **Theme…**), **ADD COMPONENT** (every kind of block, grouped **TEXT**, **DATA**, **CHARTS**, **LAYOUT**) and **STRUCTURE** (the outline: one line per block; drag to reorder) with **Delete block**.
- **The page** (middle) — the report as it will print: a title, **Author**, **Company** and **Date**, then the blocks in reading order.
- **The properties panel** (right) — the settings of the selected data block. With nothing selected it says *Select a data block to configure it — text edits happen right on the page.*; for a text block, *Edit this block directly on the page.*

45.2 Quick start

A one-page note on a stock, with its live quote, key figures and price chart.

1. Type RPRT in the command line and press Enter.

2. Under **Templates**, click **Equity Research Note**. A line asks you to fill in the details: type `AAPL` in the ticker box (a list of matches appears) and click **Apply template**.



Figure 45.3 A template asks for its details — here the ticker.

1. **Apply template** builds the report. Blank fields keep their placeholder.

3. The editor opens with the note's sections: the quote tile, thesis, rating, key statistics, price history, overview, financials, valuation, catalysts and risks.

4. Click **Refresh all**. The quote tile at the top updates with the latest price.

5. Click the **AAPL Key Statistics** block. In the properties panel on the right, type `AAPL` under **Auto-fill from Ticker** and click **Fetch**: market value, P/E, dividend yield and more fill in.

6. Click the **Price History** chart block, type `AAPL` under **Data source — symbol / period / interval** and click **Fetch**. The chart draws a year of prices.

7. Click a placeholder sentence (for example *State the thesis…*) and type your own text.

8. Click **Export PDF**, choose where to save, and the PDF is written. A message says how many pages it has.

Tip

The PDF is also copied into **Chapter 47, File Manager** p. 882, so you can find it there later.

45.3 Start a report

Start	How
Blank	**Start blank** on Home, or **New report** in the components panel.
From a template	Click a template on Home (**Templates…** in the editor takes you there). Fill in the details it asks for — a ticker, a portfolio name, a period — and click **Apply template**.
From a recent report	Click it in **Recent** on Home, or **Recent reports…** in the editor.
From a file	**Open** (toolbar) or **Open…**: a `.fincept` report file (or `.json`), up to 32 MB.
With AI	Type a topic under **Generate with AI** and click **Generate** (see below).

Opening another report or template replaces the page. The terminal asks first: a template can be undone (*Undo brings that one back*), opening another report cannot — save first.

The twelve templates

Group	Template	What it holds
RESEARCH	**Equity Research Note**	Single-name note: thesis, valuation, catalysts, risks.
RESEARCH	**Earnings Preview**	Pre-print setup: estimates, scenarios, positioning.
RESEARCH	**Earnings Review**	Post-print recap: results vs estimates, thesis impact.
MARKETS	**Daily Market Brief**	One-page daily tape read with movers and calendar.
MARKETS	**Weekly Market Review**	Cross-asset scoreboard, themes, and the week ahead.
PORTFOLIO	**Portfolio Review**	Performance, allocation, holdings, and risk flags.
PORTFOLIO	**Fund Factsheet**	Investor-facing factsheet: facts, performance, holdings.
PORTFOLIO	**Risk Report**	VaR, stress tests, concentration, and limit breaches.
TRADING	**Trade Journal**	Trade log, P&L curve, session stats, and lessons.
CORPORATE	**Deal Memo**	M&A / investment memo: terms, valuation, synergies, risks.
GENERAL	**IC Meeting Notes**	Investment-committee minutes with decisions and actions.
GENERAL	**Blank Report**	Empty page — start from scratch.

Plans

How many of the templates you can use depends on your plan: the first three (the RESEARCH group) on Exclusive, all twelve on Exclusive+ and Exclusive Pro. A template your plan does not include shows a lock that opens the upgrade sheet.

45.4 Add and arrange blocks

There are three ways to add a block:

- **The components panel** — click a block under **ADD COMPONENT**. It is added after the selected block.
- **The slash menu** — in an empty text block, type `/`. A menu lists every block with a short description; type to filter it (**Filter blocks...**), then pick one with the arrow keys and `Enter`, or click it. Some names are shorter there: **Text**, **Bulleted list**, **Quote**, **Callout** and **Code** are the Text block, List, Block quote, Callout box and Code block. It also offers two blocks the components panel does not: **Ticker table** and **Two columns**.
- **Markdown shortcuts** — at the start of an empty text block, type `#` for a heading, `##` for a smaller heading, `-` or `1.` for a list, `>` for a quote.

Group	Block	What it is
TEXT	**Heading**	A section title with an accent rule.
TEXT	**Text block**	A paragraph (markdown: `**bold**`, `*italic*`, links…).
TEXT	**List**	Bullets, one item per line.
TEXT	**Block quote**	An indented quote.
TEXT	**Callout box**	A highlighted note: **Info**, **Success**, **Warning** or **Danger**, with an optional heading.

Group	Block	What it is
TEXT	**Code block**	Monospaced code.
TEXT	**Divider**	A horizontal rule.
DATA	**Stats block**	A grid of `Label: Value` figures, typed or fetched for a ticker.
DATA	**Market data**	A live quote tile for a ticker.
DATA	**Table**	An editable grid; the first row is the header.
CHARTS	**Chart**	Line, bar, pie, candlestick and more, from typed data or a symbol's price history.
CHARTS	**Sparkline**	A tiny trend line with a value and a change.
LAYOUT	**Page break**	Starts a new page in the PDF.
LAYOUT	**Table of contents**	A list of the document's headings, built for you.
LAYOUT	**Image**	A picture from a file or the clipboard (you can also drag an image onto the page).
DATA	*Ticker table* (slash menu)	A table set up with **Symbol**, **Price** and **Change %** columns.
LAYOUT	*Two columns* (slash menu)	Two text blocks side by side.

Arrange blocks: hover over a block to see two small buttons on its left: **+** (*Insert block below*) and a grip (*Click for options, drag to reorder*). Drag the grip, or drag a line in **STRUCTURE**, to move a block. Click the grip for its menu:

Menu item	Does
Turn into	Changes a text block into another text kind (heading, list, quote…).
Tone	For a callout: **Info**, **Success**, **Warning**, **Danger**.
Duplicate	Copies the block below itself (Ctrl + D).
Move up / Move down	Moves it (Ctrl + Shift + Up / Ctrl + Shift + Down).
Delete	Removes it (Delete when the block is selected; **Undo** brings it back).

45.5 Write and format text

Click any text on the page and type. Changes are kept as you go.

- Enter at the end of a paragraph, heading, quote or callout starts a new text block below; Shift + Enter adds a line inside the block.
- Backspace in an empty block removes it.
- Select words to show a small format bar: **B** (bold, `**text**`), **I** (italic, `*text*`), **U** (underline), a list button, **H1–H3** (turn into a heading) and a button that clears the format markers.
- Esc leaves the text; then Up / Down move between blocks and Enter edits the selected one.

45.6 Set up data blocks

Select a data block (click it on the page or in **STRUCTURE**). The properties panel shows **Setup** and **Style** tabs, and **Duplicate** / **Delete** buttons.

Market data (quote tile)



Figure 45.4 A quote tile and its properties — ticker and Fetch price.

1 **Fetch price** loads the quote for the ticker above it.

Type a ticker in **Ticker symbol** (*Search, e.g. Apple, AAPL, BTC-USD, ^GSPC*) and click **Fetch price**. The tile shows the symbol, name, price, change, the day's high and low, volume and the time of the quote. A small chip on the tile says *as of HH:mm* (or *not fetched*); click it to refresh that block.

Stats block

Auto-fill from Ticker: type a ticker and click **Fetch** to fill market value, P/E, forward P/E, dividend yield, beta and the 52-week range. Or open **Manual data** and type one figure per line, `Label: Value`. **Block title** is on the **Style** tab.

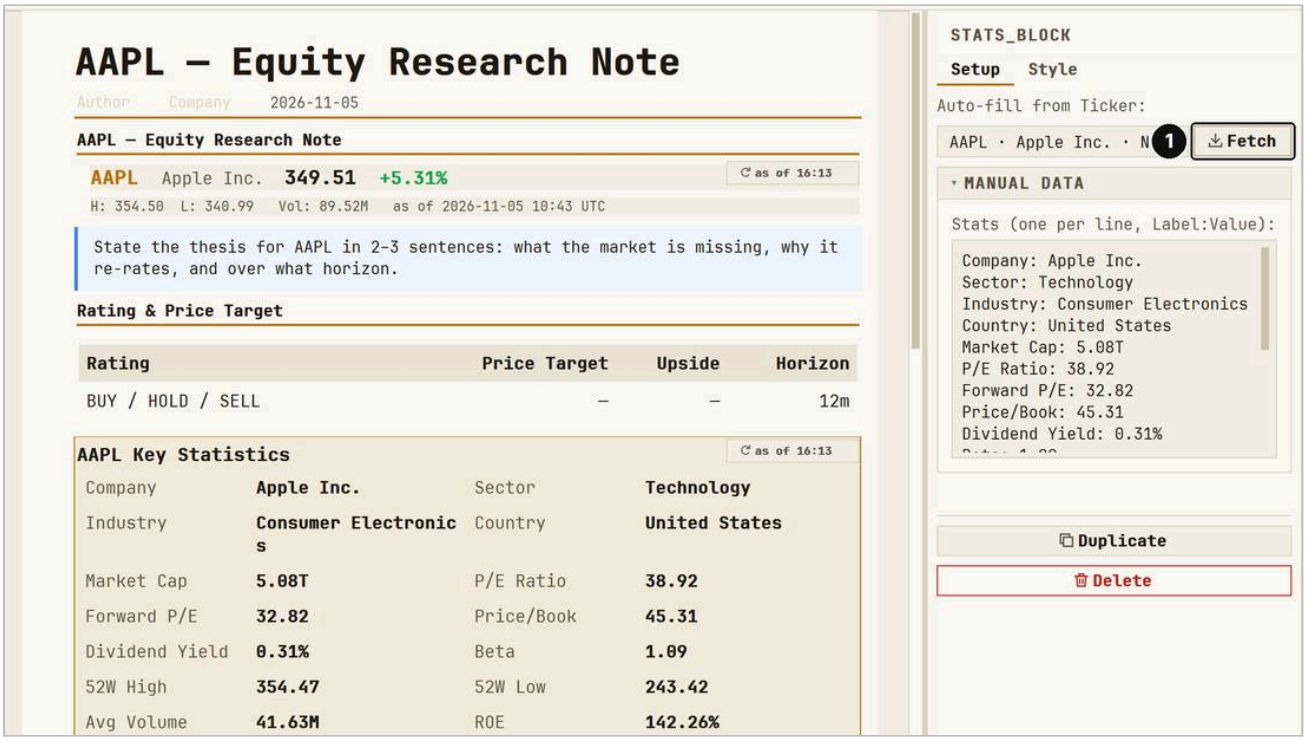


Figure 45.5 The stats block after Fetch, and its properties.

1 **Fetch** fills the block from the ticker.

Chart

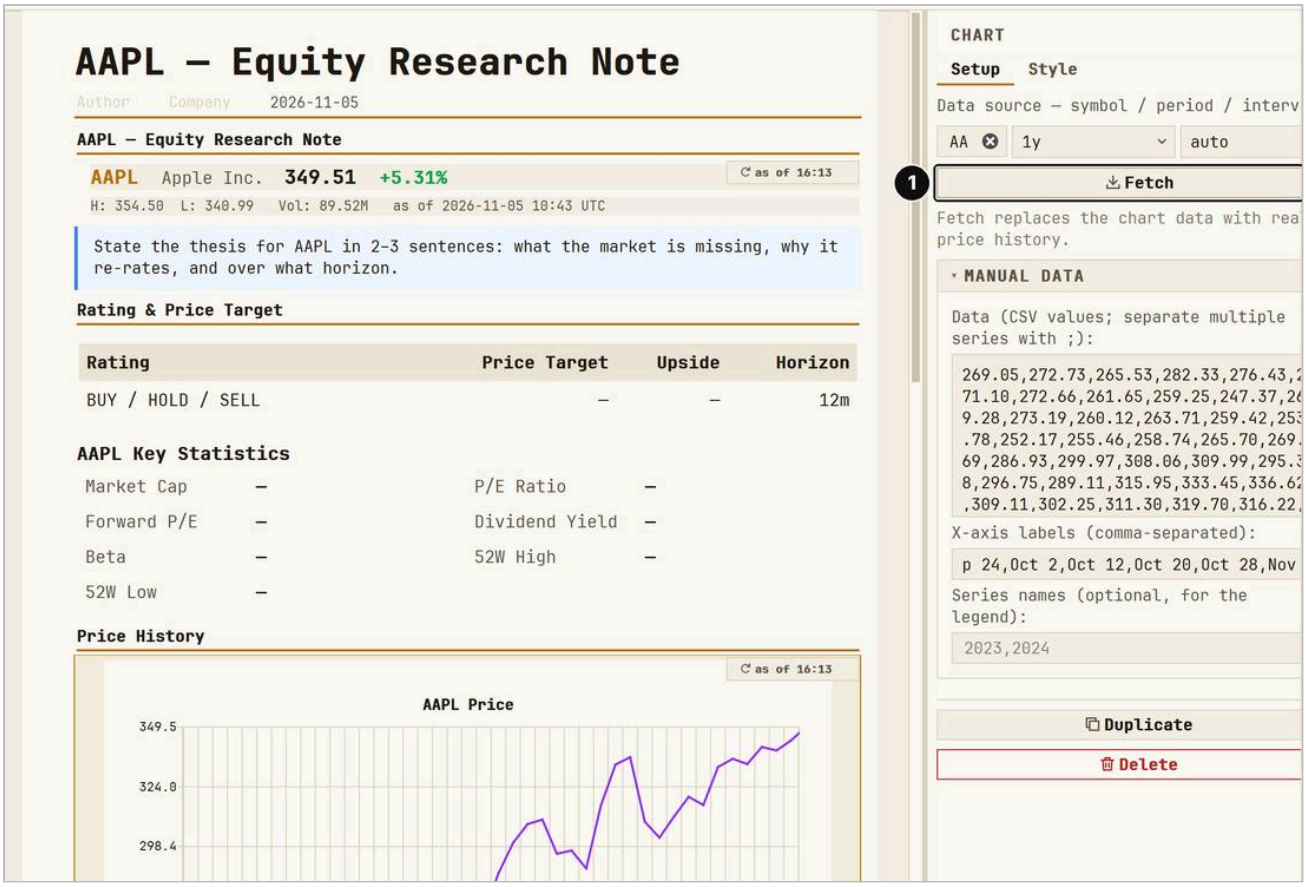


Figure 45.6 A price chart fetched for AAPL, and the chart's Setup tab.

1 **Fetch** replaces the chart's data with the symbol's price history.

Setup	
Data source — symbol / period / interval	A ticker, how much history (1mo, 3mo, 6mo, 1y, 2y, 5y, 10y, max; 6mo for a new chart) and the bar interval (**auto**, 1d, 1wk, 1mo), then **Fetch**.
Manual data	Your own numbers: **Data** (comma-separated; several series separated by `;`), **X-axis labels**, **Series names**.

Style	
Chart type	**Line**, **Spline (smooth)**, **Area**, **Bar**, **Stacked bar**, **Horizontal bar**, **Scatter**, **Pie**, **Donut**, **Candlestick (OHLC)**.
Title, Axis titles (X / Y)	Text on the chart.
Size (W x H px)	The chart's size on the page.
Legend (auto, on, off), Grid	Show or hide them.

For a pie or donut the data is the slice values; for a candlestick it is one `open,high,low,close` row per bar, rows separated by `;`.

Sparkline, table, image, callout, code

Block	Settings
Sparkline	**Price series (CSV values)**, **Current value**, **Change %**; **Label** on the **Style** tab.
Table	**Rows** and **Cols**, and the cells (click to edit; the first row is the header). On the page, double-click the table for **Add row**, **Add column**, **Remove row**, **Remove column**.
Image	**Browse file…** or **Paste from Clipboard** (PNG, JPG, BMP or SVG); **Width (px)**, **Alignment** and **Caption (optional)** on the **Style** tab.
Callout box	**Tone** and **Heading (optional)**; the text is typed on the page.
Code block	**Import from Code editor**: insert one cell, all the code of a notebook, or a script saved in the Code Editor (**Chapter 43, Code Editor** p. 833).

Refresh all fetches every block that is tied to a symbol — quote tiles, and statistics and charts once you have fetched them for a ticker — and *Data as of* shows the time of the oldest fetch.

45.7 Metadata, branding and theme

Metadata… opens **Report Metadata**:

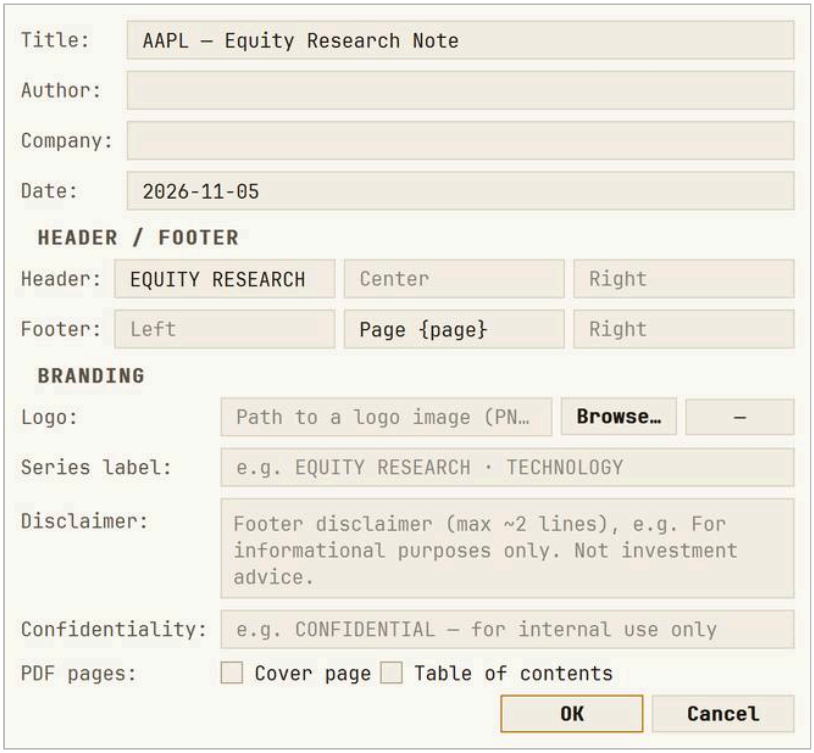


Figure 45.7 Report Metadata — the title block, header and footer, branding and the PDF's extra pages.

Field	What it is
Title, Author, Company, Date	The page's title block (you can also type them on the page).
Header / Footer — Left, Center, Right	Text on every page. `{page}` in the footer is replaced by the page number.
Logo	A PNG or JPG for the PDF (**Browse…**).

Field	What it is
Series label	A small heading line, for example *EQUITY RESEARCH · TECHNOLOGY*.
Disclaimer	A footer disclaimer of up to about two lines.
Confidentiality	A line on the cover, for example *CONFIDENTIAL — for internal use only*.
PDF pages	**Cover page** and **Table of contents** pages in the PDF.

Theme... opens **Report Theme**: pick a colour theme for the document — **Fincept Light** (the default), **Fincept Dark** or **Midnight Blue**. Themes apply as you browse; **OK** keeps, **Cancel** reverts. The report's theme is independent of the terminal's own theme.

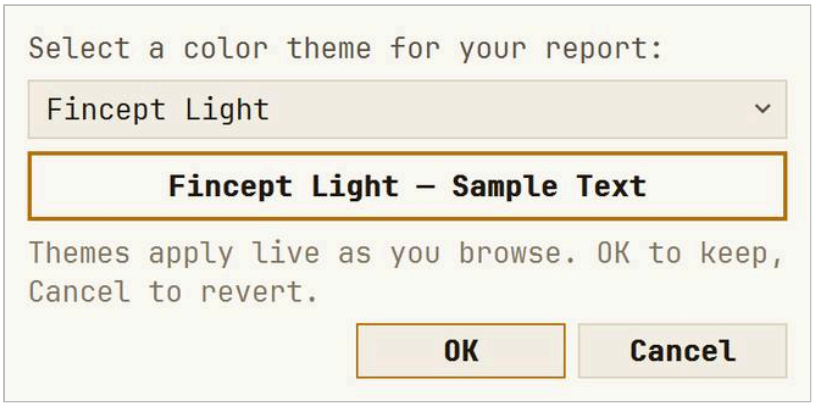


Figure 45.8 Report Theme.

Plans

A PDF without the Fincept watermark needs Exclusive+; custom branding (your logo and company in place of Fincept's) needs Exclusive Pro. The export always works; the message after it says which plan adds what yours lacks.

45.8 Preview and export the PDF

Preview shows the document exactly as the PDF will be, page by page, in a print preview window you can zoom and page through. **Export PDF** asks where to save and writes the file.

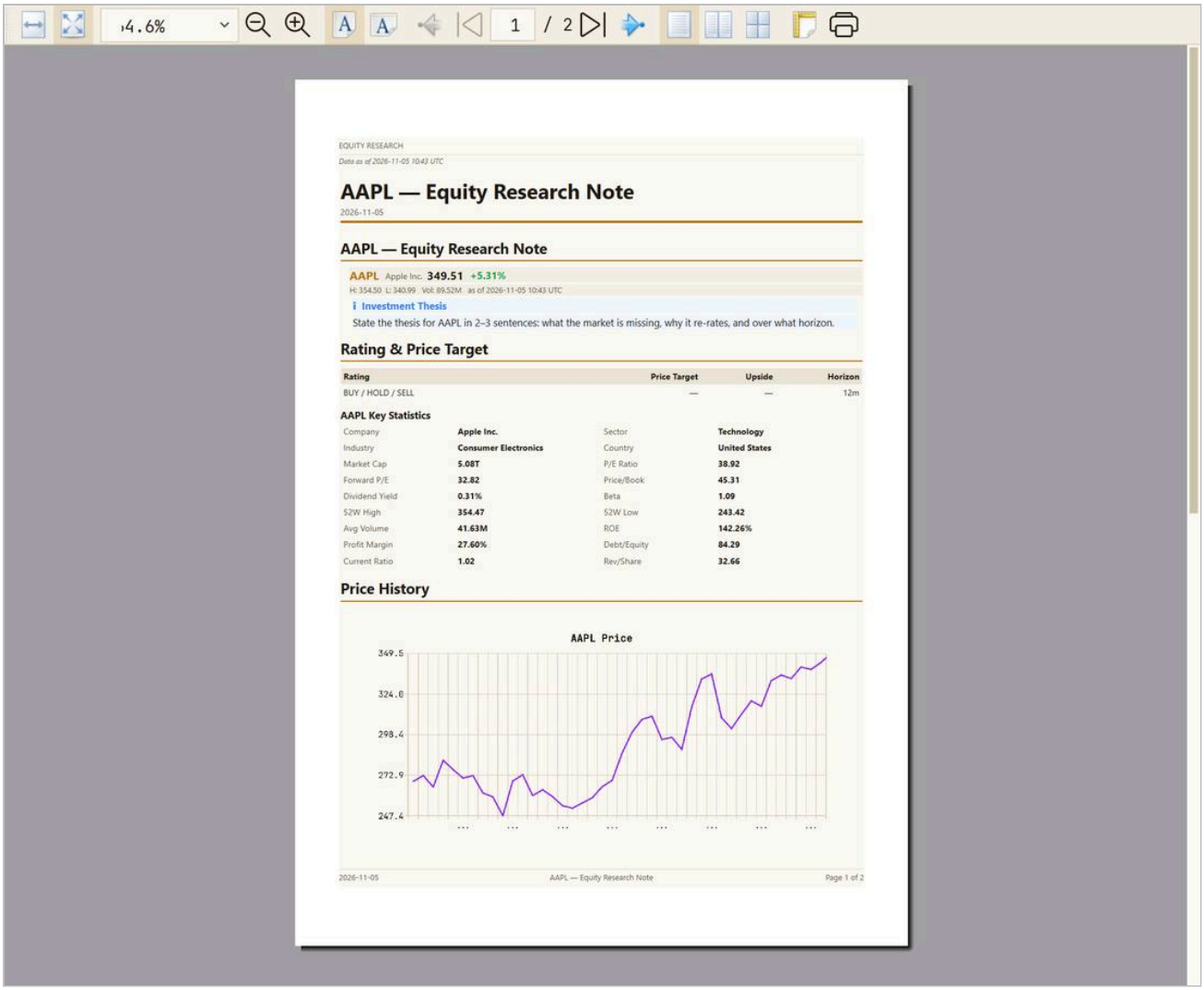


Figure 45.9 Preview shows the pages as they will be exported.

After the export, a message says *Report exported to: …* and how many pages it has. It also checks the report before you send it: *Check before sending - n problems found in the report*, with the first few — for example sections out of order, an empty price tile, totals that do not add up, or a figure written two different ways.

The PDF is also copied into **Chapter 47, File Manager** p. 882.

45.9 Save, open and recent reports

- **Save** writes the report as a `.fincept` file (or `.json`; you choose where) and adds it to **Recent** and to the File Manager. Saved reports sync to your other computers.
- The page you are working on is also kept automatically on this computer: closing the screen or the terminal does not lose it.
- **Recent reports…** lists your saved reports; click one to open it.

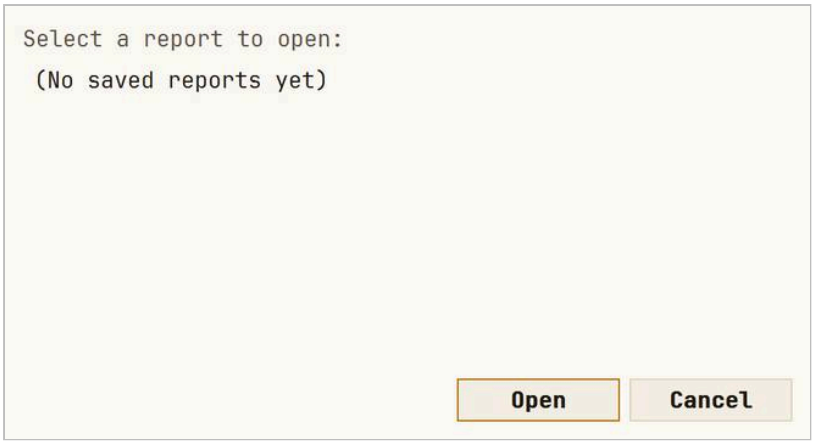


Figure 45.10 Recent Reports.

45.10 Generate with AI

On **Home**, under **Generate with AI**:

1. Pick who writes: **Fincept AI**, or one of your agents from **Chapter 38, Agent Studio** p. 739. (A team runs on Fincept's servers and cannot write on this screen; the default assistant writes instead.)
2. Type a topic, for example *Weekly crypto market review*.
3. Click **Generate**. If the page already holds a report, choose **Start clean** (Undo brings the old one back) or **Add to this report**.
4. The AI fetches real data with its tools, writes headings, text, tables and data blocks on the page, checks the report and fixes what the check finds. The status line says when it is done.

Credits

Generate runs an AI agent: it uses Fincept credits, like a chat turn with several tool calls.

The AI in **Chapter 37, AI Chat** p. 719 can also edit the open report: read it, add, change, move and delete blocks, correct a figure everywhere it appears, set the metadata and theme, apply a template, save and export. Deleting blocks, applying a template, clearing the report and overwriting a file ask you first.

Do it with AI

- *"In the Report Builder, write a one-page brief on today's Indian market with the Nifty quote tile and the five biggest movers in a table."*
- *"Check this report before I send it and fix any figures that disagree."*
- *"Add a 1-year price chart for MSFT after the Valuation section."*

45.11 Reference

Toolbar

Control	What it does
‹ / › arrows	Hide or show the components panel (Ctrl + B) and the properties panel (Ctrl + Shift + B).
Home	Home view (from Home: back to the editor).
AI	Opens Home's **Generate with AI** panel.
Data as of …	Time of the oldest data fetch in the report.
Refresh all	Re-fetch every block bound to a symbol.
Undo / Redo	Undo or redo the last change.
Open	Open a `.fincept` or `.json` report file.
Save	Save as a `.fincept` file (and to Recent, the File Manager and your other computers).
Export PDF	Write the PDF.
Preview	Print preview of the PDF.

Components panel

Section	Items
FILE	**New report** (asks first), **Open...**, **Recent reports...**
DOCUMENT	**Metadata...** (title, header and footer, branding), **Templates...** (opens Home), **Theme...**
ADD COMPONENT	TEXT: Heading, Text block, List, Block quote, Callout box, Code block, Divider · DATA: Stats block, Market data, Table · CHARTS: Chart, Sparkline · LAYOUT: Page break, Table of contents, Image
STRUCTURE	The outline (click to select, drag to reorder) and **Delete block**.

Keyboard on the page

Key	Does
Up / Down	Select the block above / below.
Ctrl + Shift + Up / Ctrl + Shift + Down	Move the selected block.
Ctrl + D	Duplicate the selected block.
Delete / Backspace	Delete the selected block.
Enter	Edit the selected text block.
Esc	Leave the text / clear the selection.
/ in an empty text block	The block menu.
#, **##**, **–** or **1.**, **>**	Heading, smaller heading, list (both make the same bulleted list), quote.

45.12 For advanced users

- **Templates with placeholders.** Templates use `{ticker}`, `{portfolio}` and `{period}`; the details you type replace them everywhere in the template.
- **Code from notebooks.** A code block can import cells straight from a notebook saved in the Code Editor, so the method behind a figure travels with the report.
- **Figures that agree.** The export's check catches the same figure written two ways; ask the AI to *replace a figure everywhere* rather than editing each mention.
- **Workflows.** A workflow can write a PDF report from data with the Node Editor's **PDF Report** node (**Chapter 40, Node Editor** p. 776); the Report Builder is for documents you edit by hand.

45.13 Troubleshooting

The chart says "add data in the Properties panel". It has no data yet. Select it and **Fetch** a symbol's history, or type data under **Manual data**.

A quote tile shows dashes or "not fetched". Click **Refresh all**, or the chip on the tile. Check the ticker (for Indian shares use the exchange form, such as `RELIANCE.NS`).

My PDF has a watermark. Your plan exports with the Fincept watermark. The message after the export names the plan that removes it.

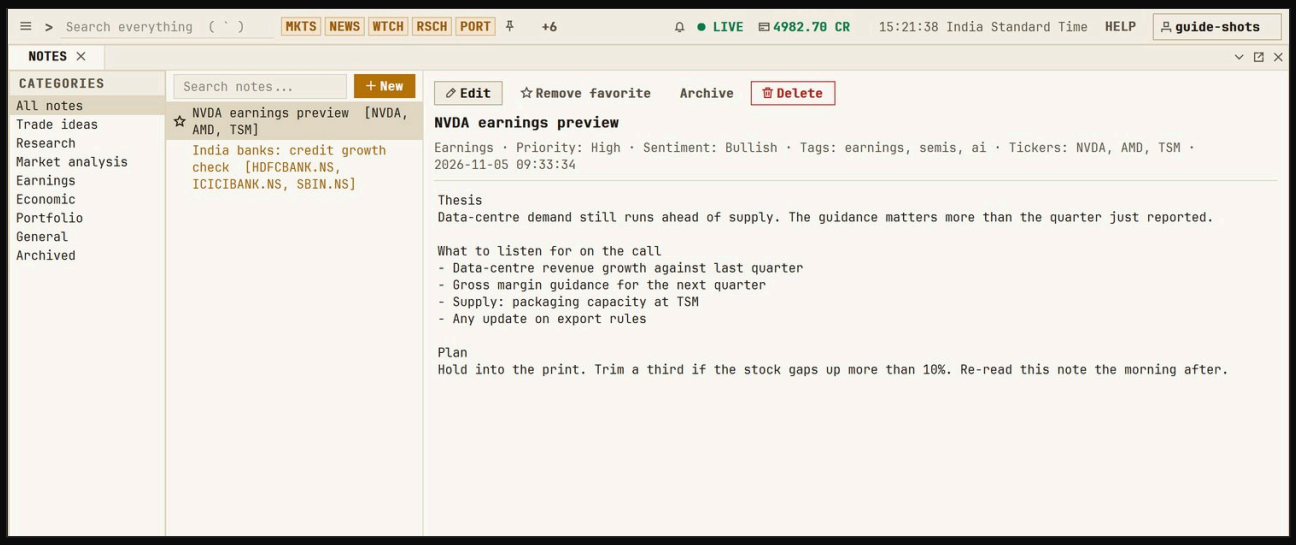
"The copy in the File Manager could not be made." The file was written where you chose; only the File Manager copy failed. Add it from the File Manager if you need it there.

Generate did nothing. Type a topic first (*Enter a report topic first.*). If the status line says the run could not be started, check your credits and try again.

CHAPTER 46

Notes NOTE

Your research journal inside the terminal. Write a note, file it under a category, mark its priority and your view, tag it with the tickers it is about, and find it again in seconds. Notes follow your account to every computer.



At a glance

Open it	• Type `NOTE` in the command line and press **Enter** (`notes` and `note` work too) • **Screens** › **Tools & Workspace** › **Notes** • Click a note on the dashboard's **Notes** tile
You need	• Signed in for notes to sync to your account (they work on this computer without it)
Best for	• An earnings preview or a trade idea you want to find again • Keeping your thesis next to the tickers it is about • Letting the AI add to a note while you research
Time to learn	5 minutes
Related	**Chapter 37, AI Chat** p. 719, **Chapter 47, File Manager** p. 882, **Chapter 8, Dashboard** p. 123, **Chapter 24, Backtesting** p. 464, **Chapter 51, Settings** p. 932

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46.1 Screen tour

Notes has three panels side by side: categories on the left, the list of notes in the middle and the open note on the right. Drag the dividers to change their widths.

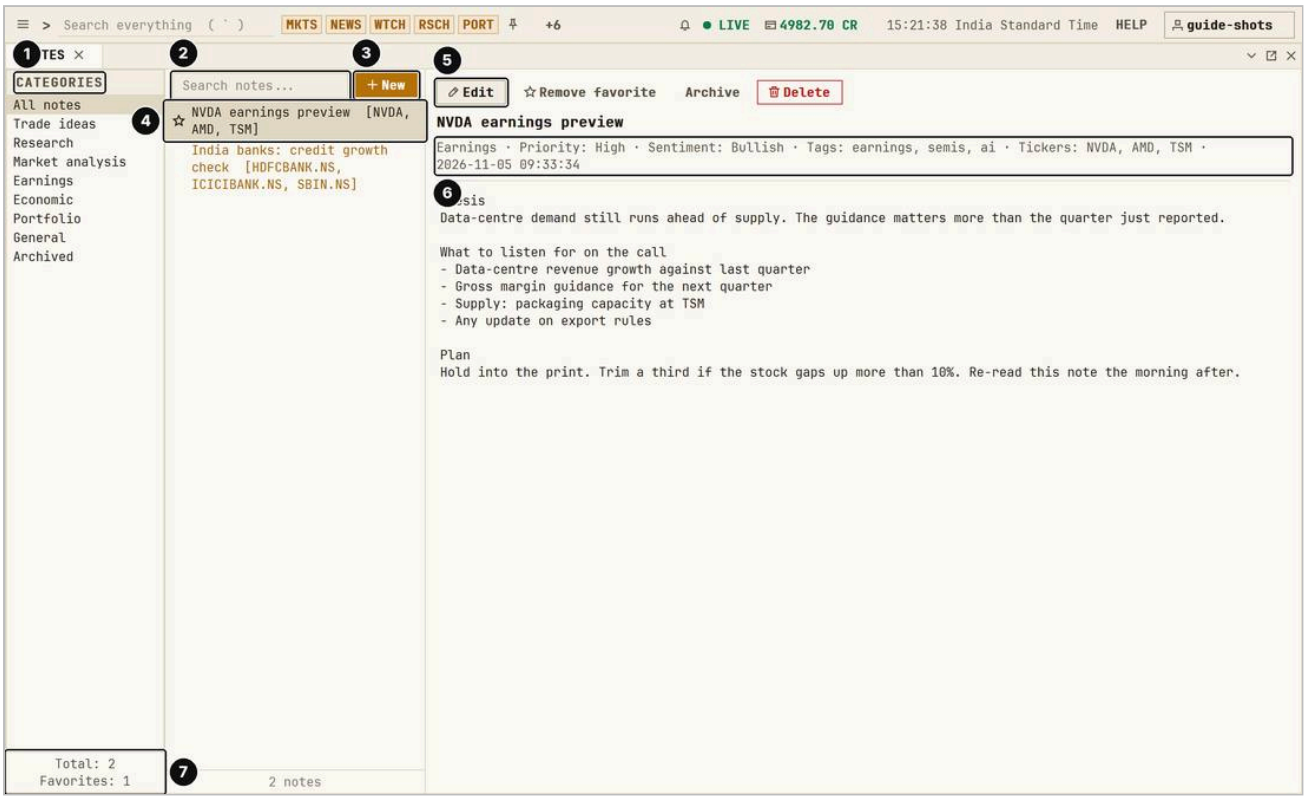


Figure 46.1 The Notes screen with two notes. The favourite one is open.

1. **CATEGORIES** — show all notes, one category, or the archive.
2. **Search notes...** — find text in titles, notes, tags and tickers.
3. **New** — start a blank note.
4. A note in the list: its title, then its tickers in brackets. The star marks a favourite; the colour is its priority.
5. The open note's tools: **Edit**, **Favorite**, **Archive**, **Delete**.
6. The note's details: category, priority, sentiment, tags, tickers and when it was last saved.
7. How many notes you have, and how many are favourites (archived notes are not counted).

Area	What it holds
CATEGORIES	**All notes**, the seven categories (**Trade ideas**, **Research**, **Market analysis**, **Earnings**, **Economic**, **Portfolio**, **General**) and **Archived**. Click one to show only its notes. The footer counts your notes (**Total**) and favourites (**Favorites**).
Notes list	The notes in the chosen category, the most recently changed first. Each row is the title, then the tickers in brackets. A star marks a favourite. The title's colour is the priority: red for **High**, amber for **Medium**, green for **Low**. The footer counts the notes shown.
Note panel	Empty (*Select a note or create a new one*), a note to read, or the editor.

46.2 Quick start

Write your first note, tagged with the stocks it is about.

1. Type `NOTE` in the command line and press **Enter**.

2. Click **New**. The editor opens on the right.

3. Type a title, for example `NVDA earnings preview`. Pick a **Category** (`Earnings`), a **Priority** (`High`) and your **Sentiment** (`Bullish`).

4. In **Tickers**, type the symbols the note is about, separated by commas: `NVDA, AMD, TSM`. In **Tags**, add words you will search for later: `earnings, semis, ai`.

5. Write the note in the large box. Plain text is fine; lines starting with `-` make readable lists.

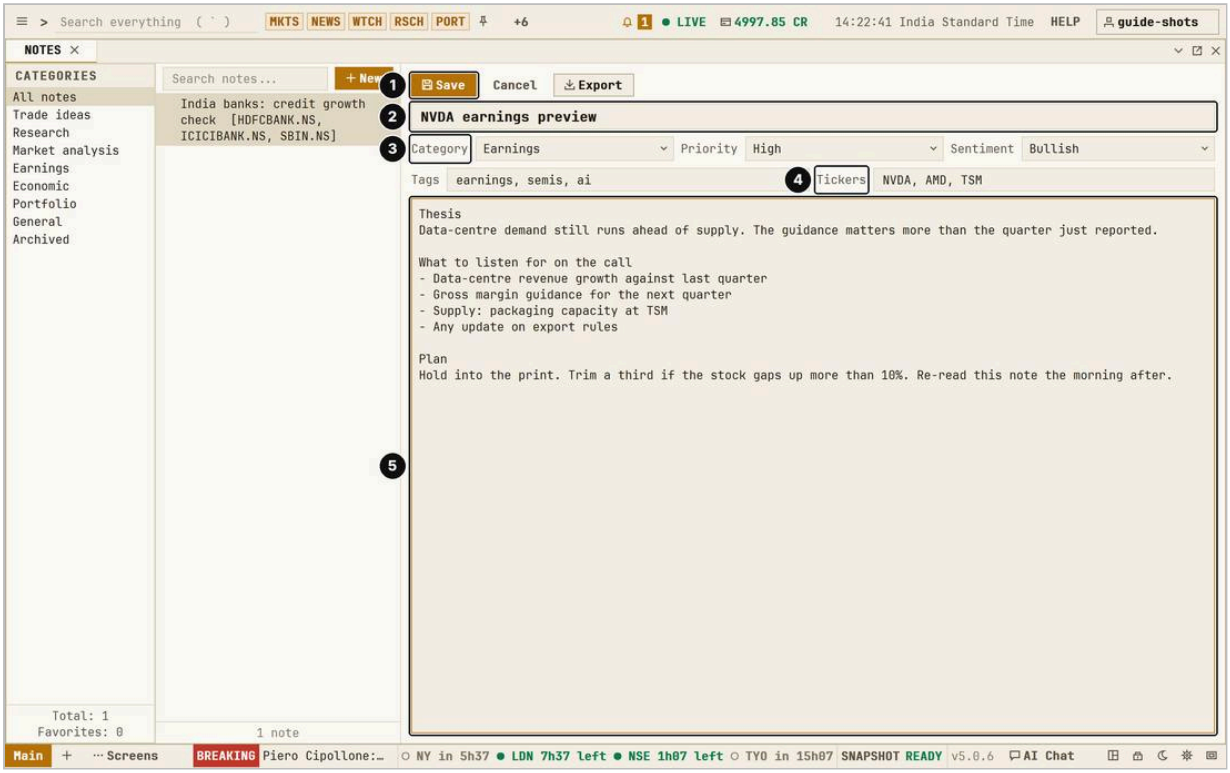


Figure 46.2 A new note, filled in and ready to save.

1. **Save** — store the note. Nothing is stored until you press it.
2. The title.
3. **Category**, **Priority**, **Sentiment**.
4. **Tickers** — the symbols the note is about, comma-separated.
5. The note itself.

6. Click **Save**. The note appears at the top of the list and opens for reading.

Careful

Cancel throws away what you typed without asking. Click **Save** first if you want to keep it.

46.3 Write and edit a note

1. To start a note, click **New**. If a category is selected in the sidebar, the new note is filed there; from **All notes** it starts as **General**.

2 Fill in the fields:

Field	What to put in it	Default
Title (*Note title...*)	A short name. A note needs a title: **Save** with no title just puts the cursor in the title box.	—
Category	**Trade ideas**, **Research**, **Market analysis**, **Earnings**, **Economic**, **Portfolio** or **General**.	**General** (or the selected category)
Priority	**High**, **Medium** or **Low**. Colours the title in the list.	**Medium**
Sentiment	Your view: **Bullish**, **Bearish** or **Neutral**.	**Neutral**
Tags (*tag1, tag2, ...*)	Words to search for, separated by commas.	empty
Tickers (*AAPL, MSFT, ...*)	Symbols, separated by commas. Saved in capitals.	empty
Note (*Write your note here...*)	The text. Stored as plain text.	empty

3 Click **Save**.

To change a note, open it and click **Edit**. The editor opens with every field filled in. Change what you need and click **Save**, or **Cancel** to leave it as it was.

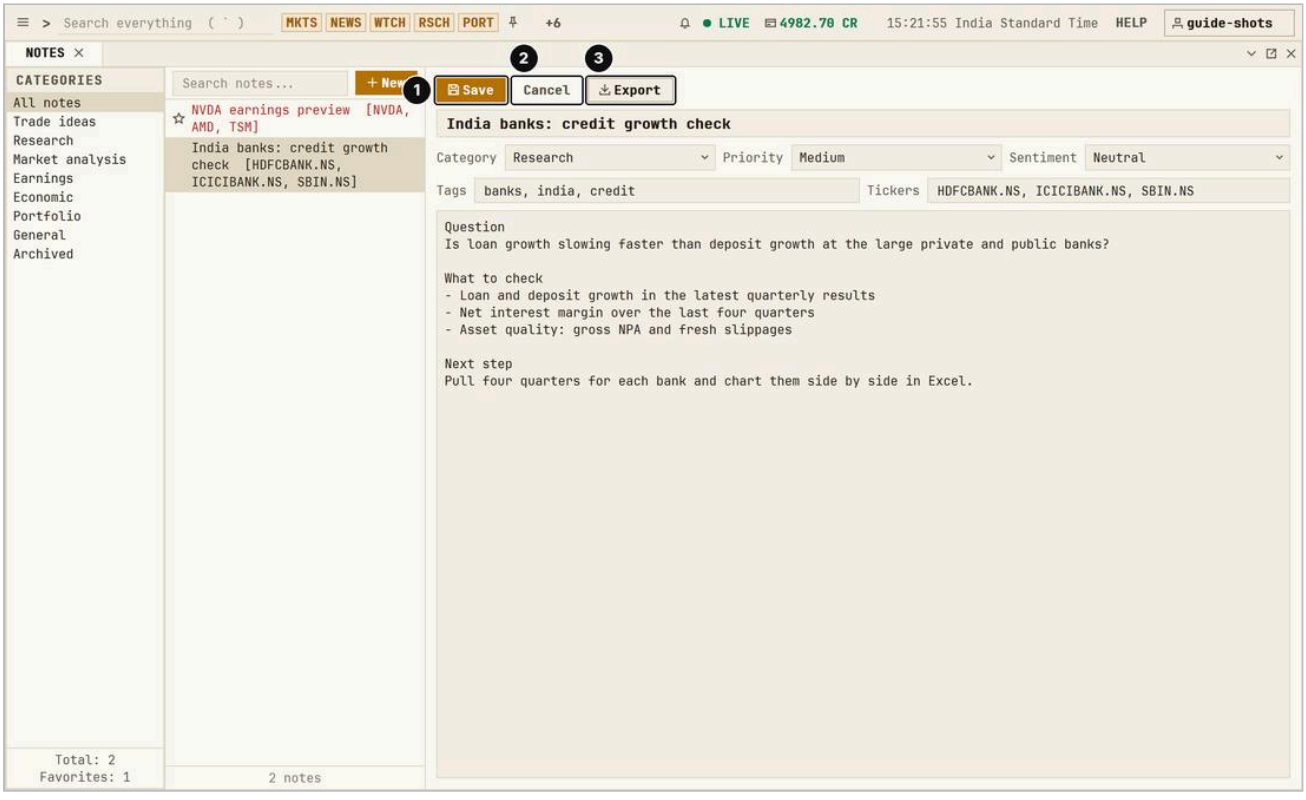


Figure 46.3 Editing a saved note. Export saves the text as a Markdown file in the File Manager.

1. **Save** — keep the changes.
2. **Cancel** — leave without saving (no question asked).
3. **Export** — save this note as a Markdown file in the File Manager.

Note

If you leave the editor with unsaved changes — by clicking **New**, another note or a category — the terminal asks **Save your changes to this note?** with **Save**, **Discard** and **Cancel**. If you close the Notes tab while editing, your draft is kept and comes back the next time you open Notes; it is still not saved as a note until you click **Save**.

46.4 Find a note

- **Search.** Type in **Search notes...**. The list narrows as you type. The search looks in titles, note text, tags and tickers, ignores upper and lower case, and works inside the chosen category (pick **All notes** to search everything).



Figure 46.4 Searching "bank" finds the note whose text and tags mention banks.

- **Category.** Click a category in the sidebar to see only its notes.

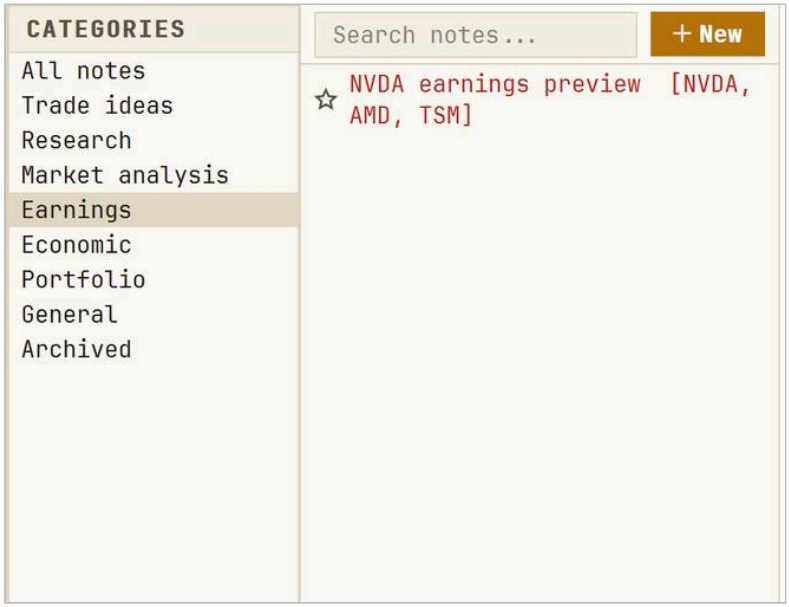


Figure 46.5 The Earnings category.

- **Favourites and priority.** Favourites carry a star in the list; high-priority titles are red. The list is always newest first, so the notes you worked on last are at the top.

46.5 Favourite, archive and delete

Open the note, then use the buttons above it:

Button	What it does
Favorite / Remove favorite	Stars the note. Favourites show a star in the list and on the dashboard's **Notes** tile (which you can set to show favourites only). Starring counts as a change, so the note moves to the top of the list.
Archive / Unarchive	Moves the note out of the list into **Archived**. Archived notes are not counted in **Total** and appear only under **Archived**, where **Unarchive** brings them back.
Delete	Deletes the note after **Delete note** — *Are you sure you want to delete this note?* (**Yes** / **No**, **No** is the default).

Careful

Delete is permanent: there is no bin. Because notes sync, the note also disappears from your other computers. If you only want it out of the way, **Archive** it.

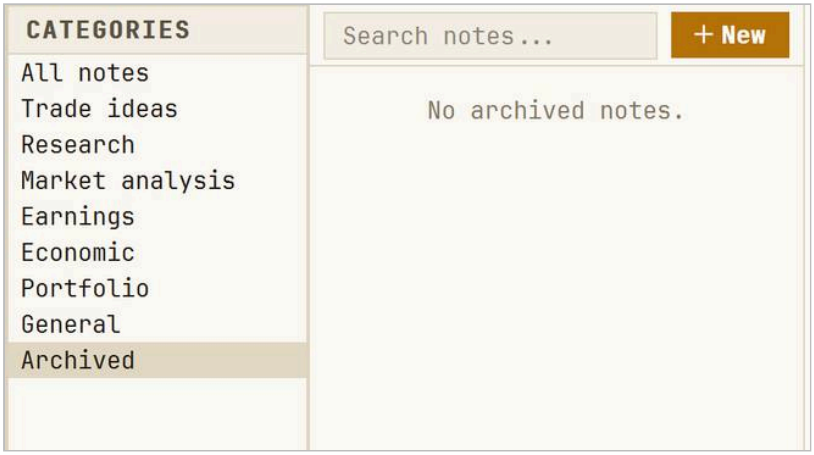


Figure 46.6 Archived holds the notes you archived; it is empty until you archive one.

46.6 Export a note to a file

In the editor, click **Export**. The note is saved as a Markdown file (`.md`) named after its title in the File Manager, under **Notes**. The button says **Exported** for a moment.

- Export saves what is in the editor now, saved or not. It does not save the note.
- The note needs a title: with an empty title, **Export** just puts the cursor in the title box.
- The file holds the title as a heading and the text. Category, tags and tickers are not included.
- Exporting the same note again adds another file with the same name; the first one is not replaced.
- In the File Manager's Cloud mode the file is uploaded to your account like any other file.
- Open, preview or download the file from **Chapter 47, File Manager** p. 882.

46.7 Notes and your tickers

The **Tickers** field ties a note to the instruments it is about:

- The tickers show in brackets after the title in the list, and in the note's details line.
- Searching a ticker (`NVDA`) finds every note that lists it, or mentions it in the text.
- The dashboard's **Notes** tile (**Chapter 8, Dashboard** p. 123) shows your recent (or favourite) notes with their priority, category and tickers; click one to open Notes.

Tickers are plain text: clicking one does not open a chart. To research a symbol from a note, type it in the command line (**Chapter 6, The Command Line** p. 89).

Other screens write notes for you. **Backtesting** can write up a result as a note in **Research** (titled *Backtest: …*, with the run's tickers). An AI agent with the hook **Add it to Notes** (**Chapter 38, Agent Studio** p. 739) adds each answer as a note titled with the agent's name and the time, tagged `agent`, in **Research** unless the hook names another category. A workflow's note node adds notes too. They appear in the list at once.

46.8 Let the AI work on a note

AI Chat can read and change the note that is open in Notes. Open Notes, open the note, then open AI Chat beside it (`F9`) and ask.

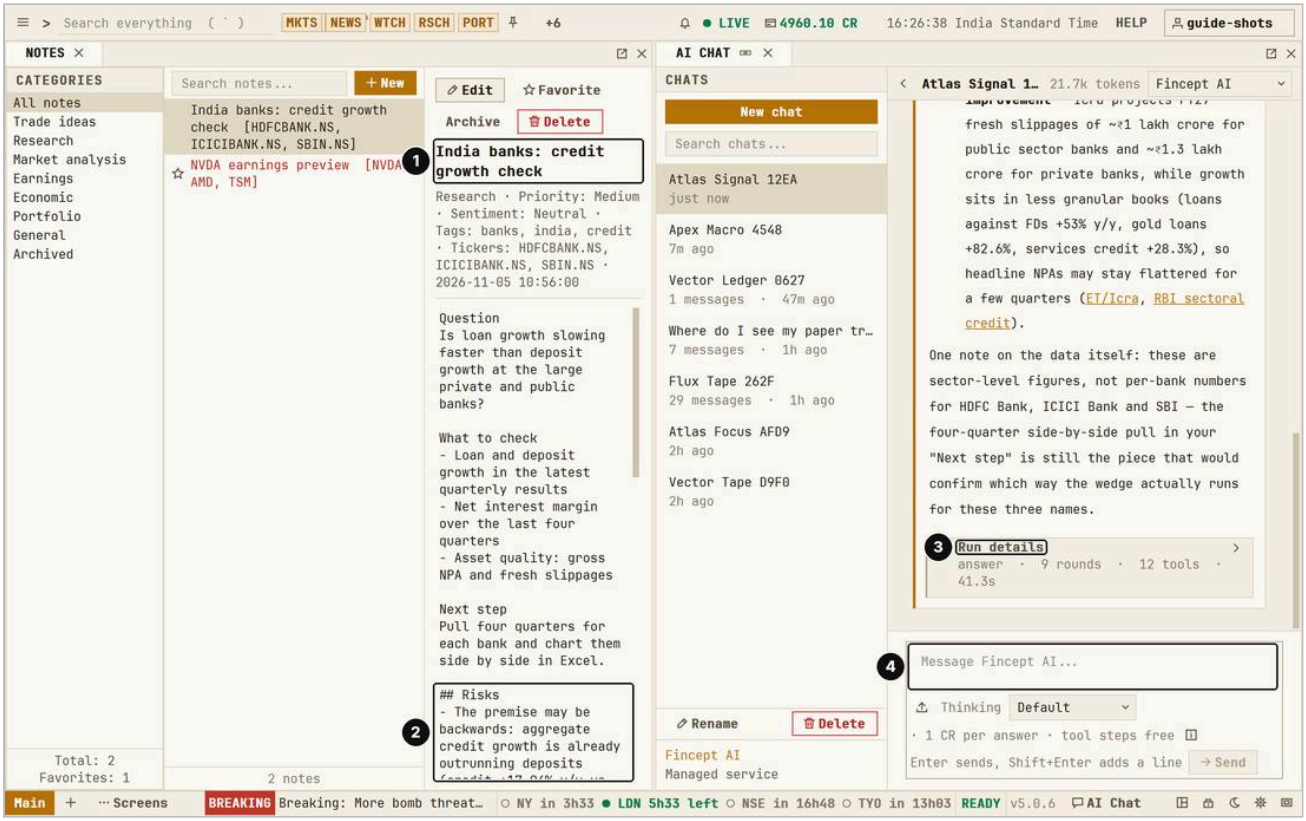


Figure 46.7 AI Chat beside Notes. Asked to add a Risks section, the AI appended it to the open note and saved it.

1. The note open in Notes is the one the AI works on.
2. The section the AI added, at the end of the note (scroll the note to read it all).
3. The AI's answer, with **Run details** (the steps it took).
4. Ask here; `Enter` sends. One answer costs the price shown under the box.

What the AI can do on the open note:

Ask for	What happens
Reading it ("summarise my open note")	It reads the title, details and up to 16,000 characters of text — while you edit, the unsaved text.
Adding text ("add a Risks section")	It adds the text at the end, under a heading if you ask. On a note you are reading, it is **saved at once**. While you edit, it goes into the editor unsaved: **Save** keeps it, one Ctrl + Z removes it.
Rewriting ("tighten the wording", "replace 'Q3' with 'Q4'")	It replaces the whole text, or every exact match of a passage. The change always lands in the editor, unsaved, so you can check it: **Save** keeps it, **Cancel** drops it.
Changing details ("set priority to Low, add tag india")	It sets title, category, priority, sentiment, tags or tickers. Saved at once on a note you are reading; unsaved while you edit.

The AI's note actions above cannot create, archive or delete notes, and they ask no approval because they change only the open note. If you ask the AI to press the screen's own buttons for you (**New**, **Archive**, **Delete**), it can; a **Delete** first asks for your approval (see **Chapter 37, AI Chat** p. 719).

If you have typed changes in the editor and the AI (or another computer) changes the same note meanwhile, your text is kept and **Save** warns you: **This note was changed outside the editor ... Save your version and replace that change?** If you had typed nothing yet, the editor simply shows the new version.

Do it with AI

With a note open in Notes, try:

- "Add a section called 'What would change my mind' with three bullets."
- "Turn this note into a checklist I can tick off on earnings day."
- "Set this note to the Trade ideas category and add the tag watchlist."

Credits

Notes themselves are free. Asking AI Chat to work on a note costs the usual price of an AI chat answer (see **Chapter 37, AI Chat** p. 719).

46.9 Reference

Toolbar of the open note

Control	Shown when	What it does
Edit	reading	Opens the editor.
Favorite / **Remove favorite**	reading	Toggles the star.
Archive / **Unarchive**	reading	Moves the note to or from **Archived**; the note closes.
Delete	reading	Deletes after a confirmation.
Save	editing	Saves the note.
Cancel	editing	Leaves the editor; unsaved changes are lost without a question.
Export	editing	Saves the editor's text as a Markdown file in the File Manager.

Messages

Message	When
No notes yet. Press New to write one.	You have no notes.
No notes match this search.	The search finds nothing in this category.
No notes in this category. / *No archived notes.*	The chosen category is empty.
Unsaved note — *Save your changes to this note?*	You leave the editor with changes.
Delete note — *Are you sure you want to delete this note?*	You clicked **Delete**.
Note changed — *This note was changed outside the editor ...*	The note changed elsewhere while you edited it.
Saved as a new note — *This note was deleted elsewhere, so your text was saved as a new note.*	You saved a note another computer had deleted.
Save failed / **Delete failed** / **Update failed** / **Export failed**	Something went wrong; the message gives the reason (for an export, for example *The File Manager could not add the export.*).

Limits

There is no limit on the length of a note or the number of tags and tickers. Your plan may limit how many notes are kept in your account (Settings > Cloud sync shows, for example, **12 of 50 notes**). Notes beyond the limit stay on this computer and upload when there is room.

46.10 For advanced users

Where notes live. Notes are stored on your computer and copied to your Fincept account in the background (**Settings** › **Cloud sync** › **Notes**). Every save, favourite, archive and delete uploads on its own; when you are offline, changes wait and upload later. Opening Notes fetches changes from your account at most once a minute. Turn off the **Notes** row in Cloud sync to keep notes on this computer only.

Times are in UTC. The details line shows when the note was last saved in UTC (Coordinated Universal Time), not your local time, and **Settings** › **General** › **Time zone** does not change it.

Markdown. The note text is plain text on screen. If you write Markdown (`#` headings, `**bold**` , `-` lists), it reads well as is and renders properly once exported and opened in the File Manager's preview.

Signing in with another account on the same computer removes the previous account's notes from this computer (they stay in that account if they were synced).

46.11 Troubleshooting

My note is not on my other computer

Notes sync through your account. On both computers check **Settings** › **Cloud sync** : **Cloud sync enabled** must be on, the **Notes** row ticked, and its status **Synced**. Press **Sync now**. A **Plan limit** status means your plan's note limit is full.

I clicked Save and nothing happened

The note has no title. Type one in the title box (the cursor is already there) and click **Save** again.

A note disappeared from the list

Check **Archived** in the sidebar, and clear the search box. A note in an unusual category (written by an older version or an automation) shows only under **All notes**.

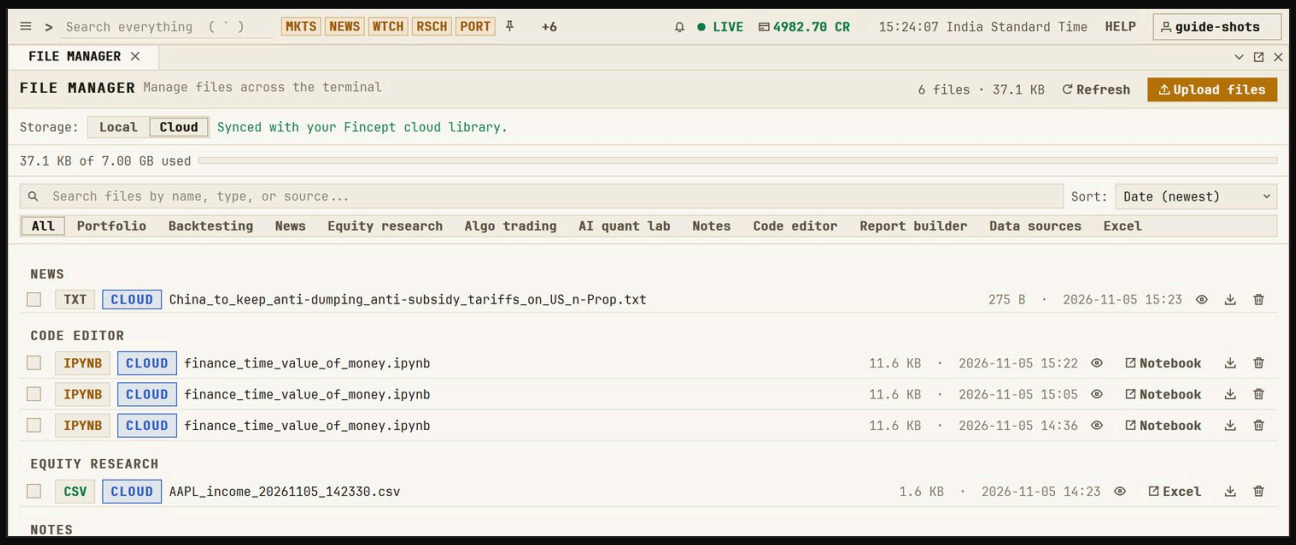
Clicking a ticker does nothing

Tickers in notes are text, not links. Type the symbol in the command line to open it.

CHAPTER 47

File Manager FILE

One library for every file the terminal makes — exported notes, statement CSVs, saved articles, reports, notebooks — and for files you upload. Keep it in your Fincept cloud so it follows you, or on this computer only. Preview most files without leaving the terminal.



At a glance

Open it	• Type `FILE` in the command line and press **Enter** (`files`, `filemanager`, `fm` and `uploads` work too) • **Screens › Tools & Workspace › File Manager**
You need	• Signed in for cloud storage (local storage works without it)
Best for	• Finding a file another screen exported • Previewing a CSV, workbook, notebook or Markdown note • Keeping your files on every computer you use
Time to learn	5 minutes
Related	**Chapter 46, Notes** p. 872, **Chapter 44, Excel** p. 844, **Chapter 43, Code Editor** p. 833, **Chapter 45, Report Builder** p. 858, **Chapter 22, Equity Research** p. 392, **Chapter 51, Settings** p. 932

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47.1 Screen tour

Every screen that exports or saves a file puts it here: an exported note, a statement CSV from Equity Research, a saved news article, a Code Editor notebook. You can also upload your own files.

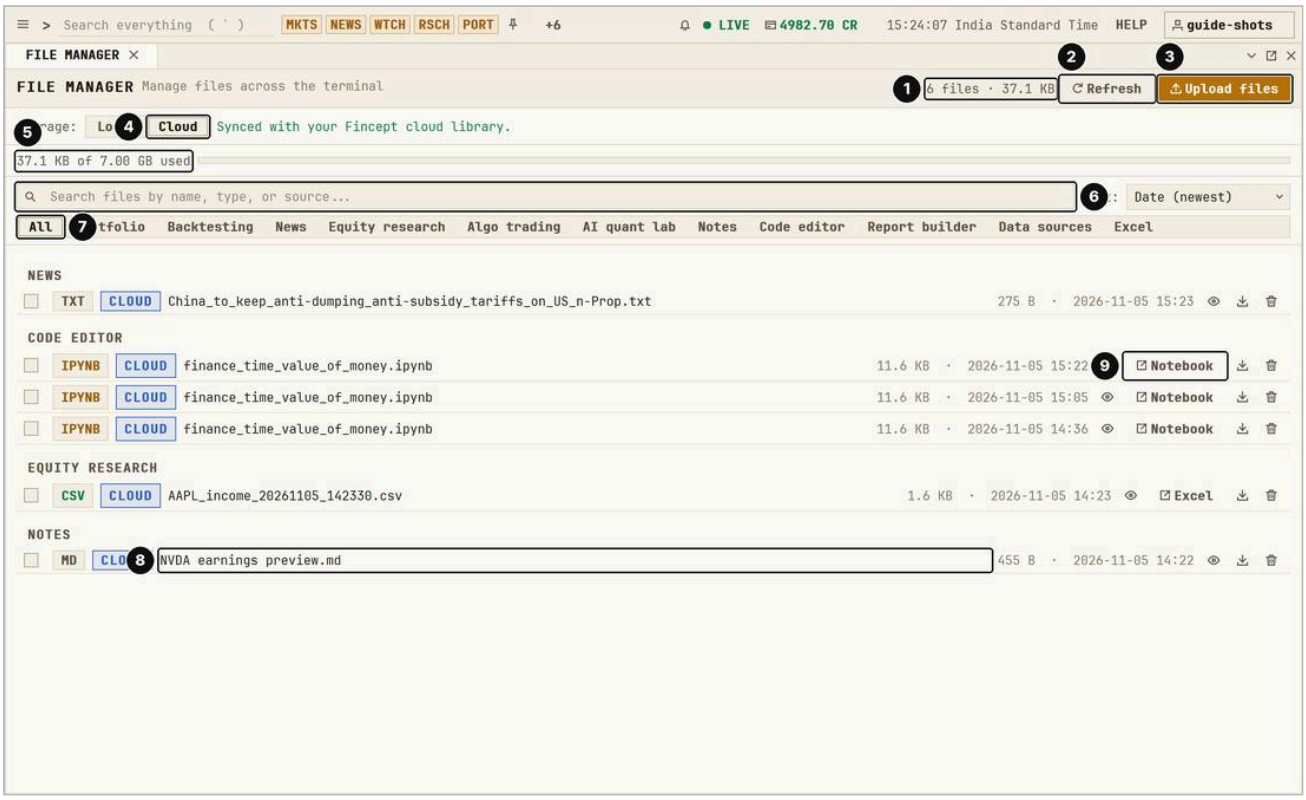


Figure 47.1 The File Manager in cloud mode, with files from four screens.

1. How many files the library holds, and their total size.
2. **Refresh** — read the list again (in cloud mode, from your account).
3. **Upload files** — add files from your computer.
4. **Storage: Local | Cloud** — where the library lives. The line beside it says whether everything is synced.
5. How much of your storage is used.
6. Search by name, type or source.
7. Source chips: show only the files one screen made.
8. A file. Click the row to preview it.
9. **Notebook**, **Excel** — open the file in the screen that works with it.

A file row reads, left to right:

Part	What it shows
Tick box	Select the file, to delete several at once.
Type chip	The file's extension in capitals (**CSV**, **MD**, **TXT**, **PDF** ...).
Sync badge (cloud mode)	**CLOUD** — in your account (a copy may be cached here). **SYNCING** — waiting to upload. **WAITING** — kept on this computer until the cloud can take it (storage full, no active plan, or the terminal needs an update); hover for why. **FAILED** — the cloud refused the file (for example too large); hover for why. **Retry sync** tries both again.
Name	The file's name.
Size and date	For example `1.6 KB · 2026-11-05 14:23`, in your computer's time zone (**Settings** › **General** › **Time zone** does not change it).
Eye (Preview)	Show the file in the preview panel.

Part	What it shows
Notebook, Excel or Report builder	Shown for files another screen can open (see below).
Download (Save a copy)	Save a copy anywhere on your computer.
Bin (Delete)	Delete the file.

Under **All**, a heading names the screen that made the files below it (for example **EQUITY RESEARCH**, **NOTES**). The list keeps its sort order, so the same heading can appear more than once when files from different screens are mixed by date.

47.2 Quick start

Preview a file another screen made.

1. Type `FILE` in the command line and press **Enter**.
2. Click a file's name, for example an exported note. The preview panel opens on the right.

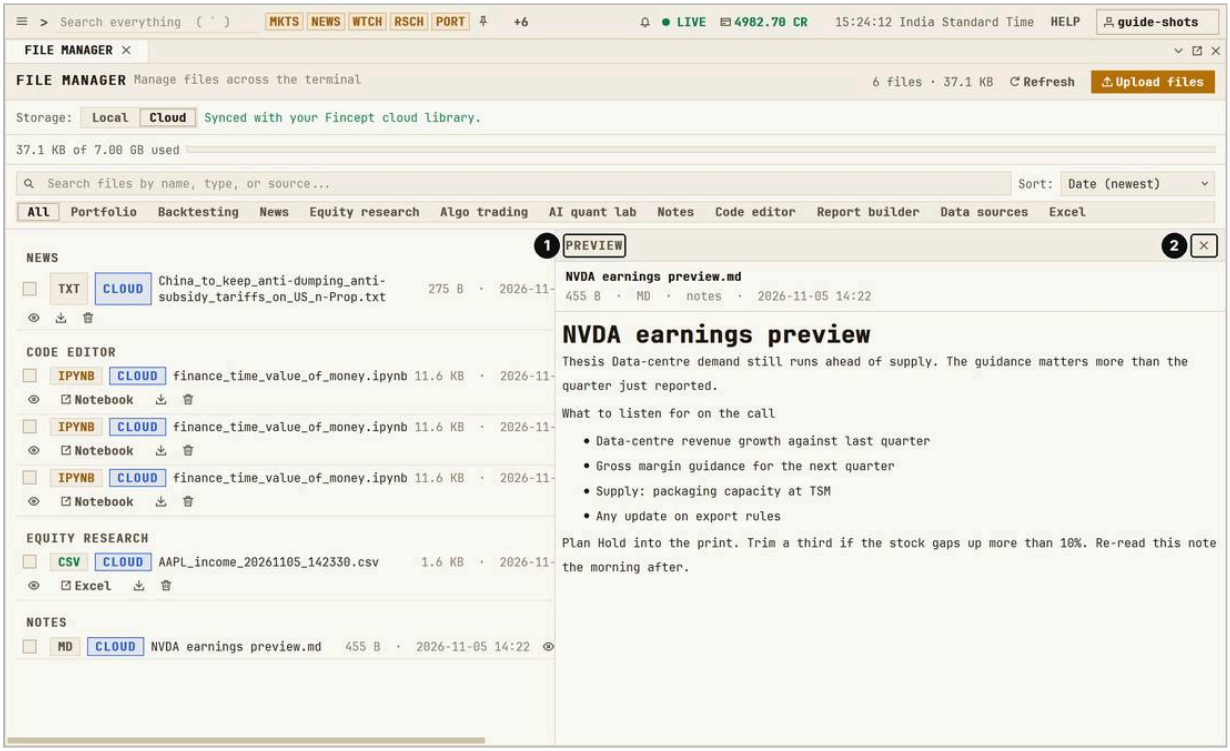


Figure 47.2 A Markdown note, previewed formatted.

1. **PREVIEW** — the file's name, size, type, source and date.
2. Close the preview panel.

3 Click another file to preview it instead. A CSV shows as a table.

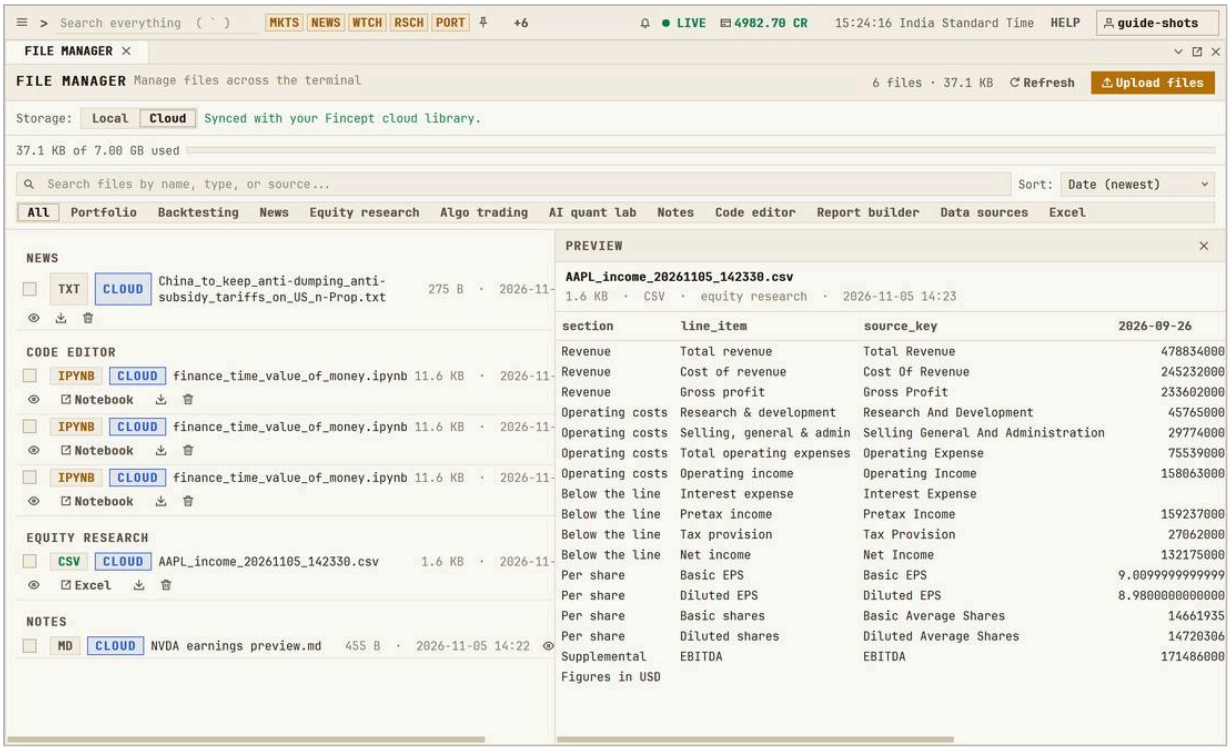


Figure 47.3 A statement CSV from Equity Research, previewed as a table.

4 To keep a copy outside the terminal, click the download icon (**Save a copy**) and choose where.

47.3 Cloud or local storage

The switch **Storage: Local | Cloud** decides where your library lives.

	Cloud	Local
Where files are	In your Fincept account. This computer keeps a cache (up to 300 MB) and downloads a file when you open it.	In a folder on this computer only.
Other computers	See the same library when signed in.	Do not see these files.
Size limits	Your plan's storage (the bar shows it, for example **2.0 KB of 7.00 GB used**) and a per-file upload limit set by Fincept (25 MB unless your account says otherwise).	No limit but your disk. The bar still compares the local library with your plan's cloud storage, so you can see whether a move to the cloud would fit.
Signed out	Not available: the **Cloud** button is greyed out and the usage bar is hidden; files you add upload after you sign in.	Works.

The status line beside the switch says what is happening: **Synced with your Fincept cloud library.**, **Syncing 2 changes...**, **1 change is waiting to upload.**, **1 file could not be synced.**, **Files are stored on this computer.** in local mode, or, in cloud mode while signed out, **Sign in to use cloud storage. Until then, files stay on this computer and upload after you sign in.** When the cloud refuses something (storage full, no active plan), the line shows that reason instead.

Note

Cloud and Local are **two separate libraries**. Switching does not move files. When you switch to **Cloud** with files in your local library, the terminal asks **Upload a copy of them to your cloud library now? — Yes** uploads copies (your local files stay), **No** switches without uploading. Switching to **Local** happens at once. A new installation starts in Cloud mode (or Local, if it already has local files). If you have local files, the terminal asks once per computer whether to **Move to cloud** or **Keep on this computer**.

In cloud mode two more buttons may appear: **Upload local files** (copy your local library to the cloud; files already there with the same name and size are skipped, and so are files larger than the upload limit) and **Retry sync** (send again anything waiting or failed).

47.4 Upload files

1. Click **Upload files**. The **Select Files to Upload** window opens.
2. Pick one or more files (any type) and click **Open**.
3. The files appear at the top of the list. In cloud mode they show **SYNCING** until they are in your account, then **CLOUD**.

Uploaded files have no source screen, so they appear under **All** only. In cloud mode, a file larger than the upload limit is refused (*"..." is larger than the ... cloud upload limit.*), and when your storage is full, new files wait on this computer and upload when space is freed or your plan changes.

There is no drag-and-drop, no folders and no renaming: the library is one list, sorted and filtered as below.

47.5 Find a file



Figure 47.4 The Notes chip shows only files the Notes screen exported.

- **Search** (*Search files by name, type, or source...*) narrows the list as you type.
- **Source chips** show one screen's files: **All**, **Portfolio**, **Backtesting**, **News**, **Equity research**, **Algo trading**, **AI quant lab**, **Notes**, **Code editor**, **Report builder**, **Data sources**, **Excel**. The chip you pick is remembered.
- **Sort: Date (newest)** (the default), **Date (oldest)**, **Name (A-Z)**, **Name (Z-A)**, **Size (largest)**, **Size (smallest)**, **Type**.

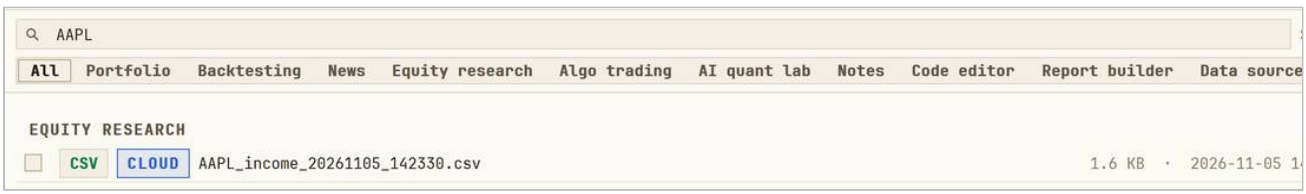


Figure 47.5 Searching "AAPL".

47.6 Open a file in another screen

Some files have a button that opens them in the screen that works with them:

File	Button	Opens
Notebook (`.ipynb`)	**Notebook**	The Code Editor, with the notebook loaded (**Chapter 43, Code Editor** p. 833).
Spreadsheet (`.csv`, `.xlsx`, `.xls`)	**Excel**	The Excel screen (**Chapter 44, Excel** p. 844). The file is not loaded for you: use Excel's own open or import.
PDF	**Report builder**	The Report Builder screen (**Chapter 45, Report Builder** p. 858). The file is not loaded for you.

Other files (a PDF, a Word document, a zip…) can be opened with your computer's own program from the preview panel: **Open with the default app** or **Open in the PDF viewer**.

47.7 Preview a file

Click a file's row (or its eye icon). The preview panel shows the file's name, size, type, source and date, then the contents:

File type	How it is shown
Text and code (`.txt`, `.py`, `.json`, `.sql`, `.yaml`, `.xml`…)	With colours for the language. The first 512 KB, up to 10,000 lines. JSON is tidied up (up to 8 MB).
Markdown (`.md`)	Formatted: headings, lists, bold, links.
CSV, TSV	As a table: the first 1,000 rows, the first row as headers. The separator (comma, semicolon or tab) is found automatically.
Excel (`.xlsx`, `.xlsm`)	As a table, up to 1,000 rows by 100 columns, with a **Sheet** picker when there are several sheets. Workbooks up to 40 MB.
Notebook (`.ipynb`)	The cells, up to 120.
Report (`.fincept`)	The report page as it looks in the Report Builder.
Images (PNG, JPG, GIF, SVG, WebP, TIFF…)	Fitted to the panel; animated GIFs play.
PDF	The document's facts (**Pages**, **Title**, **Author**, **Subject**, **Created**, **Made with**, **PDF version**, and **Protection** when it is encrypted) and **Open in the PDF viewer**. Pages are not drawn in the preview.
Anything else (zip, Word, older `.xls` workbooks, video…)	*There is no preview for … files.* and **Open with the default app**.

A note above the preview says when only part of a file is shown, for example *Showing the first 1,000 rows.*

47.8 Delete files

- One file: click its bin icon, then **Yes** in **Delete File** (*Delete "…"? This cannot be undone.*).

- Several: tick their boxes. A bar appears: **Selected files:** with **Delete n selected** and **Clear selection**. Click **Delete n selected**, then **Yes** in **Delete Files**.

Careful

Deleting is permanent. In cloud mode the file is deleted from your account, so it disappears on every computer. Changing the search, sort or chip clears the ticks.

47.9 Reference

Header and bars

Control	What it does
n files · size	Count and size of the whole library (not just what is shown).
Refresh	Read the list again; in cloud mode, from your account.
Upload files	Add files from your computer.
Storage: Local / Cloud	Choose the library. **Cloud** needs sign-in.
Upload local files	Cloud mode: copy your local files to the cloud library.
Retry sync	Cloud mode: send again what is waiting or failed.
Usage bar (... of ... used)	Cloud mode: storage used out of your plan's allowance. Local mode: the local library's size against that allowance. Turns red past 80%. Hidden in cloud mode while you are signed out.
Search, Sort:, source chips	Narrow and order the list.
Selected files: Delete n selected, Clear selection	Shown when boxes are ticked.

Where files come from

Chip	Files
Report builder	Saved reports, exported PDFs and images you place in a report
Code editor	Saved Jupyter notebooks (.ipynb), including the ready-made notebooks of the Code Editor's **Library**
Excel	Imported and exported spreadsheets and CSV
Notes	Exported Markdown note files (**Chapter 46, Notes** p. 872)
Portfolio	Portfolio CSV exports and PDF summary reports
Data sources	Connection lists you export or import (JSON)
Algo trading, Backtesting, AI quant lab	The chips are there, but in 5.0.6 no screen saves files under them, so they stay empty.
News	Saved article text files (the **Save** button in a news article)
Equity research	Financial statement CSV exports (**Export CSV** in Financials)

Files from other places — your uploads, Derivatives, M&A Analytics and Alternative Investments exports, workflow nodes — have no chip and appear under **All** only.

Connection exports

A connection list exported or imported in Data Sources is copied into the File Manager too, and in Cloud mode it is uploaded to your account. For a connection whose password has not yet been moved to secure storage, that file holds the password in plain text. Delete the copy here if you do not need it, and see **Chapter 48, Data Sources** p. 891 for securing stored passwords.

Messages

Message	Meaning
Your terminal file index is empty.	No files yet. The screen lists where files come from.
No files match your search or filter.	Clear the search or pick **All**.
Fetching from cloud storage…	The file is downloading for the preview.
Could not retrieve this file from cloud storage. Check the connection and pick the file again.	The download failed (offline?).
Cloud storage is full: … Files waiting to upload stay on this computer …	Free space or raise your plan.
Cloud Storage — *"…" is larger than the … cloud upload limit.*	The file was not added.
Download Failed — *Could not retrieve "…" from cloud storage.*	**Save a copy** could not download the file (offline?).
There is no preview for … files. Save a copy, or open it with the program your computer uses for it.	The type has no preview.

47.10 For advanced users

A file waiting to upload exists only on this computer. Files marked **SYNCING**, **WAITING** or **FAILED** have not reached your account yet. Do not uninstall or clear data on this computer until they show **CLOUD**.

Opening with another program uses the library's copy. Open with the default app opens the File Manager's own copy. Changes you make there are not uploaded back to your account; save the file elsewhere and upload it again.

Dashboard. The dashboard's **Recent files** tile lists the last eight files in the library (**Chapter 8, Dashboard** p. 123).

Settings. The storage mode is a per-computer choice. What the File Manager keeps is listed in `Settings › Cloud sync` (**Files**, managed by your account) and the local cache in `Settings › Storage & cache`.

Do it with AI

The AI cannot change where your files are stored. It asks before it opens a file in another program and before it deletes a file. In AI Chat (**Chapter 37, AI Chat** p. 719) try:

- "Open the File Manager and show only the files from Equity Research."
- "Preview my latest exported note."

47.11 Troubleshooting

The Cloud button is greyed out

You are signed out. Sign in; until then files stay on this computer and upload afterwards.

A file shows WAITING

Hover the badge for the reason. Usually your cloud storage is full (the usage bar is red): free space by deleting files, or raise your plan. It also happens with no active plan, or when the terminal must be updated first. Waiting files upload on their own once the cause is gone; **Retry sync** tries at once.

A file shows FAILED

The cloud refused it, for example because it is larger than the upload limit. Hover the badge for the reason. **Retry sync** tries again; a file that is simply too large keeps failing, so keep it in the Local library or save a copy elsewhere.

I exported something but cannot find it

Pick **All** and clear the search. Exports land in the library you are using now (Cloud or Local); switch the storage mode to look in the other one.

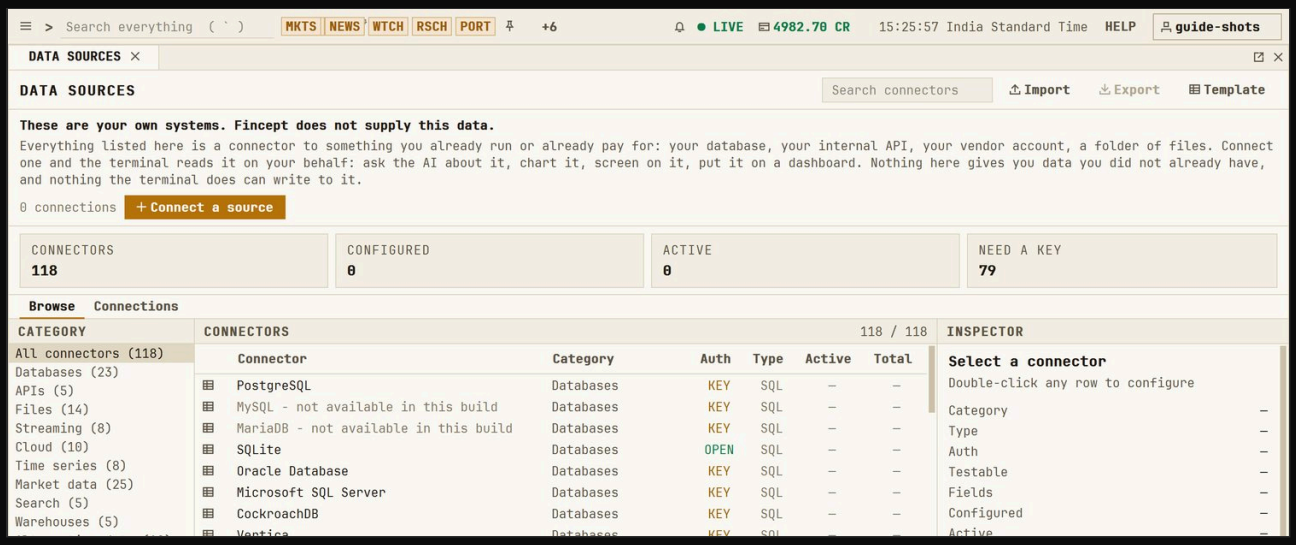
The Excel button does not open my file

It opens the Excel screen only. Open or import the file from inside Excel.

CHAPTER 48

Data Sources DSRC

Connect the terminal to systems you already own or pay for — your databases, internal APIs, files, cloud buckets, message streams and data-vendor accounts — so workflows and research screens can read them. 118 connectors in 11 groups; everything is read-only.



At a glance

Open it	• Type DSRC in the command line and press **Enter** (`datasrc` , `datasources` and `sources` work too) • **Screens** › **Tools & Workspace** › **Data Sources** • **Settings** › **Data sources** , then **Add a connection** or **Open Data Sources** • Click **Open Data Sources** on the dashboard's **My data** tile
You need	• Your own system to connect (a database, an API, a file...) and its address and credentials • Your plan may limit the number of connections
Best for	• Reading your own database, API or file in a workflow • Using your own news or sentiment vendor account in Equity Research • Keeping one list of every external system the terminal may read
Time to learn	10 minutes
Related	**Chapter 49, Data Mapping** p. 904, **Chapter 40, Node Editor** p. 776, **Chapter 8, Dashboard** p. 123, **Chapter 37, AI Chat** p. 719, **Chapter 51, Settings** p. 932

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48.1 Screen tour

Data Sources is a catalogue of connectors and a list of your saved connections. A **connector** is a kind of system (PostgreSQL, a CSV file, a REST API…). A **connection** is one configured instance of it — your server, your file — with a name.

Important

These are your own systems. Fincept does not supply this data, and the terminal never writes to it. Fincept's own market data, news, fundamentals and filings are built in and need no connection.

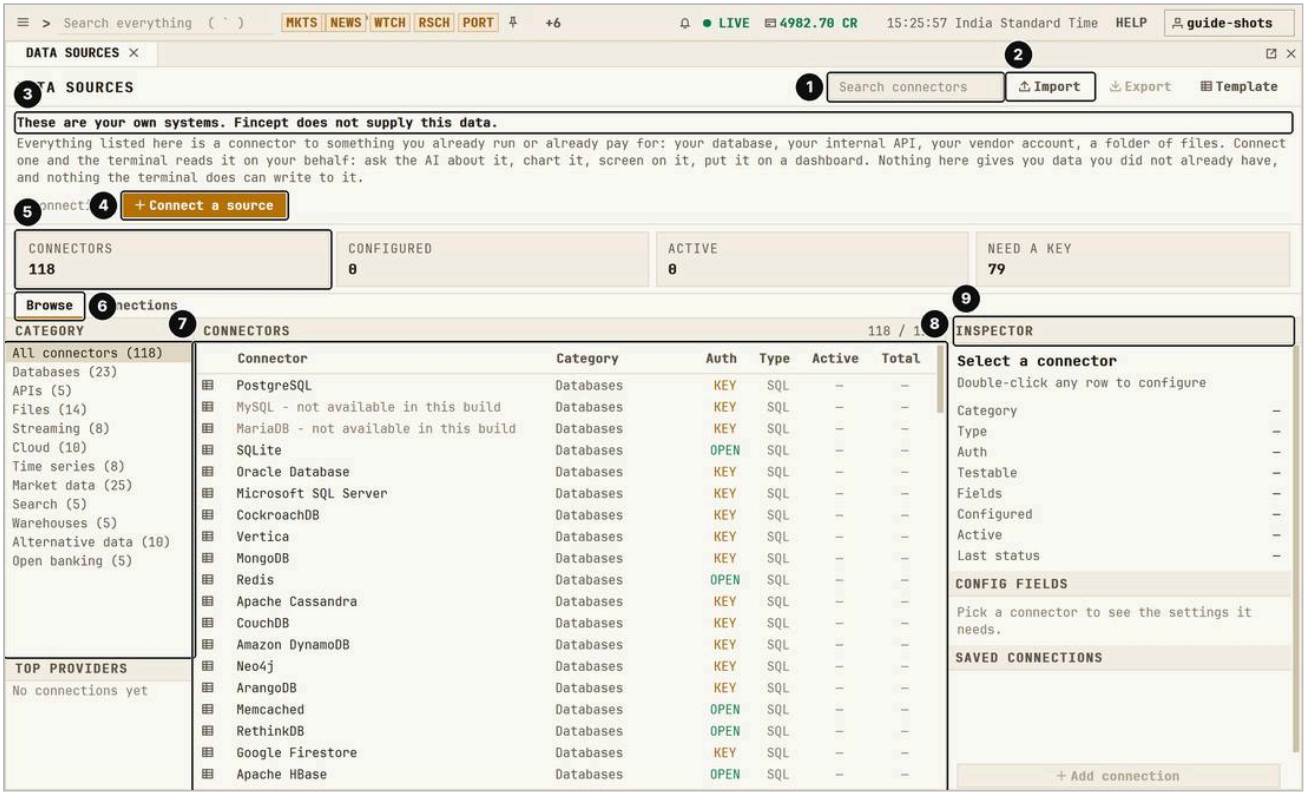


Figure 48.1 Data Sources, Browse tab: categories, the connector catalogue and the Inspector.

1. **Search connectors** — by name, type, description or category.
2. **Import**, **Export**, **Template** — move connection lists in and out as JSON files.
3. The reminder that these are your systems, read-only.
4. **Connect a source** — add a connection for the selected connector.
5. Four counts: connectors, connectors you configured, active connections, connectors that need a key. Click one to filter.
6. **Browse** (the catalogue) and **Connections** (what you saved).
7. **CATEGORY** — the 11 groups and how many connectors each holds.
8. **CONNECTORS** — double-click a row to configure it (or to edit your connection to it).
9. **INSPECTOR** — the selected connector's details, fields and saved connections.

Connector table columns

Column	What it shows
(icon)	The connector's group.
Connector	Its name. … - *not available in this build* means this installation lacks the database driver: you cannot add a connection to it here (hover the row for the reason).

Column	What it shows
Category	Its group, in long form: **Databases**, **APIs**, **File sources**, **Streaming**, **Cloud storage**, **Time series**, **Market data**, **Search & analytics**, **Data warehouses**, **Alternative data**, **Open banking**.
Auth	**KEY** — needs credentials. **OPEN** — needs none.
Type	A short code for the group: **SQL** (every database, MongoDB and Redis included), **REST** (APIs), **FILE**, **WS** (streaming), **CLOUD**, **TSDB** (time series), **MKT** (market data), **SRCH** (search), **DW** (warehouse), **ALT** (alternative data), **OB** (open banking).
Active / Total	How many of your connections to it are on, and how many there are (a dash for none).

Above the table, **118 / 118** counts the connectors shown out of all of them.

The Inspector

Click a connector to see it in the **INSPECTOR**:

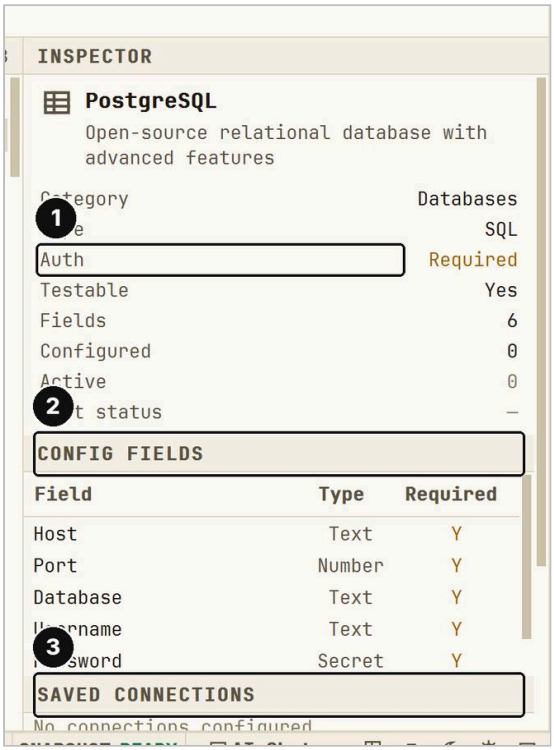


Figure 48.2 The Inspector for PostgreSQL: its details and its six settings (five required; Use SSL scrolls into view).

1. **Category**, **Type**, **Auth**, **Testable**, **Fields**, and your **Configured** / **Active** connections to it.
2. **CONFIG FIELDS** — every setting the connection needs (**Required**: Y or N).
3. **SAVED CONNECTIONS** — your connections to this connector. Below the list: **Add connection**, **Edit** and **Test**.

48.2 Quick start

See what a connection needs, without saving anything.

1. Type `DSRC` in the command line and press `Enter`.
2. In **CATEGORY**, click a group, for example **Files (14)**.
3. Click a connector, for example **CSV File**. The Inspector lists its settings.

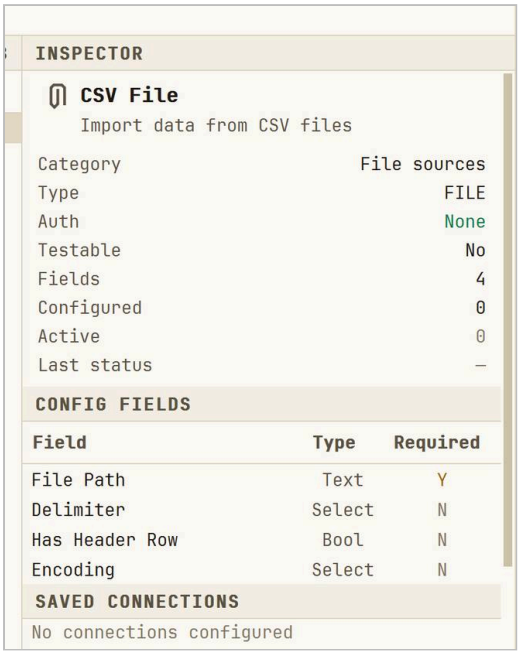


Figure 48.3 CSV File needs a file path; delimiter, header row and encoding have defaults.

4. Double-click the row (or click **Add connection**). The connection form opens.

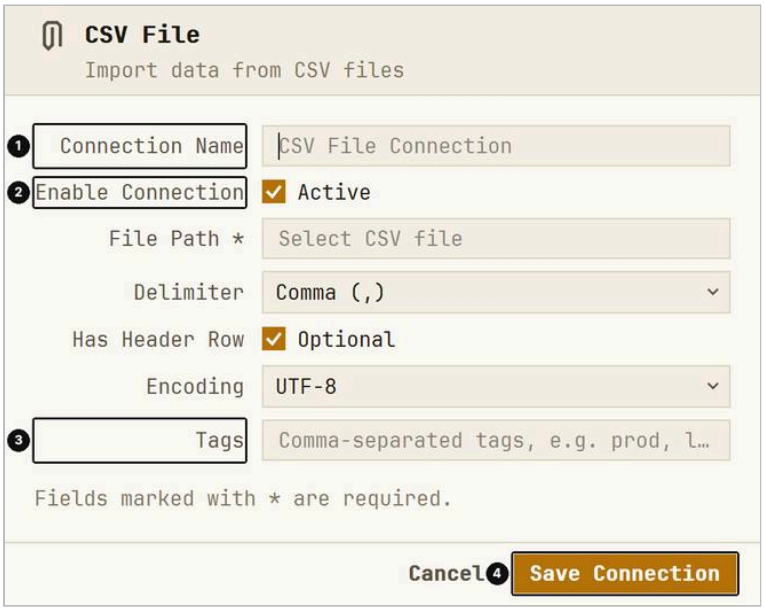


Figure 48.4 The connection form for a CSV file. Fields marked * are required.

1. **Connection Name** — your name for it (blank = the connector's name).
2. **Enable Connection** — on by default.
3. **Tags** — your own labels, comma-separated.
4. **Save Connection** — saves it. **Cancel** closes without saving.

5 Fill in the fields and click **Save Connection** — or **Cancel** to leave without saving.

48.3 Connect a database

For example a PostgreSQL server:

1 Click the **PostgreSQL** row, then **Add connection** (or double-click the row). The form opens.

2 Type a **Connection Name** (`Research DB`), the **Host**, **Database**, **Username** and **Password**. Leave **Port** at 5432 unless your server uses another.

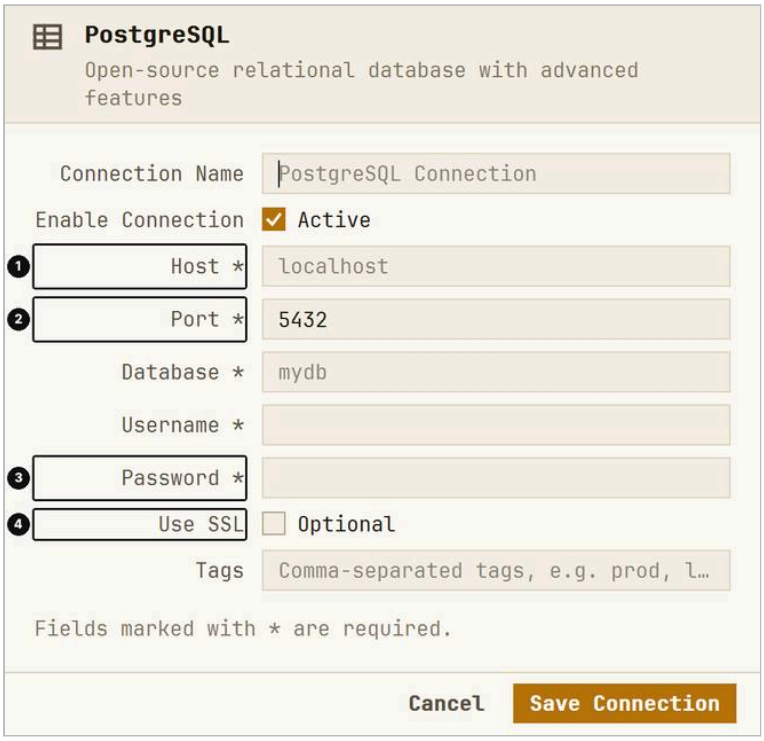


Figure 48.5 Connecting PostgreSQL: host, port, database, user name and password.

1. **Host** — the server's address (`localhost` for this computer).
2. **Port** — filled with the usual port, 5432.
3. **Password** — masked; moved to this computer's encrypted store (see Where passwords and keys are kept).
4. **Use SSL** — an encrypted connection to the server.

3 Click **Save Connection**. If a required field is empty, the form says **Missing required field: …**.

4 Back on the screen, the connection is listed under **SAVED CONNECTIONS**. Click it, then **Test**. The test lists the tables and views it finds, a few columns, and a row count.

Note

Some databases (SQL Server, Oracle, Vertica, Snowflake, Synapse, Databricks) are read through ODBC: fill the field **ODBC DSN / Connection String** with a DSN set up on your computer (or a full `DRIVER={...};SERVER=...` string). Without it the connection is saved, but **Test** answers **NO READER** and asks for the DSN. A connector marked *not available in this build* (in the build this guide shows: MySQL and MariaDB) cannot be added here: **Add connection** is greyed out and a double-click does nothing. A connection to it saved on another computer, or imported, is still listed, but this installation cannot read it.

48.4 Connect an API

REST API reaches any web API that answers JSON:



Figure 48.6 REST API: a base URL, the authentication type and optional headers.

1. **Base URL** — for example `https://api.example.com`.
2. **None**, **API Key**, **Bearer Token** or **Basic Auth**.
3. The key or token (masked).
4. Extra headers as JSON, for example `{"X-Custom": "value"}`.

With **API Key** the key in **API Key / Token** is sent as an `X-API-Key` header, with **Bearer Token** as `Authorization: Bearer ...`, and with **Basic Auth** as a user name and password (type `user:password`). For an API that wants the key in another header, add that header in **Custom Headers (JSON)** and write `{{api_key}}` where the key goes, for example `{"X-Custom-Key": "{{api_key}}"}`: the terminal fills in the masked key when it calls. Do not type the key itself into **Custom Headers (JSON)** — that box is not masked and is stored with the connection's settings.

To shape an API's answer into prices, quotes or positions the terminal understands, use **Chapter 49, Data Mapping** p. 904.

48.5 Test a connection

Pick a saved connection (in the Inspector's **SAVED CONNECTIONS**, or on the **Connections** tab) and click **Test** in the Inspector. The button says **Testing…**, then a report opens: **Connection test - …** with a status, a summary and **What was found**.

Connector kind	What Test does
A database this installation can read	Connects, lists the tables and views, shows the columns of the first three (up to six names each) and counts the rows of the first table. *Connected. 12 tables and views found.*
File (CSV, TSV, JSON)	Opens the file, reads its first part and lists its columns. *The file opened and its columns were read.*
One of the ten vendor accounts the terminal can read	Makes one real, small read with your key (up to 5 rows). *… answered a real read: the connection works.*
Anything else with a web address (REST API, Elasticsearch, InfluxDB…)	Shows the address, but does not call it. *The endpoint is configured and reachable.* only means an address is saved: the background check below tells you whether the server answers.
Anything the terminal cannot read (no driver, no ODBC DSN, no address, a file type it cannot read yet)	Nothing to check: **NO READER** and the reason, for example *Add this connection's ODBC DSN or connection string …*

The result becomes the connection's status:

Status	Meaning
CONNECTED	The test succeeded (for a web address without a reader: an address is saved).
AUTH FAILED	It answered but refused the credentials.
UNREACHABLE	No answer: wrong address, firewall, the server is down, or (for a SQLite file) the file does not exist.
NO READER	This installation cannot read the connection; the report says why. It stays saved.
NOT CHECKED	Never tested.

While the screen is open, the terminal also checks every enabled connection about every 30 seconds: it opens a network connection to its host and port (file connections and SQLite are skipped). The Inspector's **Last status** shows **OK** or **ERR**, and the **Status** column follows the same check; hover a status for the reason. This check proves the server is reachable, not that your password works.

48.6 Manage your connections



Figure 48.7 The Connections tab's toolbar.

1. **Browse** and **Connections** — the Connections tab lists your saved connections.
2. **Add** — a new connection for the selected connector.
3. **Filter connections** — by name, provider, category or tag.
4. **Enable all**, **Disable all** — for the connections shown.
5. **Delete selected** — delete the selected rows (asks first).

Before you save a connection, the tab shows **No data sources connected yet** and a short card on what the terminal can read today (listed in the Reference below).

The **Connections** tab lists every saved connection with **Name**, **Provider**, **Category**, **Type**, **Status**, **Tags** and **Updated**, and a tick box at the start of each row:

- **The tick box** turns a connection on or off at once. An off connection is hidden from workflow nodes and the **My data** tile, and readers refuse it (*the connection '...' is switched off in Data Sources*).
- **Enable all** / **Disable all** act on the rows shown (after filtering), without asking.
- **Delete selected** deletes the rows you selected (click, `Ctrl`-click or `Shift`-click). It asks **Delete n selected connection(s)?** — *This cannot be undone.* (**Yes** / **Cancel**).
- To change a connection, pick it and click **Edit** in the Inspector. The form opens as **Edit ...**; click **Update Connection**. A double-click on a connector that already has a connection also opens that connection for editing; use **Add connection** for a second one.

Tip

Delete selected leaves the deleted connections' passwords in this computer's encrypted store. Deleting a connection in **Settings** › **Data sources** removes its stored password as well.

Settings has a summary of the same list with per-row delete and bulk actions (**§51.11 Data sources** p. 953).

48.7 Use a connection

Every surface reads the same saved connections, read-only:

Where	How
Node Editor	A **Data Source Query** node runs a query (one read-only SQL `SELECT`, an endpoint path, or a file name inside the connection's folder) on a connection and feeds the rows into a workflow (**Chapter 40, Node Editor** p. 776).
Equity Research	A news-API or market-sentiment connection (**NewsAPI.org**, **Adanos Market Sentiment**), when you have one switched on, adds to the research screens (**Chapter 22, Equity Research** p. 392).
Dashboard	**Add widget > My data** shows a *saved query* as a table or a chart (**Chapter 8, Dashboard** p. 123). This version has no control that saves a new query, so the tile can only list queries saved with an earlier version.

Reads return 500 rows by default and at most 10,000.

Note

In this version AI Chat does not read your connections' tables or rows. The AI can still work this screen for you (see **§48.11 For advanced users** p. 902); to work with the rows, use a **Data Source Query** node.

48.8 Import, export and the template

Button	What it does
Export	Saves every connection to a JSON file (**Export Connections**, default `fincept_connections.json`): its name, connector, settings, tags and on/off state. A copy of the file is added to the File Manager. Greyed out until you have a connection (*No saved connections to export yet*).

Button	What it does
Import	Reads such a file (**Import Connections**). Every entry becomes a new connection, so importing the same file twice makes two of each. Each keeps the on/off state written in the file (off when the file does not say). Entries without a connector are skipped. The screen shows no summary: look at the **Connections** tab. A copy of the file is added to the File Manager.
Template	Saves a JSON file (**Save Connector Template**, default `fincept_connections_template.json`) with one entry per connector (118), each filled with default or example values, switched off, and with a `_help` line. Fill in the ones you need, set `"enabled"` to `true` for those you want on, delete the rest, and **Import** it.

Passwords already moved to this computer's encrypted store are not in an export: after an import on another computer, type them again with **Edit**.

Treat an exported file as sensitive

An export can contain passwords and keys in plain text: any password not yet moved to this computer's encrypted store (for example one saved since you last unlocked the terminal), and anything typed into an ordinary text box, such as **Custom Headers (JSON)** or a connection string. The terminal also copies every exported or imported file into the File Manager — in cloud mode, to your account (**Chapter 47, File Manager** p. 882). Click **Secure stored passwords** before you export, keep the file somewhere private, share it only with people allowed to see those credentials (or delete them from it first), and delete the copies you do not need, the File Manager copy included.

48.9 Where passwords and keys are kept

Connection definitions (names, hosts, options) are saved to your account, so your other computers see the same list. A masked field (a password, secret key or token) is first saved with the connection. Once per session, after you unlock the terminal with your PIN, the terminal moves these values into this computer's encrypted store, protected by your PIN. **Secure stored passwords** (in the banner, once you have a connection) does it at once and says how many it moved (*n moved to this device*, *Nothing left to move*, or *Unlock with your PIN first*). After that they stay on this computer: on another computer the connection is there, and you type its password once.

Values typed into ordinary text boxes — **Custom Headers (JSON)**, a connection string, a cloud storage **Access Key ID** — are not masked fields: they stay in the connection's settings and travel with them to your account.

48.10 Reference

Connectors by group

Group (count)	Connectors
Databases (23)	PostgreSQL, MySQL, MariaDB, SQLite, Oracle Database, Microsoft SQL Server, CockroachDB, Vertica, MongoDB, Redis, Apache Cassandra, CouchDB, Amazon DynamoDB, Neo4j, ArangoDB, Memcached, RethinkDB, Google Firestore, Apache HBase, ScyllaDB, OrientDB, Azure Cosmos DB, etcd
APIs (5)	REST API, GraphQL API, gRPC, SOAP API, OData API
Files (14)	CSV File, Excel (XLSX), JSON File, Parquet File, XML File, Avro File, ORC File, Feather File, FTP, SFTP, Apache Iceberg, Delta Lake, GeoParquet, Apache Arrow IPC
Streaming (8)	WebSocket, MQTT, Apache Kafka, RabbitMQ, NATS, Redpanda, Apache Flink, FIX Protocol
Cloud (10)	AWS S3, Google Cloud Storage, Azure Blob Storage, DigitalOcean Spaces, MinIO, Backblaze B2, Wasabi, Cloudflare R2, Oracle Cloud Storage, IBM Cloud Object Storage

Group (count)	Connectors
Time series (8)	InfluxDB, QuestDB, TimescaleDB, Prometheus, VictoriaMetrics, OpenTSDB, kdb+, ClickHouse
Market data (25)	Public Stock Quotes, Alpha Vantage, Finnhub, IEX Cloud, Twelve Data, Quandl/Nasdaq Data Link, Binance, Coinbase, Kraken, CoinMarketCap, CoinGecko, EOD Historical Data, Tiingo, Intrinio, Fincept Data API, Refinitiv/Reuters, Marketstack, Finage, Tradier, Polygon.io, OpenFIGI, FactSet, Refinitiv / LSEG Data Library, PitchBook, Nasdaq TotalView. Most need your API key; Public Stock Quotes, CoinGecko and OpenFIGI do not.
Search (5)	Elasticsearch, OpenSearch, Apache Solr, Algolia, MeiliSearch
Warehouses (5)	Google BigQuery, Amazon Redshift, Databricks, Azure Synapse, Snowflake
Alternative data (10)	RavenPack, Bloomberg Second Measure, SafeGraph / Placer.ai, Orbital Insight, Refinitiv Tick History, Earnest Research, Thinknum Alternative Data, Revelio Labs, Adanos Market Sentiment, NewsAPI.org. All need your key.
Open banking (5)	Plaid, MX Technologies, Finicity / Mastercard Open Banking, TrueLayer, FDX API. All need your keys.

What the terminal can read today

Every connector saves its settings. These can also be queried:

- **SQL databases**: SQLite files; PostgreSQL, TimescaleDB, CockroachDB and Redshift (where this installation has the PostgreSQL driver); MySQL and MariaDB (where it has that driver); SQL Server, Oracle, Vertica, Snowflake, Synapse and Databricks through ODBC once you give the DSN.
- **Web APIs**: any connection with a base URL — including Elasticsearch, OpenSearch, Solr, MeiliSearch, Prometheus, VictoriaMetrics, OpenTSDB, InfluxDB, QuestDB, ClickHouse, CouchDB and ArangoDB on their own host and port.
- **Files**: CSV, TSV and JSON. (Excel, Parquet, XML, Avro, ORC, Feather, Arrow, GeoParquet, Delta and Iceberg can be listed but not read yet.)
- **Vendor accounts** read with your own key: Alpha Vantage, Finnhub, Tiingo, Twelve Data, EOD Historical Data, Marketstack, Intrinio, CoinGecko, CoinMarketCap and OpenFIGI.

Everything else (MongoDB, Redis, Kafka, cloud buckets, the other vendor and banking accounts...) is kept with its settings; the background check shows whether its server is reachable, and **Test** answers **NO READER**.

Settings › Data sources sums this up as, for example, *118 connectors in 11 groups; this build queries 15 of them*. That count is what can be read with no settings filled in: SQLite, the four PostgreSQL-family databases and the ten vendor accounts in the build this guide shows. CSV, TSV and JSON files, web APIs and ODBC databases are not in it, but become readable once you fill in a file path, a base URL or a DSN.

The connection form

Part	What it is
Window title	**Configure — ...** for a new connection, **Edit — ...** for a saved one. Under the title: the connector's description.
Connection Name	Your name for the connection (placeholder *... Connection*). Blank saves as the connector's name.
Enable Connection — Active	On by default.

Part	What it is
The connector's fields	Text, masked secrets, whole numbers, web addresses, drop-downs, multi-line boxes and tick boxes (labelled **Required** or **Optional**). Required fields end with `*`. Defaults are filled in; grey text in an empty box is only an example.
Tags	*Comma-separated tags, e.g. prod, live, trading*.
Note under the form	Fields marked with `*` are required.
Save Connection / Update Connection	Save. `Enter` does the same. A message at the bottom says **Missing required field: ...** or **Failed to save: ...** when it cannot.
Cancel	Close without saving.

Counters (click to filter)

Counter	Counts	Clicking it shows
CONNECTORS	All connectors (118)	Everything
CONFIGURED	Connectors with at least one connection	Those connectors only
ACTIVE	Connections that are on	Connectors with an active connection, and active connections
NEED A KEY	Connectors that need credentials (79)	Those connectors, and connections to them

Click the same counter again to clear the filter. The counter that filters is highlighted.

The Inspector

Row	Shows
Name and description	The connector picked (*Select a connector* / *Double-click any row to configure* before you pick one; *Not available in this build* when the driver is missing).
Category, Type	Its group and short code.
Auth	**Required** or **None**.
Testable	**Yes** when the background check can reach it over the network; **No** for files and SQLite (**Test** still works for them).
Fields	How many settings it has.
Configured, Active	How many connections you have to it, and how many are on.
Last status	**OK** or **ERR** from the background check, a dash before the first one.
CONFIG FIELDS	**Field**, **Type** (**Text**, **Secret**, **Number**, **URL**, **Select**, **Textarea**, **Bool**) and **Required** (**Y** / **N**). Up to five rows show; the rest scroll.
SAVED CONNECTIONS	Your connections to it, as *name [active]* or *name [off]*. Click one to pick it for **Edit** and **Test**; with none picked, they act on the first connection that is on (else the first one).
Add connection, Edit, Test	Add a connection to this connector; edit or test the picked one.

The sidebar and the banner

- **CATEGORY — All connectors** and the 11 groups, with counts that follow the search box.

- **TOP PROVIDERS** — the connectors you have the most connections to (up to eight), with the count; click one to select it. *No connections yet* until you save one.
- The banner at the top: the reminder that these are your own systems, your plan's connection count (for example **2 of 3 connections**), **Secure stored passwords** (once you have a connection) and **Connect a source** (adds a connection to the selected connector, or the first one listed).

The Connections tab's columns

Column	Shows
(tick box)	On or off.
Name, Provider	Your name for it, and its connector.
Category	Its group as a short word (`database`, `file`, `market-data`...).
Type	The group's short code (**SQL**, **REST**...).
Status	**CONNECTED**, **AUTH FAILED**, **UNREACHABLE**, **NO READER** or **NOT CHECKED**; **OK** / **ERR** from the background check. Hover for when it was checked and why.
Tags	Your tags.
Updated	Meant for the last change; stays blank in this version.

48.11 For advanced users

Nothing writes. Database connections run read-only queries, API connections send only GET and POST, and file connections read only inside the folder they point at.

Plans. Your plan may limit how many connections you keep; the banner shows, for example, **2 of 3 connections**. When this guide was written the limits were 3 on Exclusive, 20 on Exclusive+ and no limit on Exclusive Pro. When the limit is reached, **Connect a source** shows a lock and opens the upgrade options. Tests and reads cost no credits.

Status is per computer. The status of each connection is remembered on this computer between restarts, and updated by every test and every read.

What is saved with the screen. The connector you picked and both search boxes come back when the screen is restored.

Do it with AI

The AI works this screen the way you do (**Chapter 37, AI Chat** p. 719). In AI Chat, ask for example:

- "Open Data Sources and show me what a PostgreSQL connection needs."
- "Test my Research DB connection and tell me what it found."
- "Which of my data source connections are switched off?"

It never types a password or key — you type those yourself — and it cannot change where a saved connection with a password points.

48.12 Troubleshooting

Test says UNREACHABLE

The terminal cannot reach the address. Check the host and port, that the server is running, and that your firewall or VPN lets this computer reach it.

Test says AUTH FAILED

The server answered but refused the user name, password or key. Retype them with **Edit**. If the password was already moved to the encrypted store, **Edit** opens with the field empty: type it again.

A connector says "not available in this build"

This installation lacks the driver for that database, so you cannot add a connection to it here (**Add connection** stays greyed out). Hover the row to see which driver is missing. A connection to it made elsewhere is still listed and kept, but not read on this computer.

Test says NO READER

The report gives the reason. For SQL Server, Oracle, Vertica, Snowflake, Synapse or Databricks, fill **ODBC DSN / Connection String** with **Edit**. For a CSV or JSON connection, fill the file path. For a web API, give it a base URL. Other connectors are kept but cannot be read in this version.

Test says CONNECTED, but the API is down

For a web address the terminal has no reader for (REST API, Elasticsearch and the like), **Test** only confirms that an address is saved. Watch **Last status** in the Inspector instead: the background check shows **ERR** when the server does not answer.

Imported connections are switched on or off unexpectedly

Each imported connection keeps the on/off state written in the file; entries from the **Template** are off. Tick them on the **Connections** tab.

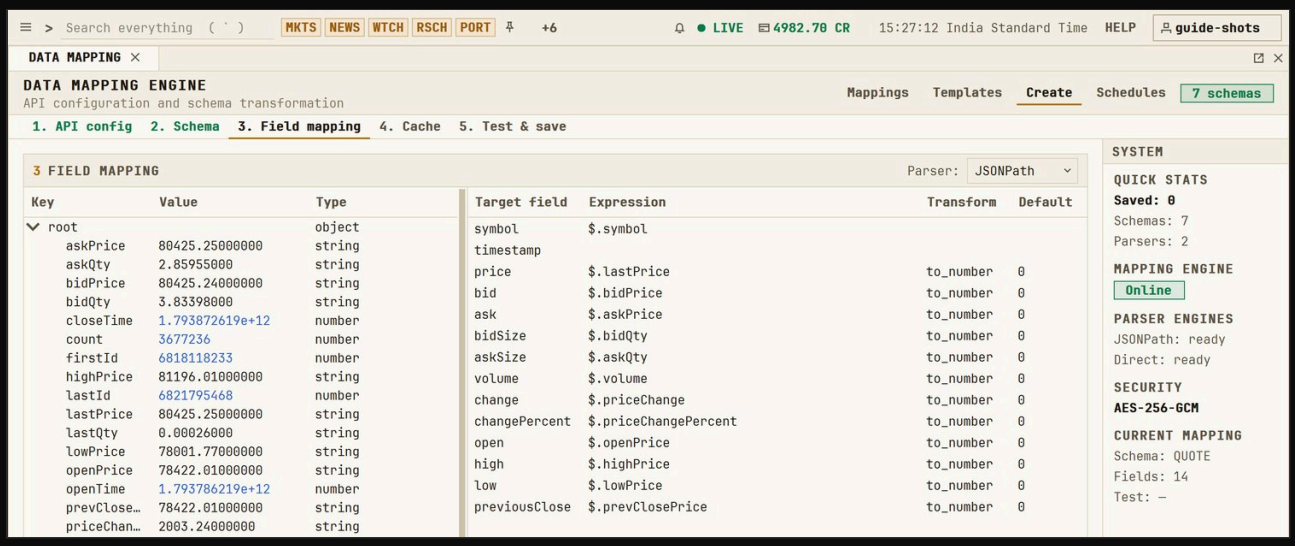
My connection is missing on my other computer, or asks for its password

The list syncs through your account; passwords do not. Type the password once on each computer.

CHAPTER 49

Data Mapping DMAP

Turn any web API's answer into data the terminal understands. Point a mapping at an endpoint, pick a target shape — candles, quotes, ticks, orders, positions, portfolio or instrument — map each field with a path expression, test it on a live sample, and save it to run whenever you like. Scheduled refreshes pull data on Fincept's servers while your computer is off.



At a glance

Open it	• Type `DMAP` in the command line and press **Enter** (`datamap`, `mapping` and `schema` work too) • **Screens** › **Tools & Workspace** › **Data Mapping**
You need	• The address of the API you want to read (and its key, if it needs one) • Credits only for scheduled refreshes
Best for	• Reading prices or positions from an API the terminal has no connector for • Checking what an API really returns before you build on it • Pulling a set of data series every morning, on the server
Time to learn	15 minutes
Related	**Chapter 48, Data Sources** p. 891, **Chapter 40, Node Editor** p. 776, **Chapter 32, Global Data** p. 648, **Chapter 51, Settings** p. 932

In this chapter

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49.1 Screen tour

A **mapping** is a saved recipe: which API to call, and how to turn its answer into rows of a known shape (a **schema**). The screen has four views, chosen at the top right.

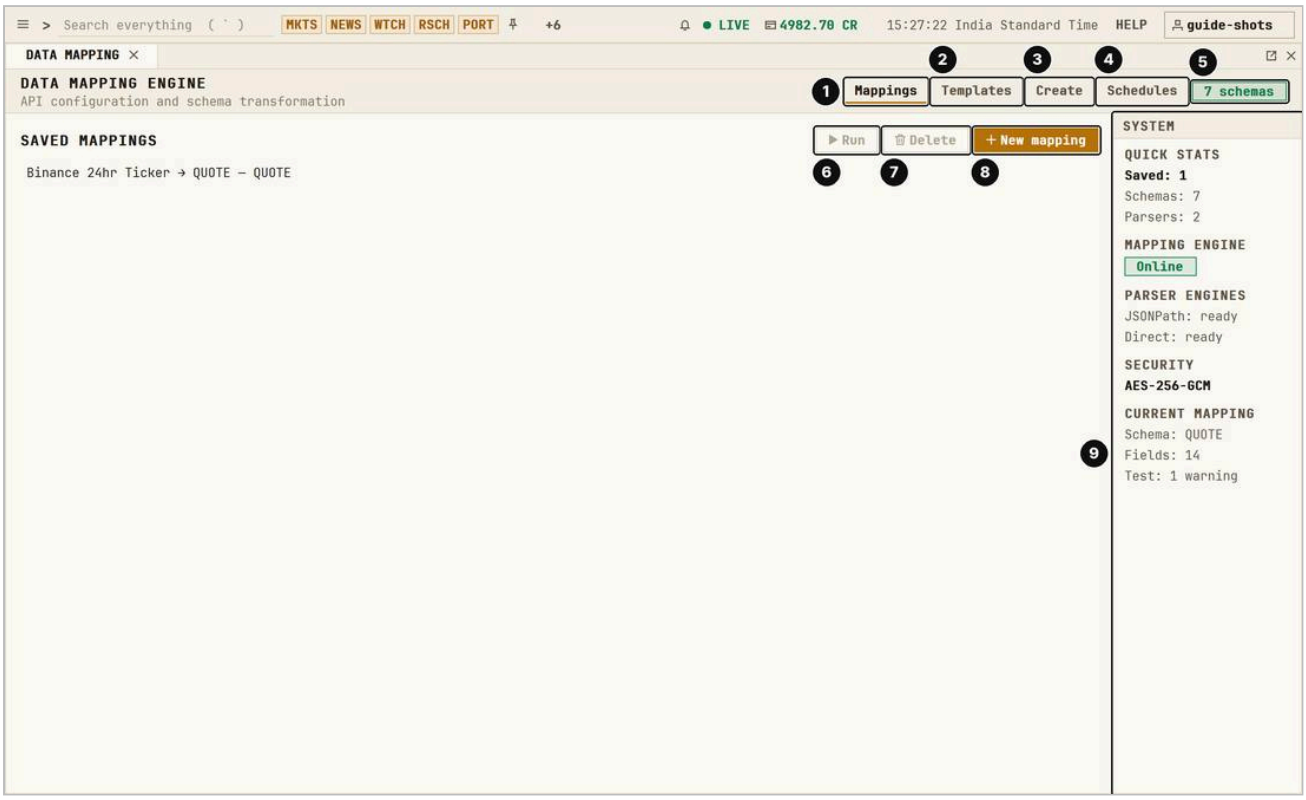


Figure 49.1 The Mappings view with one saved mapping, and the System panel on the right.

1. **Mappings** — your saved mappings.
2. **Templates** — 13 ready-made mappings for popular APIs.
3. **Create** — the five-step wizard that builds a mapping.
4. **Schedules** — refreshes that run on Fincept's servers.
5. The number of target schemas.
6. **Run** — call the API now and extract rows.
7. **Delete** — delete the selected mapping (asks first).
8. **New mapping** — start the wizard with empty fields.
9. **SYSTEM** — counts, parsers, and the mapping you are building.

Each saved mapping is listed as its name, then its schema. **Run** and **Delete** are greyed out until you click one (*Select a mapping in the list first.*). With none saved, the list says *No mappings saved yet. Use New mapping to build your first one.*

The **SYSTEM** panel shows **Quick stats** (**Saved**, **Schemas: 7**, **Parsers: 2**), the **Mapping engine** state (**Online**), the parser engines (**JSONPath: ready**, **Direct: ready**), how credentials are stored (**AES-256-GCM** encryption), and the **Current mapping**: the schema picked in the wizard, how many fields that schema has, and the last test result (**Test: passed**, **Test: 1 warning**, **Test: failed**).

49.2 Quick start

Build a working mapping from a template in about two minutes. The example reads a public crypto ticker that needs no key.

1. Type `DMAP` in the command line and press `Enter`. Click **Templates**.

2 Click a template in the list. Its details appear on the right: provider, schema, whether it is verified, a description, address, method, authentication, number of mapped fields, parser and tags.

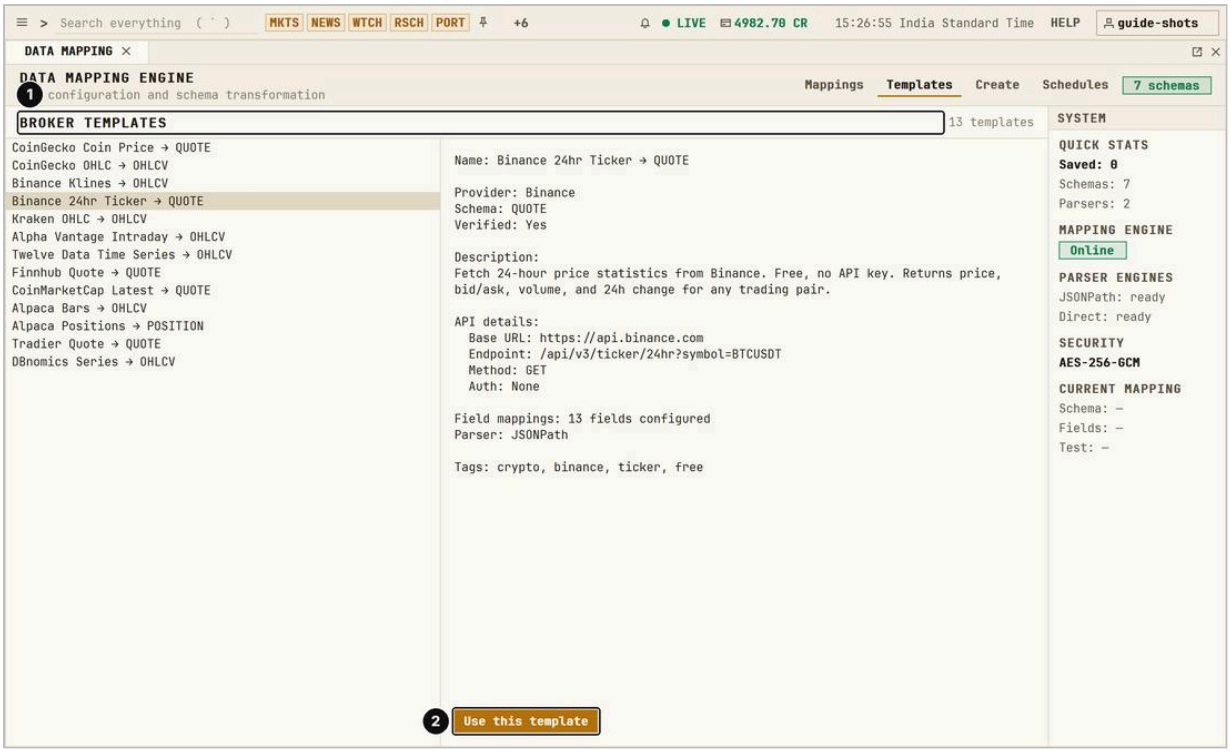


Figure 49.2 A template's details. Use this template copies it into the wizard.

1. **BROKER TEMPLATES** — 13 ready-made mappings. Hover one for its description.
2. **Use this template** — fill the wizard with it.

3 Click **Use this template**. The wizard opens at step 1 with the name, address and settings filled in.

4 Click **Test API request**. The terminal calls the API once and keeps the answer as a sample. The line beside the button says **Success: sample data received**.

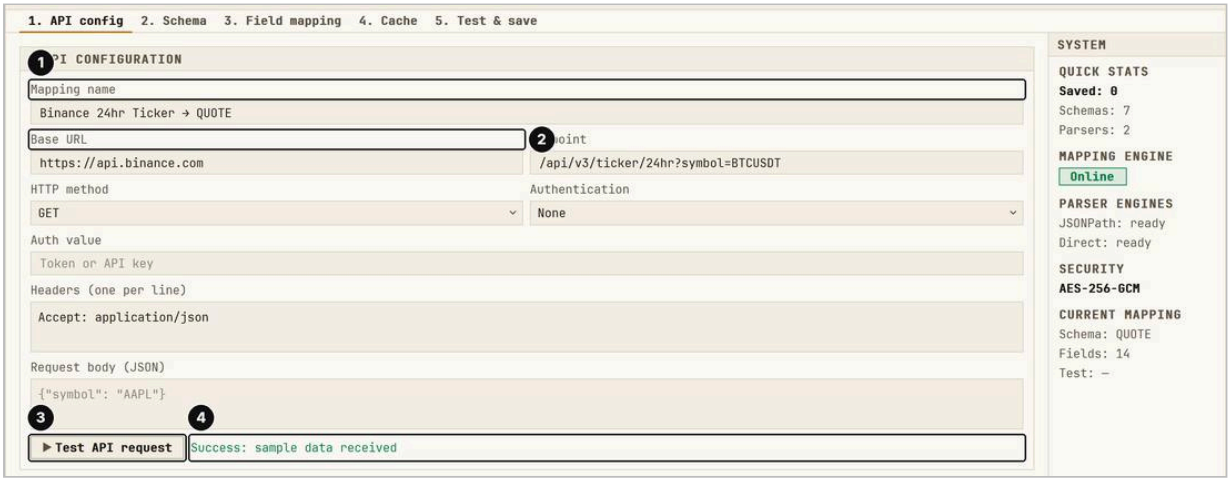


Figure 49.3 Step 1 after a successful test call.

1. **Mapping name** — required to save.
2. **Base URL** and **Endpoint** — joined exactly as typed.
3. **Test API request** — fetch a sample.
4. The result of the call.

5. Click **Next** three times to look at the schema, the field mapping and the cache, then **Next** once more to reach **5. Test & save**. Click **Run test**: it applies the mapping to the sample. Here it says **Test OK (1 row(s)), 1 validation warning(s)**: the output's validation list names the field that is missing (this template leaves **timestamp** empty).

6. To fix it, click **3. Field mapping**, type `$.closeTime` as the **timestamp** expression and `unix_ms_to_iso` as its transform (the API sends the time in milliseconds), then run the test again.

7. Click **Save mapping**. The mapping appears in **Mappings**.

Tip

After you pick another template, click **Test API request** again: the wizard keeps the previous sample (and the last test result) until you do. Not every template passes its test as shipped — see **§49.6 Reference** p. 916.

49.3 The five steps

The step bar under the header shows where you are: **1. API config**, **2. Schema**, **3. Field mapping**, **4. Cache**, **5. Test & save**. Click any step to jump to it, or use **Previous** and **Next** at the bottom (*Step 1 of 5: API config*). The steps before the one you are on turn green. The step bar and the footer show only in **Create**.

1. API configuration

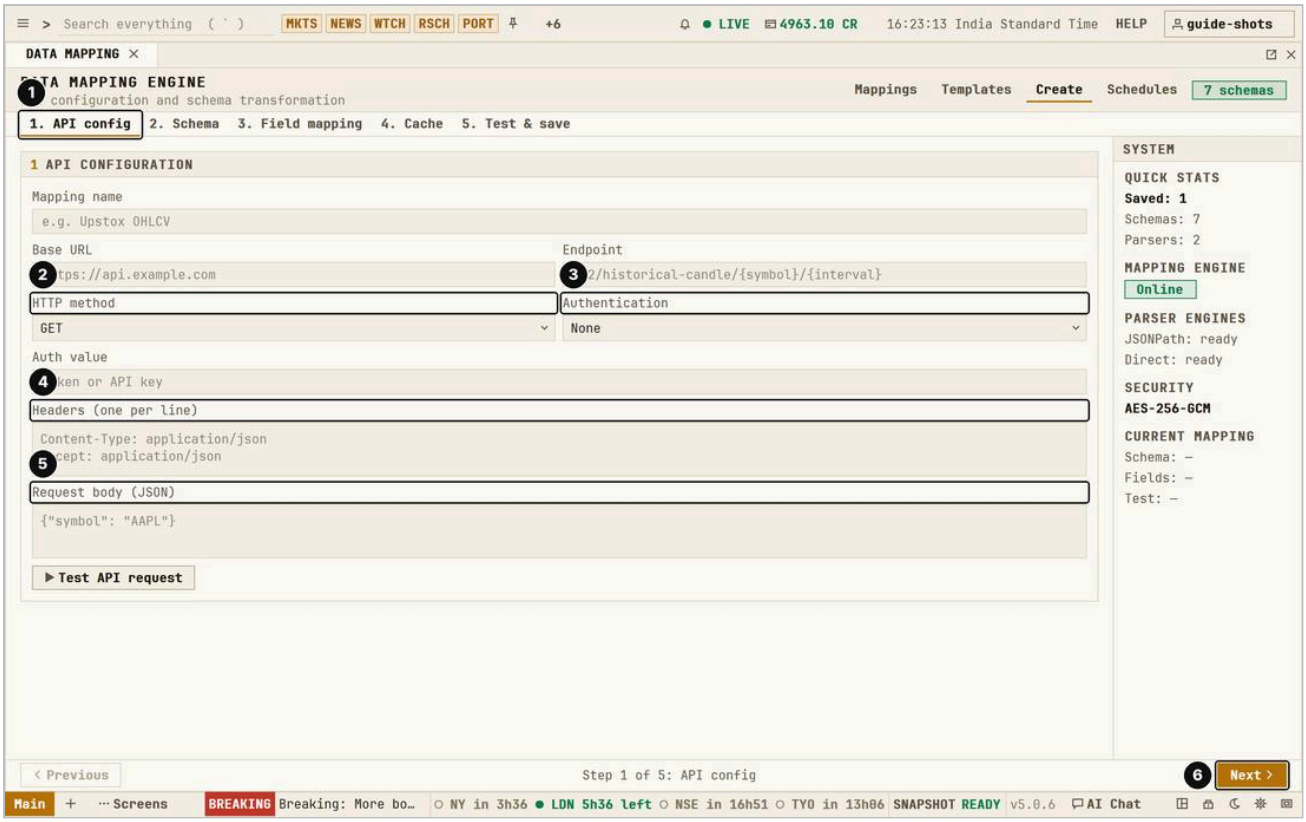


Figure 49.4 Step 1 of an empty mapping.

1. The step bar.
2. **HTTP method** — GET, POST, PUT, DELETE, PATCH.
3. **Authentication** — None, API Key, Bearer Token, Basic Auth; the secret goes in **Auth value**.
4. **Headers** — one `Name: value` per line.
5. **Request body** — a JSON object, for POST (see the table).
6. **Next** — the next step.

Field	What to enter	Default
Mapping name	A name, for example `BTC ticker`. Needed to save.	empty
Base URL	The API's address, for example `https://api.example.com`.	empty
Endpoint	The path and query, for example `/v2/historical-candle/AAPL/1d`. Write the real values: the placeholder's `{symbol}` and `{interval}` are not filled in for you.	empty
HTTP method	**GET**, **POST**, **PUT**, **DELETE**, **PATCH**. **Test API request** uses the method you pick (PATCH goes out as PUT); a saved mapping's **Run** sends POST as POST and every other method as GET.	**GET**
Authentication	**None**; **API Key** (sent as an `X-API-Key` header); **Bearer Token** (`Authorization: Bearer ...`); **Basic Auth** (`user:password`).	**None**
Auth value	The key, token or `user:password` (placeholder *Token or API key*). Masked; stored encrypted on this computer only.	empty
Headers (one per line)	Extra headers, for example `Accept: application/json`.	empty
Request body (JSON)	A JSON object (anything else is ignored). **Test API request** sends it with POST, PUT and PATCH; **Run** sends it only with POST.	empty

Test API request joins **Base URL** and **Endpoint** exactly as typed and calls the address once. (**Run** adds a `/` between them when neither has one.) The line beside the button says **Testing...**, then **Success: sample data received**, or **Failed:** with the reason — an HTTP code such as `HTTP_401` (key refused) or `HTTP_404`, or a parsing message when the answer is not JSON. With no address it says **Enter a URL first**. The answer is kept as the sample the next steps work on.

Note

An API that answers an error *in JSON* (for example a 404 with an `error` message) counts as **Success**: its error message becomes the sample. If the tree in step 3 shows an error instead of data, fix the address or key and test again.

Tip

Some APIs want the key inside the address (`...&apikey=YOUR_KEY`) or in a header of their own. Put it where the API's documentation says. The templates show where each one expects it: replace `YOUR_KEY` with your own.

2. Schema

Choose the shape the rows should have. **Schema type** offers one choice, **Predefined schema**; **Schema** picks one of the seven below. Under it, the schema's description and a table of its fields (**Field**, **Type**, **Required**, **Description**).



Figure 49.5 Step 2: the QUOTE schema and its fields.

1 **Schema** — pick the target shape. Its description and fields show below.

Schema	For	Fields (required ones in bold)
OHLCV	Candles: open, high, low, close, volume	**symbol**, **timestamp**, **open**, **high**, **low**, **close**, **volume**, vwap, trades
QUOTE	A live or delayed quote	**symbol**, **timestamp**, **price**, bid, ask, bidSize, askSize, volume, change, changePercent, open, high, low, previousClose
TICK	Individual trades	**symbol**, **timestamp**, **price**, **quantity**, side (BUY/SELL/UNKNOWN), tradeId
ORDER	Orders	**orderId**, **symbol**, **side**, **type** (MARKET/LIMIT/STOP/STOP_LIMIT), **quantity**, filledQuantity, price, averagePrice, **status** (PENDING/OPEN/FILLED/CANCELLED), **timestamp**, exchange

Schema	For	Fields (required ones in bold)
POSITION	Open positions	**symbol**, **quantity**, **averagePrice**, **currentPrice**, **marketValue**, **costBasis**, **pnl**, **pnlPercent**, exchange
PORTFOLIO	A portfolio summary	**totalValue**, **cash**, **invested**, **marketValue**, **pnl**, **pnlPercent**, dayPnl, **timestamp**
INSTRUMENT	Instrument master data	**symbol**, **name**, **exchange**, **instrumentType** (EQUITY/FUTURES/OPTIONS/CURRENCY), isin, lotSize, tickSize

When a mapping is tested or run, a row passes if the schema's key fields are there and not `null` (empty text counts as there): for OHLCV all seven bold fields; for QUOTE symbol, timestamp and price; for TICK symbol, timestamp, price and quantity; for ORDER orderId, symbol, side, type, quantity and status; for POSITION symbol, quantity and averagePrice; for PORTFOLIO totalValue and timestamp; for INSTRUMENT symbol, name and exchange. Each missing one is reported once as `Missing required field: ...`. Types and the allowed values (BUY/SELL...) are not checked.

3. Field mapping

Tell the terminal where each field is in the API's answer.

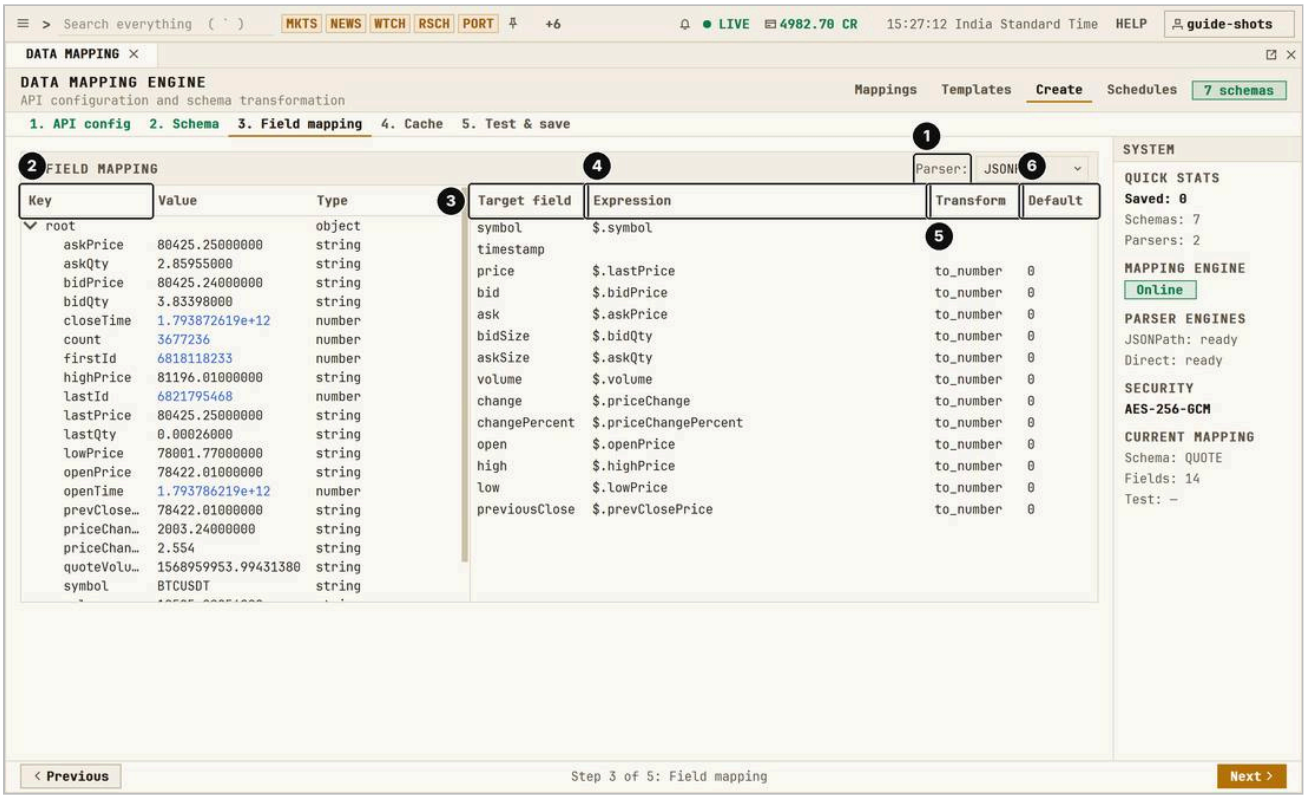


Figure 49.6 Step 3: the sample answer on the left, the mapping table on the right.

1. **Parser** — **JSONPath** or **Direct** (see below).
2. The sample answer as a tree: **Key**, **Value**, **Type**. Use it to find each field's path.
3. **Target field** — the schema's fields, one row each.
4. **Expression** — where the value is in the answer.
5. **Transform** — an optional conversion.
6. **Default** — the value to use when the answer has none.

Expressions (JSONPath parser). Start with `$` for the answer's top level:

Expression	Picks
`$.lastPrice`	The field `lastPrice` of the top-level object.

Expression	Picks
`$.data.price`	`price` inside `data`.
`$[0]`	The first element of a top-level list.
`$[*].close`	`close` of every element: one row per element.
`$[*][4]`	The fifth value of every inner list (APIs that send candles as lists).

A `[*]` makes the mapping produce one row per element of that list. The list is the one named by the first field (in table order) that has a `[*]`; every other `[*]` field is read from the same rows. A field without `[*]` (for example `$.meta.symbol`) is read once from the whole answer and repeated on every row. With no `[*]` at all, the mapping makes one row. If the list is missing or empty, it makes no row.

The parser understands only dots, plain key names, `[number]` and `[*]`. It cannot read quoted keys (`$['Time Series (5min)']`), keys that contain a dot or a `[`, `..`, `.*`, filters (`[?(...)]`), slices or negative indexes.

The **Direct** parser takes a dotted path without `$`: `data.price`; a number is a list position (`data.0.price`); a `*` means every element (`data.*.price`). An expression that starts with `$` is read as JSONPath whichever parser you pick.

To edit a cell of the mapping table, double-click it (or select it and start typing). The tree on the left is for reading only: it shows the sample from step 1, with at most 10 elements of each list, and does not fill an expression for you.

Transforms (type the name in the **Transform** cell):

Transform	Turns the value into
`to_number`	A number. Text that is not a number becomes 0.
`to_string`	Text. In this version a number turns into `{}`, so use it only on objects and text.
`unix_ms_to_iso`	A date and time (UTC, ISO format) from a time in milliseconds.
`unix_s_to_iso`	A date and time (UTC, ISO format) from a time in seconds.
`upper`, `lower`	Upper-case or lower-case text.
`abs_value`	The number without its sign.

Leave **Transform** empty to keep the value as it is. A name the terminal does not know (a typo, or `unix_to_iso`) also leaves the value unchanged, without a warning.

Default is used when the expression finds nothing. It is text: `0` stays the text `"0"` unless the row also has a transform such as `to_number`, which is applied to the default too.

> **Note**
>
> A row with an empty **Expression** is ignored, even if it has a **Default**. To give a field a fixed value (for example the symbol), write any expression that points at a missing key (such as `$.none`) and put the value in **Default**.

4. Cache



Figure 49.7 Step 4: response caching, and how credentials are stored.

Field	Choices	Default	What it does
Response caching	**Enabled**, **Disabled**	**Enabled**	Keep the last result for a while, so a repeated **Run** does not call the API again.
Cache TTL	0 to 86,400 sec	300 sec	How long the result is kept. 0 turns the cache off. The cache lives in memory and empties when the terminal restarts.

While the cache is fresh, **Run** shows the same result again — the same rows, or the same **Run failed** — without calling the API. A failed call is not cached. **Test API request** never uses the cache.

The **Encryption** box says *API credentials are encrypted with AES-256-GCM before storage. Sensitive data never stored in plaintext.* That is the **Auth value**: it is kept in this computer's encrypted store. Keys you type into **Headers** or into the address are kept with the mapping's settings instead (see **§49.7 For advanced users** p. 917).

5. Test and save

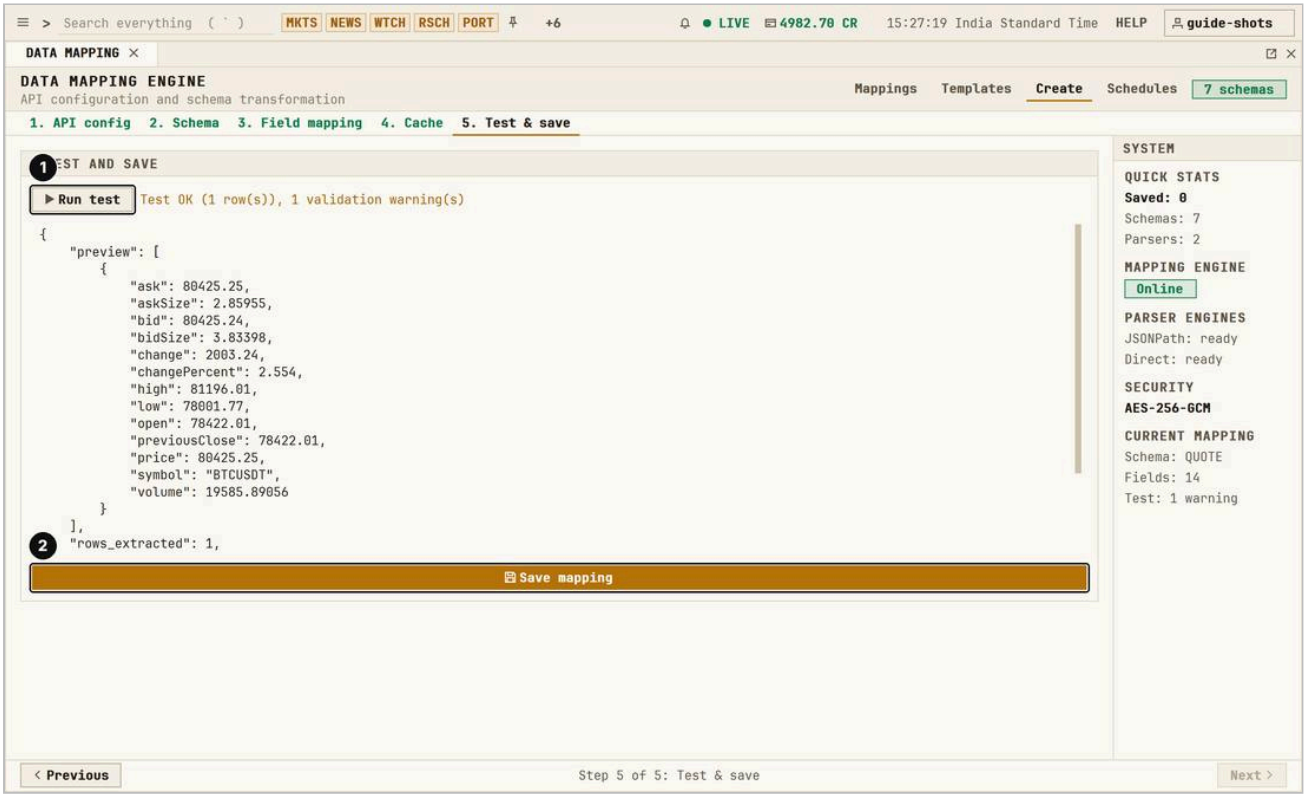


Figure 49.8 Step 5 after Run test: rows extracted, a preview of the first rows and the validation result.

1. **Run test** — apply the mapping to the sample (no new API call).
2. **Save mapping** — enabled once a test has run.

Run test applies your mapping to the sample from step 1 and shows the result as text: how many rows were extracted, the schema, the first three rows and **validation** — `ok`, or the list of problems such as `Missing required field: timestamp`. The line beside the button starts as **Not yet tested** and then says **Test passed: 1 row(s) extracted**, **Test OK (1 row(s)), 2 validation warning(s)**, **No sample data. Test the API first (step 1).** or **Test failed: no field mappings configured**.

Save mapping turns on after a **Run test** with at least one mapped field, even one with warnings: a mapping that fails validation can be saved, but every **Run** of it fails. It stores the mapping and returns to **Mappings**. It needs a name (**Enter a mapping name first**). Each save creates a new mapping: saving twice makes two.

49.4 Run a saved mapping

1. In **Mappings**, click the mapping.
2. Click **Run**. The button says **Running...** while the API is called.
3. When every row passes validation, a window **Run: ...** says *Extracted n row(s) for schema ...*; **Show Details...** lists the first five rows (*First 5 of n rows:* when there are more).

Run fails in two ways, both in a window titled **Run failed: ...** (the mapping's name):

- **The rows miss required fields.** The window lists them (`Missing required field: timestamp`). Rows were extracted, but a run with any validation problem counts as failed and its rows are not shown.
- **The call failed** (no answer, a refused key, an answer that is not JSON). The window only says *request failed*. To see why, rebuild the mapping from the same template or address and use **Test API request**, which shows the reason.

Remember that **Run** may differ from **Test API request**: it sends every method except POST as GET, sends a body only with POST, and adds a `/` between **Base URL** and **Endpoint** when neither has one.

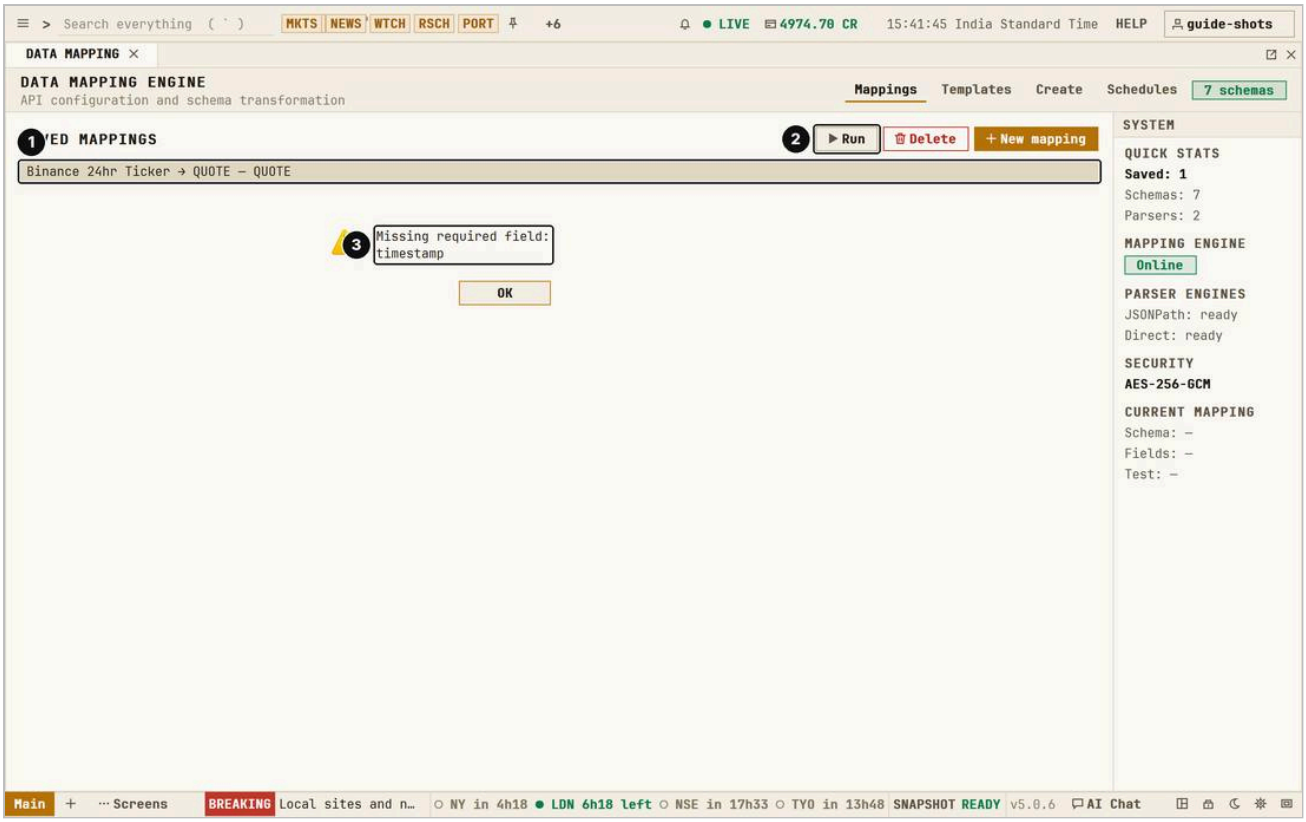


Figure 49.9 Running the template mapping saved without the step-6 fix: Run fails because timestamp is missing.

1. The selected mapping: its name, then its schema.
2. **Run** — call the API and extract rows.
3. Why the run failed. Map the field (step 3) in a new mapping, save it, and run that one.

To delete a mapping, select it and click **Delete**, then **Yes** in **Delete '...'? This cannot be undone.** Its stored credential is deleted too. A saved mapping cannot be opened for editing: build a new one (a template, or **New mapping**) and delete the old one.

49.5 Scheduled refreshes

Schedules is a separate tool: it pulls a set of data series on Fincept's servers on a schedule, so the data is already there when you open the terminal. Fetching a series by hand stays free; a schedule charges credits for each run, because Fincept does the work while your computer is off.

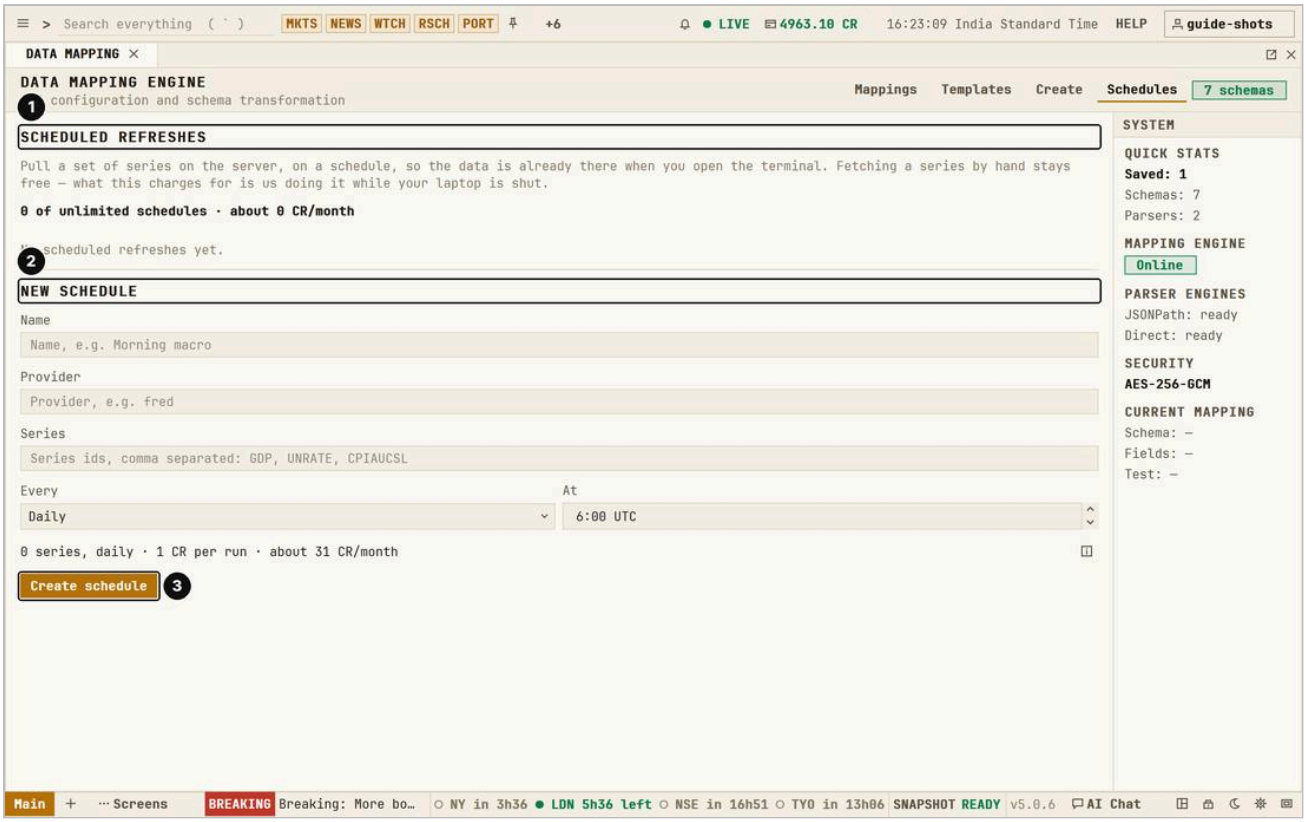


Figure 49.10 Schedules: your scheduled refreshes, and the form for a new one with its price.

1. **SCHEDULED REFRESHES** — how many you have, your plan's limit and the expected monthly cost.
2. **NEW SCHEDULE** — name, provider, series, how often, at what hour (UTC).
3. **Create schedule** — shows a lock if your plan does not include schedules.

Field	What to enter	Default
Name	A label, for example `Morning macro`. Optional: without one the list shows the provider.	empty
Provider	The data provider's id, as used in Global Data (**Chapter 32, Global Data** p. 648).	empty
Series	Series ids, separated by commas or spaces, at most 100 per schedule. `provider:id` takes one series from another provider.	empty
Every	**Daily**, **Weekly**, **Monthly**. There is nothing more frequent than daily.	**Daily**
At	The hour, 0 to 23, in UTC. Each schedule runs at a fixed minute within that hour.	6 (`6:00 UTC`)

Before you create it, the form shows the price, for example *0 series, daily · 1 CR per run · about 31 CR/month*, updated as you type series or change **Every** (*Each run costs …* until the server's price arrives). A run costs the same whatever the number of series (1 CR when this guide was written); the monthly figure counts 31 runs for daily, 5 for weekly and 1 for monthly. **Create schedule** with no provider or series says *Enter a provider and at least one series id first.*; a refusal from the server shows as *Failed: …* in the price line.

Each schedule in the list shows its name, then *provider · n series · cadence at h:00 UTC*, then *Last run: …*, *Paused by you.* or *Paused: not enough credits. It resumes automatically after a top-up.* — and **Pause** / **Resume** and **Delete** buttons (delete does not ask). The line above the list totals them: *n of limit schedules · about n CR/month*. Before you are signed in it says *Waiting for sign-in. Your schedules load as soon as your session is ready.*

Credits

Mappings are free: tests and runs call the API directly from your computer. Scheduled refreshes cost credits per run; the price is shown before you create one. Your plan sets how many schedules you can have: when this guide was written, none on Exclusive (**Create schedule** shows a lock), 10 on Exclusive+ and no limit on Exclusive Pro.

49.6 Reference

Templates

The 13 templates (**BROKER TEMPLATES**, *13 templates*) cover public crypto-price APIs (no key needed), market-data APIs (your own key), broker data APIs (your key or token) and a public macro-data API. Each is marked verified and uses GET with the JSONPath parser. Templates that need a key carry `YOUR_KEY` (and `YOUR_SECRET`) where it goes — in the address or in **Headers**; Tradier takes its token in **Auth value**.

Several templates do not pass **Run test** as shipped. The table says what each one maps and what to fix before you save it. "Default only" means the row has a **Default** but no expression, so it is dropped: give it an expression that finds nothing (such as `$.none`) and the default is used.

Template	Schema	Key	As shipped
CoinGecko Coin Price → QUOTE	QUOTE	No	Passes, but **symbol** reads the whole coin object (`$.bitcoin`) and **timestamp** stays a number of seconds (its transform `unix_to_iso` does not exist). Fix: symbol `$.none` with Default `bitcoin` ; timestamp transform `unix_s_to_iso` .
CoinGecko OHLC → OHLCV	OHLCV	No	Fails: **symbol** is Default only, and this answer has no **volume**.
Binance Klines → OHLCV	OHLCV	No	Fails: **symbol** is Default only.
Binance 24hr Ticker → QUOTE	QUOTE	No	Fails: **timestamp** is not mapped (the Quick start fixes it).
Kraken OHLC → OHLCV	OHLCV	No	Fails: **symbol** is Default only; **timestamp** stays seconds (`unix_to_iso` ; use `unix_s_to_iso`).
Alpha Vantage Intraday → OHLCV	OHLCV	In the address	Fails: its expressions use quoted keys the parser cannot read, so nothing is found.
Twelve Data Time Series → OHLCV	OHLCV	In the address	Maps every required field.
Finnhub Quote → QUOTE	QUOTE	In the address	Fails: **symbol** is Default only; **timestamp** stays seconds (`unix_to_iso` ; use `unix_s_to_iso`).
CoinMarketCap Latest → QUOTE	QUOTE	In a header	Maps every required field.
Alpaca Bars → OHLCV	OHLCV	In headers	Maps every required field.
Alpaca Positions → POSITION	POSITION	In headers	Maps every required field (paper-trading address).
Tradier Quote → QUOTE	QUOTE	Bearer token	Fails: **timestamp** is not mapped.

Template	Schema	Key	As shipped
DBnomics Series → OHLCV	OHLCV	No	Fails: maps only timestamp, close and symbol; OHLCV also needs open, high, low and volume.

"Maps every required field" means the mapping passes validation when the API answers as the template expects and your key is accepted.

Buttons and messages

Control	Where	What it does
Run	Mappings	Calls the API for the selected mapping and extracts rows. Needs a selection (*Select a mapping in the list first.*).
Delete	Mappings	Deletes the selected mapping after **Delete mapping** asks *Delete '...'? This cannot be undone.* (**Yes** / **No**).
New mapping	Mappings	Opens the wizard with empty fields: GET, no authentication, OHLCV, JSONPath, caching on, 300 sec, *Not yet tested*.
Use this template	Templates	Copies the template's name, address, method, authentication type, headers, body, schema, parser and field rows into the wizard. Your auth value, cache settings and the last sample are not touched.
Test API request	Step 1	Fetches the sample.
Run test	Step 5	Applies the mapping to the sample.
Save mapping	Step 5	Saves a new mapping. Errors: **Save failed: database error**.
Previous / Next	Footer	Move between steps (greyed out at the first and the last step).
Create schedule, Pause / Resume, Delete	Schedules	Manage scheduled refreshes. The buttons say *Creating…*, *Pausing…*, *Resuming…*, *Deleting…* while the server answers.

49.7 For advanced users

Where mappings live. Mappings are saved on this computer and copied to your account (**Settings** › **Cloud sync** › **Data mappings**). The **Auth value** stays in this computer's encrypted store. In the account's copy, header, address and body values whose names look like keys (`token` , `apikey` , `secret` ...) are blanked: on another computer, enter them again. On this computer they stay with the mapping as you typed them.

Plans. Your plan sets how many mappings your account keeps: when this guide was written, 3 on Exclusive, 20 on Exclusive+ and no limit on Exclusive Pro. Past the limit a new mapping is still saved on this computer, the terminal explains the limit, and the copy to your account waits until you raise the plan or delete another mapping.

What a run keeps. A run that calls the API stores its first extracted row, the raw answer and any validation problems on this computer. The rows are shown in the run window; other screens do not read them yet.

Mappings and Data Sources. A mapping calls the API directly; it does not use a Data Sources connection. To make an API available to workflows, add it as a **REST API** connection in **Chapter 48, Data Sources** p. 891.

Wizard state. When the terminal restores the screen (for example after a restart), it brings back the mapping name, base URL, endpoint, headers, body and the last test output — not the method, authentication, auth value, schema, field rows or cache settings. It reopens on **Mappings** or **Templates**; click **Create** to carry on, and test again.

With AI. The AI can work this screen the way you do (**Chapter 37, AI Chat** p. 719): pick a template, fill the wizard, test and save. It never types into **Auth value**; you type keys yourself.

49.8 Troubleshooting

Test API request says Failed

Check the address (base URL plus endpoint, joined exactly as typed — watch for a missing or double `/`), the method and the key. `HTTP_401` or `HTTP_403` means the key was refused. Paste the full address into a browser to see what the API returns.

Test API request says Success, but step 3 shows an error message

The API answered an error in JSON, and that answer became the sample. Fix the address or the key and click **Test API request** again.

Run test reports "Missing required field"

A required field of the schema has no value. Check its expression against the tree on the left of step 3, or give it a **Default** (with a non-empty expression). For a template, see the templates table in the Reference: several miss a field as shipped. The API's answer may also have changed.

A date shows as a long number

The API sends time as a number. Set the field's **Transform** to `unix_s_to_iso` (seconds, about 10 digits) or `unix_ms_to_iso` (milliseconds, about 13 digits).

Save mapping stays greyed out

Run **Run test** first, with at least one field mapped.

Run fails although Run test passed

Run calls the API again. The API may limit how often you call it, need a fresh key, or be unreachable now — then the window only says *request failed*. A mapping that uses PUT, DELETE or PATCH is run as GET, and its body is sent only with POST. Run also reports missing required fields as a failure.

PART VIII

Account, Settings & Help

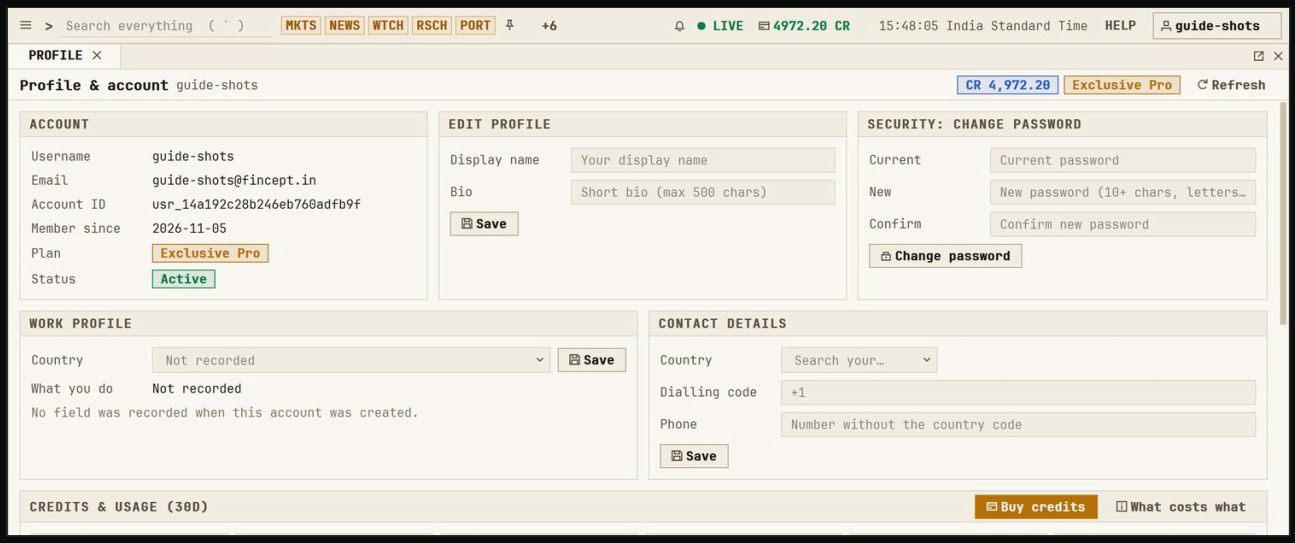
Your profile and plan, credits and billing, every setting the terminal has, and where to get help.

50	Profile, Plan & Billing	PROF
51	Settings	PREF
52	Help, Docs and Support	HELP

CHAPTER 50

Profile, Plan & Billing PROF

Your account on one page — name and work profile, password, credits and where they went, every credit movement, your plan and payments, and the computers that hold your seats. Buying a plan, a seat or credits happens in your browser; nothing is charged inside the terminal.



At a glance

Open it	• Type `PROF` in the command line and press **Enter** (`profile` and `account` work too) • Click your name at the right of the top bar, then **Profile** • Click the credits chip (**... CR**) in the top bar for what credits cost
You need	• Signed in
Best for	• Checking your credit balance and what spent it • Changing your password or your country • Moving your seat to a new computer • Buying credits or changing your plan
Time to learn	10 minutes
Related	**Chapter 3, Create your account** p. 38, **Chapter 51, Settings** p. 932, **Chapter 37, AI Chat** p. 719, **Chapter 1, Welcome to Fincept Terminal** p. 16

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50.1 Screen tour

Profile is one long page. Scroll down for credits, the credit ledger, your plan and payments, and your devices.

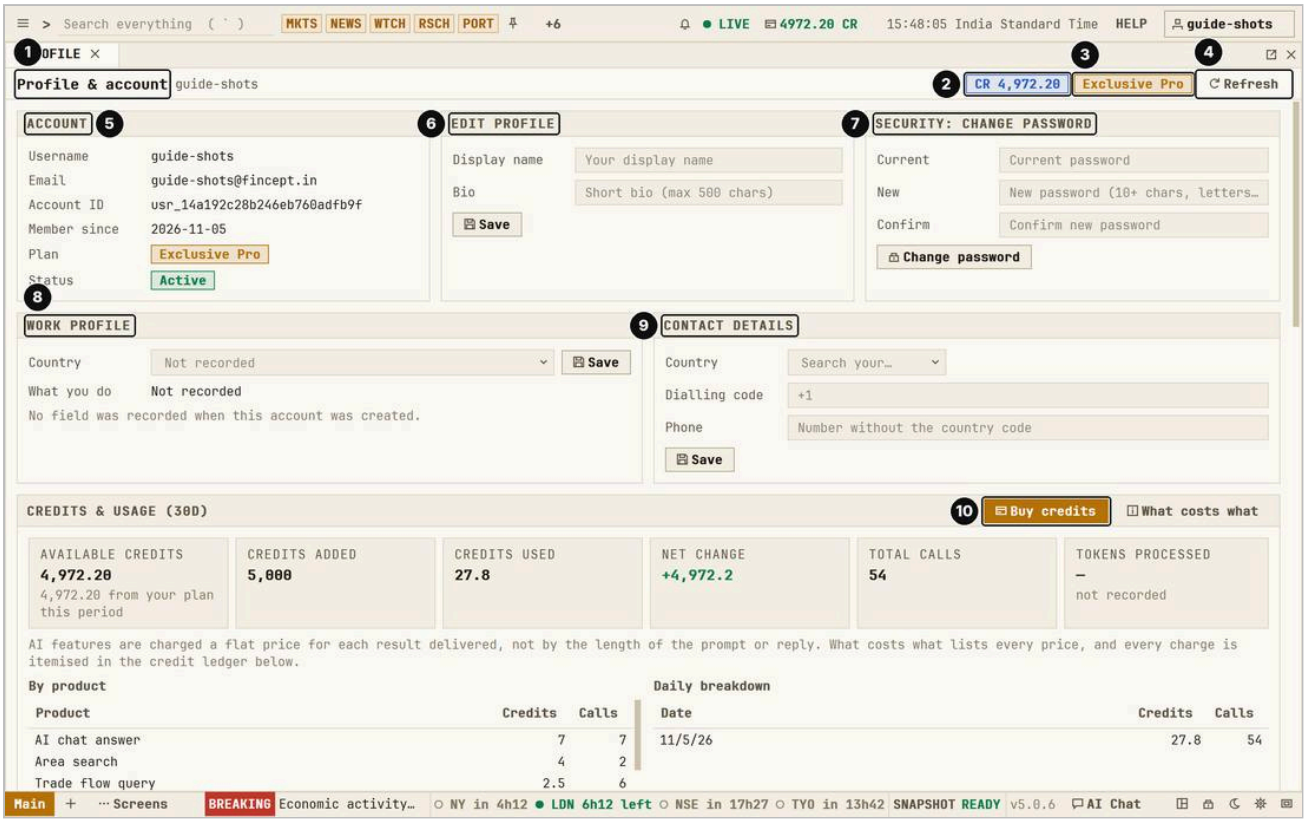


Figure 50.1 The top of the Profile page.

1. **Profile & account**, with your user name.
2. Your credit balance (**CR** = credits). The top bar's chip shows it too.
3. Your plan.
4. **Refresh** — read everything again.
5. **ACCOUNT** — user name, email, account ID, member since, plan and status.
6. **EDIT PROFILE** — display name and bio.
7. **SECURITY: CHANGE PASSWORD**.
8. **WORK PROFILE** — your country and what you do.
9. **CONTACT DETAILS** — country and phone.
10. **CREDITS & USAGE (30D)** starts here; scroll for the rest.

The page, top to bottom:

Panel	What it holds
ACCOUNT	**Username**, **Email**, **Account ID**, **Member since**, **Plan** and **Status** (**Active** or **Inactive**). Read only.
EDIT PROFILE	**Display name** and **Bio**.
SECURITY: CHANGE PASSWORD	Change your password.
WORK PROFILE	**Country** (your dashboard's markets follow it), **What you do** and, when your account has one, **Dashboard desk**.
CONTACT DETAILS	**Country**, **Dialling code**, **Phone**.
CREDITS & USAGE (30D)	Your balance and the last 30 days of credit use, by product, by day and by screen.
CREDIT LEDGER	Every credit movement, newest first.

Panel	What it holds
PLAN & BILLING	Your plan, when it expires, and your payments.
DEVICES & SEATS	The computers that hold your plan's seats.
Log out	Sign out of this computer, after "Are you sure you want to log out?".

50.2 Quick start

Check how many credits you have and what used them.

1. Type `PROF` in the command line and press `Enter`.
2. Look at the badge **CR ...** at the top right: that is your balance.
3. Scroll to **CREDITS & USAGE (30D)**. **AVAILABLE CREDITS** is your balance; **CREDITS USED** is what you spent in the last 30 days.



Figure 50.2 Credits & usage: your balance, what came in, what went out, and the split by product and day.

1. **Buy credits** — add credits (payment in your browser).
2. **What costs what** — the price of every paid feature.
3. **AVAILABLE CREDITS** — your balance, and how much of it came with your plan.
4. **By product** — credits and calls per paid feature.
5. **Daily breakdown** — credits and calls per day.

4. Scroll on to **CREDIT LEDGER**: every charge, with the date, what it was for, and your balance after it.

50.3 Credits

A **credit** (shown **CR**) is the unit paid features are priced in: AI answers, research reports, briefs, scheduled jobs. Most of the terminal costs nothing. Each plan comes with a number of credits for its period; you can buy more at any time.

Where your balance shows. The top bar's credits chip, the **CR** badge on this page, the **AVAILABLE CREDITS** tile and **Credit balance** in **PLAN & BILLING**. After each charge the top-bar chip briefly shows the amount, for example **-1 CR**. Its colour warns you: amber when you have a quarter or less of your plan's credits left, red at zero.

Credits & usage (30d)

Tile or table	What it shows
AVAILABLE CREDITS	Your balance now. The line under it says how much is from your plan and how much you bought (bought credits never expire).
CREDITS ADDED	Credits added in the last 30 days (your plan, purchases).
CREDITS USED	Credits spent in the last 30 days.
NET CHANGE	Added minus used.
TOTAL CALLS	How many charged actions you made.
TOKENS PROCESSED	Shown when recorded; otherwise *not recorded*.
By product	**Product**, **Credits**, **Calls**.
Daily breakdown	**Date**, **Credits**, **Calls**, newest first.
Where your credits went	**Tab**, **Credits**, **Calls**, **% of spend**: which screens spent credits.

AI features are charged a flat price per result delivered, not by the length of your question or the answer.



Figure 50.3 Where your credits went, and the credit ledger.

1. **Where your credits went** — spend by screen.
2. **CREDIT LEDGER** — every credit movement.
3. How many entries are shown; **Load older** fetches more.

Credit ledger

Every credit movement on your account, newest first, 50 at a time:

Column	What it shows
Date	Date and time, in your date format and time zone (Settings > General).

Column	What it shows
Description	What it was: an AI chat answer, a paper trade, a plan activation, a purchase...
Tokens	Shown when recorded.
Change	Plus for credits added (green), minus for credits spent (red).
Balance	Your balance after this entry, as recorded by Fincept's server.

Load older fetches the next 50 entries. The line under the table reads **Showing n of n entries**.

What costs what

Click **What costs what** (or the credits chip in the top bar) for the price list.

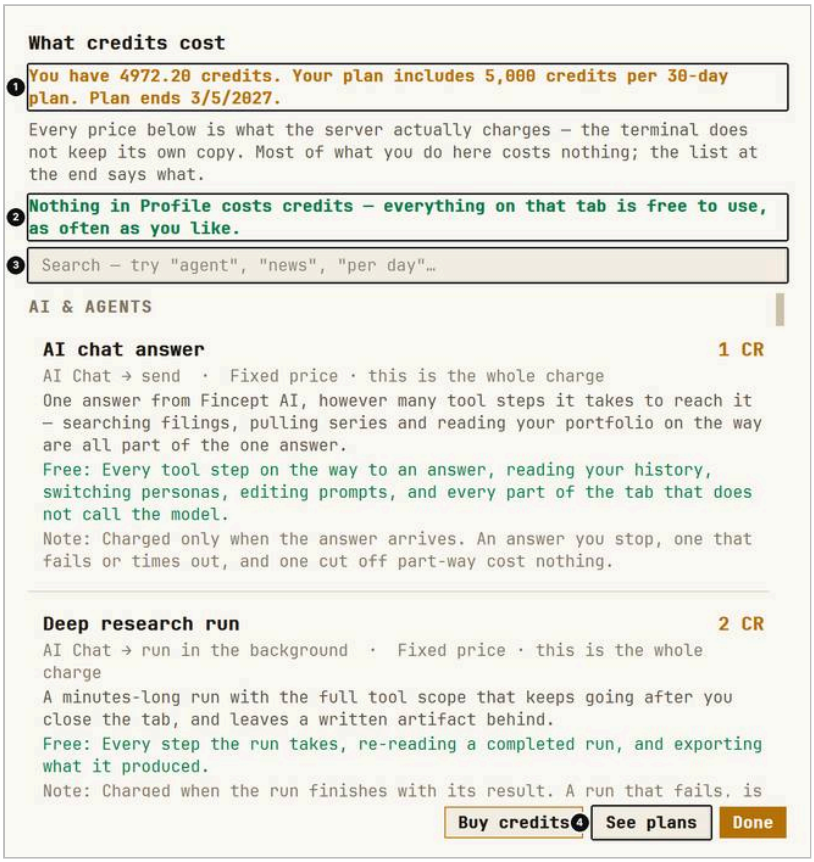


Figure 50.4 What credits cost. The list is the server's own price list.

1. Your balance, what your plan includes, and when it ends.
2. What the screen you came from costs (here: nothing).
3. Search the price list.
4. **Buy credits**, **See plans**, **Done**.

Each price shows its amount (**n CR**, **~n CR** for an estimate, or **n CR** per unit) and how it is billed:

Billing note	Meaning
Fixed price · this is the whole charge	You pay exactly that.
Estimate · ... CR to start, then what it actually uses	A starting charge, then the real use.
Estimate · billed from what it actually uses	Charged for what it really uses, with no starting charge.

Billing note	Meaning
Recurring · about ... CR a month if left on	A job that runs on its own (for example a scheduled refresh).
While open · rounded up to the minute, stops when you close it	Charged while something stays open.
Only past your plan's included allowance	Free until your plan's allowance runs out.

The list ends with **Free — always:** what is never metered.

50.4 Buy credits

1. Click **Buy credits** (in **CREDITS & USAGE**, or in **What costs what**). The **Buy credits** window opens.

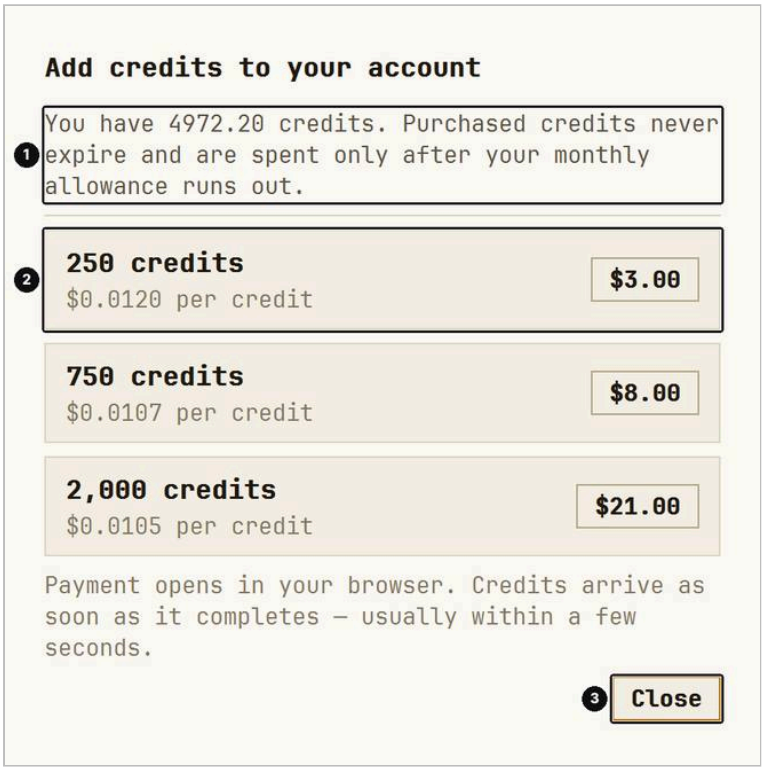


Figure 50.5 Buy credits. Each pack shows its size, its price per credit and its price.

1. Your balance. Bought credits never expire and are spent only after your plan's credits run out.
2. A pack: how many credits, the price per credit, and its price button.
3. **Close** — leave without buying.

2. Click the price button of the pack you want. The button says **Opening...** and your browser opens the payment page.

3. Pay in the browser. The window says *Complete the payment in your browser. Your balance updates automatically once it clears.* Credits usually arrive within a few seconds.

Packs and prices come from Fincept's server and are in US dollars. They do not follow Settings > Currency. There is no custom amount: pick a pack.

50.5 Plans and pricing

Your plan sets how much of each screen you get (portfolios, watchlists, price history, broker accounts, seats) and how many credits come with it. Every screen is on every plan except Crypto Trading, which starts at Exclusive+ (**§1.4 Plans at a glance** p. 23).

Open it with **Manage / upgrade plan** (in **PLAN & BILLING**, or Settings > General), **Add a seat**, **See plans**, or **Plan: …** in the top bar's account menu. **Plans & pricing** fills the window.

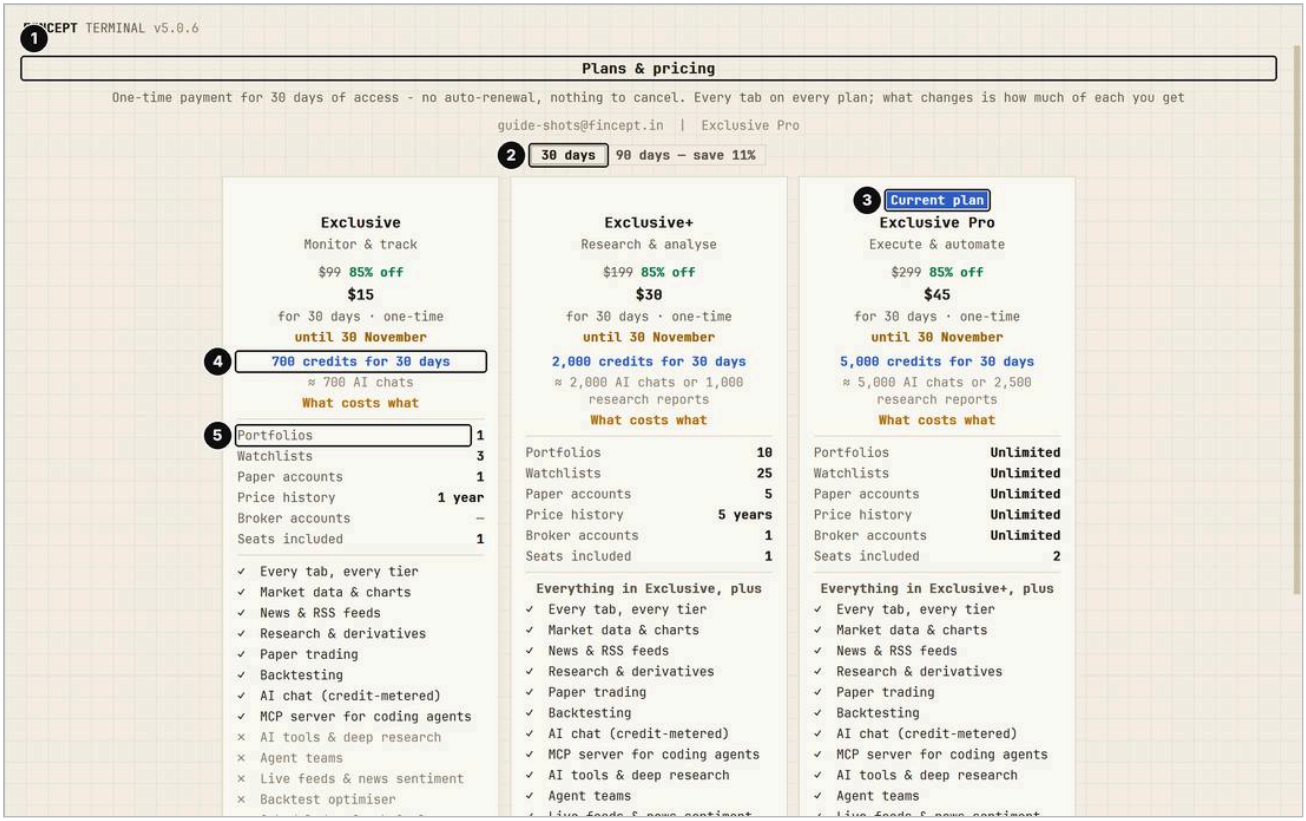


Figure 50.6 Plans & pricing. Prices and offers change; your screen shows today's.

1. One payment for 30 days (or 90): no automatic renewal, nothing to cancel.
2. **30 days** or **90 days** (with its saving).
3. **Current plan** marks yours.
4. The credits included, and roughly what they buy.
5. Headline limits: portfolios, watchlists, paper accounts, price history, broker accounts, seats.

Each plan card shows, top to bottom: **Current plan** on your own plan's card (or **Recommended** on the plan Fincept suggests); its name and tagline; the price (when there is an offer, the standard price is struck through, the discount is shown in green and the last day of the offer under it); **for 30 days · one-time** (or **for 90 days · one-time**, with its saving and the price per 30 days); the credits included and roughly how many AI chats (or research reports) they buy; **What costs what**; the headline limits; the features, ticked (√) or not (✗); the seats; and a button.

Button	Means
Choose plan	You have no plan yet.
Upgrade / Downgrade	Move to this plan.
Add seat	On your current plan: one more computer at the same price, billed separately.

Clicking any of them opens the payment page in your browser (**Opening browser...**). The screen then waits for the payment: *Complete your payment in the browser. This screen unlocks automatically when it goes through — you don't need to sign in again.* It keeps checking for 15 minutes. **Back to dashboard** returns to the terminal without buying.

> **Prices**
>
> Plan prices, offers and credit packs are set by Fincept and shown in US dollars. They can change from month to month, so this guide does not list them: the Plans & pricing screen always shows the current ones. A plan is paid once for its period (30 or 90 days) and does not renew by itself.

50.6 Plan & billing

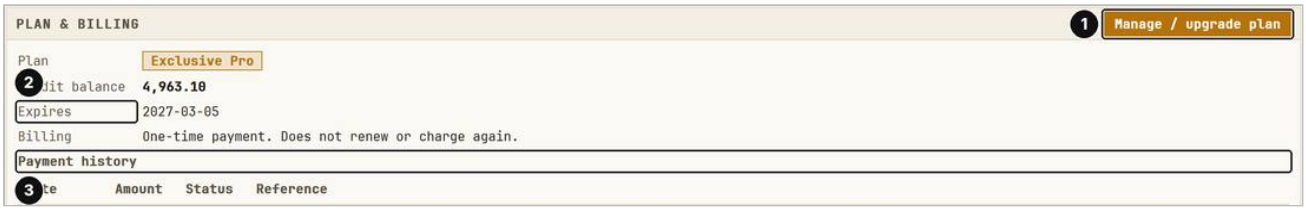


Figure 50.7 Plan & billing, with the columns of the payment history.

1. **Manage / upgrade plan** — open Plans & pricing.
2. **Expires** — the day your plan ends.
3. **Payment history** — your payments.

Row	What it shows
Plan	Your plan.
Credit balance	Your balance.
Expires	The date your plan ends (*YYYY-MM-DD*). Buy again before it to keep access.
Billing	*One-time payment. Does not renew or charge again.*
Payment history	Your 20 most recent payments: **Date**, **Amount** (in the currency charged), **Status** and **Reference** (the payment's reference). *No payments on this account yet.* when empty.

There are no invoices to download in the terminal.

50.7 Devices and seats

A **seat** lets one computer use your account. Your plan includes a number of seats (the line under the title says how many). The table lists the computers that hold one:

Column	What it shows
Device	The computer's name. *(this machine)* marks the one you are on.
Activated	When it took the seat.
Last seen	When it was last used.

Seats in use reads, for example, **1 of 2**.



Figure 50.8 The top of Devices & seats: your seats and the table's columns. Below the table: Release selected device and Add a seat.

1. How many seats your plan includes.
2. One row per computer holding a seat: **Device**, **Activated**, **Last seen**.

Move your seat to another computer

1. On any computer signed in to your account, open Profile and scroll to **DEVICES & SEATS**.
2. Click the computer you no longer use, then **Release selected device**.
3. Click **Yes** in the **Release device** box. For another computer it says: *That machine will need to re-activate before it can be used again. The freed seat becomes available immediately.* For this one: *This is the machine you're using right now. You'll need to re-activate it to keep using Fincept here.*
4. The page says **Device released, seat freed.** Sign in on the new computer.

If every seat is taken when you sign in somewhere new, the terminal shows **All seats in use** with the same device list and **Release selected device**, **Retry** and **Sign out** (**§3.8 Seats and devices** p. 51). **Add a seat** opens Plans & pricing, where your plan's card offers **Add seat**.

50.8 Edit your profile

Panel	Fields	Rules
EDIT PROFILE	**Display name** (up to 80 characters), **Bio** (*Short bio (max 500 chars)*)	Click **Save**; it says **Saved**.
WORK PROFILE	**Country**	Type to search (*Search your country*), pick from the list, click **Save**. Your dashboard's markets — the ticker, index and currency boards, the calendar — follow your country. Your own dashboard edits stay.
	What you do	Your field and role from sign-up, for example *M&A Advisory - Vice President*. Read only. *Not recorded* (with "No field was recorded when this account was created.") on an account made without one.
	Dashboard desk	The name of the desk your first dashboard was built from. Shown only when your account has one. Read only.
CONTACT DETAILS	**Country**, **Dialling code** (up to 5 characters), **Phone** (up to 20)	Picking a country fills the dialling code (unless you typed your own). Type the number without the country code. Click **Save**. Both the code and the number are needed ("Enter the dialling code and the phone number").

The country lists hold every country (about 250). A name that is not in the list is refused: **Choose your country from the list**. Both **Country** fields set the same account country.

Change your password

1. In **SECURITY: CHANGE PASSWORD**, type your **Current** password, a **New** one and **Confirm** it.
2. Click **Change password**.
3. The panel says *Password changed. Your other devices have been signed out.* This computer stays signed in.

A new password needs at least 10 characters and must mix letters with numbers or symbols. The messages are **Fill in all fields**, **New password must be at least 10 characters**, **New password must mix letters with numbers or symbols** and **Passwords do not match**.

Your account menu

Click your name at the right of the top bar:



Figure 50.9 The account menu.

Item	What it does
Your email	Who is signed in (greyed out).
Plan: …	Opens Plans & pricing.
Profile	Opens this page.
What credits cost	The price list.
Settings	Opens Settings (**Chapter 51, Settings** p. 932).
Theme	**Light** or **Dark**.
Lock terminal	Locks the terminal now.
Sign out	Signs out of this computer at once.

50.9 Reference

Locked features

Every screen opens on every plan except Crypto Trading, which opens on a card ("Requires Exclusive+", **Upgrade plan**) on the Exclusive plan. When something needs a bigger plan or more credits, its button keeps its name but shows a padlock; hover it to see why (*This is part of the … plan.*, *This costs n credits and you have n.*, *Your plan has expired - buy … again to …*). Clicking it opens a window titled **Not on your plan**, **Plan expired**, **Safety limit** (or **Daily safety limit** / **Hourly safety limit**) or **Temporarily unavailable**, with **What costs what**, **Buy credits** or **See plans** (**Buy a new plan** when your plan has expired) as fits, and **Not now** or **Close**.

Where profile changes go

Change	Saved	Effect
Display name, bio	Your account	Shown in these boxes.
Work profile country	Your account	Your dashboard's market boards follow it.
Contact details	Your account	Your phone, with its dialling code.
Password	Your account	Other computers are signed out.

Page behaviour

- Opening Profile costs nothing.
- Coming back within a minute shows what is loaded; **Refresh** reads everything again.
- Figures update by themselves when your balance changes; the tables re-read a few seconds later.
- Signed out, the page says *Sign in to see your profile*.

50.10 For advanced users

Reading the ledger. Each charge is one line with its own description, and **Balance** is the balance recorded at that moment, so you can reconcile your use exactly. A plan purchase appears as *Plan activation*, with its credits as a plus.

Plan credits and bought credits. Your plan's credits are spent first. Bought credits are used only after them and never expire.

Seats are per computer. A seat belongs to a computer until it is released; signing out does not release it. A computer released from another one is signed out (*This machine was released from your account on another device.*).

Sessions. To end every session at once (a lost laptop, a shared password), use **Settings › Security › Sign out everywhere**.

Do it with AI

In AI Chat (**Chapter 37, AI Chat** p. 719) try:

- "How many credits did I use this week, and on what?"
- "What does a research report cost in credits?"
- "When does my plan expire?"

50.11 Troubleshooting

I paid but my credits or plan did not change

Wait a few seconds, then click **Refresh**. On Plans & pricing, **Already paid? Refresh status** checks again (it is shown when you have no plan yet). If it still has not arrived, contact support with the payment's reference (**Chapter 52, Help, Docs and Support** p. 967).

"All seats in use" on a new computer

Release an old computer in **DEVICES & SEATS** (from any computer signed in to your account), or add a seat. Then click **Retry**.

A button shows a padlock

That feature needs a bigger plan, or more credits than you have. Hover it to see which, and click it for the options.

The dialling code changed when I picked a country

Picking a country fills its code unless you typed a code yourself. Type your code again if it is wrong.

CHAPTER 51

Settings PREF

Every preference the terminal has, on fourteen pages — language, dates and time zone, currency, theme and text size, alerts, keyboard shortcuts, logs and privacy, the PIN lock, your own data connections, Python, local storage and cloud sync.

At a glance

Open it	• Type `PREF` in the command line and press **Enter** (`settings` , `prefs` , `preferences` and `config` work too) • Click the gear (**Settings**) at the right end of the bottom bar • Click your name at the right of the top bar, then **Settings** • Type the name of a page in the command line — for example `keyboard shortcuts` or `notification settings` — to open that page directly
You need	• Nothing to unlock: every page works on every plan • Signed in for the pages that talk to your account (Cloud sync, Usage analytics, Sign out everywhere)
Best for	• Setting your language, date format, time zone and home currency • Getting alerts on your phone (Telegram, email, Slack and more) • Changing a keyboard shortcut • Checking what is stored on this computer and what follows you
Time to learn	30 minutes to read; a few seconds per change
Related	**Chapter 50, Profile, Plan & Billing** p. 920, **Chapter 42, Use Your Own AI** p. 819, **Chapter 48, Data Sources** p. 891, **Chapter 53, Keyboard Shortcuts** p. 983, **Chapter 5, The Terminal Window** p. 70, **Chapter 3, Create your account** p. 38

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51.3	General	**935**	51.12	Python	**954**
51.4	Currency	**937**	51.13	Storage & cache	**955**
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51.1 Screen tour

Settings is one screen with a list of pages on the left and the open page on the right. The list has two groups. **SHELL** holds how the terminal looks and behaves. **PROFILE** holds your security, your data, local storage, cloud sync and the AI engines.

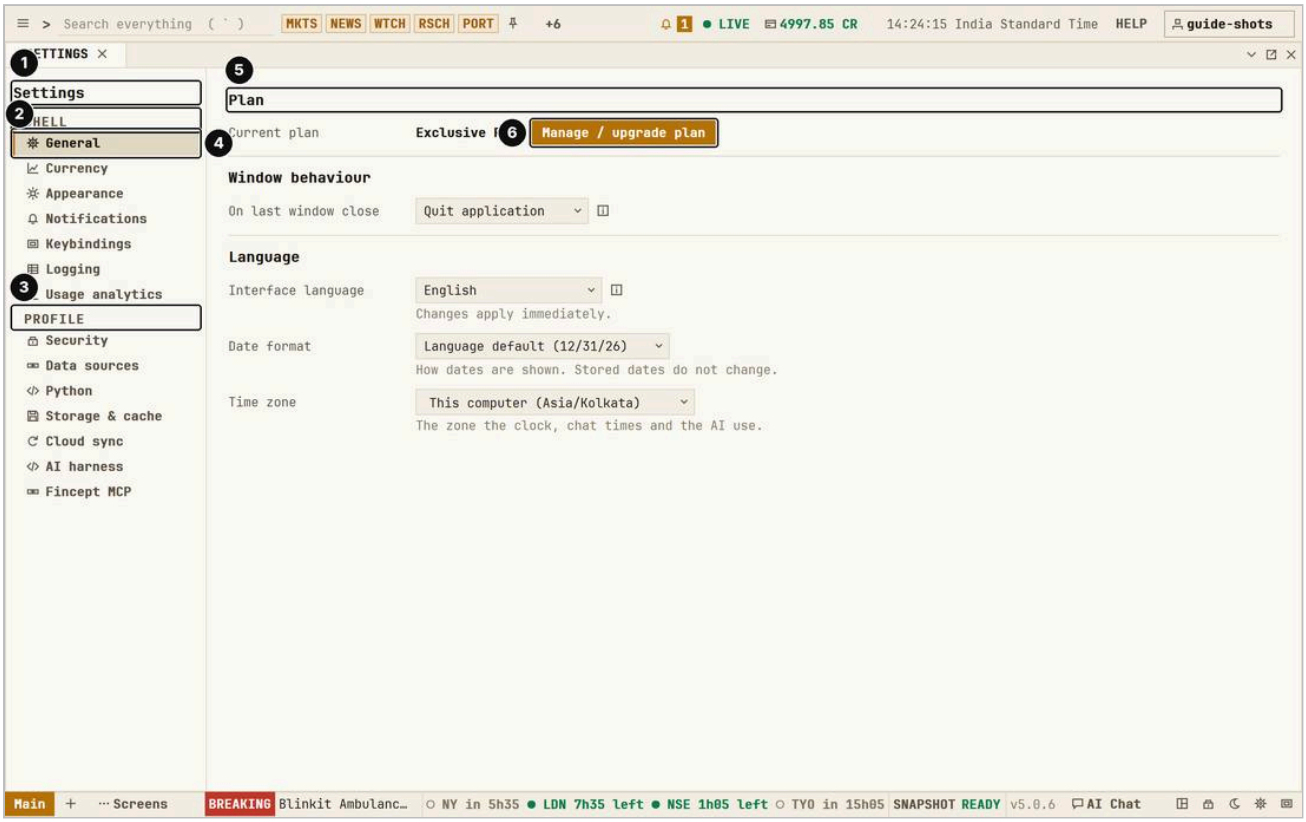


Figure 51.1 Settings, open on its first page, General.

1. The screen title. The list under it is every page of Settings.
2. **SHELL** — look and behaviour: General, Currency, Appearance, Notifications, Keybindings, Logging, Usage analytics.
3. **PROFILE** — Security, Data sources, Python, Storage & cache, Cloud sync, AI harness, Fincept MCP.
4. The page that is open is highlighted. Click any name to open its page.
5. The open page. Each page is split into groups with a bold heading.
6. Buttons act at once. There is no **Save** button for the page as a whole.

Three things are true on almost every page:

- **Changes apply at once.** Pick a value and it is in force; there is no **Save** or **Apply** for the page. The exceptions say so on the page: **Logging** (**Apply & save**), **Usage analytics** (**Save**) and the **Auto-lock** group of **Security** (**Save security settings**).
- **Most settings follow your account.** While cloud sync is on (it is, unless you turn it off), your General, Currency, Appearance, Notifications and Keybindings choices are saved to your account and appear on every computer you sign in on. A few settings belong to one computer only; the tables below mark them **This computer**.
- **The terminal remembers the page you were on.** Settings opens on **General** the first time and on the last page you looked at after that.

The pages at a glance

Page	Group	What it is for	Saved
General	SHELL	Your plan, what closing the last window does, language, date format, time zone	Account
Currency	SHELL	Your home currency, how money is written, converted values, each market's currency	Account
Appearance	SHELL	Light or dark theme, text size, density, chat bubble, animations, GPU or CPU drawing	Account (drawing: this computer)
Notifications	SHELL	Where alerts go (15 services) and which alerts fire	Account
Keybindings	SHELL	Every keyboard shortcut, and changing them	Account
Logging	SHELL	How much the terminal writes to its log, and sending logs to Fincept	This computer
Usage analytics	SHELL	Whether, and in how much detail, usage is recorded	This computer
Security	PROFILE	PIN status, auto-lock, sign out everywhere, the security audit log	Account
Data sources	PROFILE	Your own databases and APIs: a summary, provider keys, bulk actions	Account (keys: this computer)
Python	PROFILE	Which Python on this computer runs notebooks and Code nodes	This computer
Storage & cache	PROFILE	What this computer stores, and clearing it	This computer
Cloud sync	PROFILE	What is kept in your account, sync status, sync now	This computer
AI harness	PROFILE	Which AI engine answers: Fincept AI or your own	See **Chapter 42, Use Your Own AI** p. 819
Fincept MCP	PROFILE	Fincept's tools inside your own AI coding agent	See **Chapter 42, Use Your Own AI** p. 819

51.2 Quick start

Open Settings and set the three things most people change on day one: date format, time zone and home currency.

1. Type `PREF` in the command line at the top and press `Enter`. Settings opens on **General**.

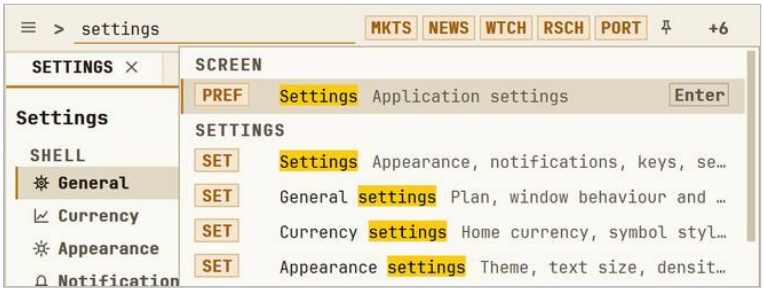


Figure 51.2 Typing settings in the command line lists Settings and its pages; press Enter or click a row.

2. Under **Language**, open **Date format** and pick the style you read best, for example `31/12/2026`. Dates across the terminal change at once.

3. Open **Time zone**. The first choice, **This computer (...)**, follows your computer's clock. To use another zone, type part of its name — `london`, `new_york`, `kolk` — and pick it from the list.

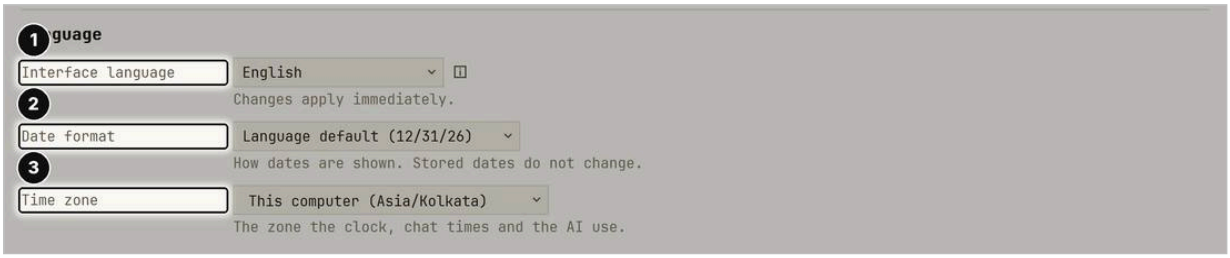


Figure 51.3 Language, date format and time zone are on General.

1. **Interface language** — the language of the whole terminal. Changes apply immediately.
2. **Date format** — how dates are written. Stored dates do not change.
3. **Time zone** — the zone the top-bar clock, chat times and the AI use.

4. Click **Currency** in the list. Under **Home currency**, open **Your currency** and pick yours, for example `INR – Indian Rupee (₹)`. Totals and converted values now use it.

5. That is all: there is nothing to save. The same choices appear on your other computers the next time you sign in there.

Tip

Every value on these pages can be changed back the same way. Where a page has a reset button (**Reset to default**, **Use default**, **Reset all markets**, **Reset all to defaults**), it is described with that page.

51.3 General

Plan, **Window behaviour** and **Language**: the basics of the terminal.

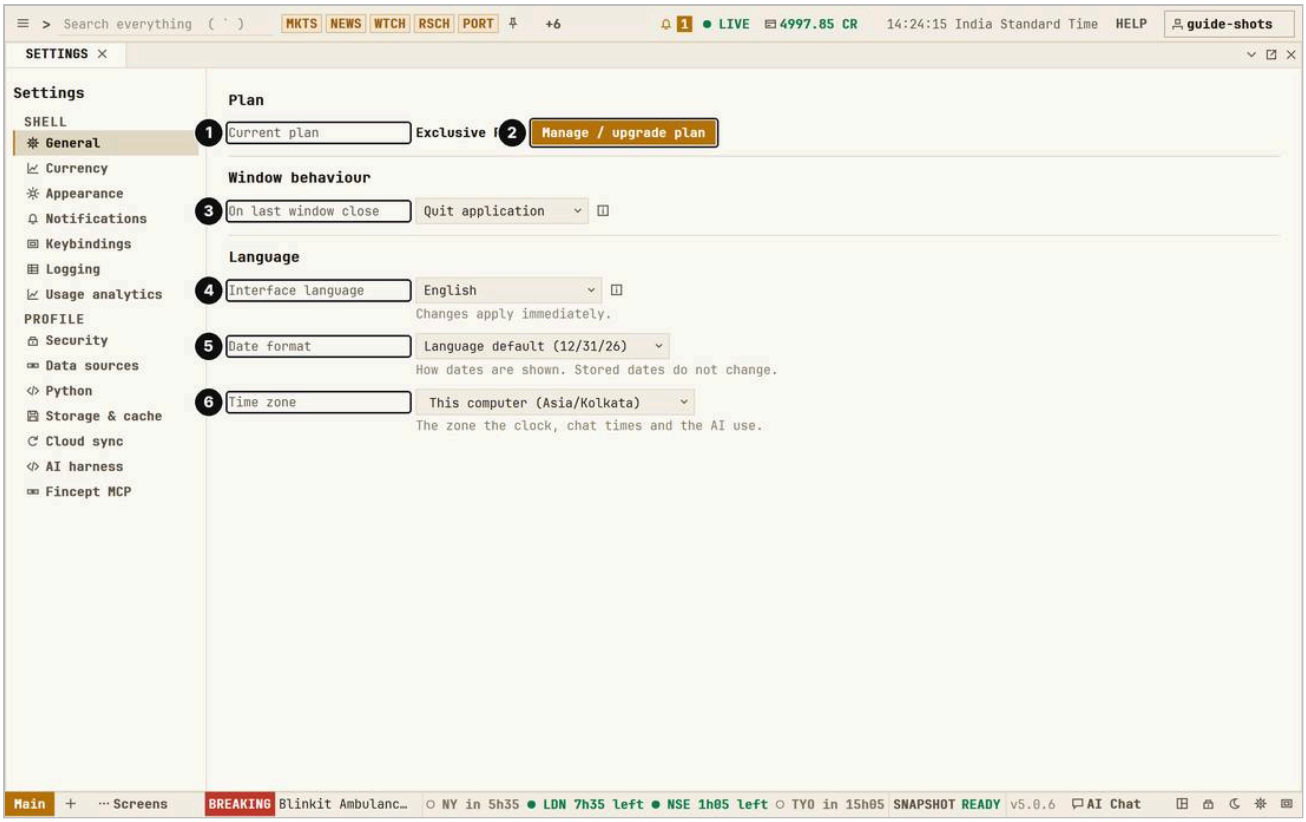


Figure 51.4 The General page.

1. **Current plan** — your plan's name.
2. **Manage / upgrade plan** opens **Plans & pricing** (see **Chapter 50, Profile, Plan & Billing** p. 920).
3. **On last window close** — quit, or keep a small Launchpad window open.
4. **Interface language** — twelve languages.
5. **Date format** — five styles.
6. **Time zone** — this computer's, or any zone you pick.

Option	Choices	Default	What it does
Current plan	— (read only)	Your plan	Shows **Exclusive**, **Exclusive+**, **Exclusive Pro** or **No plan**. **Manage / upgrade plan** opens Plans & pricing.
On last window close	**Quit application**, **Show Launchpad**	**Quit application**	What closing your last terminal window does. **Show Launchpad** keeps a small portal window open so the terminal is one click away.
Interface language	English, 简体中文, 繁體中文 (香港), 繁體中文 (台灣), Bahasa Indonesia, Tiếng Việt, Türkçe, Deutsch, Português (Brasil), Español, Français, Italiano	Your computer's language if it is in the list, otherwise English	The language of every menu, button and message. Applies immediately. Each language is shown in its own spelling.
Date format	**Language default (...)**, `31.12.2026`, `31/12/2026`, `2026-12-31`, `12/31/2026`	**Language default** (for English: `12/31/26`)	How dates are displayed everywhere. Stored dates do not change.
Time zone	**This computer (...)**, then every time zone your computer knows (about 600)	**This computer**	The zone the top-bar clock, chat times and the AI use. Type part of a name to find it. Display only: stored times do not change. Other screens do not follow it: the File Manager and Economic Calendar use your computer's zone, and a note's saved time is shown in UTC.

Note

If you have scheduled AI tasks (see **Chapter 42, Use Your Own AI** p. 819), closing the last window does not quit the terminal, whatever **On last window close** says. A message explains that Fincept keeps running for your scheduled tasks; quit from the tray or menu-bar icon.

51.4 Currency

Your home currency, how money is written, and which currency each market's prices are in. Prices always keep their own currency (an Indian stock in rupees, a US stock in dollars); this page decides the currency of totals, and how every figure is written.

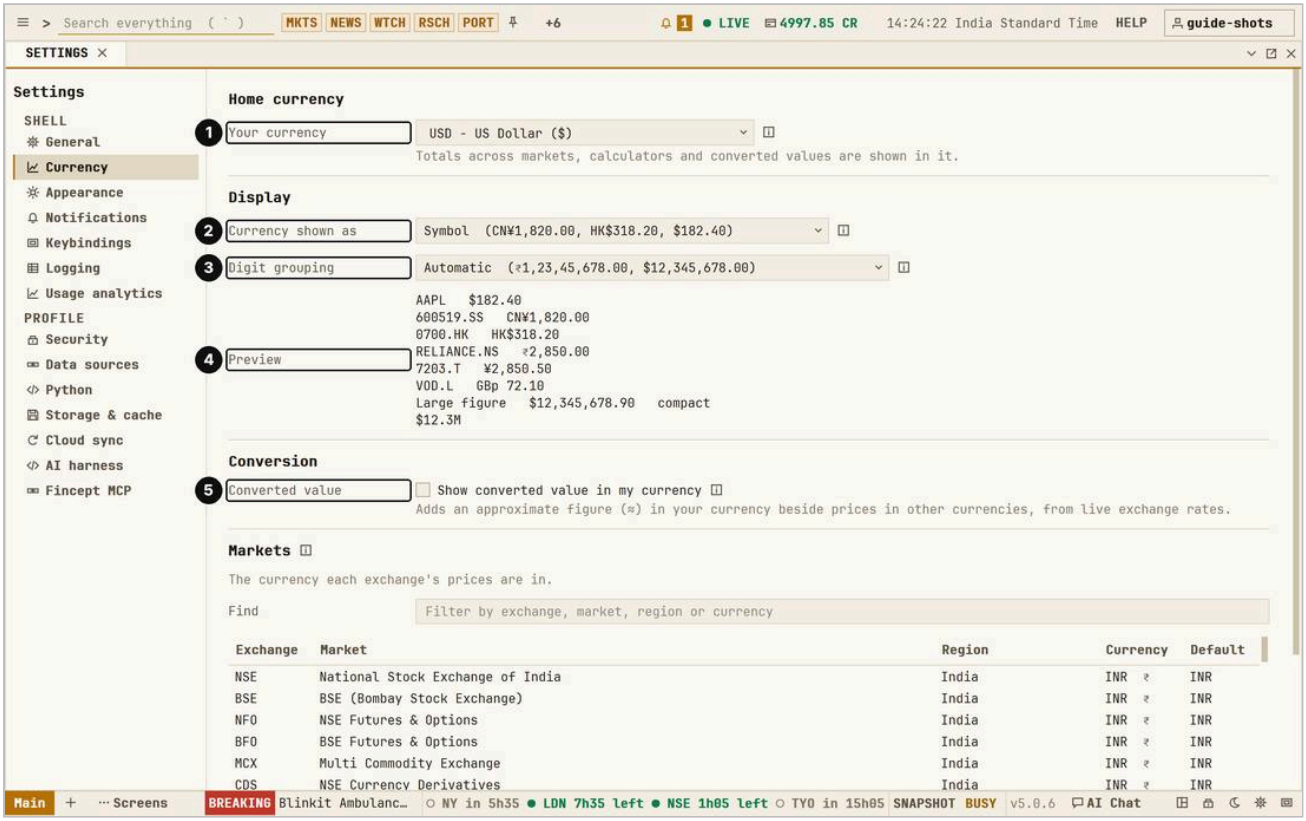


Figure 51.5 The Currency page, top part.

1. **Your currency** — your home currency, for totals and converted values.
2. **Currency shown as** — symbol, ISO code or the local glyph.
3. **Digit grouping** — thousands, or lakh and crore.
4. **Preview** — sample prices written with your current choices.
5. **Converted value** — add an approximate figure in your currency beside foreign prices.

Option	Choices	Default	What it does
Your currency	155 currencies, as `CODE – Name (symbol)` (for example `INR – Indian Rupee (₹)`, `CHF – Swiss Franc`). Type to search.	`USD – US Dollar ($)`	The unit for totals across markets, calculators and converted values. A market price always keeps its own currency.
Currency shown as	**Symbol**, **ISO code**, **Local glyph** (each shows examples)	**Symbol**	**Symbol** tells every currency apart (CN¥ is yuan, ¥ is yen). **ISO code** writes `USD 182.40`. **Local glyph** is shorter but shared: $ is also the Hong Kong and Canadian dollar.

Option	Choices	Default	What it does
Digit grouping	**Automatic**, **Western**, **Indian (lakh, crore)**	**Automatic**	**Automatic** writes rupee, Pakistani rupee, Nepalese rupee and taka figures in lakh and crore (₹1,23,45,678.00) and everything else in thousands.
Preview	—	—	Six sample prices (a US, a Shanghai, a Hong Kong, an Indian, a Tokyo and a London listing) and one large figure in full and in short form (`$12.3M`), written with your current choices.
Converted value — ***Show converted value in my currency***	on / off	off	Adds `(≈ amount)` in your currency beside prices in other currencies, from live exchange rates. For orientation only: orders, P&L and balances are never converted.

Markets: the currency of each exchange

Scroll down to **Markets**. The table lists 89 exchanges and the currency their prices are in.



Figure 51.6 The Markets table. Pick a row, then change its currency in the row under the table.

1. **Find** — filter by exchange, market, region or currency.
2. **Exchange**, **Market**, **Region** — the venue. Regions: India, Americas, Europe, Asia-Pacific, Middle East & Africa.
3. **Currency** — the currency in use now. A changed one is bold.
4. **Default** — the currency that market really trades in.

To change one market's currency:

1. Click its row. The line under the table reads, for example, **Shanghai Stock Exchange (SSE) trades in.**
2. Pick a currency in the box beside it. The first entry, **Default (XYZ)**, puts it back.
3. **Use default** clears the change for the selected market. **Reset all markets** clears every change, after **Put every market back on its default currency?** (**Yes** / **Cancel**).

Careful

Change a market's currency only when it really trades in another currency. A price whose market data names its currency keeps that one; this table decides the rest. Like the rest of this page, it changes how figures are displayed, never what an order or a broker uses.

51.5 Appearance

The theme, the size of text, how tight rows are, the chat bubble, animations and how charts are drawn.

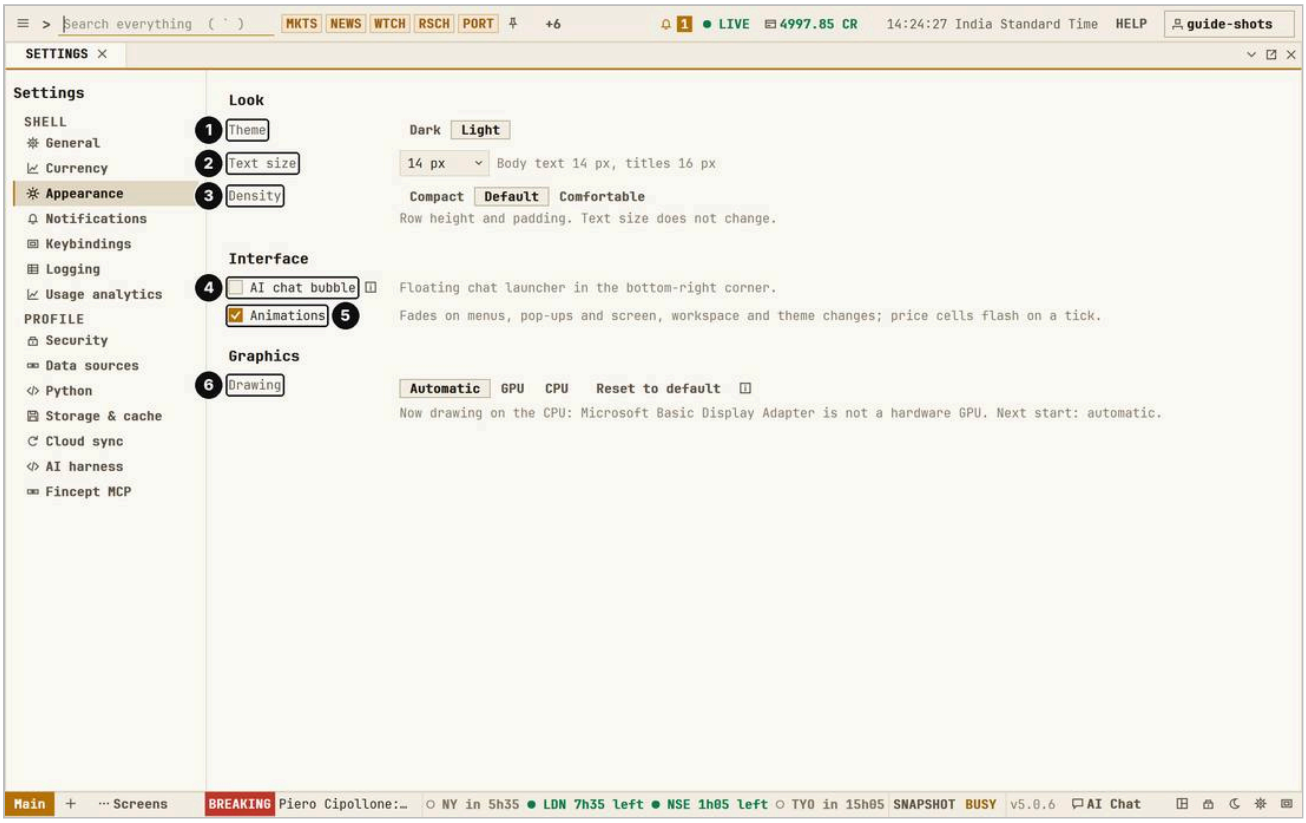


Figure 51.7 The Appearance page.

1. **Theme** — **Dark** or **Light**.
2. **Text size** — 13 to 18 px; titles are 2 px larger.
3. **Density** — row height and padding.
4. **AI chat bubble** — a floating chat button in the bottom-right corner.
5. **Animations** — fades, and price cells that flash on a tick.
6. **Drawing** — draw charts and web pages on the GPU or the CPU.

Option	Choices	Default	What it does	Saved
Theme	**Dark**, **Light**	**Dark**	The colours of the whole terminal. Applies immediately.	Account
Text size	13 px to 18 px	14 px	The base text size. The caption shows the result: **Body text 14 px, titles 16 px**.	Account
Density	**Compact**, **Default**, **Comfortable**	**Default**	Row height and padding. Text size does not change.	Account
AI chat bubble	on / off	off	A floating chat launcher in the bottom-right corner. The **AI Chat** button in the bottom bar always works. Takes effect the next time you change screen.	Account

Option	Choices	Default	What it does	Saved
Animations	on / off	on	Fades on menus, pop-ups, screen, workspace and theme changes; price cells flash on a tick. On Windows, animations also stay off when Windows itself is set to reduce animation.	Account
Drawing	**Automatic**, **GPU**, **CPU**, and **Reset to default**	**Automatic**	How charts and web pages are drawn. **Automatic** uses the GPU when this computer has a working one, and the CPU otherwise (no GPU, a virtual machine, remote desktop, or a GPU that failed here). Applies the next time the terminal starts.	This computer

The line under **Drawing** says what the terminal draws on now and what it will use at the next start, for example **Now drawing on the CPU: ... Next start: automatic.** If the GPU failed once, the line says the terminal is held on the CPU; **Reset to default** tries the GPU again.

Light and dark theme

The terminal has two themes, **Light** and **Dark**. A new installation starts in the dark theme. Every picture in this guide shows the light theme. The two themes have the same layout and the same controls; only the colours differ. To switch, use any of these:

- **Settings** › **Appearance** › **Theme**, then click **Light** or **Dark**.
- The sun/moon button near the right end of the bottom bar. Its tooltip says what it does: **Switch to the dark theme** or **Switch to the light theme**.
- Click your name at the right of the top bar, then **Theme**, then **Light** or **Dark**.
- Type `light` or `dark` in the command line and pick **Light** or **Dark**.

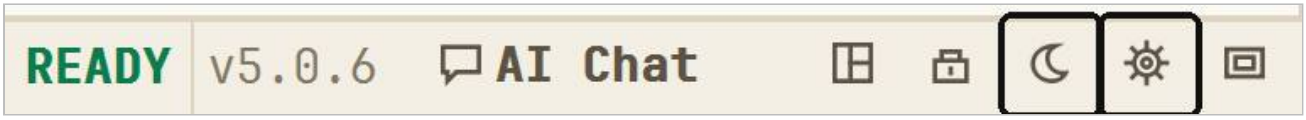


Figure 51.8 The right end of the bottom bar. The outlined buttons switch the theme (here it offers the dark theme) and open Settings.

Your theme, text size and density are saved to your account, so every computer you sign in on uses the same look. Text size and density can also be set from the command line: type `text size` or `density`.

51.6 Notifications

Where alerts are sent (your phone, chat apps, email, incident tools) and which alerts fire at all.



Figure 51.9 Notifications. Each service is a card; click its name to open it.

1. **Notification providers** — fifteen services. All are off until you set one up.
2. Click a card's name to open it and fill in its details.
3. **Enabled** — turn the service on or off, even while the card is closed.

Alert triggers

At the bottom of the page, **Alert triggers** decide which alerts happen at all. A trigger that is off stops that kind of alert everywhere — in the terminal and on every service.



Figure 51.10 Alert triggers, at the bottom of the page. News alerts are off until you turn them on.

Trigger	Default	What it does
Desktop alerts (system notification + bell)	on	Shows alerts as system notifications and counts them on the alerts bell in the top bar. Off: alerts are still recorded, but raise no system notification and add nothing to the bell.
Price alerts	on	Notify when a price alert's threshold is crossed.
News alerts	**off**	Turns on news notifications and shows the four options below it.
— Breaking news	on	Notify once for each story group that contains a FLASH or URGENT story. The caption on the page also names BREAKING, but a BREAKING story on its own does not notify.
— Monitor keyword matches	on	Notify when a news monitor finds new matches (see **Chapter 11, News** p. 182).

Trigger	Default	What it does
— Category volume spikes	on	Notify when a news category has an unusually high number of articles.
— Flash and high-impact articles	on	Notify on single articles that are both FLASH priority and high market impact.
Order fill alerts	on	Notify when an order is filled or rejected.

Set up a service

You need an account with the service you choose. The terminal sends the alert; the service delivers it.

1. Click the service's name, for example **Telegram**. The card opens. At its top, **How to set this up** opens the service's own instructions in your browser; below are the service's fields (listed in the table further down) and a **Test send** button.

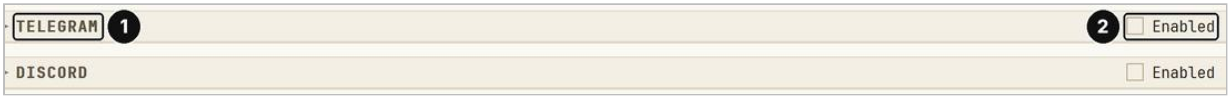


Figure 51.11 A closed card: its name (click to open) and its Enabled box.

1. Click the name to open or close the card.
2. **Enabled** — on or off, saved at once.

2. Fill in the fields. Each field is saved when you press `Enter` or click elsewhere; the card says **Saved**.

3. Click **Test send**. The card says **Sending…**, then **Sent successfully** or the service's own error message. The test message reads *Fincept Test — This is a test notification from Fincept Terminal.*

4. Make sure **Enabled** is ticked. (A service turns itself on the first time all its required fields are filled.)

Telegram, step by step. Create a bot with Telegram's @BotFather and copy its token. Paste it into **Bot token** and click elsewhere: the card checks it (**Checking token…**) and shows **Connected to @yourbot**. Click **Detect chat ID**, then send your bot any message from your phone within about 40 seconds. The terminal fills **Chat ID**, ticks **Enabled** and sends *Telegram is connected. You'll receive alerts here.* If nothing arrives in time, it says so; send the bot a message and click **Detect chat ID** again.

Email, step by step. Fill **SMTP host**, **Port**, **Username**, **Password** and **To address** (several addresses separated by commas). Most mail services need an *app password* rather than your normal password. Port 465 uses implicit TLS; any other port (587 if you leave it blank) uses STARTTLS.

The fifteen services

Fields marked * are secret: they are masked on screen and kept encrypted in your account.

Service	Fields
Telegram	**Bot token*** (from @BotFather), **Chat ID** (for example `123456789`); **Detect chat ID**
Discord	**Webhook URL***
Slack	**Webhook URL***, **Channel** (legacy webhooks only; optional)
Email	**SMTP host** (for example `smtp.gmail.com`), **Port** (blank = 587), **Username**, **Password*** (an app password), **To address** (several, separated by commas), **From address** (optional)

Service	Fields
WhatsApp	**Account SID**, **Auth token***, **From number**, **To number** (a Twilio account)
Pushover	**API token***, **User key***
ntfy	**Server URL** (blank = the public ntfy.sh), **Topic**, **Auth token*** (optional)
Pushbullet	**API key***, **Channel tag** (optional)
Gotify	**Server URL**, **App token***
Mattermost	**Webhook URL***, **Channel** (optional), **Username** (optional)
MS Teams	**Webhook URL*** (Teams > Workflows > Post to a channel)
Webhook	**URL***, **Method** (POST; PUT and PATCH also work)
PagerDuty	**Routing key*** (the 32-character integration key)
Opsgenie	**API key***, **Region**: **US (api.opsgenie.com)** (default) or **EU (api.eu.opsgenie.com)**
SMS (Twilio)	**Account SID**, **Auth token***, **From number**, **To number**

Costs

Sending alerts through these services costs no Fincept credits (watchlist price alerts themselves have a small daily charge: **§10.6 Set a price alert** p. 176). SMS and WhatsApp messages are billed per message by your own Twilio account.

The page checks what you type: a port must be a whole number from 1 to 65535 (**Enter a port number from 1 to 65535.**), and every URL must start with `https://` or `http://` (**Enter a full address starting with https:// or http://.**). A blank field is always accepted and clears the stored value.

51.7 Keybindings

Every keyboard shortcut of the terminal, grouped, with a search box. Click a row to change its key.

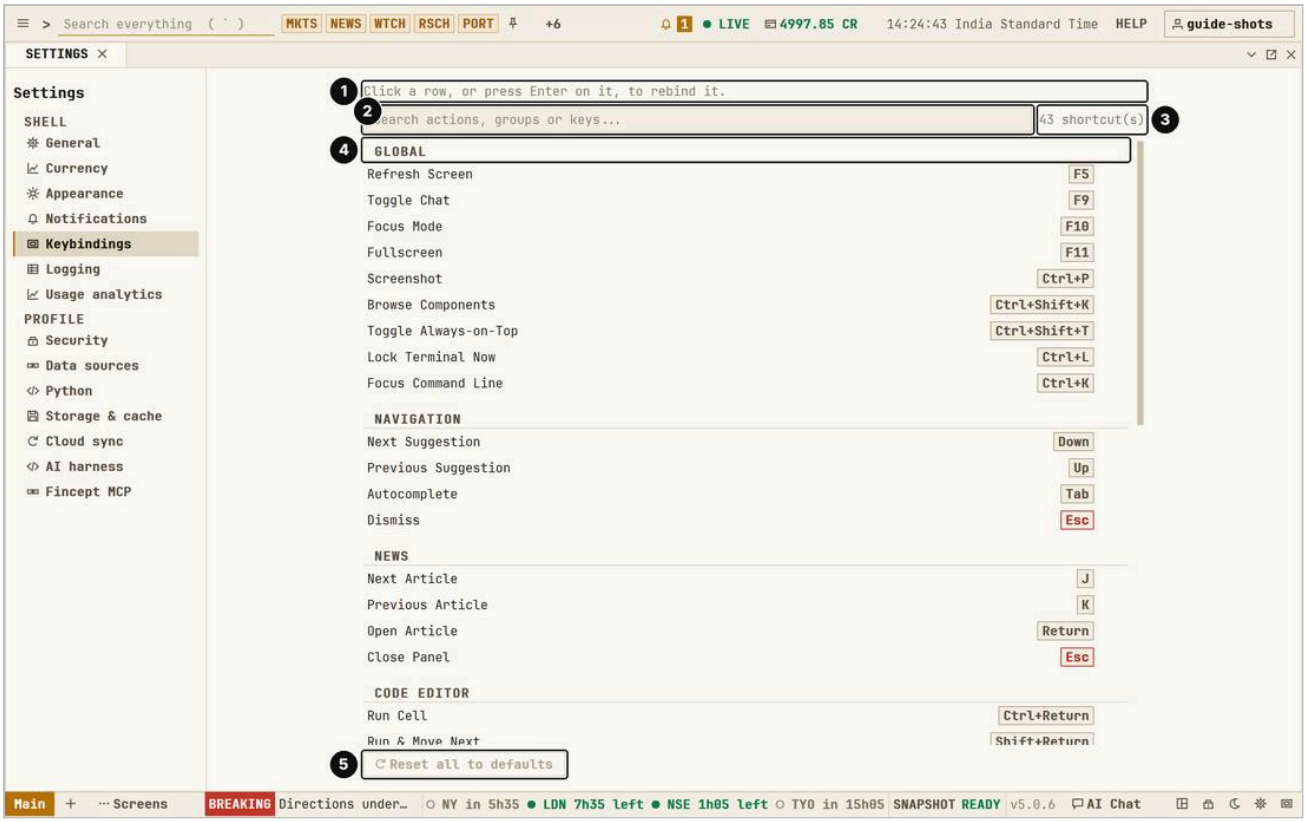


Figure 51.12 The Keybindings page.

1. Click a row (or press **Enter** on it) to change its key.
2. Search by action, group or key — type `Ctrl+L` to see what uses that key.
3. How many shortcuts there are (43), or how many match the search; it also counts the ones you changed.
4. Shortcuts are grouped: **GLOBAL**, **NAVIGATION**, **NEWS**, **CODE EDITOR**, **WINDOWS**.
5. **Reset all to defaults** — only active when you changed something.

Note

On a new installation **Dismiss** and **Close Panel** both use **Esc**, so both keys show in red with the tip *Also bound to "..."; both may fail to fire.* In practice each works in its own place (the command-line suggestions and the news reader).

Change a shortcut

1. Click the row, for example **Screenshot**. The **Rebind: Screenshot** window opens.

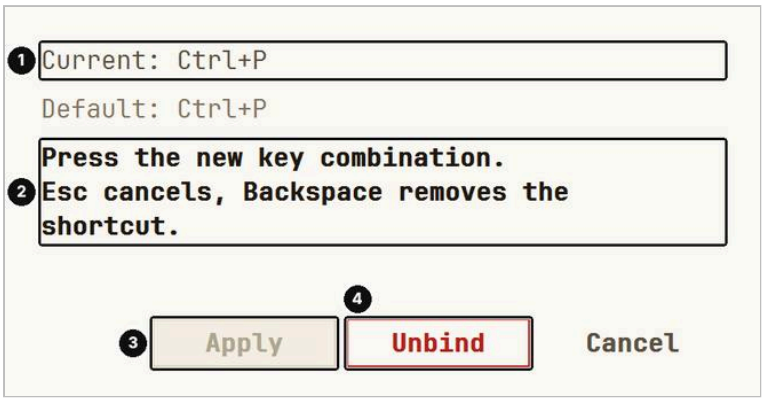


Figure 51.13 Press the new key combination. Apply saves it.

1. The key it uses now, and its default.
2. Press the new keys. `Esc` cancels; `Backspace` removes the shortcut.
3. **Apply** — save the new key.
4. **Unbind** — leave the action without a key. **Cancel** closes the window and changes nothing.

2. Press the new combination, for example `Ctrl` + `Shift` + `P`. It shows in large letters.

3. If another action already uses it, a red line says **Already used by "..."** and a box **Remove it from "..."** is ticked: Apply moves the key to this action. Untick it to keep the key on both (then neither may work).

4. Click **Apply**. The change is live at once. A changed row shows a dot (*Changed from the default ...*) and a small reset button (**Restore ...**) that puts the default back.

Rules the window applies:

- A letter, digit, punctuation key or Space needs `Ctrl`, `Alt` or `Shift` with it: **Add Ctrl, Alt or Shift to a letter, digit or Space.** Function keys, arrows, `Tab`, `Page Up` and the like work alone.
- `Ctrl` + `C`, `Ctrl` + `V`, `Ctrl` + `X`, `Ctrl` + `A` and `Ctrl` + `Z` are accepted with a warning: inside a text field they still copy, paste, cut, select all or undo.
- **Reset all to defaults** asks **Restore every shortcut to its default? All your customisations will be lost.** (**Yes** / **Cancel**).

> **Tip**
>
> **Next Article** (`J`) and **Previous Article** (`K`) are plain letters. The window cannot take a letter without a modifier, so if you change them, use the row's **Restore** button (or **Reset all to defaults**) to get `J` and `K` back.

Every default shortcut

On macOS `Ctrl` is the Command key.

Group	Action	Default key
GLOBAL	Refresh Screen	`F5`

Group	Action	Default key
GLOBAL	Toggle Chat	F9
GLOBAL	Focus Mode	F10
GLOBAL	Fullscreen	F11
GLOBAL	Screenshot	Ctrl + P
GLOBAL	Browse Components	Ctrl + Shift + K
GLOBAL	Toggle Always-on-Top	Ctrl + Shift + T
GLOBAL	Lock Terminal Now	Ctrl + L
GLOBAL	Focus Command Line	Ctrl + K (the backtick key ` does the same outside a text field)
NAVIGATION	Next Suggestion	Down
NAVIGATION	Previous Suggestion	Up
NAVIGATION	Autocomplete	Tab
NAVIGATION	Dismiss	Esc
NEWS	Next Article	J
NEWS	Previous Article	K
NEWS	Open Article	Return
NEWS	Close Panel	Esc
CODE EDITOR	Run Cell	Ctrl + Return
CODE EDITOR	Run & Move Next	Shift + Return
CODE EDITOR	Rename Cell	F2
WINDOWS	Focus Window 1 … 9	Ctrl + 1 … Ctrl + 9
WINDOWS	Next Panel / Previous Panel	Ctrl + Tab / Ctrl + Shift + Tab
WINDOWS	Next Window / Previous Window	Ctrl + Alt + Tab / Ctrl + Alt + Shift + Tab
WINDOWS	New Window (Next Monitor)	Ctrl + Shift + N
WINDOWS	Move Window to Monitor 1 … 9	Ctrl + Shift + 1 … Ctrl + Shift + 9



Figure 51.14 Searching "Window" shows 23 of the 43 shortcuts, all in the WINDOWS group (top of the list).

The full list of every shortcut in the terminal, including those that cannot be changed, is in **Chapter 53, Keyboard Shortcuts** p. 983.

51.8 Logging

How much the terminal writes to its log file, and whether logs are sent to Fincept. Use it when support asks for a log, or to see more detail while you investigate a problem.

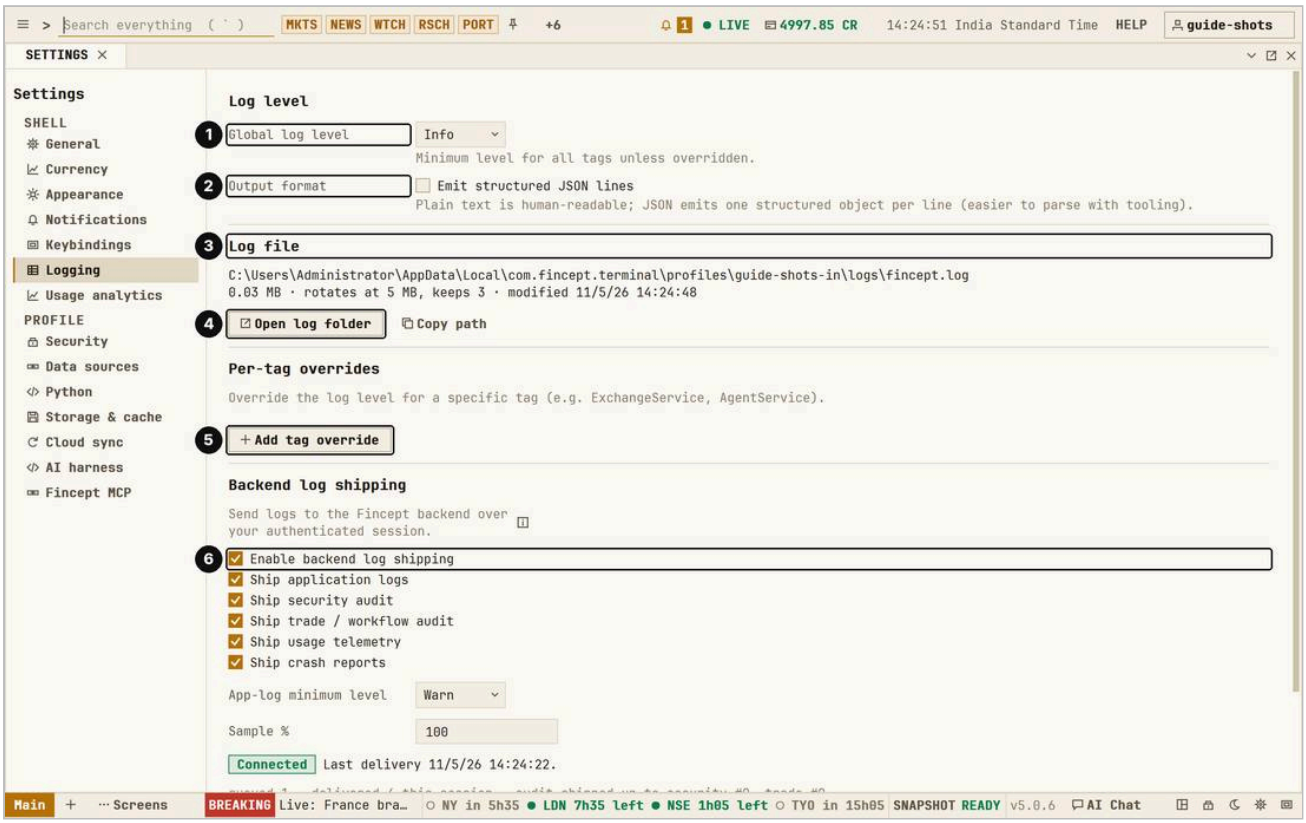


Figure 51.15 Logging, top part. Changes take effect when you press Apply & save at the bottom.

1. **Global log level** — the least important level written to the log.
2. **Output format** — plain text or one JSON object per line.
3. **Log file** — where the log is, its size and when it was written.
4. **Open log folder** opens it in your file browser; **Copy path** copies the file's path.
5. **Add tag override** — a different level for one part of the terminal.
6. **Backend log shipping** — send logs to Fincept over your signed-in session.

Option	Choices	Default	What it does
Global log level	**Trace**, **Debug**, **Info**, **Warn**, **Error**, **Fatal**	**Info**	The least important level written to the log file, for every part of the terminal that has no override.
Output format — ***Emit structured JSON lines***	on / off	off	Plain text is easy to read; JSON writes one structured object per line (easier for tools).
Per-tag overrides	a tag name + a level, per row; **Remove** deletes a row	none	A different level for one part of the terminal (a *tag* is the name its log lines carry). Support tells you which tag to use.
Enable backend log shipping	on / off	on	Sends logs to Fincept over your signed-in session. Nothing is sent while you are signed out.
Ship application logs	on / off	on	Ordinary log lines, filtered by **App-log minimum level** and **Sample %**. Best effort.

Option	Choices	Default	What it does
Ship security audit	on / off	on	The security events from Settings > Security. Delivered reliably.
Ship trade / workflow audit	on / off	on	The record of trading and workflow actions. Delivered reliably.
Ship usage telemetry	on / off	on	Usage events (they are still recorded on this computer either way).
Ship crash reports	on / off	on	Crash reports left by an earlier session.
App-log minimum level	the six levels	**Warn**	The least important application line that is sent.
Sample %	0 to 100	100	The share of eligible application lines that is sent.

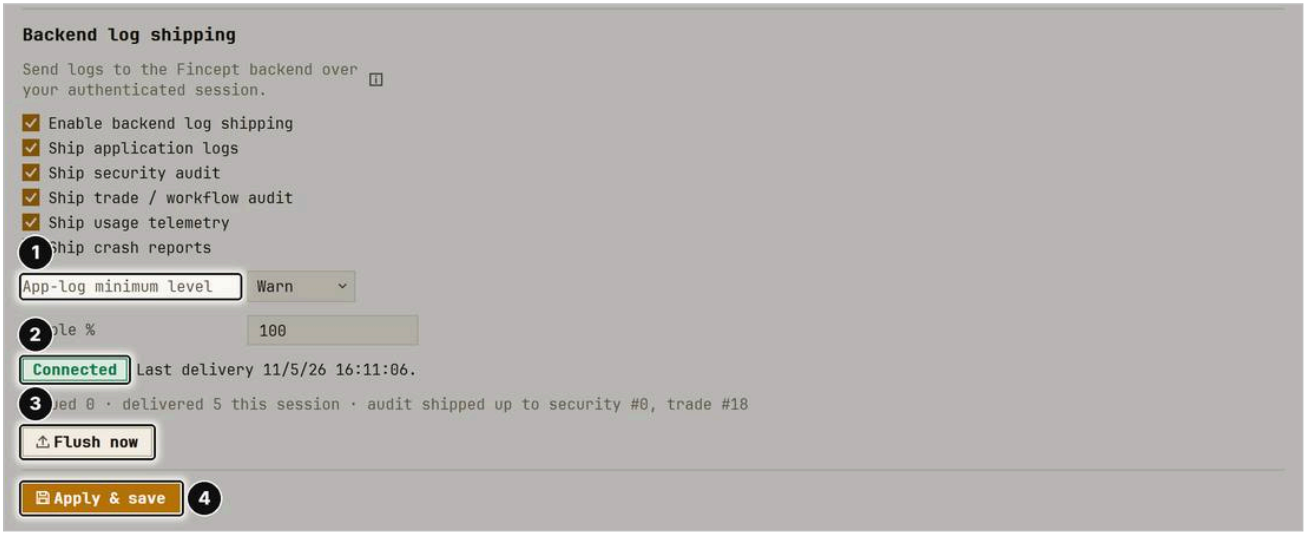


Figure 51.16 Log shipping, its status, Flush now and Apply & save.

1. **App-log minimum level** and **Sample %** — which application lines are sent.
2. The shipping status: **Off**, **Waiting for sign-in**, **On**, **Connected** or **Degraded**, then when logs were last delivered.
3. **Flush now** — send what is queued now (normally every 30 seconds).
4. **Apply & save** — save and apply the whole page. No restart.

Where the log is. On Windows the log file is `%LOCALAPPDATA%\com.fincept.terminal\logs\fincept.log`. It starts a new file at 5 MB and keeps three old ones. The page shows the exact path for your computer; **Copy path** puts it on the clipboard so you can attach the file to a support request (**Chapter 52, Help, Docs and Support** p. 967).

After **Apply & save** the page says, for example, **Saved: 0 tag override(s), shipping on.**

51.9 Usage analytics

Whether the terminal records how it is used — which screen, which control, how long — and in how much detail. Fincept uses it to find the parts that are hard to reach.

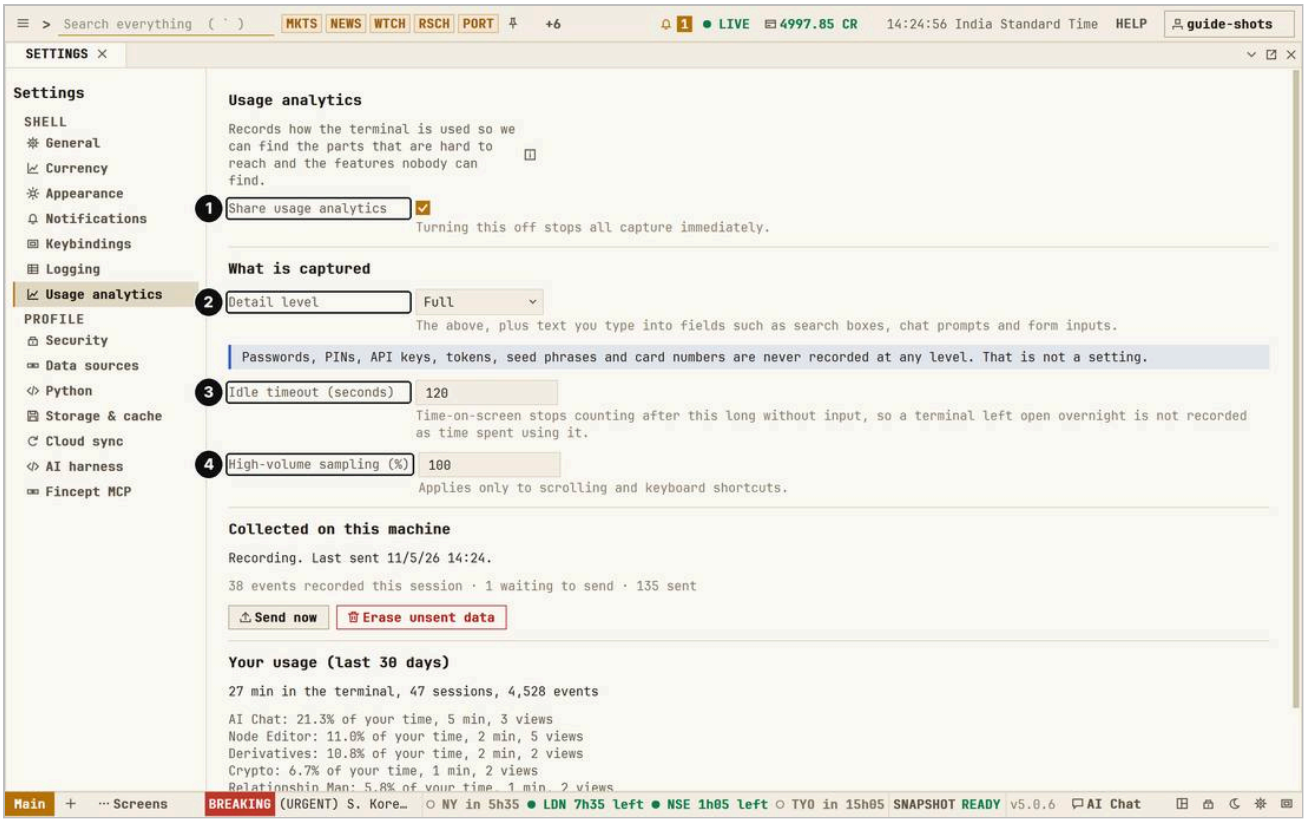


Figure 51.17 Usage analytics. Settings here take effect when you press Save.

1. **Share usage analytics** — the master switch. Off stops all capture immediately.
2. **Detail level** — how much is recorded. The line under it says exactly what.
3. **Idle timeout** — time on a screen stops counting after this long without input.
4. **High-volume sampling** — only for scrolling and keyboard shortcuts.

Option	Choices	Default	What it does
Share usage analytics	on / off	on	The master switch. Turning it off stops all capture immediately. Anything collected but not yet sent stays on this computer until you erase it.
Detail level	**Off**, **Structural**, **Content**, **Full**	**Full**	**Off**: nothing is recorded. **Structural**: which screen and which control, how long, and whether an action succeeded; no content. **Content**: the above, plus short selections such as symbols, data providers and chart timeframes; no free text. **Full**: the above, plus text you type into fields such as search boxes, chat prompts and form inputs.
Idle timeout (seconds)	15 to 3600	120	Time on a screen stops counting after this long without input, so a terminal left open overnight is not counted as use.
High-volume sampling (%)	0 to 100	100	The share of scroll and shortcut events recorded. Clicks, screen views and sign-in events are never sampled.

Important

At every level, **passwords, PINs, API keys, tokens, seed phrases and card numbers are never recorded.** That is not a setting.



Figure 51.18 The status of collection on this computer, Send now, Erase unsent data, and your own usage summary.

1. **Send now** — send what is waiting now.
2. **Erase unsent data** — delete what is recorded here and not yet sent.

- **Collected on this machine** says whether recording is on and when data was last sent, with counts: events recorded this session, waiting to send, and sent.
- **Send now** sends what is waiting. **Erase unsent data** deletes everything recorded on this computer and not yet sent. Neither asks first.
- **Your usage (last 30 days)** (when you are signed in) sums up your own use: time in the terminal, sessions and events, and your six most-used screens with their share of your time, minutes and views.
- **Save** saves the page; it says **Saved.**

51.10 Security

Your PIN, automatic locking, signing out every device, and a log of security events.

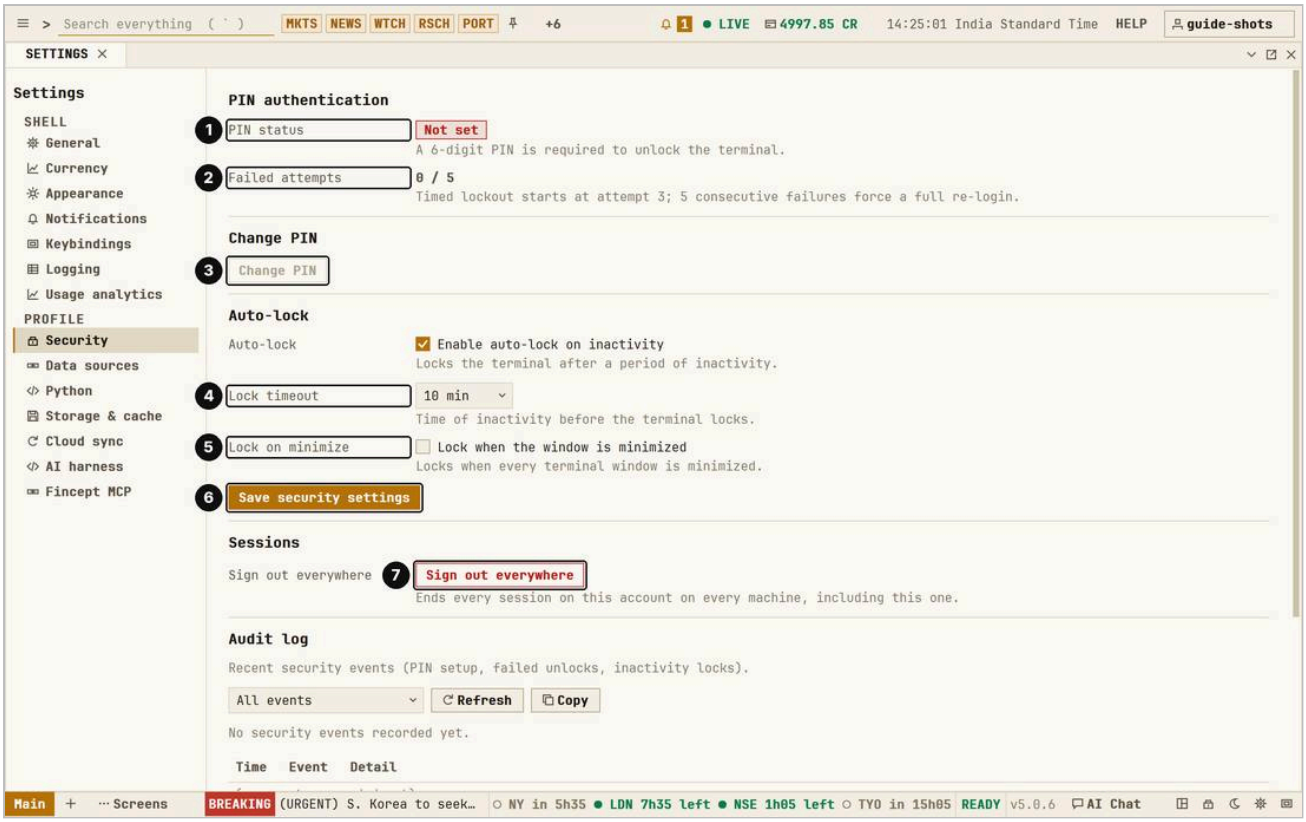


Figure 51.19 The Security page.

1. **PIN status** — **Configured** or **Not set**. A 6-digit PIN unlocks the terminal.
2. **Failed attempts** — wrong PINs so far, out of 5.
3. **Change PIN** — available once a PIN is set on this computer.
4. **Auto-lock** and **Lock timeout** — lock after a period without input.
5. **Lock on minimize** — lock when every terminal window is minimised.
6. **Save security settings** — saves the Auto-lock group.
7. **Sign out everywhere** — end every session on every computer, this one included.

Option	Choices	Default	What it does
PIN status	— (read only)	—	**Configured** when this computer unlocks with a PIN, **Not set** otherwise. You set a PIN at the lock screen after sign-in (see **Chapter 3, Create your account** p. 38).
Failed attempts	— (read only)	**0 / 5**	The first two wrong PINs cost nothing. After the 3rd the terminal makes you wait 30 seconds before the next try (**Locked: 30s left**), after the 4th 60 seconds (when you are online, Fincept's server may set its own wait). After 5 wrong PINs in a row you must sign in again with your password.
Auto-lock — *Enable auto-lock on inactivity*	on / off	on	Lock the terminal after a period without keyboard or mouse input. Needs a PIN.
Lock timeout	1, 2, 5, 10, 15, 30, 60 min	**10 min**	How long without input before it locks. Greyed out while **Auto-lock** is off.
Lock on minimize — *Lock when the window is minimized*	on / off	off	Lock when every terminal window is minimised.

Press **Save security settings** after changing the Auto-lock group. The message under it says what happens now:

- **Saved. The terminal now locks after 10 min idle, effective now.**

- **Saved. Auto-lock stays off until a PIN is configured.** (no PIN on this computer)
- **Saved. Locks after 10 min idle once no agent task is scheduled.** (scheduled AI tasks are holding it)
- **Saved. Auto-lock is off.**

Note

While AI tasks are scheduled (see **Chapter 42, Use Your Own AI** p. 819), the page shows **Paused while agent tasks are scheduled.** The terminal then does not lock on idle, after sleep or on minimise, so the tasks can run. Locking by hand (Ctrl + L, or the lock button in the bottom bar) still works.

Change your PIN

1. Click **Change PIN**. Three fields open: **Current PIN**, **New PIN**, **Confirm PIN**.
2. Type them and click **Update PIN** (or press Enter).
3. The page says **PIN updated successfully**.

A PIN is exactly six digits (**PIN must be exactly 6 digits**). Simple PINs are refused: all the same digit (**PIN is too simple — use unique digits**) or a run like 123456 (**PIN is too simple — avoid sequential digits**). The other checks say **Enter your current PIN**, **New PINs do not match** and **New PIN must differ from the current PIN**. A wrong current PIN counts as a failed attempt. While the form is open, **Change PIN** reads **Cancel** and closes it. There is no button to remove a PIN.

Sign out everywhere

Use it if a computer was lost or someone else may know your password. Click **Sign out everywhere** and confirm (*Every machine signed in to this account, including this one, will be signed out and will need the password to sign in again.*). Every session ends, this one included, so you go back to the sign-in screen. If Fincept cannot be reached, nothing is signed out and the page says **Other sessions were not signed out: ... This device is still signed in - try again.**

Audit log



Figure 51.20 The audit log lists security events on this computer (none yet here).

The audit log records PIN set-up and changes, failed unlocks, lockouts and every lock (by hand, on idle, after sleep, on minimise). Its columns are **Time**, **Event** and **Detail**; important events are coloured. Filter it with **All events**, **Failures & lockouts**, **Lock events**, **Unlocks** or **PIN changes**; **Refresh** reloads it; **Copy** copies the listed rows. It keeps 180 days (at most 5,000 events) and shows the newest 200.

Event	Meaning
PIN configured / PIN changed / PIN cleared	A PIN was set, changed or removed.
Unlocked	The terminal was unlocked.

Event	Meaning
Failed unlock attempt	A wrong PIN (the detail says which attempt, and where).
Lockout engaged / Lockout cleared	The wait after repeated wrong PINs started or ended.
Attempt limit reached — re-login required	Five wrong PINs: sign in with your password.
Locked (inactivity) / (manual) / (resumed from sleep) / (window minimised)	Why it locked.
Automatic lock paused (agent tasks scheduled) / Automatic lock resumed	See the note above.

51.11 Data sources

A summary of your own data connections — databases, APIs, files — and the keys for data vendors the terminal calls with your own account. You add and test connections on the **Data Sources** screen (**Chapter 48, Data Sources** p. 891); this page lists them, turns them on or off, and deletes them.

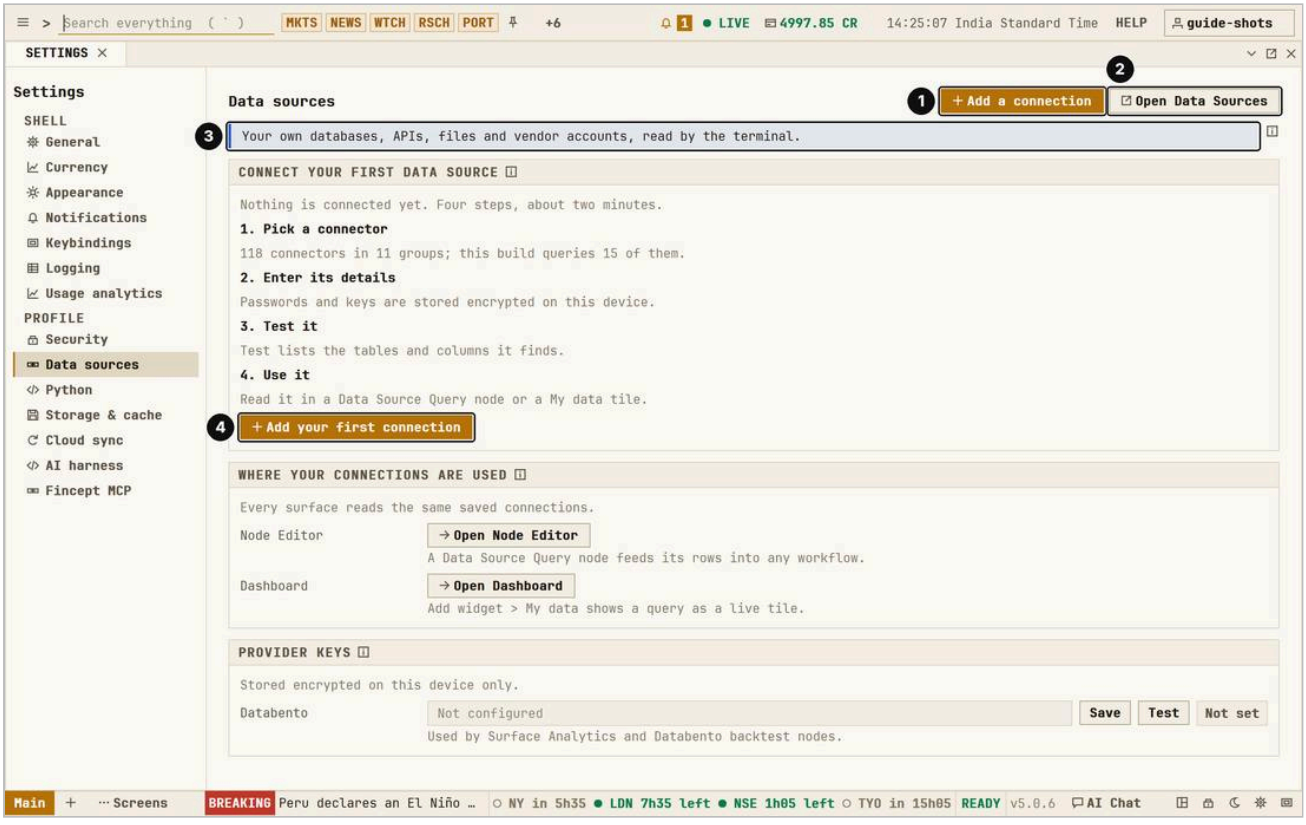


Figure 51.21 Settings > Data sources with no connection yet: a four-step guide.

1. **Add a connection** opens the Data Sources screen to pick a connector.
2. **Open Data Sources** opens the same screen.
3. A data source is your own system. Fincept's own market data, news and fundamentals are built in and need no set-up.
4. With nothing connected, the page shows four steps and this button.

The first step counts the connectors the Data Sources screen offers and how many of them this version reads before you enter any details (here: 118 connectors in 11 groups, 15). More become readable once set up — for example a CSV or JSON file once you pick it, a web API once it has an address. A connection the terminal cannot

read is still kept; its status shows **NO READER** and says why.

When you have connections, the page shows four counts (**Total**, **Active**, **Inactive**, **Providers**) and a **Connections** list grouped by category, with these columns:

Column	What it shows
Source	The connection's name and connector, and a line saying what the terminal can do with it (for example *The terminal can list this database's tables and run read-only queries against it. Nothing it does can write.*).
Type	**REST** or **WS** (streaming).
Status	**CONNECTED**, **AUTH FAILED**, **UNREACHABLE**, **NO READER** or **NOT CHECKED**; hover for when it was last checked.
On	Off hides the connection from workflow nodes and the dashboard's **My data** tile. Saved at once.
Delete	Deletes the connection after **Delete connection "..."? This cannot be undone.** Its stored passwords are removed from this computer too.

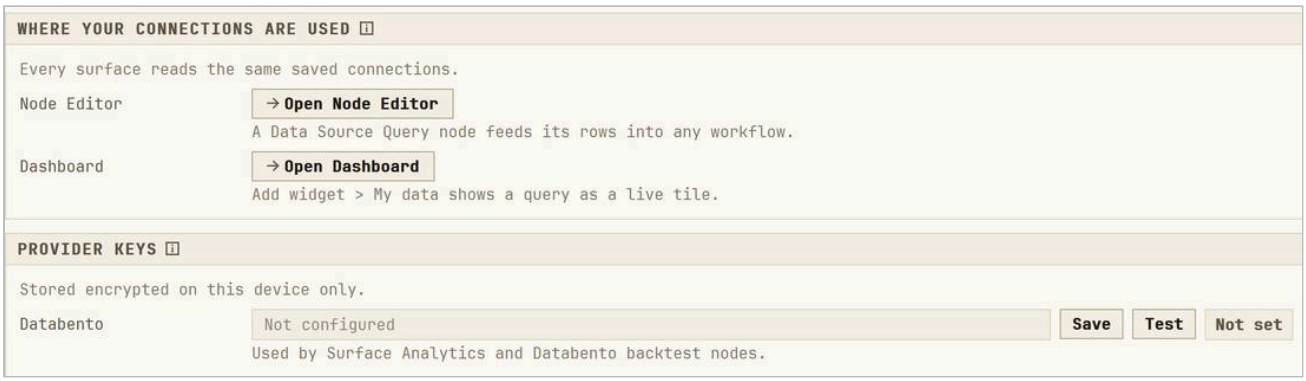


Figure 51.22 Where your connections are used, and Provider keys.

- **Where your connections are used** — **Node Editor** (a **Data Source Query** node feeds a connection's rows into a workflow) and **Dashboard** (**Add widget > My data** shows a saved query as a live tile; this version has no control that saves a new query, so the tile works only with queries saved by an earlier version), each with a button that opens that screen.
- **Provider keys** — keys for market-data vendors the terminal calls directly with your own account. A key is stored encrypted on this computer only: enter it again on another computer. **Save** stores it; saving with the field empty removes it, after a question. **Test** asks the vendor whether the key works, free — no data is bought. The status beside it reads **Not set**, **Saved**, **Key works** or **Test failed**.
- **Bulk actions** (shown when you have connections) — **Enable all**, **Disable all** (asks first) and **Delete all** (asks first; *This cannot be undone.*). They act on every connection.

51.12 Python

Which Python on your computer runs Code Editor notebooks, the workflow **Code** node and every other Python feature of the terminal. The terminal ships no Python of its own; it finds yours.

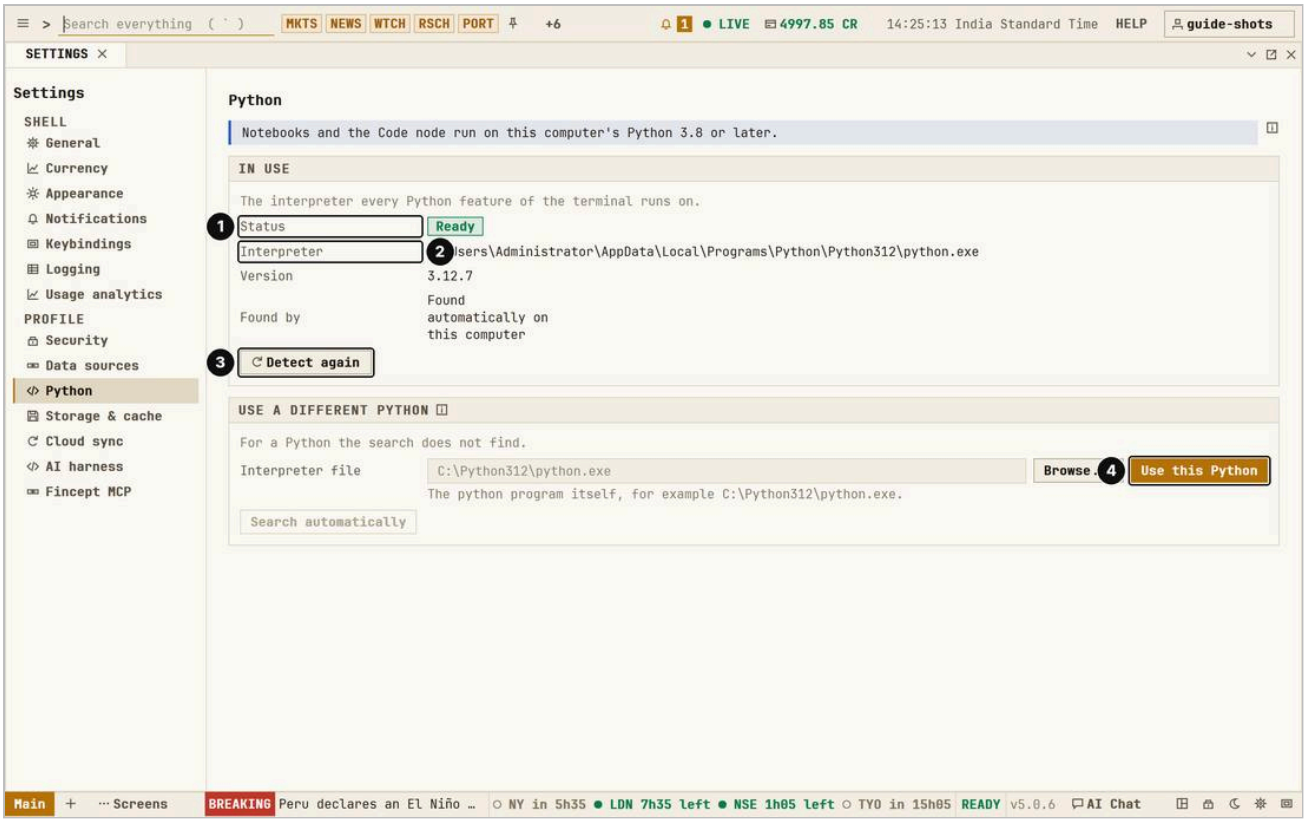


Figure 51.23 The Python page.

1. **Status** — **Looking for Python...**, **Ready** or **Not found**.
2. **Interpreter**, **Version**, **Found by** — the Python in use and how it was found.
3. **Detect again** — search again, for example after installing Python.
4. **Use a different Python** — point at a specific install.

Item	What it does
In use panel	**Status**, **Interpreter** (its path), **Version**, **Found by** (**Found automatically on this computer** or **Picked by you below**).
Detect again	Searches the computer for Python again.
Download Python	Shown only when no Python was found: opens python.org. On Windows, tick *Add python.exe to PATH* while installing, then press **Detect again**.
Interpreter file + Browse... + Use this Python	Pick a specific `python.exe` (Windows) or `python3` (macOS, Linux). The file is checked first: it must run as Python 3.8 or later, or nothing changes.
Search automatically	Forget your pick and let the terminal find Python again.

The default is to find Python automatically: first on your PATH, then the `py -3` launcher, then the usual install folders. Your pick is saved on this computer only. A successful pick says, for example, **Python 3.12.4 at C:\Python312\python.exe now runs the notebooks and the Code node.**

51.13 Storage & cache

What this computer stores, how big it is, and how to clear it. Use it to free disk space, or when support asks you to clear a cache.

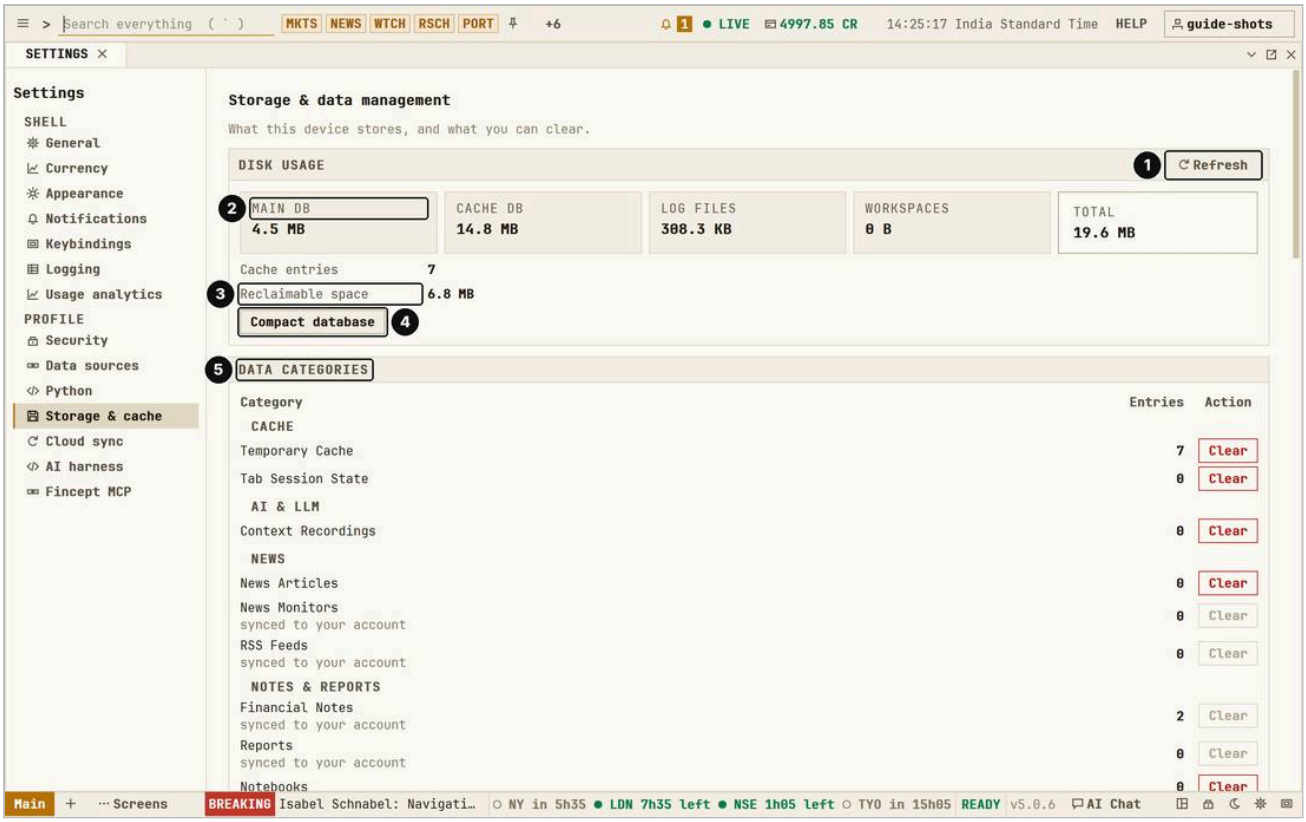


Figure 51.24 Storage & data management, top part.

1. **Refresh** — measure again.
2. Sizes: the main database, the cache database, log files, workspaces and the total. **Cache entries** under them counts what the cache holds.
3. **Reclaimable space** — free space inside the database. Amber above 8 MB.
4. **Compact database** — release that space, after a question. Nothing is deleted.
5. **Data categories** — what is stored, by kind, with a **Clear** button each.

Data categories

Each row is one kind of stored data, with its number of entries and a red **Clear** button. **Clear** asks **Permanently delete all …? This cannot be undone.** first.

Rows whose **Clear** is greyed out are kept safe on purpose, with a reason under the name:

- **synced to your account** — delete the items in their own screen, so your account deletes them too (otherwise they would come back at the next sync).
- **managed by Cloud sync** — the queue of changes waiting to upload; discard them per kind in Cloud sync.
- **PIN, sign-in and saved credentials** — remove a credential where you added it.

Group	Categories you can clear here	Kept (cleared elsewhere)
Cache	Temporary Cache, Tab Session State	—
AI & LLM	Context Recordings	AI Harness Tasks, Missions, Agent Plan History
News	News Articles	News Monitors, RSS Feeds
Notes & Reports	Notebooks	Financial Notes, Reports
Portfolio & Trading	Custom Indices	Watchlists, Saved Strategies, Scanner Watches, M&A Deals, Alternatives Program, Portfolio Insights

Group	Categories you can clear here	Kept (cleared elsewhere)
Alpha Arena	—	Alpha Arena
Market Data	Market Data Cache, Sector Cache, Derivatives Cache (all fetched again when needed)	—
Data & Integration	MCP Tool Cache (rebuilt on demand), WebSocket Providers	Data Sources, Data Mappings, MCP Servers
Workspaces	—	Saved Workspaces
Dashboard	Dashboard Layouts	—
Broker	Broker Instruments (downloaded again at next sign-in)	—
Diagnostics	Security Audit, Trade / Workflow Audit (clearing drops rows not yet sent)	Pending Sync Queue
Settings & Credentials	App Settings, Key-Value Storage	Stored Credentials

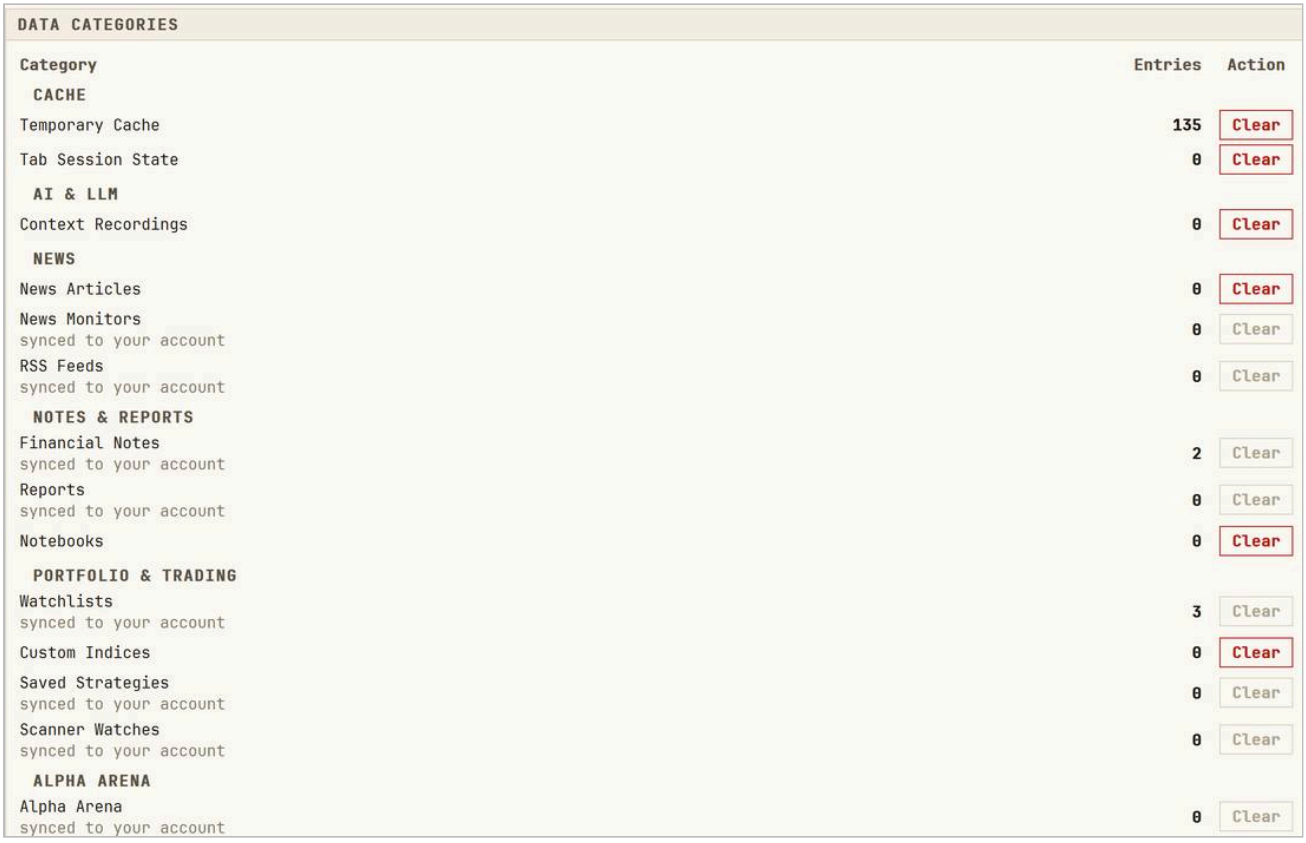


Figure 51.25 Data categories, first part. Greyed-out Clear buttons belong to synced data.



Figure 51.26 Data categories, second part.

File & state management, quick cache clears

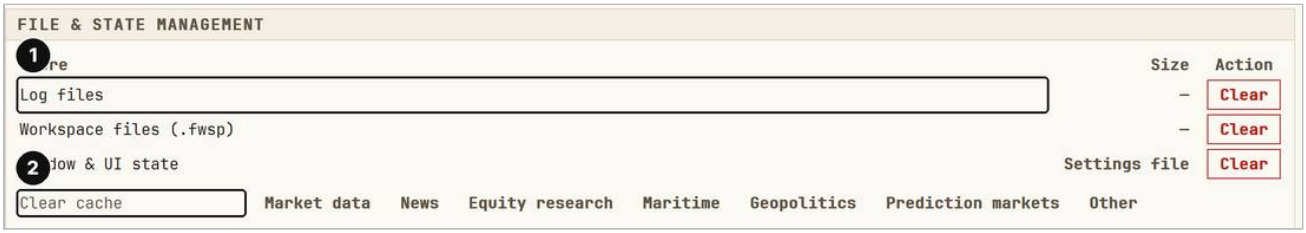


Figure 51.27 Files and window state, and one-click cache clears by kind.

1. **Log files**, **Workspace files (.fwsp)**, **Window & UI state** — each with its size and a **Clear** button.
2. **Clear cache** — one button per kind of cache.

Row	Clear does	It asks
Log files	Empties every log file.	**Clear all application log files? Current log data will be lost.**
Workspace files (.fwsp)	Deletes saved workspace files on this computer.	**Delete all saved workspace files? This cannot be undone.**
Window & UI state	Resets window positions, panel layouts and perspectives, at the next start. It also puts this computer's own settings back to their defaults (see the warning below).	**Reset all window positions, dock layouts, and perspectives? Takes effect on next restart.**
Clear cache buttons	**Market data**, **News**, **Equity research**, **Maritime**, **Geopolitics**, **Prediction markets**, **Other** — each clears that cache at once; data is fetched again when needed.	—

Careful

The **Window & UI state** store also holds the settings this computer keeps for itself: **Logging**, **Usage analytics**, the Python you picked and **Drawing**. Its **Clear** (and **Delete all** in the danger zone) resets those as well, although the question names only windows and layouts. Check those pages after the restart.

SQL console



Figure 51.28 The SQL console and the danger zone at the bottom of the page.

1. **Execute** — run the statement. SELECT and EXPLAIN run at once; anything else asks first.
2. **Quick:** — fill in a query on a common table.
3. **Clear all cache** — temporary data only.
4. **Clear all user data** — asks twice.

For advanced users and support: run a query on the terminal's local database files. Pick **fincept.db** (the main one) or **cache.db**, type a statement and press **Execute** (or Enter). The **Quick:** buttons fill in a query that shows 20 rows of a common table. A `SELECT` or `EXPLAIN` runs at once and shows at most 100 rows; anything else asks **This may modify the database: … Continue?** first.

Careful

A statement that changes the database can damage your local data. Run only queries you understand, or ones Fincept support gives you.

Danger zone

- **Clear all cache** — *Temporary data, fetched again when needed.* Asks **Delete all temporary cached data? Data will be re-fetched on next access.**
- **Clear all user data** (**Delete all**) — *Local data, files, cache and UI state. Credentials and synced items stay.* It lists what will go, asks again (**Final Confirmation**), then deletes it. Stored credentials, the sync queue and items synced to your account are kept. Because it includes **Window & UI state**, this computer's own settings go back to their defaults too.

51.14 Cloud sync

What is kept in your Fincept account so your other computers open where this one left off, and whether it is all uploaded.

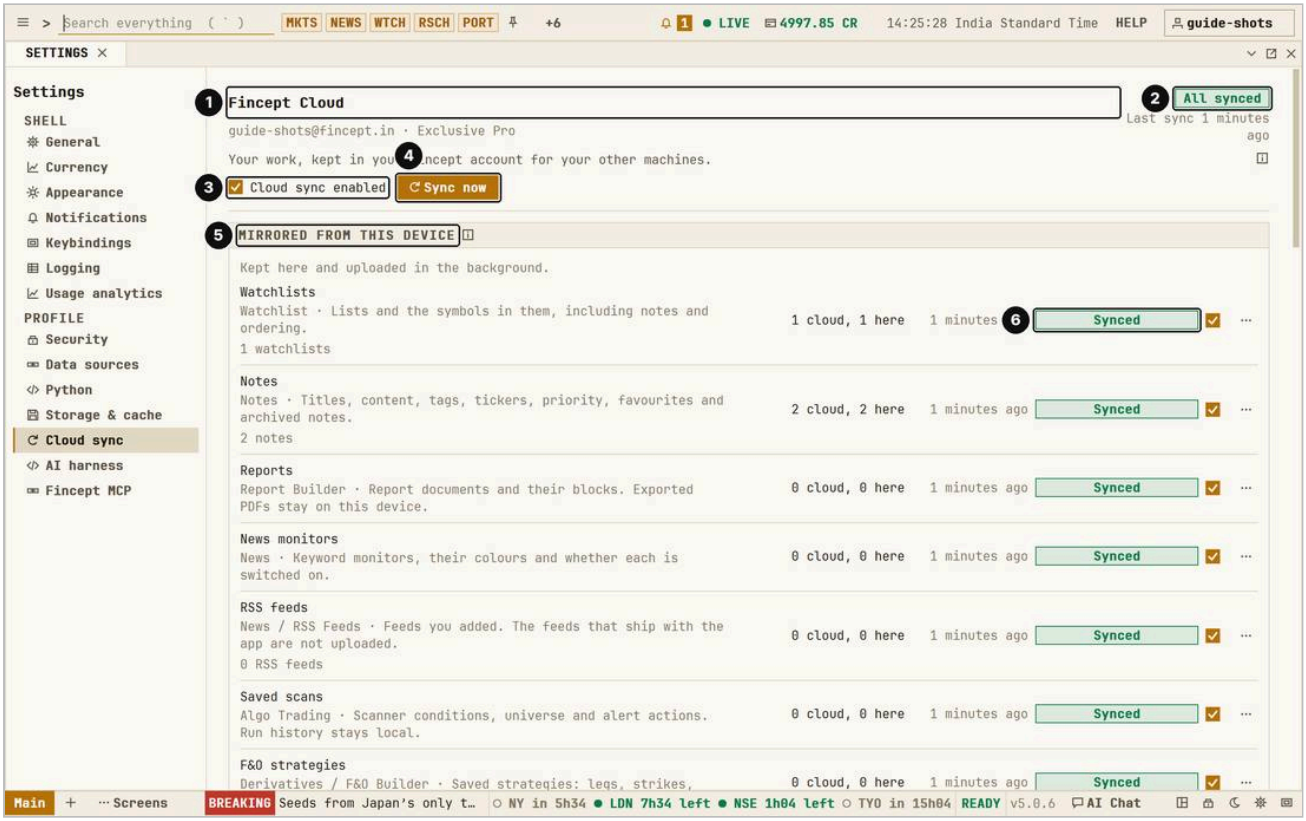


Figure 51.29 Cloud sync, top part.

1. Your account and plan.
2. The overall status, and when the last sync ran.
3. **Cloud sync enabled** — the master switch for this computer (on by default).
4. **Sync now** — upload everything waiting, then download everything.
5. **Mirrored from this device** — kept here and uploaded in the background.
6. Each row: counts in the cloud and here, last sync, status, its own switch and a **…** menu.

Sync is on unless you turn it off. The copy on this computer is always the working copy: sync runs in the background and never blocks you. Changes upload under a second after you make them, and a full check runs every 15 minutes. The master switch and the per-row switches are saved on this computer only.

What syncs

Mirrored from this device — kept here and uploaded; each has its own switch (on by default):

Row	What is kept
Watchlists	Lists and their symbols, with notes and order.
Notes	Titles, text, tags, tickers, priority, favourites and archived notes.
Reports	Report documents. Exported PDFs are not part of this sync (the row says they stay on this device); the copy each export puts in the File Manager is kept wherever the File Manager keeps its files (your Fincept cloud or this computer).
News monitors	Keyword monitors, their colours and on/off state.
RSS feeds	Feeds you added (the built-in feeds are not uploaded).
Saved scans	Scanner conditions, universe and alerts. Run history stays here.
F&O strategies	Saved option strategies: legs, strikes, expiries, lots and notes.
Data mappings	Endpoints, field mappings and parser settings. Tokens and values that look like keys stay on this computer.
Saved workspaces	Workspaces you saved. Snapshots, templates and thumbnails stay here.
AI harness tasks	Scheduled tasks. Each runs only on the computer that owns it.
Missions	Mission set-up and their latest state. Runs happen only on the owning computer.
Alpha Arena competitions	Set-up and roster. Rounds and orders stay where they ran.
Agent plan history	The Planner's history.
M&A deals	Deals you added or edited.
Alternatives program	Your alternatives program as one document.
Portfolio insights	Each book's insights history.

Managed by your account — stored in the account and read live; there is nothing to switch off: Preferences (your settings), Dashboard board, Portfolios, AI chat history, Excel workbooks saved to the cloud, Agent run history, Agents, Workflows, Data sources (definitions; keys stay on this computer), Paper trading, Broker accounts (details only; credentials never leave this computer), Algo strategies, and Files (in cloud mode, see **Chapter 47, File Manager** p. 882).



Figure 51.30 The first row managed by your account. These rows show Live: there is no switch, because the account is the store.

Never leaves this device — broker credentials, the MCP server registry (it holds pasted keys), window and layout state, and your PIN and encryption key.

Row status and the ... menu

Status	Meaning
Synced	Everything is uploaded.
Syncing / n queued	Changes are uploading or waiting.
Retrying	An upload failed and is retried automatically.
Offline	No connection: changes wait and upload when it returns.
Plan limit	Your plan's limit for this kind is full (the row shows, for example, **7 of 25 watchlists**). Remove one or raise your plan, then press **Sync now**.
Refused	The server refused a change (too large or invalid): edit it, or discard it from the row's menu.
Paused / Off	Sync is paused (for example out of credits) or switched off for this row.
Live / This device	Managed rows, and rows that never sync.
All synced / Sync off / Signed out	The overall status at the top of the page: nothing is waiting, the master switch is off, or you are signed out (nothing is uploaded until you sign in). Otherwise it shows the most urgent row status.

The **...** menu on a mirrored row offers **Re-upload all, then download**, **Upload this device's copy**, **Download the account's copy...** (your account's items replace their copies here; items only here stay) and, when changes are waiting, **Discard ... queued changes...**.

The first time a kind of data exists both here and in your account, the terminal asks what to do: **Upload & merge** (recommended: adds this computer's items to your account) or **Download cloud copy**. A backup of the local data is saved first.

51.15 AI harness and Fincept MCP

The last two pages decide which AI engine answers the terminal's AI, and let your own AI coding agent use Fincept's data. Both have their own chapter: **Chapter 42, Use Your Own AI** p. 819.



Figure 51.31 AI harness: Fincept AI, or a model you already pay for.



Figure 51.32 Fincept MCP, top part: the endpoint, and one-click install into Claude Code or Codex on this computer.

- **AI harness** — **Fincept AI** (the managed model, paid with credits) or your own Claude Code, Codex, an LLM endpoint or another command-line agent; sessions; scheduled AI tasks; and whether your own command-line sessions may connect to the terminal.
- **Fincept MCP** — the address of Fincept's MCP server, one-click install into Claude Code and Codex on this computer, instructions for other clients, and what your agent gets.

51.16 Reference

Where each setting is kept

Kept in your account (follows you)	Kept on this computer only
General, Currency, Appearance (except Drawing), Notifications (secret fields encrypted), Keybindings, Security's Auto-lock group, data-source connection definitions	Appearance > Drawing, Logging, Usage analytics, Python, Storage & cache, Cloud sync switches, provider keys, data-source passwords, window and layout state

Account settings sync only while **Cloud sync enabled** is on (**Settings** › **Cloud sync**).

Command-line rows that open a page

Type	Opens
`PREF` , `settings` , `prefs` , `preferences` , `config`	Settings, on the last page you used
`general settings`	General
`currency settings`	Currency
`appearance settings`	Appearance
`notification settings`	Notifications
`keyboard shortcuts` (also `hotkeys` , `bindings`)	Keybindings
`logging settings`	Logging
`usage analytics settings`	Usage analytics
`security settings`	Security
`data source settings`	Data sources
`python settings`	Python
`storage and cache`	Storage & cache

Type	Opens
`cloud sync settings`	Cloud sync
`AI harness settings`	AI harness
`Fincept MCP`	Fincept MCP
`light`, `dark`	Switch the theme
`text size`, `density`	Set the text size (13 to 18 px) or the density

Buttons that ask before they act

Page	Button	It asks
Currency	**Reset all markets**	Put every market back on its default currency?
Keybindings	**Reset all to defaults**	Restore every shortcut to its default? All your customisations will be lost.
Security	**Sign out everywhere**	Every machine ... will be signed out ... Continue?
Data sources	**Delete** (a row), **Disable all**, **Delete all**, **Save** with an empty provider key	Delete connection ...? / Disable all ...? / Permanently delete all ...? / Remove the saved ... key from this device?
Storage & cache	**Compact database**	Rewrite the database to release ... of free space?
Storage & cache	**Clear** (any row), **Clear cache** (danger zone), **Delete all**	Each names what will be deleted; **Delete all** asks twice.
Storage & cache	**Execute** (a statement that is not SELECT/EXPLAIN)	This may modify the database ... Continue?
Cloud sync	**Download the account's copy...**, **Discard ... queued changes...**	Each explains what happens to this computer's copy.

Buttons that act without asking: **Flush now**, **Send now**, **Erase unsent data**, **Detect again**, **Reset to default** (Drawing), the **Clear cache** buttons by kind, **Enable all**, **Sync now**, **Test send**.

51.17 For advanced users

Settings follow you, mostly. Change a preference on one computer and your others pick it up the next time they sync — no export or import needed. What stays local is listed in the reference table above: anything that is specific to one machine (graphics, Python, logs, storage) or that holds a secret (provider keys, data-source passwords, broker credentials).

Log levels in practice. Leave **Global log level** at **Info**. When support asks for detail on one area, add a **Per-tag override** at **Debug** or **Trace** for the tag they name, press **Apply & save**, reproduce the problem, then remove the override. **Trace** on everything makes the log grow fast (it rotates at 5 MB).

Privacy in two switches. For the least data leaving your computer: in **Usage analytics**, set **Detail level** to **Structural** (or untick **Share usage analytics**) and press **Save**; in **Logging**, untick **Ship usage telemetry** and press **Apply & save**. Security and trade audit shipping helps support investigate account problems; you may turn it off too.

Freeing disk space safely. Look at **Disk usage** first. **Compact database** releases free space and deletes nothing. The cache categories (Temporary Cache, Market Data Cache and the **Clear cache** buttons) are safe to clear: data is fetched again when needed. Synced categories cannot be cleared here on purpose.

Do it with AI

The AI can open any Settings page and read it for you. On **General**, **Currency** and **Appearance** it can also change a choice when you ask; on **Data sources** and **Storage & cache** it asks your approval before anything that deletes. The pages that hold your alerts, privacy, security and keys are closed to it — **Notifications**, **Logging**, **Usage analytics**, **Security**, **Python**, **Provider keys**, **Cloud sync**, the **SQL console** and **Danger zone**, **AI harness** and **Fincept MCP**: those choices are yours to make. In AI Chat (**Chapter 37, AI Chat** p. 719) try:

- "Open the keyboard shortcuts page."
- "What does the Date format setting do, and what is mine set to?"
- "Which of my data is not synced to my account?"

51.18 Troubleshooting

I changed a setting on one computer but my other computer still shows the old one

Settings sync through your account. Check **Settings** › **Cloud sync** on both computers: **Cloud sync enabled** must be ticked and the status should read **All synced**. Press **Sync now** to pull immediately. Settings marked *This computer* in the tables above never sync.

Auto-lock does nothing

Auto-lock needs a PIN. If **PIN status** says **Not set**, **Save security settings** answers **Saved. Auto-lock stays off until a PIN is configured.** It also pauses while AI tasks are scheduled (**Paused while agent tasks are scheduled.**).

A keyboard shortcut does not work

Open **Keybindings** and type the key in the search box. A red key means two actions share it; give one of them another key. Some keys are taken by your operating system before the terminal sees them.

Test send fails for a notification service

The card shows the service's own error message. Check the token or URL (copy it again from the service), and for email check host, port and an app password. A field with a red edge failed the check: **Fix the highlighted field first.**

Charts flicker or the window draws badly

Open **Settings** › **Appearance** and set **Drawing** to **CPU**, then restart the terminal. If the GPU failed before, the terminal already holds itself on the CPU; **Reset to default** tries the GPU again at the next start.

Python shows "Not found"

Install Python 3.8 or later from python.org (on Windows tick *Add python.exe to PATH*), then press **Detect again**. If it is installed somewhere unusual, pick its `python.exe` under **Use a different Python**.

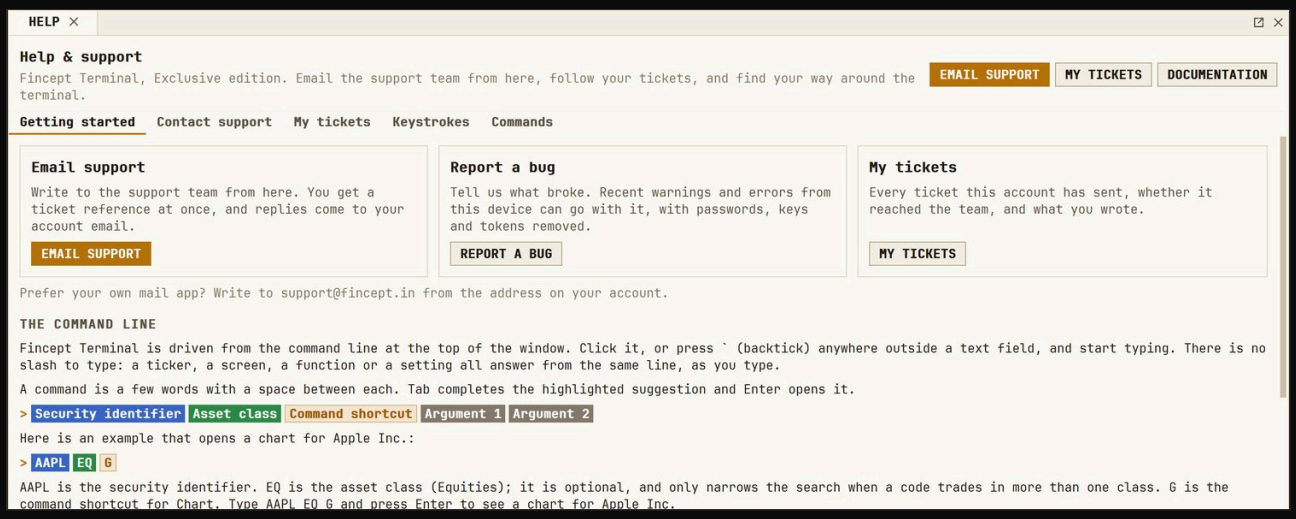
Cloud sync says Plan limit

Your plan holds a limited number of that item (for example watchlists). Remove one, or upgrade your plan (**Chapter 50, Profile, Plan & Billing** p. 920), then press **Sync now**.

CHAPTER 52

Help, Docs and Support HELP

Where to look things up and where to ask. The Help screen, the in-app documentation, the support form and your tickets, the About page with its release notes, and the legal pages.



At a glance

Open it	• Click **HELP** at the right of the top bar • Type `HELP`, `DOCS` or `INFO` in the command line and press **Enter** • **Menu** › **Help** › **Help center**
You need	• Signed in (the support form and My tickets need a session)
Best for	• Finding a shortcut or a screen code • Reporting a problem to the Fincept team • Checking which version you run
Time to learn	10 minutes
Related	**Chapter 53, Keyboard Shortcuts** p. 983, **Chapter 54, Screen Codes** p. 993, **Chapter 55, Troubleshooting & FAQ** p. 1005, **Chapter 2, Install and update** p. 28

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52.1 Screen tour

Help is where you look things up and where you ask the Fincept team. Its header is always on screen; five tabs sit under it.

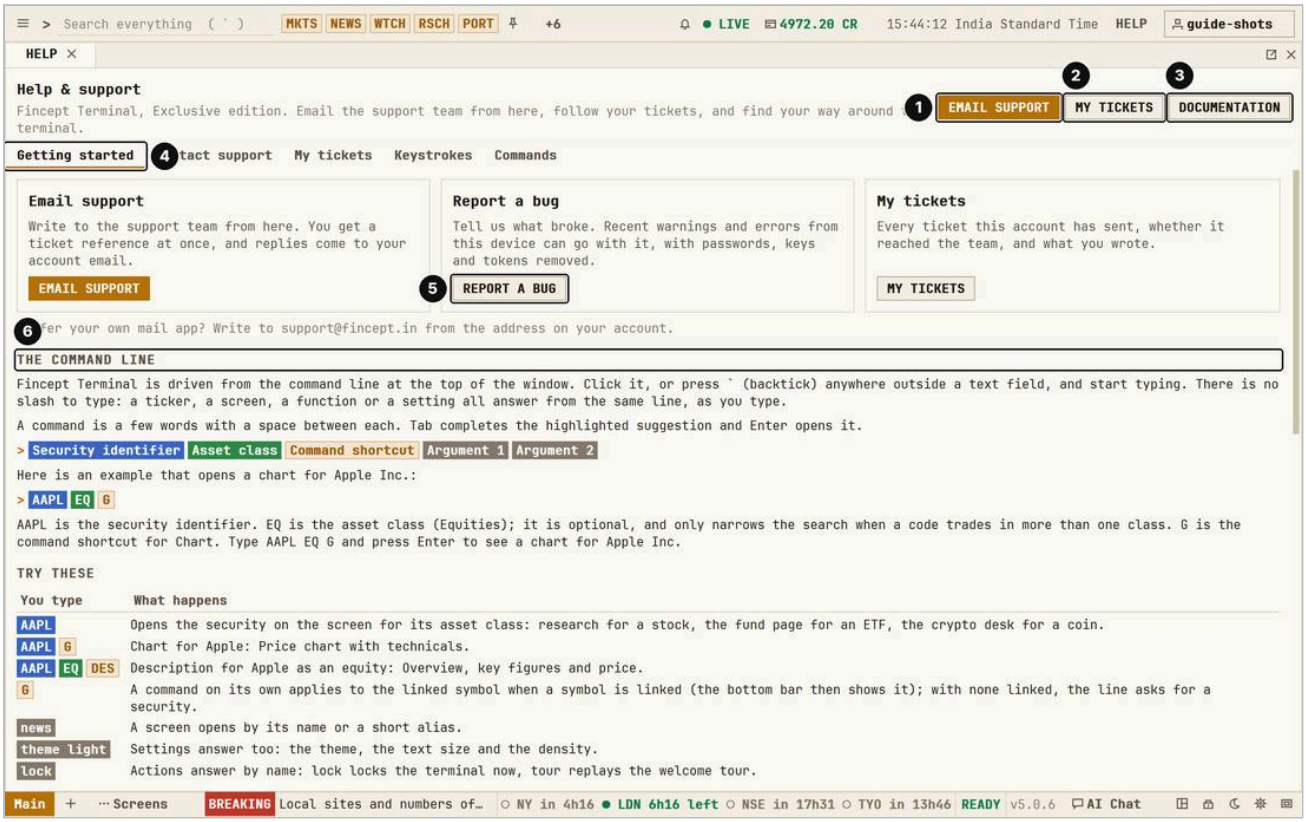


Figure 52.1 The Help screen, Getting started tab.

1. **EMAIL SUPPORT** opens the support form.
2. **MY TICKETS** lists what you have sent.
3. **DOCUMENTATION** opens the Docs screen.
4. Five tabs: **Getting started**, **Contact support**, **My tickets**, **Keystrokes**, **Commands**.
5. Three cards to get help fast.
6. How the command line works, with examples.

The other help pages are reached from the main menu (**Menu** › **Help**): the support form, your tickets, About, Contact us, the terms, the privacy policy, the trademarks page and **Check for updates**.

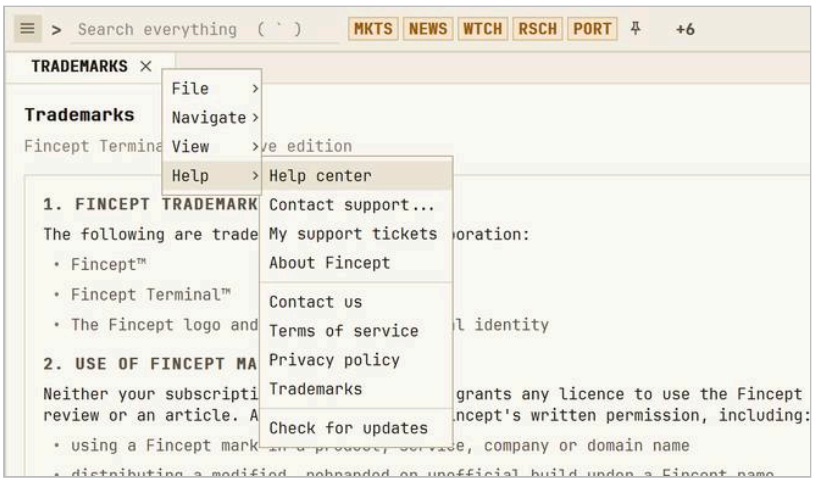


Figure 52.2 The Help menu.

52.2 Quick start

1. Click **HELP** at the right of the top bar.
2. Read **Getting started**: the command line, examples to try and the **Frequently asked questions**. Click a question to open its answer.

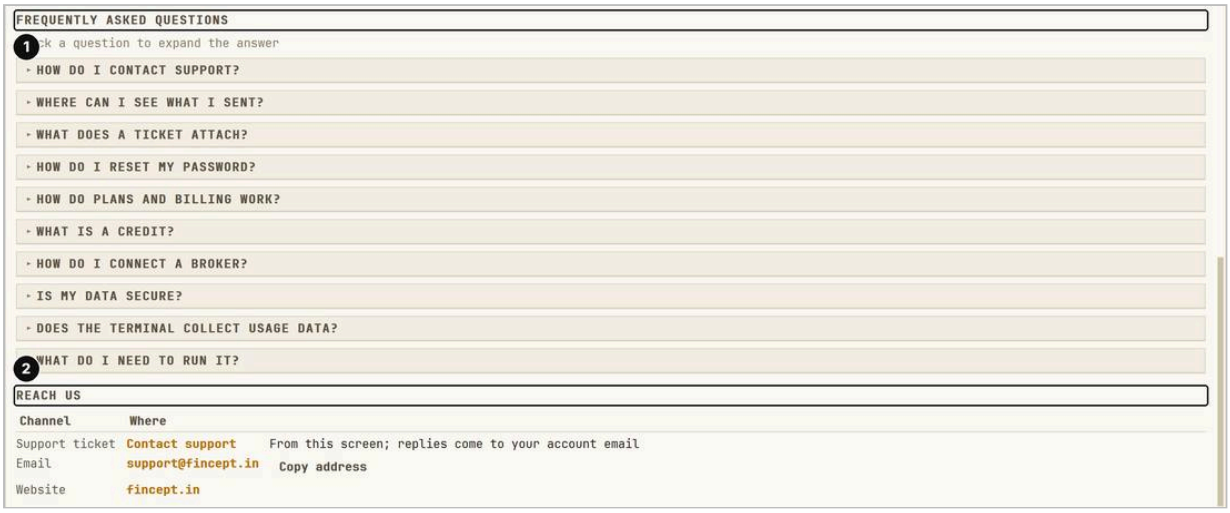


Figure 52.3 Further down Getting started: the frequently asked questions and the ways to reach the team.

1. Click a question to open its answer.
2. A support ticket, the support email address and the website.

3. Click **Keystrokes** to see every keyboard shortcut, or **Commands** for every command and screen code.
4. To ask the Fincept team something, press **EMAIL SUPPORT**, fill in the form and press **SEND TO SUPPORT**.

52.3 Contact support

Use the form to report a problem or ask a question. You get a ticket reference at once, and the reply comes by email to the address on your account.

1. Press **EMAIL SUPPORT** (or choose **Menu** › **Help** › **Contact support…**, or type `contact support` in the command line and press **Enter**; `support` alone opens the Help screen).



Figure 52.4 The support form, with How it works and other ways to reach the team on the right.

1. What it is about.
2. How urgent it is.
3. A short summary, 5 to 200 characters.
4. What happened, in your own words, 10 to 10,000 characters.
5. What happens after you send.

2. Pick a **Type of request** (**Bug report**, **Question**, **Billing**, **Account**, **Feature request**, **Data issue**, **Other**) and a **Priority**.

3. Write a **Subject** and a **Message**. The counters under each field show how many characters you have.

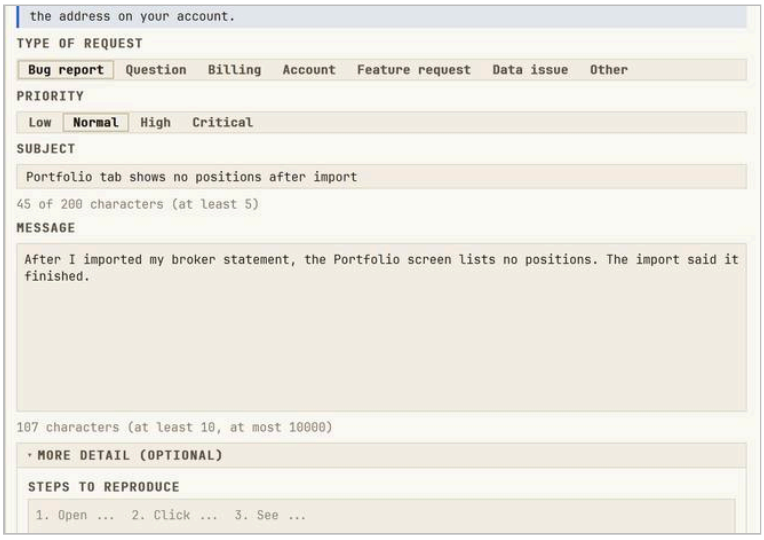


Figure 52.5 A bug report being written.

4. For a bug, open **More detail (optional)** and fill **Steps to reproduce**, **What you expected** and **What happened instead**.

5 Leave **Attach recent warnings and errors from this device** ticked: it helps the team find the problem. Press **Preview log excerpt** or **What will be sent** to see exactly what goes with the ticket.

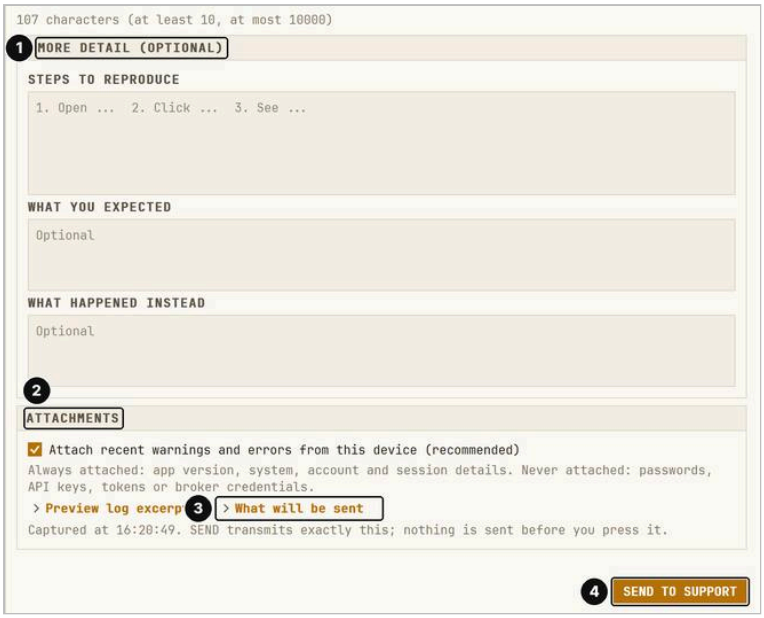


Figure 52.6 The lower half of a bug report: the three optional detail fields, the attachments and the button that sends it.

1. Opens by itself for a **Bug report**.
2. What goes with the ticket. Untick the box to leave the log out.
3. Shows everything the ticket carries, before you send it.
4. Files the ticket. Nothing leaves your computer before you press it.

6 Press **SEND TO SUPPORT**. The form shows your reference, for example *FS-7KQ2MX*, with **View ticket** and **Write another**.

Important

Nothing leaves your computer before you press **SEND TO SUPPORT**, and **What will be sent** shows all of it first. Passwords, API keys, tokens and broker credentials are never attached.

52.4 Follow your tickets

My tickets lists every ticket this account has sent, newest first, with its reference, whether it reached the team, and what you wrote.

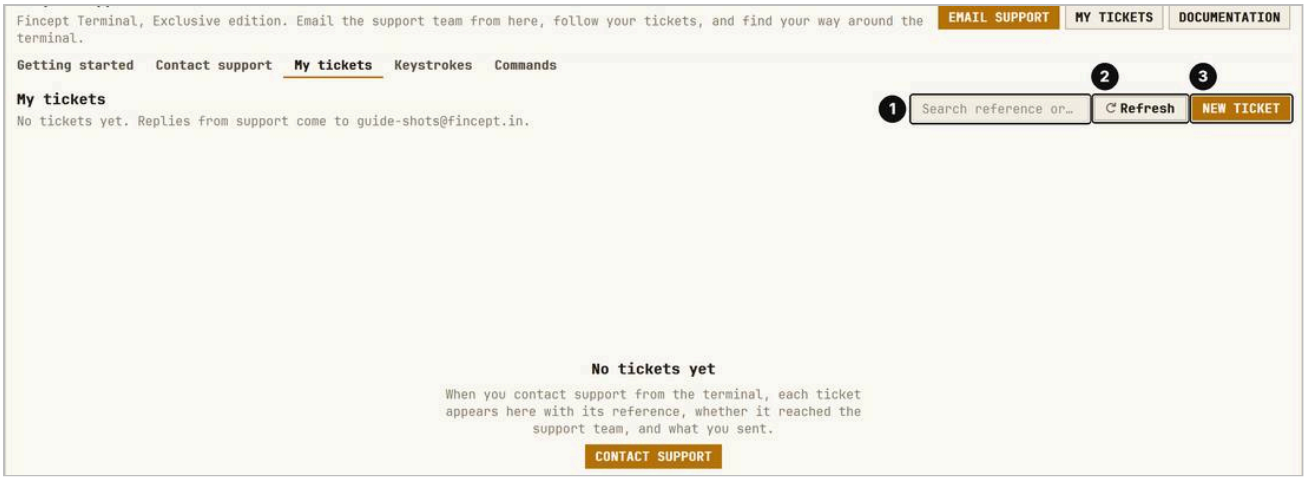


Figure 52.7 My tickets on an account that has not sent one yet.

1. Find a ticket by reference or subject.
2. Reload the list.
3. Write a new ticket.

1. Click **MY TICKETS** (or type `tickets` in the command line).
2. Click a ticket on the left. Its **Status**, **Delivery**, **Replies** and your message show on the right.
3. Press **Copy reference** to quote it in an email, or **Email support about this ticket** to open your mail app with the reference already in it.

52.5 Look up keys and commands

Keystrokes and **Commands** are look-up pages: every key the terminal answers to, and every word the command line understands.

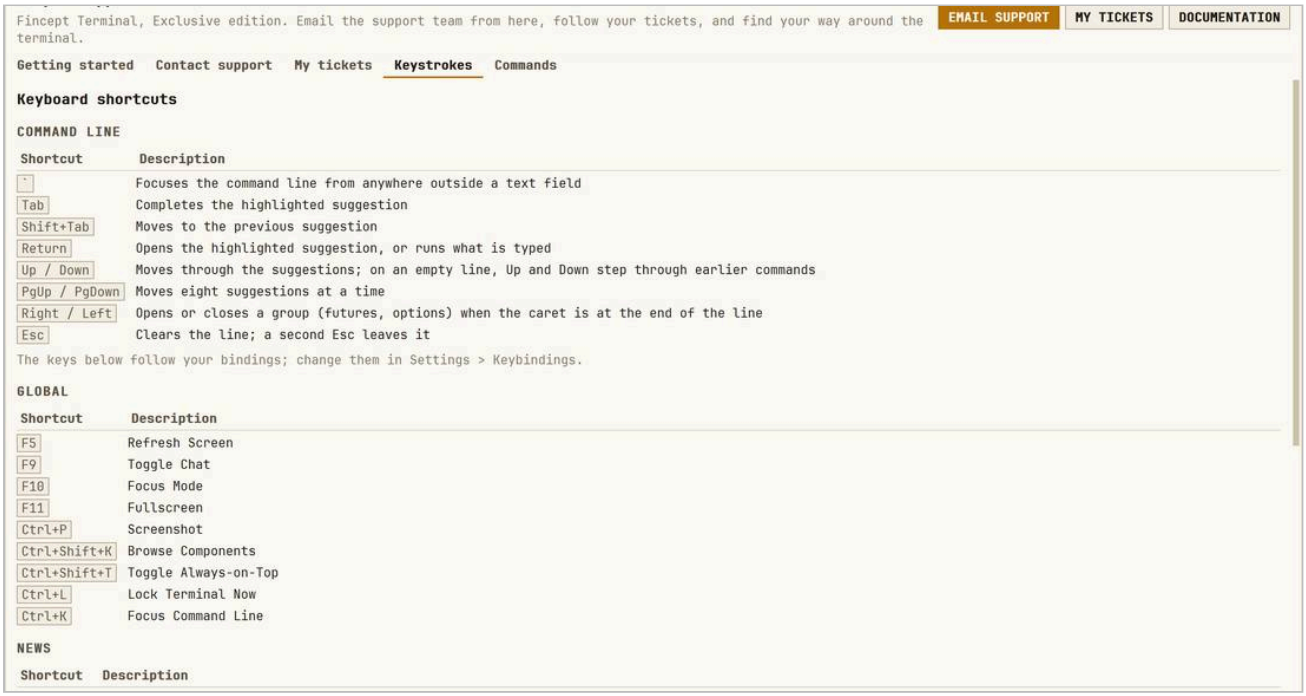


Figure 52.8 Keystrokes: the command line's keys, then every shortcut, following your own bindings.



Figure 52.9 Commands: the security shortcuts. Asset classes, settings words and every screen code follow further down.

For the complete lists see **Chapter 53, Keyboard Shortcuts** p. 983 and **Chapter 54, Screen Codes** p. 993.

52.6 Read the documentation

The Docs screen is a short in-app guide: 36 topics in nine categories in 5.0.6, most of them one per screen, with pictures, control tables and tips by skill level. Not every screen has a topic (Global Economy, Global Data and Relationship Map, for example, have none), and a few topics still show pictures of an older version of their screen. This guide covers every screen.

1. Type `DOCS` in the command line and press **Enter**, or press **DOCUMENTATION** on the Help screen.

2 Click a topic in the contents on the left. Categories can be folded with the arrow before their name.

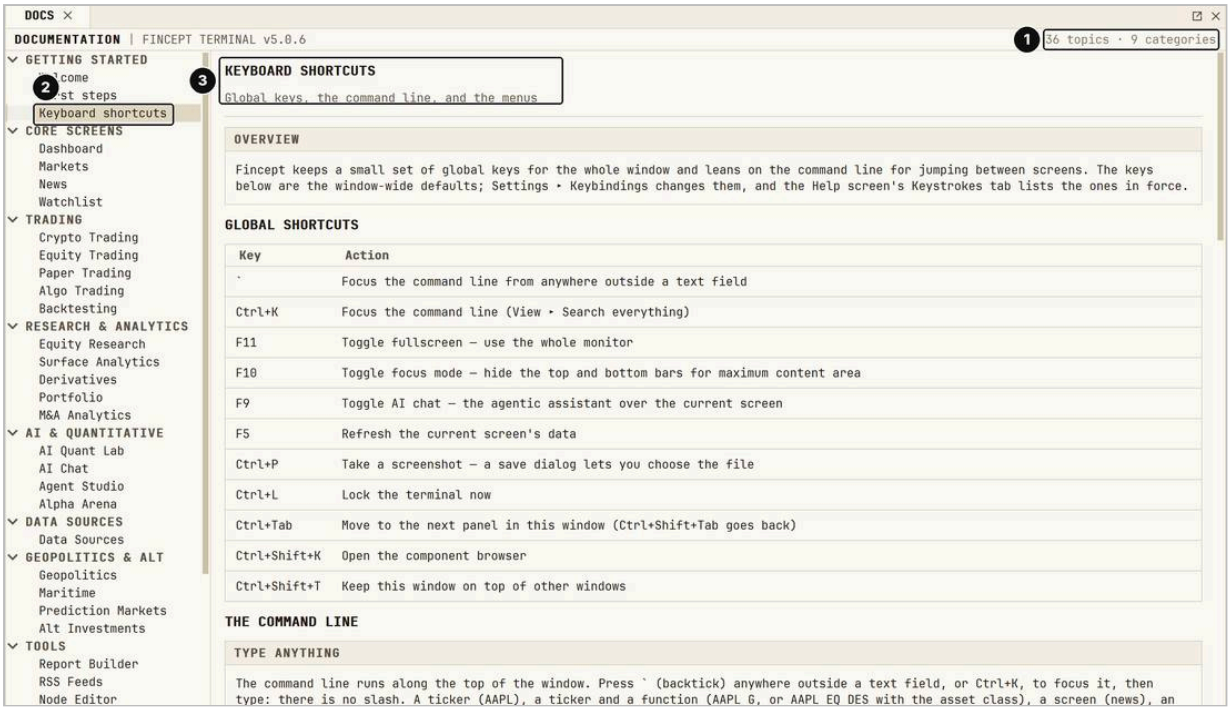


Figure 52.10 The Docs screen open on Keyboard shortcuts.

1. How many topics and categories the docs hold.
2. The contents: click a topic to read it.
3. The topic you are reading, with a one-line summary. Its sections follow below.

52.7 Check your version and read the release notes

The About page (`INFO`) shows which version you run, checks for updates and holds the release notes.



Figure 52.11 About Fincept Terminal: the version you run and the licence.

1. The version you run.
2. Look for a newer version now.
3. What changed in each version.

Below the licence, **Diagnostics** shows **Crash dumps**, the folder on your computer where crash reports are written, with **Open folder** to open it. **Resources** and **Contact** come last.

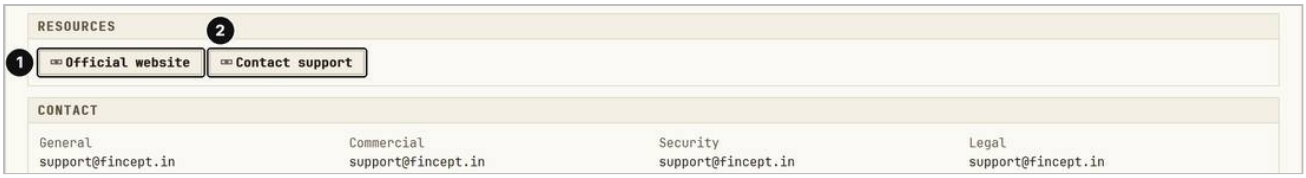


Figure 52.12 The bottom of the About page: Resources and Contact.

1. Opens fincept.in in your browser.
2. Opens the support form.

1. Type `INFO` in the command line and press **Enter** (or **Menu** › **Help** › **About Fincept**).

2. Press **Release notes**. The left column lists every version; the one you run is marked **now**.



Figure 52.13 Release notes.

1. Back to the About page.
2. The version you run.
3. Click a version to jump to it.

3. Press **Back to About** when you are done.

What **Check for updates** does, and how updates install, is in **Chapter 2, Install and update** p. 28.

52.8 Contact us, terms, privacy and trademarks

These pages are in **Menu** › **Help**. **Contact us** holds the same support form, how it works, other ways to reach the team and answers to common issues.

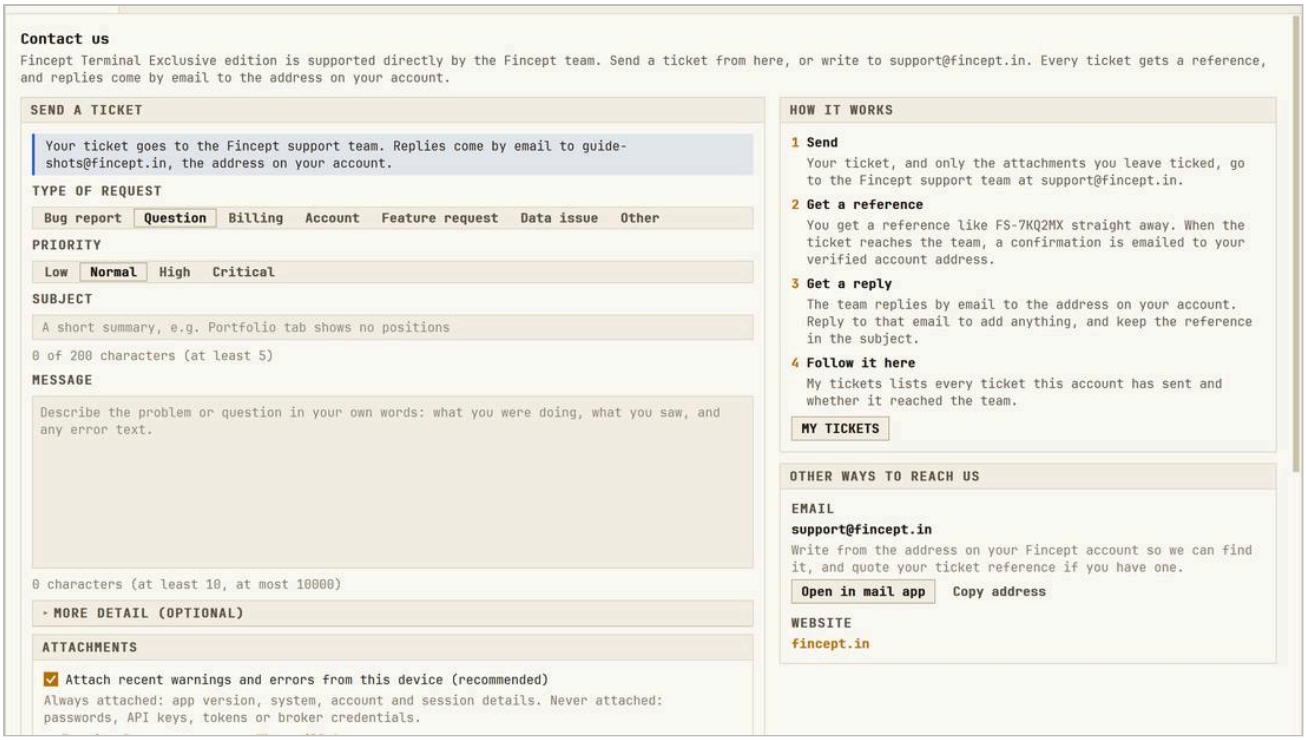


Figure 52.14 Contact us.



Figure 52.15 Terms of service.

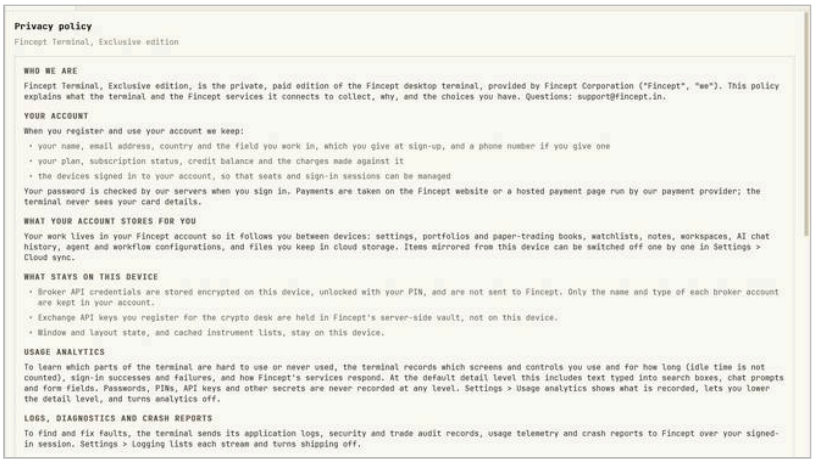


Figure 52.16 Privacy policy.

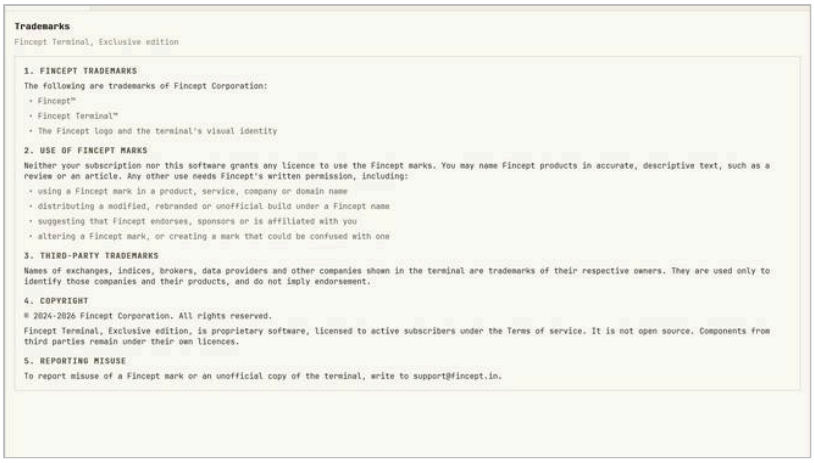


Figure 52.17 Trademarks.

52.9 Reference

Help screen

Item	What it does
EMAIL SUPPORT	Opens the **Contact support** tab with an empty form.
MY TICKETS	Opens the **My tickets** tab.
DOCUMENTATION	Opens the Docs screen.
Getting started tab	Three cards (**Email support**, **Report a bug**, **My tickets**), how the command line works, examples to try, how results are grouped, **First steps**, **Frequently asked questions** and **Reach us**. Signed out, it also shows **Your account** with **Create account** and **Reset password**.
REPORT A BUG (card)	Opens the form with **Bug report** chosen, unless you have already started writing a ticket.
Contact support tab	The support form.
My tickets tab	Every ticket this account has sent.
Keystrokes tab	The command line's keys, then every keyboard shortcut, grouped. The shortcuts follow your own bindings (**Settings** › **Keybindings**); an action with no key reads **Not bound**.
Commands tab	**Commands list** (security shortcuts such as `G` and `DES`, with what each applies to), **Asset classes** (the words that keep one class, such as `EQ`), **Settings** (`theme`, `size`, `density`) and **Screens** (every screen's four-letter code, name, description and key).

Support form

Field	What to enter	Limits
Type of request	**Bug report**, **Question**, **Billing**, **Account**, **Feature request**, **Data issue**, **Other**.	One choice
Priority	**Low**, **Normal**, **High**, **Critical**.	Default **Normal**
Subject	A short summary, for example *Portfolio tab shows no positions*.	5 to 200 characters

Field	What to enter	Limits
Message	What you were doing and what went wrong, in your own words.	10 to 10,000 characters
More detail (optional)	**Steps to reproduce**, **What you expected**, **What happened instead**. Opens by itself for a bug report.	4,000 / 2,000 / 2,000 characters
Attachments	**Attach recent warnings and errors from this device (recommended)**: warning and error lines plus the last lines of the terminal's log, with tokens, passwords and keys removed. **Preview log excerpt** shows them; **What will be sent** shows everything the ticket carries.	Ticked by default
SEND TO SUPPORT	Files the ticket. Nothing leaves your computer before you press it.	

Always attached: the app version, your system, and account and session details. Never attached: passwords, API keys, tokens or broker credentials. The character counter under **Subject** and **Message** shows how many characters you have and the limits.

After **SEND TO SUPPORT** the form says "Sent. Your ticket reference is FS-...", with **View ticket** and **Write another**.

My tickets

Item	What it does
Search box	Filters the list by reference or subject.
Refresh	Reloads the list.
NEW TICKET	Opens an empty form.
Load older tickets	Fetches the next page of older tickets.
Ticket detail	**Status**, **Filed**, **Delivery**, **Replies** (where replies will come from and to), **Your message** and the optional detail fields, **What was attached**, **Copy reference** and **Email support about this ticket** (opens your mail app with the reference quoted).

Delivery states: **Queued** (filed, waiting to be emailed to the team, usually under a minute), **Retrying**, **Emailed to support** (in the team's inbox) and **Not delivered** (write to support@fincept.in and quote the reference). While a shown ticket is waiting, the screen checks it again every 30 seconds.

Docs screen

Item	What it does
Header	**DOCUMENTATION**, the version you run, and how many topics and categories there are.
Contents (left)	Nine categories, each with its topics: **Getting started** (Welcome, First steps, Keyboard shortcuts), **Core screens** (Dashboard, Markets, News, Watchlist), **Trading** (Crypto Trading, Equity Trading, Paper Trading, Algo Trading, Backtesting), **Research & analytics** (Equity Research, Surface Analytics, Derivatives, Portfolio, M&A Analytics), **AI & quantitative** (AI Quant Lab, AI Chat, Agent Studio, Alpha Arena), **Data sources** (Data Sources), **Geopolitics & alt** (Geopolitics, Maritime, Prediction Markets, Alt Investments), **Tools** (Report Builder, RSS Feeds, Node Editor, Code Editor, Excel, Notes, MCP Servers, Data Mapping) and **Account** (Settings, Profile). Click a topic to read it.
Page (right)	The topic: what the screen is for, pictures, tables of controls, tips and **Skill levels** (**Beginner**, **Intermediate**, **Advanced**, **Pro**).

About (INFO)

Panel	Items
Version information	**Fincept Terminal**, the **Exclusive edition** badge, the version you run, **Check for updates**, **Release notes**, the copyright line.
License	The licence name, **Licensed to active subscribers only**, **Redistribution & resale prohibited**, **Reverse-engineering not permitted**, and a link to the terms on fincept.in.
Diagnostics	**Crash dumps**: the folder where crash reports are written (you can select and copy the path), and **Open folder**, which creates the folder if needed and opens it.
Resources	**Official website** (opens fincept.in) and **Contact support** (opens the support form).
Contact	**General**, **Commercial**, **Security** and **Legal**: all support@fincept.in.

Release notes

Item	What it does
Back to About	Returns to the About page.
Installed v…	The version you run.
Versions (left)	Every version in the notes, newest first; **now** marks the one you run and **new** a newer one. Click one to jump to it.
Timeline (right)	Each version with its date and chips (**Latest**, **Installed**, **Newer**), and its notes grouped as Added, Changed, Fixed, Removed and so on.

The notes are built into the terminal, so they open instantly and work offline. They describe the version you run and the ones before it; a newer version's notes come with its update prompt.

Contact us, Terms, Privacy, Trademarks

Page	What it holds
Contact us	The support form (**Send a ticket**), **How it works**, **Other ways to reach us** (email, with **Open in mail app** and **Copy address**, and the website) and **Common issues** with short answers.
Terms of service	The terms for the Exclusive edition: accounts and seats, plans and billing, licence, acceptable use, market data, not investment advice, liability, termination, your data, changes, contact.
Privacy policy	What your account stores, what stays on your device, usage analytics, logs and crash reports, support tickets, AI features, sharing, security and your choices.
Trademarks	Fincept's marks, how they may not be used, third-party marks, copyright and how to report misuse.

52.10 For advanced users

Shortcuts into Help from the command line

These words work in the command line (press `Enter` after typing them):

Type	What happens
`HELP`, `DOCS`, `INFO`	Opens Help, Docs or About.

Type	What happens
`contact support`, `email support`, `report bug`, `bug report`, `help desk`	Opens the support form.
`support`, `shortcuts`	Open the **Help** screen (they are Help's own short names), where **Contact support** is one click away.
`tickets`, `my tickets`, `support tickets`, `ticket status`	Opens **My tickets**.
`tour`, `replay tour`, `onboarding`	Plays the welcome tour again over the current window.

One ticket, one reference

Every report gets one reference (like FS-7KQ2MX) the moment you send it. If the network fails and you press **SEND TO SUPPORT** again, the same report is sent again with the same identity, and the server recognises it: you get "Already received as FS-..." instead of a second ticket. **Write another** starts a new report with a new identity.

What the form attaches, exactly

The form takes a snapshot of what it will attach when it opens (and again if you come back more than a minute later). **What will be sent** shows that snapshot, and **SEND TO SUPPORT** sends exactly it. The log excerpt holds the newest warning and error lines (up to 80, repeats counted once) and the last 40 lines of the terminal's log from this device, with tokens, passwords, keys and other people's email addresses removed, up to about 48 KB.

Do it with AI

The AI can open the support form and fill it in for you. Try: "Report a bug: the Portfolio screen shows no positions after I import a file." The form opens in a window of its own, **CONTACT FINCEPT SUPPORT**, with the subject, message and steps written, then the AI stops. It can never press **SEND TO SUPPORT**: you read the form, change what you want and send it yourself, or press **CANCEL**.

Crash reports

If the terminal closes unexpectedly, a crash report is written to the folder shown under **Diagnostics** on the About page. **Open folder** opens it. Attach the newest file to a ticket, or mention it in your message.

Replay the welcome tour

Type `tour` (or `replay tour`) in the command line and press `Enter`. The welcome tour plays again over the current window, pointing at each part of the screen. What the tour shows is described in **Chapter 4, Your first ten minutes** p. 57.

52.11 Troubleshooting

The support form says I must sign in. The form needs a session to file a ticket. Sign in, or write to support@fincept.in from any mail app.

SEND TO SUPPORT shows a message and nothing is sent. A field is too short or too long. The subject needs 5 to 200 characters and the message 10 to 10,000; the counter under each field shows where you are, and the cursor jumps to the field to fix. Fix it and press **SEND TO SUPPORT** again.

My ticket shows "Not delivered". The ticket was filed but could not be emailed to the team. Write to support@fincept.in and quote the reference, or use **Email support about this ticket**.

My tickets says "Could not load your tickets". Check the connection, then press **Try again** or **Refresh**.

The release notes do not mention a newer version. The notes describe the version you run and older ones. To see what is new, use **Check for updates** on the About page; the update prompt shows the new version's notes.

Check for updates says I am up to date, but I heard of a newer version. Releases reach users in stages. Try again later, or see **Chapter 2, Install and update** p. 28.

PART IX

Reference

Look-up tables for every keyboard shortcut and screen code, troubleshooting for common problems, and a glossary of terms.

53 Keyboard Shortcuts

54 Screen Codes

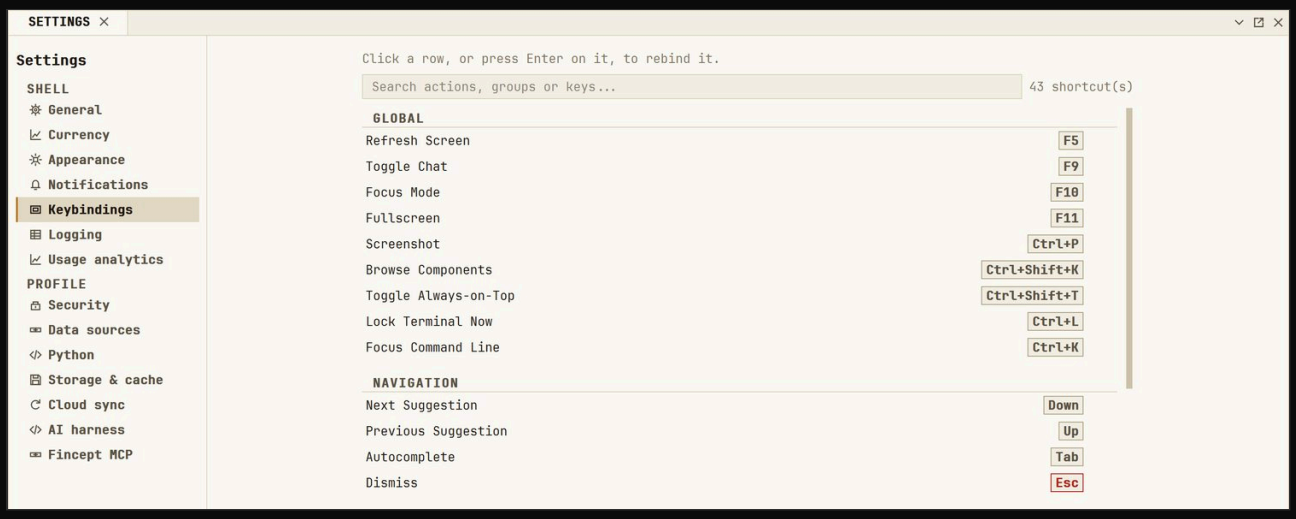
55 Troubleshooting & FAQ

56 Glossary

CHAPTER 53

Keyboard Shortcuts

Every keyboard shortcut in the terminal, grouped by where it works, and how to change the ones you can change.



At a glance

Open it	• Click **HELP** in the top bar, then **Keystrokes** • **Settings** › **Keybindings** to change them • Type `keys` in the command line and pick **Keyboard shortcuts**
You need	• Nothing: shortcuts work on every plan
Best for	• Working without the mouse • Finding what a key does
Time to learn	5 minutes
Related	**Chapter 6, The Command Line** p. 89, **Chapter 5, The Terminal Window** p. 70, **Chapter 51, Settings** p. 932

In this chapter

53.1	How shortcuts work	984
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53.1 How shortcuts work

The terminal has two kinds of keyboard shortcut.

- **Terminal keys** work wherever you are: on any screen, in any panel, in a floating panel window. `F5` refreshes, `F10` hides the bars, `Ctrl` + `K` jumps to the command line. You can change these in **Settings** › **Keybindings**.
- **Screen keys** work only while the keyboard focus is inside one screen. For example `J` and `K` move through headlines on News. Most of these are fixed.

To see the keys as they are bound right now, click **HELP** in the top bar and open the **Keystrokes** page. The page reads your own bindings, so it changes when you change a key.

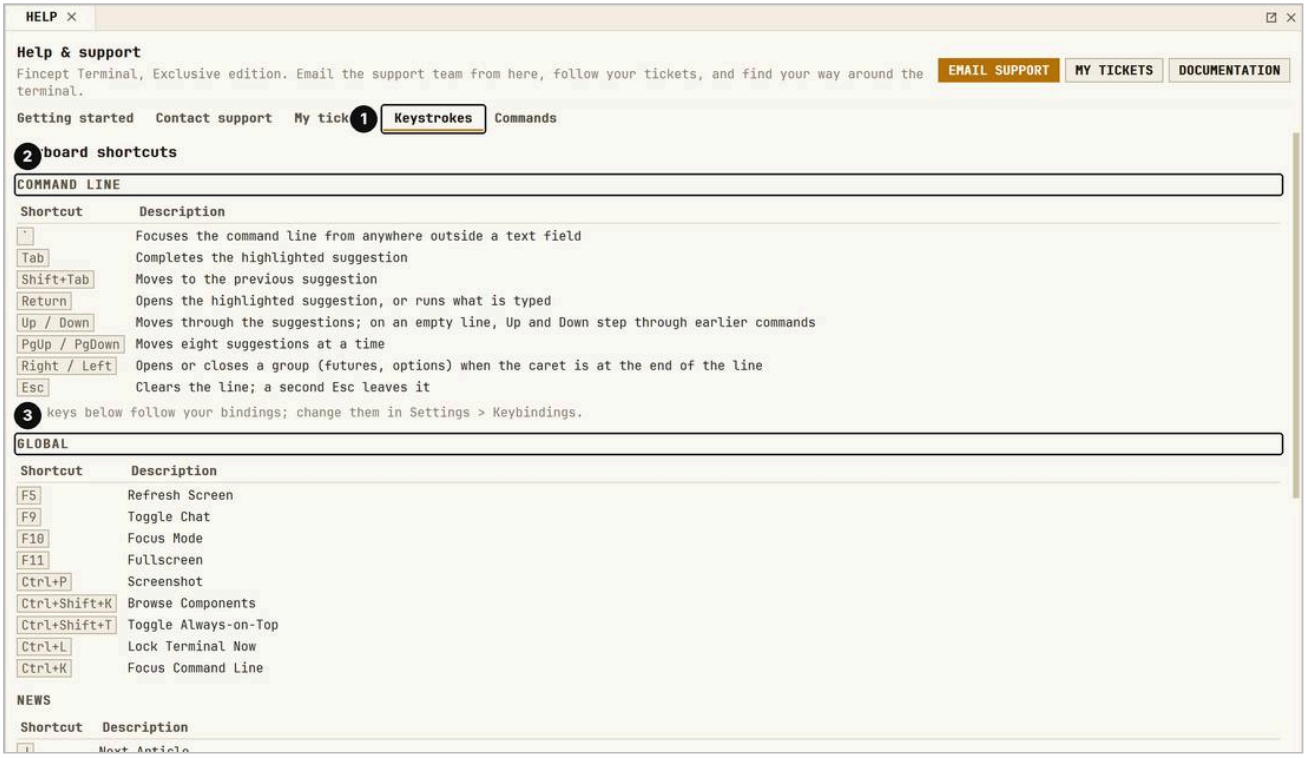


Figure 53.1 Help > Keystrokes lists the command line's keys and every terminal key as it is bound now.

1. The **Keystrokes** page of Help.
2. The command line's own keys (fixed).
3. The terminal keys, as you have bound them.

On a Mac

Every `Ctrl` key in this chapter is the Command key on a Mac: `Cmd` + `K` for the command line, `Cmd` + `L` to lock, `Cmd` + `P` for a screenshot, `Cmd` + `1` … `Cmd` + `9` for windows. `Alt` is the Option key. Settings and Help show every key with the Mac's own symbols. Three things to know:

- `Cmd` + `Tab` and `Cmd` + `Shift` + `Tab` belong to macOS (they switch apps), so **Next Panel** and **Previous Panel** never reach the terminal with their default keys. In **Settings** › **Keybindings**, give them other keys.
- Many Mac keyboards need `Fn` for `F5`, `F9`, `F10` and `F11`, and macOS may use some F keys itself.
- On a price chart, the Ctrl keys work with Command or Control, and the key you hold while drawing a straight line is Control.

53.2 Quick start

Five keys to learn first:

1. Press `` ` `` (the backtick key, left of `1`) to jump to the command line from anywhere. `Ctrl` + `K` does the same.
2. Type `NEWS` and press `Enter` to open a screen by its code.
3. Press `F5` to refresh the panel you are working in.
4. Press `F10` to hide the top and bottom bars and give the panels the whole window. Press `F10` again to bring them back.
5. Press `F9` to open the AI Chat beside your panels.

53.3 Change a shortcut

Do this when a key clashes with something on your computer, or when you want a key you remember better.

1. Open **Settings** › **Keybindings**. (Or type `keys` in the command line and pick **Keyboard shortcuts**.)

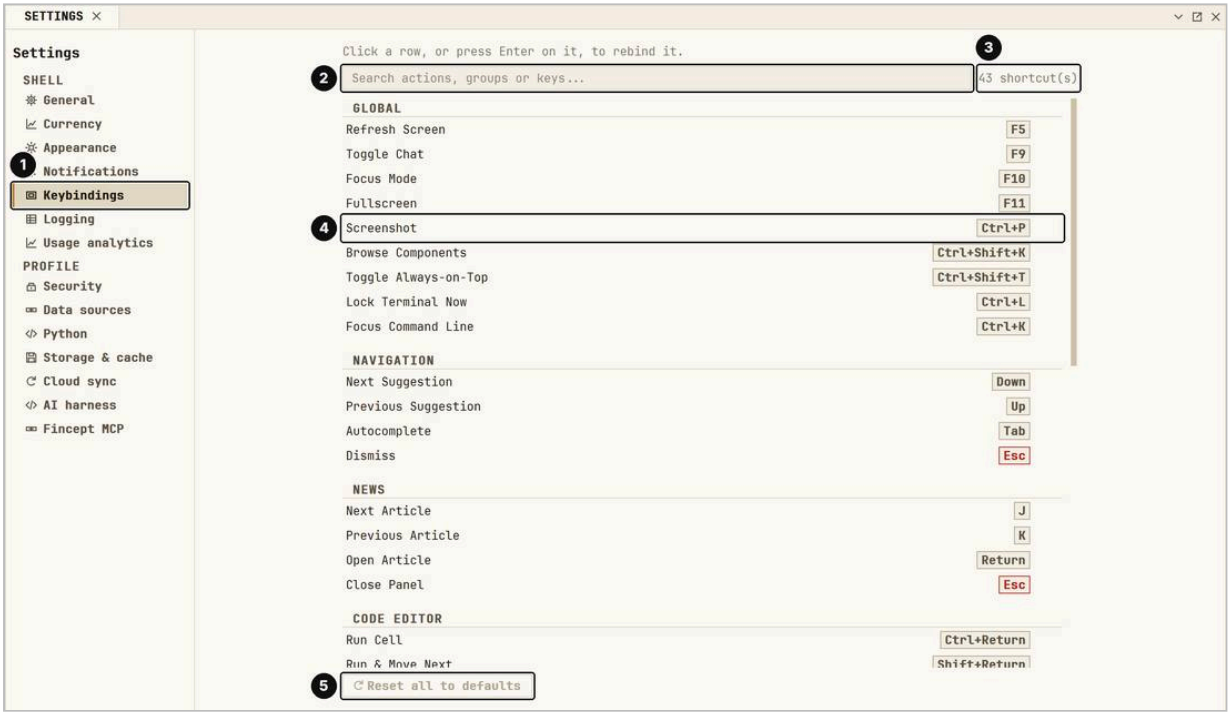


Figure 53.2 Settings > Keybindings. Each row is one action; its key is on the right.

1. The **Keybindings** page.
2. Search by action, group or key. Type `Ctrl+L` to see what uses that key.
3. How many shortcuts there are (and how many you changed).
4. Click a row, or press `Enter` on it, to rebind it.
5. **Reset all to defaults** puts every key back (it asks first).

2. Click the row of the action you want to change, or move to it and press Enter. The **Rebind** window opens.



Figure 53.3 The Rebind window waits for the new key combination.

1. The key now, and the default.
2. **Unbind** removes the shortcut.

3. Press the new key combination, for example Ctrl + Shift + S.

4. If the key is already used, the window says **Already used by** and the other action's name, and a box **Remove it from** that action is ticked: **Apply** then moves the key here. Untick it to keep the key on both (then neither may work), or press another combination.

5. Click **Apply**.

Rules for a new key:

- A letter, digit or Space needs Ctrl, Alt or Shift with it. Keys such as F1 to F12, Home or Page Up work alone.
- Ctrl + C, Ctrl + V, Ctrl + X, Ctrl + A and Ctrl + Z are allowed, but the window warns you: in text fields they also copy, paste, cut, select all and undo.
- Esc cancels the window. Backspace removes the shortcut, as does the **Unbind** button.

A changed row shows a small dot; hover it to see the default. The round arrow at the end of a changed row restores that one key. A key used by two actions shows in red, and its tooltip says **Also bound to** the other action (both may fail to fire). Your bindings are saved to your account, so they follow you to every computer you sign in on.

> **Careful**
>
> **Reset all to defaults** removes every change you made, on this computer and on your account. It asks before it does anything. The button is greyed out while no key has been changed.

53.4 Reference

Terminal keys you can change

These are the defaults. The names in the first column are the names Settings > Keybindings uses.

Action	Default key	What it does
Refresh Screen	F5	Asks the panel you are working in for fresh data. Also ☰ > View > **Refresh screen**.
Toggle Chat	F9	Opens the AI Chat screen as a panel beside the others (or brings it forward if it is open).
Focus Mode	F10	Hides the top bar and the bottom bar. An **Exit focus** button appears in the top-right corner.
Fullscreen	F11	Puts the window in full screen, and back.
Screenshot	Ctrl + P	Takes a picture of the window and asks where to save it (a PNG named `fincept_` and the date and time).
Focus Command Line	Ctrl + K	Puts the cursor in the command line. The backtick ` does the same, outside text fields.
Browse Components	Ctrl + Shift + K	Opens the **Component Browser**, a searchable gallery of every screen.
Toggle Always-on-Top	Ctrl + Shift + T	Keeps this window above other programs, and back.
Lock Terminal Now	Ctrl + L	Locks the terminal at once. It works even while a dialog is open.

Windows and panels

Settings > Keybindings lists these under **Windows**.

Action	Default key	What it does
Focus Window 1 … 9	Ctrl + 1 … Ctrl + 9	Brings terminal window 1 to 9 to the front (in the order they were opened).
Next Panel	Ctrl + Tab	Moves the focus to the next panel in this window.
Previous Panel	Ctrl + Shift + Tab	Moves the focus to the previous panel.
Next Window	Ctrl + Alt + Tab	Brings the next terminal window to the front (when two or more are open).
Previous Window	Ctrl + Alt + Shift + Tab	Brings the previous terminal window to the front.
New Window (Next Monitor)	Ctrl + Shift + N	Opens a new terminal window. With more than one monitor it asks which one.
Move Window to Monitor 1 … 9	Ctrl + Shift + 1 … Ctrl + Shift + 9	Moves this window to monitor 1 to 9 (only with more than one monitor).

News

These keys work while the focus is inside the News screen. You can change them in Settings > Keybindings under **News**.

Action	Default key	What it does
Next Article	J	Selects the next headline.
Previous Article	K	Selects the previous headline.
Open Article	Enter	Opens the selected story's web page in your browser.

Action	Default key	What it does
Close Panel	Esc	Closes the story panel, or the side drawer.

Code Editor

Change these in Settings > Keybindings under **Code Editor**.

Action	Default key	What it does
Run Cell	Ctrl + Enter	Runs the cell you are typing in.
Run & Move Next	Shift + Enter	Runs the cell and moves to the next one.
Rename Cell	F2	Renames the cell selected in the cell list.
(fixed)	Ctrl + S	Saves the notebook.

Only keys you press yourself run code: the AI cannot run a cell with these keys.

The command line

These keys belong to the command line and cannot be changed.

Key	What it does
`	Puts the cursor in the command line from anywhere outside a text field, while the main terminal window is active.
Up / Down	Moves through the suggestions. On an empty line they step through commands you ran before.
Page Up / Page Down	Moves eight suggestions at a time.
Tab	Completes the highlighted suggestion into the line.
Shift + Tab	Moves to the previous suggestion.
Enter	Opens the highlighted suggestion, or runs what you typed.
Shift + Enter	Opens the highlighted chart, news or data series in a window of its own.
Right / Left	Opens or closes a group (futures months, option expiries and strikes), with the cursor at the end of the line. On a strike they pick the call or the put.
Esc	Clears the line; a second Esc leaves it.

Note

Settings > Keybindings also lists a **Navigation** group (Next Suggestion, Previous Suggestion, Autocomplete, Dismiss). The command line uses the fixed keys above and does not read those four bindings, so changing them does nothing. Because **Dismiss** and News **Close Panel** are both Esc by default, both rows show the "used twice" mark from the start; it is harmless.

AI Chat

Where	Key	What it does
AI Chat screen	Enter	Sends your message.

Where	Key	What it does
AI Chat screen	Shift + Enter	Starts a new line in the message.
AI Chat screen	Esc	Stops the answer while it is still being written.
AI Chat screen	Ctrl + N	Starts a new chat.
AI Chat screen	Ctrl + B	Collapses or opens the list of chats on the left.
AI Chat panel (bottom-right button)	Enter / Shift + Enter	Sends / starts a new line.
AI Chat panel	Esc	Closes the panel.
AI Chat panel	Ctrl + L	Locks the terminal, as everywhere: **Lock Terminal Now** wins. Only if you move Lock Terminal Now to another key does Ctrl + L in the message box start a new chat (the old one stays in your history).
Algo Trading strategy chat and idea box	Ctrl + Enter	Sends.

Price charts

Every candlestick chart in the terminal (Equity Research, chart windows, dashboard charts) has these keys while it has the focus. Press ? on a chart to see the list there.

Key	What it does
Ctrl + Z / Ctrl + Y	Undo / redo a drawing change (Ctrl + Shift + Z also redoes)
F3	Repeat the last drawing tool
Delete or Backspace	Delete the selected drawing
Enter	Finish a polyline
Esc	Stop drawing, close a menu or dialog, leave replay
Ctrl **(while drawing)**	Keep the line horizontal or vertical
Alt + T	Trend line
Alt + H	Horizontal line
Alt + V	Vertical line
Alt + F	Fibonacci retracement
Alt + R	Rectangle
Alt + C	Cross line
Alt + X	Text
Alt + P	Pitchfork
Alt + M	Ruler
Ctrl + I	Insert a study (indicator)
Ctrl + Shift + D	Data Window

Key	What it does
Ctrl + G	Go to date
Ctrl + Plus / Ctrl + Minus	Zoom in / out
Left / Right	Scroll the chart (in replay: step back / forward)
Home / End	First bar / current bar
Space	Replay: play / pause
Shift + Right	Replay: jump forward past quiet bars
?	Show this list on the chart

Other screens

These keys work while the focus is inside the screen named. They are fixed.

Three of them are also terminal keys: Ctrl + 1 ... Ctrl + 8 (**Focus Window 1 ... 8**), F5 (**Refresh Screen**) and F9 (**Toggle Chat**). While the focus is inside that screen the terminal cannot tell which one you mean, so the key does nothing. Use the screen's buttons instead, or give the terminal action another key (or none) in Settings › Keybindings ; the screen key then works. Outside that screen the terminal key works as usual.

Screen	Key	What it does
Derivatives	Ctrl + 1 ... Ctrl + 8	Opens page 1 to 8: Chain, Vol surface, Vol analysis, Strategy lab, Risk, Positioning, Events, Pricers. Clashes with Focus Window 1 ... 8 (see above).
Derivatives	Ctrl + R	Recomputes the page you are on.
Mission Control	F2	Pauses or resumes the selected agent.
Mission Control	F5	Runs the selected agent now. Clashes with Refresh Screen (see above).
Mission Control	F6	Puts the cursor in the console's message line.
Mission Control	F8	Stops the selected agent's run.
Mission Control	Shift + F8	Stops every run in flight (it asks first).
Mission Control	F9	Starts a new mission. Clashes with Toggle Chat (see above).
Node Editor	Ctrl + Z / Ctrl + Y	Undo / redo
Node Editor	Delete or Backspace	Deletes the selected nodes and connections
Node Editor	Ctrl + A	Selects everything
Node Editor	Ctrl + C / Ctrl + X / Ctrl + V	Copy / cut / paste nodes
Node Editor	Ctrl + D	Duplicates the selected nodes
Node Editor	F	Fits the whole workflow in view
Node Editor	Esc	Cancels a connection you are drawing
Excel	Ctrl + C / Ctrl + X / Ctrl + V	Copy, cut and paste cells (while the grid has the focus)

Screen	Key	What it does
Report Builder	Ctrl + B	Collapses or opens the components panel
Report Builder	Ctrl + Shift + B	Collapses or opens the properties panel
Report Builder (a block selected)	Up / Down, Ctrl + Shift + Up / Ctrl + Shift + Down, Ctrl + D, Delete, Enter, Esc	Select, move, duplicate, delete or edit blocks; see **Chapter 45, Report Builder** p. 858
Portfolio (Positions, Lots & Income, Transactions)	/	Puts the cursor in the tab's filter box
Portfolio filter box	Esc	Clears the filter; a second Esc goes back to the table
Economic Calendar (month view)	Arrow keys, Enter	Move from day to day (a week at a time with Up and Down); Enter lists that day's releases under the grid
Backtesting result charts	Plus / Minus, Left / Right, Home, Esc	Zoom, scroll, back to the whole range, clear the selection
Crypto Trading	Ctrl + Enter	Presses the order ticket's submit button
Sovereign Bonds (a bond's detail)	Esc or the system's Back key (Alt + Left on Windows)	Goes back to the list
M&A Analytics tables	Ctrl + C	Copies the selected rows
Chart, news and data windows opened from the command line	Ctrl + W (also Ctrl + F4 on Windows)	Closes the window
Notices panel (the bell)	Esc	Closes the panel
Agent Studio chat	Enter / Shift + Enter	Sends / starts a new line

Mouse shortcuts

Do this	Where	What happens
Double-click	A panel's tab title	Renames the panel in place.
Right-click	A panel's tab	The panel menu: rename, duplicate, float, link group, new window, close.
Click	A panel's link square	Moves the panel to the next link group.
Right-click	A panel's link square	The link-group menu: unlink, pick a group, rename or recolour a group.
Click	A symbol in the top bar's price strip	Sends the symbol to link group A.
Double-click	A symbol in the price strip	Opens the symbol.
Drag	A symbol (strip, watchlist, tables)	Drop it on a panel to load it there, or on the strip to pin it.
Right-click	A quick-launch chip (MKTS, NEWS ...)	Remove it, or edit the quick-launch list.
Right-click	A workspace tab at the bottom	Switch, save, rename or delete the workspace.
Mouse wheel	The workspace tabs	Scrolls the tabs when there are more than fit.

See **Chapter 5, The Terminal Window** p. 70 for each of these in pictures.

53.5 For advanced users

- **Keys follow you.** Bindings are saved to your account. When you sign in on another computer the terminal applies them as soon as your settings arrive.
- **A key held down fires once.** The terminal's keys never repeat while held, so holding Ctrl + L locks once.
- **Floating windows.** Terminal keys also work inside a floating panel window, and act on the terminal window that panel belongs to.
- **Lock works everywhere.** Ctrl + L is the only key that works while a dialog has the focus. Every other terminal key acts on the window you are in.
- **Unbound keys.** An action with no key shows **unbound** in Settings and **Not bound** in Help. It still works from the menu or the command line: type its name, such as `fullscreen`, `lock` or `screenshot`.
- **Two actions on one key.** Settings marks a key used twice with a warning: both may fail to fire. Give one of them another key. Some screen keys clash with terminal keys from the start: see **Other screens** above.

53.6 Troubleshooting

The backtick key does not jump to the command line

The backtick works only outside text fields, so it can still be typed in a note or a chat, and only while the main terminal window is active (not from a floating panel window). Click an empty part of a panel first, or press Ctrl + K. On some keyboard layouts the key left of 1 is not a backtick; use Ctrl + K.

A key does nothing

Check Settings > Keybindings: the key may be unbound or moved to another action (search for the key, for example F9). Screen keys work only while the focus is inside that screen: click inside it first. In Derivatives and Mission Control, Ctrl + 1 ... Ctrl + 8, F5 and F9 clash with terminal keys and do nothing (see **Other screens**).

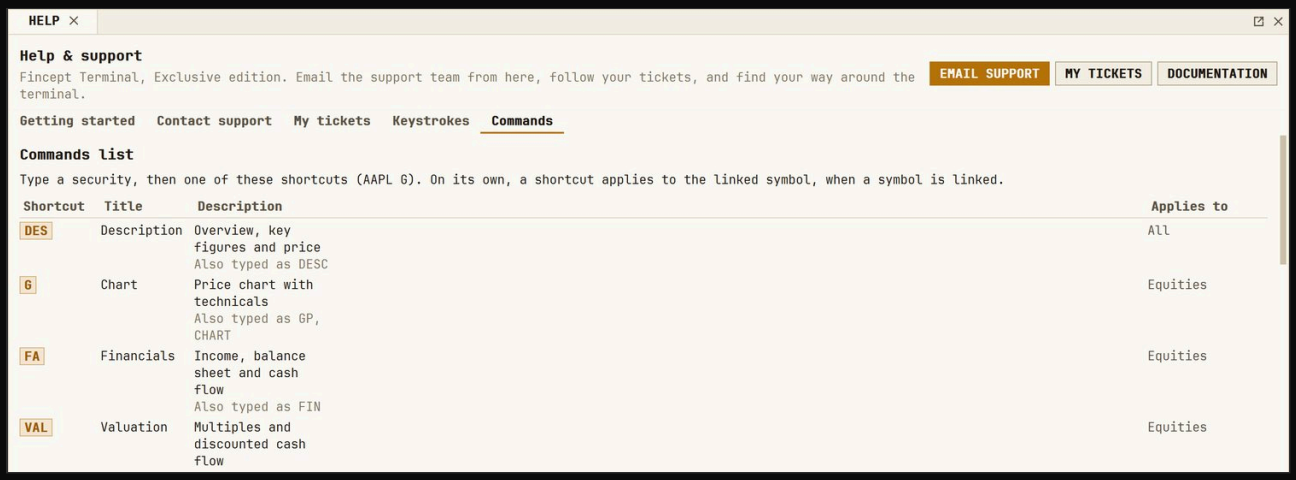
F11 or Ctrl+Alt+Tab does something else

Your operating system may use that key. Rebind the terminal action in Settings > Keybindings.

CHAPTER 54

Screen Codes

Every screen of the terminal with its four-letter code, the other words that open it and what it is for, plus every command form the command line understands, on a few pages you can keep open beside the terminal.



At a glance

Open it	• Type a code in the command line at the top and press **Enter** • Click **HELP** in the top bar, then the **Commands** tab
You need	• Signed in on any paid plan
Best for	• Looking up a code you forgot • Learning the words the command line understands
Time to learn	5 minutes to skim, then keep it as a reference
Related	**Chapter 6, The Command Line** p. 89, **Chapter 5, The Terminal Window** p. 70, **Chapter 53, Keyboard Shortcuts** p. 983

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54.1 How to read this chapter

Every screen of Fincept Terminal has a **screen code**: four capital letters such as `MKTS` for Markets or `PORT` for Portfolio. Type the code in the command line at the top of the window and press `Enter`, and that screen opens.

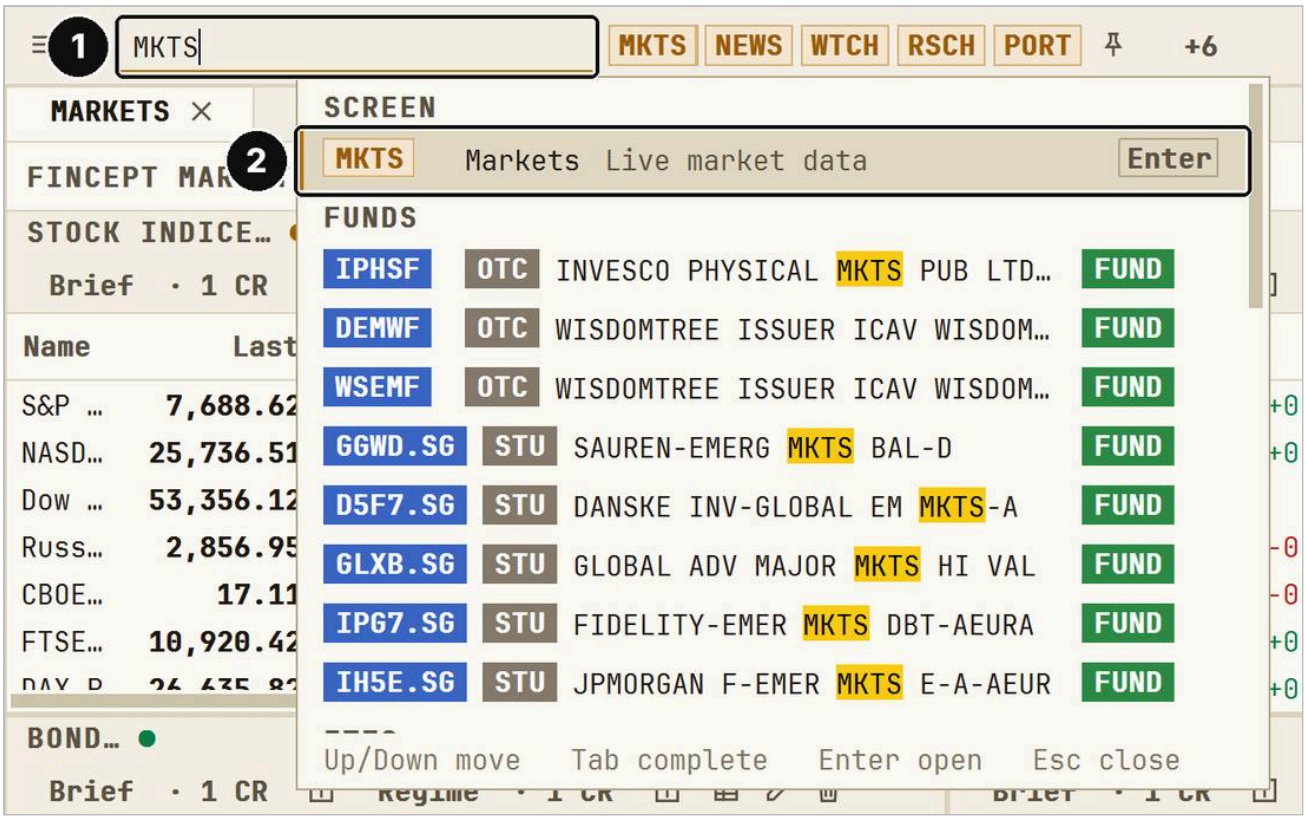


Figure 54.1 Typing a code. The command line shows the screen it opens before you press Enter.

1. The command line. Type a code here.
2. The screen the code opens. Press `Enter` to open it.

You do not have to remember codes. The command line also accepts:

- the screen's full name, such as `markets` or `equity research`;
- any of its **other words** (aliases), such as `home` for the Dashboard or `options` for Derivatives;
- a few words of what you want: typing `vol surface` or `cables` lists the screens that match, and you pick one.

Capital letters do not matter: `mkts`, `Mkts` and `MKTS` all open Markets.



Figure 54.2 `options` is one of Derivatives' other words, so Derivatives leads the list.

1. The screen the word opens, with its code (DERV).

> **Note**
>
> A code always opens the same screen. Other words are unique too: no two screens share an alias, so a word never opens a different screen depending on what else matches.

The same list is inside the terminal: click **HELP** in the top bar and choose the **Commands** tab.



Figure 54.3 The Commands tab of Help. It starts with the commands you type after a security (DES, G, FA …); every screen code, with its description and key, follows further down the page.

54.2 Quick start

1. Click the command line at the top of the window, or press `` ` `` (the backtick key, left of `1`).
2. Type `NEWS`.
3. Press `Enter`. The News screen opens and fills the window.
4. Type `MKTS RIGHT` and press `Enter`. Markets opens to the right of News, and both stay on screen.

Tip

A plain code replaces the panels on screen with that one screen. Add a placement word (`RIGHT` , `LEFT` , `UP` , `DOWN` , `TL` , `TR` , `BL` , `BR` , `TAB`) to keep what is already open. **§6.6 Open screens side by side** p. 97 explains every placement word.

54.3 Every screen and its code

The screens are grouped as they are in the menu (☰ > **Navigate**) and in the **Screens** button at the bottom left. The last column says where this guide explains the screen.

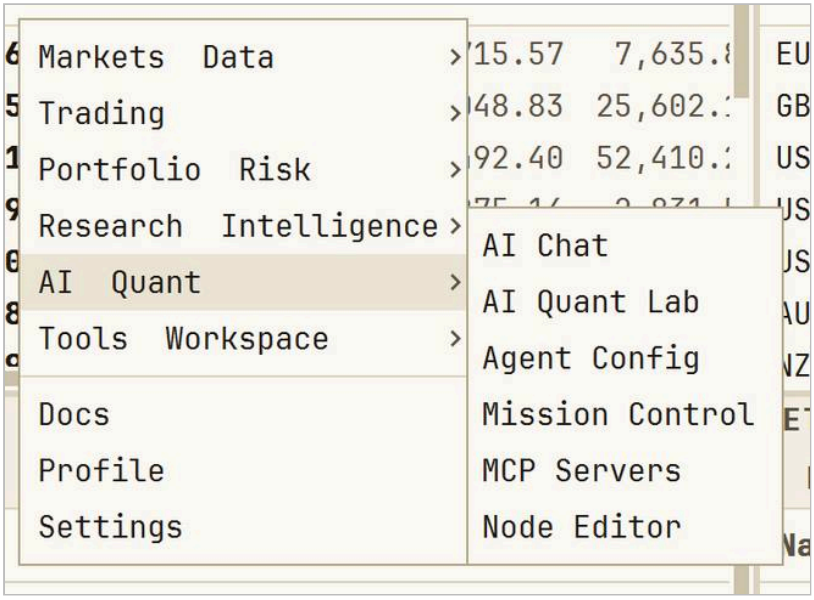


Figure 54.4 The Screens button at the bottom left lists the same groups; here AI & Quant is open (in 5.0.6 the menu drops the & from the group names).

Markets & Data

Code	Screen	Other words that open it	What it is for
`DASH`	Dashboard	`dash` , `home` , `overview` , `main`	Your board of tiles: prices, news, charts and widgets in one view. **Chapter 8, Dashboard** p. 123
`MKTS`	Markets	`mkts` , `markets` , `market` , `live`	Live prices for indices, currencies, commodities, bonds, ETFs, crypto and country boards. **Chapter 9, Markets** p. 160
`WTCH`	Watchlist	`watch` , `watchlist` , `wl`	Your own lists of symbols with live prices. **Chapter 10, Watchlist** p. 172
`NEWS`	News	`news` , `headlines`	The financial news feed, filters and monitors. **Chapter 11, News** p. 182
`RSSF`	RSS Feeds	`rss` , `feeds` , `feed`	A board of your own RSS and Atom feeds. **Chapter 12, RSS Feeds** p. 203
`GDAT`	Global Data	`gd` , `global` , `data` , `econ` , `economics` , `govt` , `gov` , `asia` , `apac`	One explorer for economic, government, fiscal and energy data series. **Chapter 32, Global Data** p. 648

Trading

Code	Screen	Other words that open it	What it is for
EQTR	Equity Trading	eqtrade, equities, trade, trading	Order tickets, positions, holdings and orders for stocks, on Fincept Paper or a broker. **Chapter 16, Equity Trading** p. 264
CRYP	Crypto Trading	crypto, cryptotrading, kraken	The crypto desk: venues, order book, ticket, bots and risk. **Chapter 18, Crypto Trading** p. 298
ALGO	Algo Trading	algo, algotrading, scrn, screener, scan, scanner	Build, scan, deploy and monitor rule-based strategies. The stock screener lives here. **Chapter 19, Algo Trading** p. 331
DERV	Derivatives	deriv, derivatives, option, options, vol, volatility, chain, greeks, strategy, gex, straddle, calc, calculator	The options workbench: chain, volatility surface, strategy lab, risk and pricers. **Chapter 25, Derivatives** p. 493
PRED	Prediction Markets	poly, polymarket, kalshi, prediction, predictions	Prices and odds of prediction markets. **Chapter 14, Prediction Markets** p. 233
ARNA	Alpha Arena	alpha, arena, alphaarena	AI models trade paper money against each other on a leaderboard. **Chapter 20, Alpha Arena** p. 371

Portfolio & Risk

Code	Screen	Other words that open it	What it is for
PORT	Portfolio	port, portfolio, pf, holdings	Your portfolios: positions, performance, risk, scenarios, rebalancing and reports. **Chapter 23, Portfolio** p. 430
BTST	Backtesting	bktest, backtest, backtesting, bt, optimize, optimise, sweep, compare, cmp	Test a strategy on past prices, then validate and optimise it. **Chapter 24, Backtesting** p. 464
SURF	Surface Analytics	surface, volsurface, 3dviz, 3d	3-D volatility surfaces and correlation views. **Chapter 26, Surface Analytics** p. 543

Research & Intelligence

Code	Screen	Other words that open it	What it is for
RSCH	Equity Research	rsrch, research, equity, eqresearch	Everything about one company: financials, valuation, peers, ownership, filings, news. **Chapter 22, Equity Research** p. 392
CNPT	Concept Studio	concept, learn, explain, visualize	AI-made visual explanations of finance concepts. **Chapter 30, Concept Studio** p. 615
MERG	M&A Analytics	ma, mna, mergers, acquisitions	Deals, comparable transactions and merger models. **Chapter 27, M&A Analytics** p. 556
ALTS	Alt. Investments	altinv, alt, alternatives	Analysis of alternative investments. **Chapter 28, Alternative Investments** p. 580
RMAP	Relationship Map	relmap, relationships, relationship	A network map of companies, people and how they connect. **Chapter 29, Relationship Map** p. 603

Code	Screen	Other words that open it	What it is for
`GEOP`	Geopolitics	`geo`, `geopolitics`, `politics`	Conflict and political events on a map and in tables. **Chapter 35, Geopolitics** p. 688
`MARI`	Maritime	`marine`, `maritime`, `shipping`	Ships, ports and chokepoints. **Chapter 36, Maritime** p. 699

AI & Quant

Code	Screen	Other words that open it	What it is for
`CHAT`	AI Chat	`chat`, `ai`, `aichat`, `assistant`, `bot`	The AI assistant. The code opens it alone; `F9` opens it beside your panels. **Chapter 37, AI Chat** p. 719
`QLAB`	AI Quant Lab	`quantlab`, `quant`, `lab`	Quantitative research: factors, models and signals. **Chapter 31, AI Quant Lab** p. 623
`AGNT`	Agent Config	`agents`, `agent`, `agentconfig`, `studio`	Build and configure your own AI agents (Agent Studio). **Chapter 38, Agent Studio** p. 739
`MCTL`	Mission Control	`missions`, `mission`, `missioncontrol`, `agentops`	Watch and steer long-running AI agents and their missions. **Chapter 39, Mission Control** p. 764
`MCPS`	MCP Servers	`mcp`, `servers`	Add tool servers that the AI can use. **Chapter 41, MCP Servers** p. 810
`NODE`	Node Editor	`nodes`, `workflow`, `node`	Visual workflows made of connected nodes. **Chapter 40, Node Editor** p. 776

Tools & Workspace

Code	Screen	Other words that open it	What it is for
`DSRC`	Data Sources	`datasrc`, `datasources`, `sources`	Connect your own data sources. **Chapter 48, Data Sources** p. 891
`DMAP`	Data Mapping	`datamap`, `mapping`, `schema`	Map an outside API's data into the terminal's shapes. **Chapter 49, Data Mapping** p. 904
`CODE`	Code Editor	`code`, `editor`, `dev`	Notebooks that run your own Python. **Chapter 43, Code Editor** p. 833
`XLSX`	Excel	`excel`, `spreadsheet`, `xls`	A spreadsheet with finance formulas and `.xlsx` import and export. **Chapter 44, Excel** p. 844
`RPRT`	Report Builder	`report`, `reports`, `builder`	Build reports and export them as PDF. **Chapter 45, Report Builder** p. 858
`GECO`	Global Economy	`geco`, `economy`, `tradeviz`, `infra`, `worldmap`	Trade flows, country indicators and infrastructure on one world map. **Chapter 34, Global Economy** p. 672
`FILE`	File Manager	`files`, `filemanager`, `fm`, `uploads`	Your files, notebooks and uploads. **Chapter 47, File Manager** p. 882
`NOTE`	Notes	`notes`, `note`	Notes and research write-ups. **Chapter 46, Notes** p. 872

Account and help

Code	Screen	Other words that open it	What it is for
`DOCS`	Docs	`docs`, `documentation`, `manual`, `guide`	Product documentation inside the terminal. **Chapter 52, Help, Docs and Support** p. 967
`HELP`	Help	`help`, `support`, `shortcuts`	The command line explained, keyboard shortcuts, the commands list and support. **Chapter 52, Help, Docs and Support** p. 967
`INFO`	About	`about`, `info`, `version`	Version, updates and licences. **Chapter 52, Help, Docs and Support** p. 967
`PROF`	Profile	`prof`, `profile`, `account`	Your account, plan, credits, usage and devices. **Chapter 50, Profile, Plan & Billing** p. 920
`PREF`	Settings	`settings`, `prefs`, `preferences`, `config`	Every setting of the terminal. **Chapter 51, Settings** p. 932

Screens with a code but not in the menus

These two open from the strip at the top of Global Data. They have codes, so you can also open them straight from the command line.

Code	Screen	Other words that open it	What it is for
`ECAL`	Economic Calendar	`calendar`, `econcal`, `ecocal`, `events`	Scheduled economic releases and central-bank events. **Chapter 13, Economic Calendar** p. 218
`BOND`	Sovereign Bonds	`bonds`, `sovereign`, `yields`, `govbonds`	Government bond yields, spreads and ratings by country. **Chapter 33, Sovereign Bonds** p. 660

Screens without a code

A few screens need something to show, so they open from a pick rather than from a code.

Screen	How it opens	Chapter
F&O	The **F&O** button on Equity Trading; a futures or options pick in the command line (`/futures`, `/option`); the `FNO` command after a security (`RELIANCE FNO`)	**Chapter 17, F&O** p. 284
Asset Research	Picking an instrument that is not a company share, a fund, crypto or a derivative (an index, a currency pair or a bond, for example) in the command line	**Chapter 22, Equity Research** p. 392
Fund Research	Picking a fund or an ETF in the command line, or a `/fund` search	**Chapter 22, Equity Research** p. 392
Contact, Terms, Privacy, Trademarks	☰ > **Help** menu	**Chapter 52, Help, Docs and Support** p. 967

54.4 Command forms

Besides screen codes, the command line understands a handful of command shapes. This is the short list; **Chapter 6, The Command Line** p. 89 explains each one with pictures.

Open and arrange panels

Type a screen, then a word that says where it goes. Words can be in any case.

You type	What happens
`NEWS`	News opens alone and fills the window.
`NEWS RIGHT` (also `LEFT`, `UP`, `DOWN`)	News opens beside the panel you last used.
`NEWS TL` (also `TR`, `BL`, `BR`)	News goes into a quarter of the window: top-left, top-right, bottom-left, bottom-right. `Q1` to `Q4` work too.
`NEWS TAB`	News opens as another tab of the panel you last used.
`NEWS ONLY`	Every panel closes except News.
`NEWS CLOSE` or `CLOSE NEWS`	News closes.
`NEWS FLOAT` or `FLOAT NEWS`	News moves into a floating window of its own.
`NEWS DOCK` or `DOCK NEWS`	A floating News goes back into the main window.
`MKTS ADD NEWS`	News opens to the right of Markets (Markets opens first if it is not on screen).
`MKTS ADD NEWS DOWN`	News opens below Markets. Any placement word works at the end.
`ADD NEWS` (or `ADD NEWS LEFT`)	News opens beside the panel you last used (to the right if no side is given).
`MKTS REPLACE NEWS`	News takes the place of Markets.

Other words that mean the same:

Word	Also accepted
`RIGHT`	`R`, `EAST`
`LEFT`	`L`, `WEST`
`UP`	`U`, `TOP`, `ABOVE`, `NORTH`
`DOWN`	`D`, `BOTTOM`, `BELOW`, `SOUTH`
`TL`, `TR`, `BL`, `BR`	`Q1`, `Q2`, `Q3`, `Q4`; `NW`, `NE`, `SW`, `SE`; `TOPLEFT`, `TOPRIGHT`, `BOTTOMLEFT`, `BOTTOMRIGHT`
`TAB`	`STACK`
`CLOSE`	`REMOVE`, `X`, `HIDE`, `RM`
`ONLY`	`FULL`, `MAX`, `SOLO`, `ALONE`
`FLOAT`	`POP`, `POPOUT`, `DETACH`, `UNDOCK`
`DOCK`	`REDOCK`

A security, then a command

Type a symbol, a space and a short command. Without a symbol, the command uses the symbol your panels are linked to (see **§5.5 Link panels with link groups** p. 82).

Command	Also typed as	What it opens	Works for
`DES`	`DESC`	The screen that describes this kind of instrument: research for a share, the fund screen for a fund, and so on	Every kind
`G`	`GP`, `CHART`	The price chart with technicals (Equity Research)	Shares, depositary receipts
`FA`	`FIN`	Financials: income statement, balance sheet, cash flow	Shares, depositary receipts
`VAL`	`DCF`	Valuation: multiples and discounted cash flow	Shares, depositary receipts
`ANR`	`EST`	Analyst ratings, estimates and targets	Shares, depositary receipts
`RV`	`PEERS`, `COMP`	Peers: relative value against competitors	Shares, depositary receipts
`N`	`CN`, `NEWS`	Company news and headlines	Shares, depositary receipts
`SENT`		News and social sentiment	Shares, depositary receipts
`QUAL`		Earnings quality and distress scores	Shares, depositary receipts
`HDS`	`OWN`	Ownership: institutional and insider holders	Shares, depositary receipts
`CF`	`SEC`, `FIL`	Regulatory filings and events	Shares, depositary receipts
`SCEN`	`STRESS`	Scenario and stress tests	Shares, depositary receipts
`XA`		Cross-asset: correlation and beta to other assets	Shares, depositary receipts
`QL`	`QUANT`	Quant lab: factor and signal research	Shares, depositary receipts
`MACRO`		Rates and macro sensitivity	Shares, depositary receipts
`OMON`	`OPT`, `OPTIONS`	Options: chain, greeks and volatility (Derivatives)	Shares, ETFs, indices, depositary receipts
`FNO`		Futures and options chain for Indian markets (F&O)	Shares, indices, futures
`TRADE`	`BUY`, `SELL`	An order ticket on Equity Trading (it opens on the buy side, even after `SELL`)	Shares, ETFs, depositary receipts
`BT`	`BACKTEST`	Backtesting with this security	Every kind
`W`	`WATCH`	Adds the security to your default watchlist	Every kind
`PIN`		Pins the security to the price strip in the top bar	Every kind

A research command typed after something that is not a company (`EURUSD G`) opens that instrument on the screen that can show it instead.

To keep only one asset class when a symbol is listed as several, put a class word between the symbol and the command: `AAPL EQ DES`.

Class word	Means
`EQ`, `EQUITY`	Shares
`ETF`	Exchange-traded funds
`IDX`, `INDEX`	Indices
`FX`	Currencies
`CRY`, `CRYPTO`	Crypto

Class word	Means
`FUT`, `CMDTY`	Futures and commodities
`OPT`	Options
`BND`, `BOND`	Bonds
`FND`, `FUND`	Funds

Search one asset class

Start the line with a slash word to search only one kind of instrument.

You type	Searches
`/stock` (or `/equity`)	Shares, by symbol or company name
`/etf`	Exchange-traded funds
`/fund`	Mutual funds and ETFs, with fees and ratings
`/dr`	Depositary receipts (ADRs and GDRs)
`/index`	Market indices
`/forex` (or `/fx`)	Currency pairs
`/crypto`	Cryptocurrencies
`/futures` (or `/future`)	Futures: roots first, then contract months
`/option` (or `/options`)	Options: the name, then the expiry, then the strike
`/bond`	Bonds and fixed income, European venues included
`/economic`	Economic indicators

Any other slash word is read as the word itself: `/news` opens News and `/backtest AAPL` is the same as `backtest AAPL`. Two exceptions: `/data`, `/sources` and `/datasources` open Data Sources (plain `data` opens Global Data), and `/datamap` opens Data Mapping.

Commands with arguments

You type	What happens
`backtest AAPL` (also `bt AAPL`)	Opens Backtesting with AAPL. Several symbols work: `backtest AAPL MSFT NVDA`
`backtest AAPL sma_crossover`	The same, with a strategy template (a word with an underscore)
`optimize AAPL` (also `optimise`, `sweep`)	Opens the optimiser with these symbols
`bt history`	Opens Backtesting on the page you left it on: a page word (`history`, `results`, `trades`, `validate`, `build`) does not switch pages, and after a symbol it is read as another symbol
`backtest book` (also `backtest portfolio`)	Backtests your active portfolio's weights as a monthly rebalance

You type	What happens
`backtest watchlist US Tech` (also `wl`)	Backtests a whole watchlist as one strategy; no name means your default list
`compare <run> <run>` (also `cmp`)	Opens two to four backtest runs side by side
`portfolio risk` (also `port`, `pf`)	Opens a Portfolio tab: `overview`, `positions`, `lots`, `performance`, `attribution`, `risk`, `scenarios`, `rebalance`, `limits`, `transactions`, `reports` (and short forms such as `perf`, `pos`, `txn`)
`save layout Morning`	Saves the workspace on screen as "Morning". **Chapter 7, Workspaces** p. 112 lists every workspace command
`link A`, `unlink`, `publish A AAPL`	Link-group commands. See **§5.5 Link panels with link groups** p. 82

The backtest and portfolio commands lead the list, so Enter runs them. Terminal actions with a word after them (`save layout Morning`, `link A`) appear last, under **ACTION**: click that row, or press Up to jump to it and then Enter.

Settings you can type

You type	What it offers
`theme`	The terminal's themes (Dark, Light)
`text size` or `font`	Text sizes from 13 to 18 px
`density`	Row height and padding
`keys`, `hotkeys` or `bindings`	**Keyboard shortcuts**: opens Settings > Keybindings. (`shortcuts` is also one of Help's words, so Enter on it opens Help; move down to the **Keyboard shortcuts** row for Settings.)
`currency`, `notifications`, `security`, `python`, `harness` ...	The matching Settings page

A setting row changes the terminal straight away when you pick it, so read the row before you press Enter.

54.5 For advanced users

- **How a word is matched.** When you press Enter without moving to a row, the line is checked in a fixed order. First comes a complete panel command (`NEWS RIGHT`), then an exact screen code, name or alias, then the highlighted row, then a command with arguments, and last a single word read as a symbol. So `NEWS` always opens News, even if a headline row is on top.
- **Codes never change meaning.** Older names keep working as aliases: `econ`, `govt` and `asia` still land on Global Data, and `tradeviz` on Global Economy.
- **Locked screens.** If your plan does not include a screen, its row in the command line says **Requires** and the plan name, and its quick-launch chip shows a lock. The screen still opens and shows what it needs. See **Chapter 50, Profile, Plan & Billing** p. 920.
- **The AI uses the same words.** When you ask the AI chat to "open News on the right", it types the same panel command you would.

54.6 Troubleshooting

Typing a code opens a search instead of the screen

Press Enter without arrowing down: the typed code wins. If you arrowed to another row, Enter opens that row. Check also that the line has nothing after the code: a second word turns it into a search, or into a panel command when the word is a placement word (`MKTS X` closes Markets).

My other panels disappeared when I typed a code

A plain code shows that screen alone. Your other panels are not lost: open them again by their codes, or switch back to your saved workspace in the bottom bar. Next time use a placement word (`NEWS RIGHT`).

F&O does not appear when I type FNO

`FNO` is a command that needs a security first: type `RELIANCE FNO`. Or open Equity Trading and click **F&O**.

CHAPTER 55

Troubleshooting & FAQ

Short answers to the problems people meet most often — installing and updating, signing in, prices that do not show, credits and locked buttons, brokers, paper orders, charts and maps, AI — grouped by area, each pointing to the chapter that explains more. It ends with how to send the Fincept team a report it can act on.



At a glance

Open it	• Click **HELP** in the top bar: **Getting started** ends with **Frequently asked questions** • Click **AI Chat** in the bottom bar and describe the problem to the companion • Choose **Menu** › **Help** › **Contact support...** to write to the Fincept team
You need	• Nothing: look up any problem, signed in or not
Best for	• Fixing a problem in a minute • Knowing what to send support
Time to learn	Look up what you need
Related	**Chapter 52, Help, Docs and Support** p. 967, **Chapter 51, Settings** p. 932, **Chapter 5, The Terminal Window** p. 70, **Chapter 50, Profile, Plan & Billing** p. 920, **Chapter 3, Create your account** p. 38

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55.1 Start here: five quick checks

Most problems have a cause the terminal already tells you about. Before you look for your problem below, take thirty seconds for these five checks.

1. **Look at the connection status** at the right of the top bar. ● **LIVE** means the terminal reaches Fincept's servers. **OFFLINE**, **RECONNECTING** or **SIGNED OUT** explains most empty screens (**§55.4 Connection, live prices and freshness** p. 1009).
2. **Read the message on the screen.** Screens say in words what is missing: *Sign in to load...*, *Press Load*, *No tickers in this panel*. A greyed-out button or a padlock explains itself when you point at it: the tooltip names the reason.
3. **Look at your credits chip** (for example **4972.20 CR**) beside the status. Charged buttons show their price, such as **· 1 CR**, and do not run when your balance is too low.
4. **Give a screen a moment after sign-in.** Many screens load your data only once your session is ready. *Waiting for sign-in* and *loading* messages clear by themselves within seconds.
5. **Check your version** at the right of the bottom bar (or type `INFO`). If an **UPDATE** button sits beside it, a newer version is ready: one click installs it (**Chapter 2, Install and update** p. 28).



Figure 55.1 The right end of the top bar: connection status, credits and the account menu.

1. **Connection status**: whether the terminal reaches Fincept's servers.
2. **Credits**: your balance. Click it for what each action costs.
3. **HELP**: the help screen, the FAQ and the support form.

If your problem is not in this chapter, ask the companion (**AI Chat** in the bottom bar) or write to the Fincept team (**§55.15 Get help from the Fincept team** p. 1035).

> **Tip**
>
> Every chapter of this guide ends with its own **Troubleshooting** section. This chapter collects the most useful answers in one place; the reference after each answer leads to the full explanation.

55.2 Install and update

Installing, updating and moving to a new computer. The full story is in **Chapter 2, Install and update** p. 28.

Windows asks for permission during an update.

Your copy is in `C:\Program Files`. Allow it once: the update moves the terminal to your user folder, and later updates never ask. If you dismiss the prompt, nothing changes and the update stays ready (**Update not installed**). See **§2.4 Install** p. 30.

The UPDATE button never appears.

The terminal checks a few seconds after you sign in or unlock, then about every six hours. To check now, use **Menu › Help › Check for updates**. "You're running the latest version" means there is nothing to install; "Sign in

to check for updates." means you are signed out. See **§2.6 Check for updates by hand** p. 33.

"The update could not be downloaded" or "failed integrity verification".

The download broke off, or the file that arrived did not match the published checksum. A damaged file is deleted and never installed. Check your internet connection, VPN or proxy, then use Menu › Help › Check for updates again. An update that was downloading in the background tries again by itself after 30 minutes. See **§2.9 For advanced users** p. 36.

"Update Not Installed": the update could not be installed automatically.

The last update did not finish, so your copy is unchanged and keeps working. The message gives the reason. Try again from Menu › Help › Check for updates, or download the installer from fincept.in and run it; your settings and data are kept. The `update.log` file in the `updates` folder records what happened (**§55.15 Get help from the Fincept team** p. 1035). See **§2.9 For advanced users** p. 36.

"Update downloaded": the update could not install itself.

This copy cannot be replaced in place (for example a Linux install the terminal does not manage). The message shows where the downloaded file is: run it yourself, or click **Open downloads page** and get the installer that matches your system. See **§2.8 Reference** p. 35.

A colleague already has a newer version, but mine says it is up to date.

New versions reach users in waves, so one person can be offered it a little before another. Try again later. See **§2.9 For advanced users** p. 36.

The terminal says Update required and offers only Update or Quit.

That version is required, for example after a security fix. Install it; your settings and data are kept. If the message offers **Open Downloads Page**, download the latest installer and run it. See **§2.5 Automatic updates** p. 32.

"Fincept Terminal is finishing an update and opens by itself in a moment."

You started the terminal while an update was being installed. Wait: the new version opens when it is ready. If an update fails, the previous version is put back and the next start explains what happened. See **§2.9 For advanced users** p. 36.

The Mac says the app cannot be opened.

Make sure you dragged it to **Applications** and that your Mac has Apple silicon (an M-series chip in Apple menu > About This Mac). The Mac build does not run on Intel Macs. See **§2.3 System requirements** p. 30.

Linux says "permission denied" when I run the .run file.

Make it executable first: `chmod +x FinceptTerminal-*-linux-x64-setup.run`. See **§2.4 Install** p. 30.

I have two copies installed.

Run the newest installer and answer **Yes** to "Update that installation?". Then uninstall the other copy from Windows Settings and answer **No** when it asks about user data. See **§2.4 Install** p. 30.

Starting the terminal again does not open a second copy.

That is by design: it brings the running window to the front. For a second window, use Menu › File › New window, or Ctrl + Shift + N for a new window on the next monitor. See **§5.8 Several windows** p. 85.

The terminal closed unexpectedly.

Start it again. If it did not close cleanly, it offers **RECOVER PREVIOUS SESSION**: pick a snapshot and press **RESTORE**, or **SKIP** to start fresh. A crash report is saved; send it to support (**§55.15 Get help from the Fincept team** p. 1035). See **§4.9 For advanced users** p. 68.

I moved to a new computer. What do I need to do again?

Install and sign in: workspaces, dashboards, portfolios, chats and settings arrive from your account. Broker logins, AI keys and data-source passwords stay on the computer where you typed them, so enter them again. Then release the old computer's seat in `Profile › Devices & seats`. See **§2.7 Uninstall** p. 34.

Will uninstalling delete my work?

No. Your account and everything in it stay on Fincept's servers. On Windows, answer **No** to "remove all Fincept Terminal user data?" to keep this computer's local data too. See **§2.7 Uninstall** p. 34.

55.3 Sign in, PIN, seats and devices

Getting into the terminal, and keeping your computers within your plan's seats. See **Chapter 3, Create your account** p. 38 and **§50.7 Devices and seats** p. 927.

The sign-in page says I'm offline.

The terminal cannot reach Fincept. Check your internet connection, VPN or proxy. You do not need to restart: the page signs you in by itself when the connection returns. See **§3.1 Screen tour** p. 39.

No verification email arrives.

Look in your spam or junk folder, then click **Send a new code** (only the newest code works). If you mistyped the address, click **Back to sign in** and create the account again. See **§3.3 Create an account** p. 41.

I forgot my password.

Reset it on the website: open fincept.in/enterprise/forgot-password in your browser. In this version the terminal's **Forgot password?** page answers "Password recovery isn't available in the app yet — please reset on the website." See **§3.7 Forgot your password or PIN** p. 49.

I forgot my PIN.

Click **Forgot PIN?** on the lock screen, sign in with your email and password, and set a new PIN. The old PIN stops working on every computer of your account. See **§3.7 Forgot your password or PIN** p. 49.

The PIN page says "PIN is too simple".

Avoid six of the same digit (111111) and runs such as 123456 or 987654. See **§3.4 Set up your PIN** p. 45.

The PIN box is locked for 30 seconds, or says "Too many PIN attempts".

Three wrong PINs in a row lock the box for 30 seconds, four for 60 seconds. After five, the only way on is **Sign in again**, which resets your PIN. The count covers all your computers. See **§3.6 Lock and unlock the terminal** p. 48.

"The PIN service is unavailable right now, so the terminal stays locked."

The terminal could not reach the PIN service. Wait a moment and try again. The terminal never opens without the PIN. See **§3.11 Troubleshooting** p. 55.

The lock screen sends me to the sign-in page.

Your session ended while the terminal was locked, for example after a password change or **Sign out everywhere** on another computer. Sign in with your email and password; your PIN still works afterwards. See **§3.11 Troubleshooting** p. 55.

"Session conflict: This account is already signed in on another machine."

Log out the other session and continue signs the other computer out and lets you in here. **Cancel** leaves the other computer alone. See **§3.5 Sign in and sign out** p. 47.

I paid, but the Plans & pricing page is still there.

Click **Already paid? Refresh status**. The page also checks by itself every 20 seconds. If it has not unlocked after a few minutes, contact support@fincept.in with the email you paid with. See **§3.3 Create an account** p. 41.

"All seats in use" on a new computer.

Each computer you sign in on takes one seat. Select a computer you no longer use and click **Release selected device**, or add a seat, then click **Retry**. See **§3.8 Seats and devices** p. 51.

"All seats in use" on a computer I already use.

It may have been released from another computer, or reinstalled so that it looks new. Release its old row (marked *(this machine)*) or another device, then click **Retry**. See **§3.11 Troubleshooting** p. 55.

"This machine's seat was released from another device."

Someone released this computer in Profile while you worked. Release another device or buy a seat to continue. If the terminal signed you out instead ("This machine was released from your account on another device. Sign in again to use Fincept here."), sign in again: that claims a seat if one is free. See **§3.8 Seats and devices** p. 51.

I signed out, but my seat is still taken.

Signing out does not give the seat back. Release the device in `Profile › Devices & seats`. See **§50.7 Devices and seats** p. 927.

My other computers were signed out after I changed my password.

That is expected: a new password signs out every other computer. The computer you changed it on stays signed in. See **§50.8 Edit your profile** p. 928.

The terminal locks itself too often, or never.

Set **Lock timeout** (default 10 minutes) or switch auto-lock off in `Settings › Security`, then click **Save security settings**. Auto-lock needs a PIN, and it pauses while AI tasks are scheduled. See **§51.10 Security** p. 950.

Locking stops nothing

Broker connections, live prices, algo deployments and scheduled AI tasks keep running behind the lock screen. See **§3.6 Lock and unlock the terminal** p. 48.

55.4 Connection, live prices and freshness

Two small words tell you how fresh your data is. The **connection status** at the top right says whether the terminal reaches Fincept's servers. A **freshness badge** says how current one price is: you see it on Markets panels, in the quote bars of research and trading screens, and as the **price status** word in the bottom bar.

Connection status (top bar)	Meaning
● **LIVE**	Connected to Fincept's servers.
● **CONNECTING**	Waiting for the first answer, just after start.
● **RECONNECTING**	A request failed and is being tried again; data may be a few seconds old.
● **OFFLINE**	The servers cannot be reached. Prices, portfolios and AI pause until the connection returns.
● **SIGNED OUT**	No one is signed in, so nothing streams.

Freshness badge	Meaning
LIVE	A real-time feed. A broker price counts as LIVE only while it keeps updating.
DELAYED n MIN	The exchange's feed for this instrument runs n minutes behind. The price moves, but it is not the current one.
LIVE FEED	Streaming, but the source does not publish its delay.
STALE	The last price received, not the current one: a stream that dropped, or a broker price that stopped updating.
CLOSED	The market is shut; the value is the last traded price.
SNAPSHOT	Not on the live stream; the price is read again about once a minute and may itself be delayed.

The full tables are in **§5.3 The top bar** p. 72 and **§9.8 Reference** p. 167.

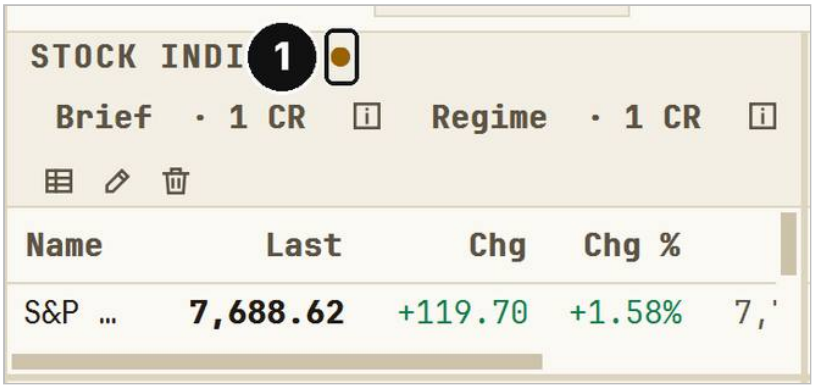


Figure 55.2 Freshness on a Markets panel: hover the dot beside a panel title to read its state, here DELAYED for four of the panel's prices.

1 The panel's freshness dot. Hover it for the state in words.

Prices show a dash (–) or stay blank.

Live prices arrive a moment after a screen opens. If they stay blank, look at the connection status. A panel that says **Sign in for quotes** loads only once you are signed in; one that says **Timeout** did not answer in time, so press **Refresh**. See **§9.10 Troubleshooting** p. 170.

A screen says "Sign in to load …" or "Waiting for sign-in" although I am signed in.

The screen opened before your session was ready. It loads by itself a moment later; you do not need to do anything. See **§34.10 Troubleshooting** p. 686.

The status says OFFLINE or RECONNECTING.

The terminal cannot reach Fincept's servers. Check your internet connection, VPN or proxy. Prices, portfolios and AI resume by themselves when the connection is back. See **§5.3 The top bar** p. 72.

The badge says DELAYED.

Some exchanges publish prices with a delay, for example 15 minutes. The price is right for its time but is not the current one. A connected broker gives real-time prices for what it covers. See **§9.10 Troubleshooting** p. 170 and **Chapter 15, Brokers & Accounts** p. 248.

Indian shares show DELAYED.

Live prices for NSE and BSE shares come through a connected Indian broker. Without one, the terminal uses a delayed price. See **§23.25 Troubleshooting** p. 463.

The badge says STALE.

The stream for that price dropped, or your broker stopped sending updates. The value shown is the last one received. It recovers when the stream comes back; check the connection status and your broker session. See

§9.8 Reference p. 167.

One row says "no quote available", or a symbol I added shows no price.

The symbol cannot be priced as typed: a typo, a delisted company, or the wrong market format. Indian NSE shares end in `.NS` (`TCS.NS`), indices start with `^` (`^NSEI`), crypto ends in `-USD` (`BTC-USD`). Search by name and pick the instrument from the suggestions. See **§10.12 Troubleshooting** p. 180.

An instrument I know is not in the command line's list.

Wait a second: the full market search answers after the first rows (**searching all markets**). Try the ticker with its exchange suffix (`RELIANCE.NS`, `VOD.L`) or a slash search (`/stock vodafone`). See **§6.12 Troubleshooting** p. 111.

Times on a screen look wrong by a few hours.

The clock, chats and the AI use the time zone in **Settings › General** (your computer's zone unless you pick one). The Economic Calendar and the File Manager always use your computer's zone, and a note's saved time is shown in UTC. Check your computer's time zone first. See **§51.3 General** p. 935.

Numbers look out of date.

Look for the screen's own age stamp (**Updated 1h ago**, **Last update**, *priced …*). Some screens keep an answer for a while: a relationship map is kept for ten minutes. Press the screen's **Refresh**. See **§29.9 Troubleshooting** p. 614.

55.5 Credits, plans and locked features

Every screen but one opens on every plan: Crypto Trading starts on Exclusive+. Elsewhere, what a plan changes is how much you get, and a few features that start on the higher plans. Paid actions are priced in credits. See **Chapter 50, Profile, Plan & Billing** p. 920.

How to tell what something costs

A charged button shows its price, for example **Brief · 1 CR**. Click the credits chip in the top bar, or **What credits cost** in the account menu, for the price of every metered action. After a charge the chip shows the amount for a moment (**-1 CR**). It turns amber when a quarter or less of your plan's credits is left, and red at zero.

A button or a tab shows a padlock.

That feature needs a bigger plan, or more credits than you have. Point at it to see which; click it for the options (**What costs what**, **Buy credits** or **See plans**). See **§50.9 Reference** p. 929.

Crypto Trading is marked "(Exclusive+)" in the menu.

It is the one screen the Exclusive plan does not include. The command line marks it **Requires Exclusive+**, and it opens on a lock card with **Upgrade plan**. Every other screen opens on every plan. See **§4.6 Find anything** p. 64.

An action says my balance is too low and does nothing.

Your balance is lower than the action's price, so it was not run and nothing was charged. Click **Buy credits** in Profile (or in **What credits cost**) and pay in your browser; credits usually arrive within seconds. See **§50.4 Buy credits** p. 925.

Where did my credits go?

Open Profile (`PROF`). **CREDITS & USAGE (30D)** splits your spending by product, by day and by screen; **CREDIT LEDGER** lists every charge with your balance after it. See **§50.3 Credits** p. 922.

I paid, but my credits or plan did not change.

Wait a few seconds, then click **Refresh** in Profile. If it still has not arrived, contact support with the payment's reference. See **§50.11 Troubleshooting** p. 930.

My plan expired.

Plans are paid once for 30 or 90 days and never renew by themselves; **Expires** in Profile shows the date. After it, locked buttons say *Your plan has expired*. Buy a plan again with **Manage / upgrade plan** in Profile's **PLAN & BILLING**. See **Chapter 50, Profile, Plan & Billing** p. 920.

Cloud sync says Plan limit.

Your plan holds a limited number of that item, for example watchlists or notes. Remove one, or upgrade, then press **Sync now** in Settings › Cloud sync. See **§51.18 Troubleshooting** p. 965.

A team mode, a tab or a page is greyed out with a plan name.

It starts on a higher plan. Point at it: the tooltip names the plan. See **§1.4 Plans at a glance** p. 23.

Is anything charged when an action fails?

Not in these cases: a Concept Studio page that did not finish, a regime scan on a panel that is too small, a backtest refused for low credits, and an Alpha Arena round that could not read the market. AI features are charged per result delivered. See **§50.3 Credits** p. 922.

55.6 The window, panels and workspaces

The frame around every screen, the command line and your saved layouts. See **Chapter 5, The Terminal Window** p. 70, **Chapter 6, The Command Line** p. 89 and **Chapter 7, Workspaces** p. 112.

The top bar or the bottom bar is gone.

You are in focus mode. Press F10 or click **Exit focus** in the top-right corner. See **§5.7 Focus mode, full screen and always on top** p. 85.

My other panels disappeared when I opened a screen.

A screen opened by its code alone, a chip or a menu replaces the panels on screen. Nothing is lost: click your workspace tab in the bottom bar to get the arrangement back. Next time add a placement word (`NEWS RIGHT`) to keep both. See **§6.6 Open screens side by side** p. 97.

A floating panel is lost behind other windows.

Use ☰ > View > Float panel > **Dock all floating panels** to bring every floating panel back into the window. See **§5.4 Panels** p. 79.

Two panels do not follow each other's symbol.

Both must be in the same link group (the same letter on the square), both must be screens that can be linked, and the group must be switched on. See **§5.5 Link panels with link groups** p. 82.

The backtick key types a character instead of jumping to the command line.

The backtick jumps only when the cursor is not in a text field. Click an empty part of a panel first, or press Ctrl + K. On some keyboard layouts the key left of 1 is not a backtick. See **§53.6 Troubleshooting** p. 992.

I typed a screen code and something else opened.

You moved to another row of the list before pressing Enter. Clear the line with Esc, type the code and press Enter straight away. A code followed by another word (`MKTS X`) is not a code. See **§54.6 Troubleshooting** p. 1004.

I typed a word such as `lock` and the terminal acted at once.

Action and setting rows of the command line act as soon as you press Enter on them. Read the highlighted row before you press it. See **§6.8 Run actions, change settings, open workspaces** p. 105.

I typed `save layout Morning`, pressed Enter, and nothing was saved.

Actions with words after them are listed last, under **Action**, so they never run by accident. Click the row, or press Up (it jumps to the last row) and then Enter. See **§6.9 Commands with words after them** p. 107.

The footer says "Type a security before G".

A command typed without a security uses your linked symbol. With nothing linked, type the security first (`AAPL G`). See **§6.4 Run a command on a security** p. 94.

Typing FNO does not open F&O.

`FNO` is a command that needs a security first: type `RELIANCE FNO`. Or open Equity Trading and click **F&O**. See **§54.6 Troubleshooting** p. 1004.

A keyboard shortcut does nothing, or does something else.

Open Settings › Keybindings and search for the key: it may be unbound, moved, or shared by two actions (shown in red). Screen keys work only while that screen has the focus: click inside it first. Your operating system takes some keys, such as F11, before the terminal sees them; rebind the action. In 5.0.6 a few screen keys clash with terminal keys: Ctrl + L in the chat box locks the terminal instead of starting a new chat, and F5 and F9 inside Mission Control and Ctrl + 1 to Ctrl + 8 inside Derivatives do nothing. Use the buttons there. See **§53.3 Change a shortcut** p. 985.

My workspace came back different.

A workspace is saved when you switch away from it, not every minute. If you closed panels and then switched, that state was saved. Rebuild it and use **Save changes to** to keep it. See **§7.5 Save, rename and delete** p. 116.

A workspace I saved on another computer is missing.

Saved workspaces sync through your account. Check that workspace sync is on in Settings › Cloud sync on both computers, and that you saved the desk: an unsaved desk such as **Main** stays on its computer. See **§7.10 Troubleshooting** p. 120.

Export layout does nothing useful.

Export writes the current saved workspace. Save the desk first (**Save workspace as...**), then export. See **§7.10 Troubleshooting** p. 120.

I picked a ready-made desk again and did not get a fresh copy.

If you already have a workspace with that desk's name, the menu switches to it, so your changes are kept. See **§7.3 Start from a ready-made desk** p. 114.

Window positions from my workspace were not applied on my laptop.

Window positions are applied only on a computer with the same monitor set-up. See **§7.8 Reference** p. 119.

My price alert or order fill is not in Notices.

Notices are messages from Fincept only. Your alerts and fills arrive as desktop notifications and in the Action Center; choose which ones in Settings › Notifications. See **§5.3 The top bar** p. 72.

The NY clock says open, but it is a holiday.

The market clocks in the bottom bar use regular hours only; holidays are not shown. See **§5.6 The bottom bar** p. 84.

I closed a screen and cannot find it again.

Type its name in the command line, or open it from **Screens** in the bottom bar. See **§4.6 Find anything** p. 64.

55.7 Dashboard, markets, watchlists and news

The monitoring screens. See **Chapter 8, Dashboard** p. 123, **Chapter 9, Markets** p. 160, **Chapter 10, Watchlist** p. 172, **Chapter 11, News** p. 182, **Chapter 12, RSS Feeds** p. 203 and **Chapter 13, Economic Calendar** p. 218.

My dashboard is empty: "No widgets on this dashboard".

You started with a blank board, or removed every tile. Click **Reset** and pick a desk or a template, or click **Add** to place tiles one by one. See **§8.8 Start from a template (Reset)** p. 130.

Add, Layout, Reset and Save are greyed out.

The terminal is still loading your saved board from your account. Wait a few seconds. See **§8.15 Troubleshooting** p. 158.

"The dashboard is not saved yet: your account's settings have not loaded."

The terminal waits for your account's copy of the board before it writes, so it never overwrites a board saved on another computer. It saves as soon as the settings arrive. See **§8.11 Save your board** p. 134.

I cannot move or close tiles.

The layout is locked. Click **Locked** in the toolbar and untick **Lock layout**. See **§8.6 The tile menu** p. 129.

A tile shows "Refresh failed" in its header.

The last refresh got no answer, so the tile kept its last data. Hover the message for the reason, then click the tile's round arrow. See **§8.7 Keep data fresh** p. 129.

A tile says "No broker connected".

Trading tiles read a connected account. Connect a broker, or pick **Paper account**, which always shows your Fincept Paper account. See **§8.15 Troubleshooting** p. 158.

Add widget explains a limit instead of adding the tile.

Your plan limits the number of tiles. The meter in the window reads, for example, "5 of 6 widgets". See **§8.3 Add a widget** p. 126.

A tile that spends credits does not update with Refresh.

Tiles that spend credits never run from the toolbar's **Refresh** or the board's interval. Press the tile's own button, or switch on its own **Refresh every**. See **§8.7 Keep data fresh** p. 129.

The Geopolitics events or Trade flows tile shows nothing.

Loading them costs credits, so they wait until you press the tile's round arrow; the tile shows the price. See **§8.12 Widget catalogue** p. 134.

I clicked Buy on the Quick trade tile and nothing was sent.

The tile sends nothing itself. **Open in Equity Trading** opens the full order ticket filled in with your values. See **§8.12 Widget catalogue** p. 134.

I changed the dashboard on one computer and it changed on the other.

Your account has one board, the same on every computer, so an edit on one replaces it on the others. Reset and a removed tile cannot be undone. See **§8.11 Save your board** p. 134.

A Markets panel says "No tickers in this panel".

The panel is empty. Click **Edit panel** and add symbols, or **Remove panel**. See **§9.3 Change a panel's symbols** p. 163.

Regime does nothing useful on my panel.

A regime scan needs at least five symbols. Hover **Regime**: the tip says when the panel is too small, and nothing is charged. See **§9.6 Read a written brief or a regime scan** p. 165.

I cannot tick another column on a Markets panel.

A panel shows at most seven columns; the rest are greyed out until you untick one. See **§9.5 Choose a panel's columns** p. 165.

Will Brief charge me again for the same panel?

Not if the panel is unchanged: the last brief is shown again for free. **Regenerate** always writes and charges a new one. A brief that fails is not charged. See **§9.6 Read a written brief or a regime scan** p. 165.

The watchlist's Add box does nothing.

A broker list is open, and broker lists are read-only. Pick one of your own lists first. See **§10.9 Broker lists** p. 178.

Delete list is greyed out.

It is your only list. Make another list first. See **§10.8 Delete a watchlist** p. 177.

Import says "CSV missing SYMBOL column."

The first line of the file must name a column `SYMBOL`. Export a list once to see the format. See **§10.5 Import and export a CSV file** p. 175.

Some symbols were not added to my watchlist.

Your plan sets how many symbols one list can hold. When the list is full, the extra symbols are skipped and the terminal tells you the limit. See **§10.3 Add and remove symbols** p. 174.

How do I rename a watchlist?

You cannot. Make a new list, import or type the symbols, then delete the old one. See **§10.8 Delete a watchlist** p. 177.

What do price alerts cost?

One small daily charge for the whole account (1 credit when this guide was written) on any day at least one alert is armed, whether one alert or twenty. Nothing is charged on a day with none armed. See **§10.6 Set a price alert** p. 176.

A price alert did not fire at night.

Alerts are checked only while the symbol's market is open. See **§21.5 Set a price alert** p. 386.

An Algo Trading or Equity Research alert did not fire while the terminal was closed.

Those alerts are checked by the terminal itself, only while it runs. Only Watchlist price alerts run on Fincept's servers. See **§21.5 Set a price alert** p. 386.

The News wire is empty.

Read the message. For "No headlines match these filters", widen the time range, pick **All**, **All regions**, **All languages** and **Mixed**, and clear the search. **All** leaves **Filings** out. See **§11.4 Filter the wire** p. 186.

I never get news notifications.

News alerts is off by default: tick it in **Settings** › **Notifications**. Breaking and spike notifications also need the News screen to be open. See **§11.9 Stay up to date** p. 197.

News shows "Last 7 of 30 days" in amber.

Your plan limits how far back the news archive reaches. The tooltip names the plan that reads further back. See **§11.4 Filter the wire** p. 186.

The breaking banner did not show a story.

It shows at most one new story every two minutes and never repeats a story within 30 minutes. See **§11.5 Breaking news** p. 189.

My keyword monitor for "oil" does not match "turmoil".

Monitors match whole words only. End a keyword with `*` to match the start of words (`fed*` finds *Federal*). See **§11.8 Keyword monitors** p. 194.

How do I stop keyword-monitor charges?

Each switched-on monitor is charged per day. Switch it **Off** or delete it. See **§11.8 Keyword monitors** p. 194.

The News badge says Offline.

The live stream is off or not connected. Click the badge to switch it on. Headlines still update on the auto-refresh interval. See **§11.12 Troubleshooting** p. 202.

Analyze shows a low confidence.

The publisher blocked the article's text, so the AI read only the headline. Use **Open** to read the article yourself. See **§11.6 AI on the news** p. 190.

A feed's Test / Preview says "Access denied / not a feed" or "No items parsed".

The address is a web page, not a feed, or the site blocks programs: look for the real feed address (often ending in `.xml`, `.rss` or `/feed`). For "No items parsed", set **Parse** to **Manual** and click **Discover**. See **§12.4 Map an unusual feed by hand** p. 207.

My board feed does not appear in the News wire, or my News feed shows nothing.

Board feeds and News feeds are separate lists: add the address under News **Sources** too. Then select **RSS only**, check the time range and use **Test URL**. A feed that fails is skipped without a message. See **§12.6 Add a feed to the News wire** p. 211.

I renamed an RSS box and the name was gone after a restart.

Rename... and a box's own refresh interval are not kept after a restart. Change the feed's **Name** in its gear window instead. See **§12.5 Arrange and manage boxes** p. 209.

The Economic Calendar is not in the Screens menu.

Open it with `ECAL` (or `calendar`) in the command line, from the Global Data toolbar, or from its dashboard tile. See **§13.7 Open the calendar from elsewhere** p. 227.

A release I expect is missing from the Economic Calendar.

Click **Clear filters**: a grade chip hides every ungraded release, and country chips hide other economies. **Last update** shows how far ahead releases are scheduled. See **§13.4 Filter by country, impact and name** p. 222.

A release shows no actual figure although its time has passed.

The status reads **Awaiting the actual**. Click **Refresh** a few minutes later. See **§13.10 Troubleshooting** p. 232.

The end date changed when I picked dates three months apart.

A range covers at most 92 days. Pick a shorter range, or use **Month** view and the › arrow. See **§13.3 Pick the dates** p. 221.

Prediction markets: nothing loads, and a notification says a name could not be resolved.

Some internet providers block prediction-market websites. Try another network or change your computer's DNS server, then click **Refresh**. See **§14.10 Troubleshooting** p. 246.

Prediction markets: the indicator says Snapshot instead of Live.

Live prices stream only after you select a market (on Kalshi, only with your own Kalshi account connected). Prices still refresh with the list every 60 seconds. See **§14.10 Troubleshooting** p. 246.

Prediction markets: Yes and No add up to 101%.

They are the last prices of two separate shares; the difference is the spread and rounding. See **§14.3 Browse and search markets** p. 236.

55.8 Brokers and sessions

Connecting a broker account and keeping its login alive. See **Chapter 15, Brokers & Accounts** p. 248.

Connect says I need another plan.

Linking a broker account needs a plan that includes broker accounts. Fincept Paper works on every plan. See **§15.14 Troubleshooting** p. 263.

The browser login never finishes.

The browser must come back to the address registered in your broker app (for example `http://127.0.0.1:5010/`). If another program uses that port, the window says **Port ... busy**: use the manual paste option under the browser button. "Browser login timed out" means the browser never came back: try again, or paste the address you landed on by hand. See **§15.5 Connect a broker account** p. 255.

Adding a broker account says "Could not add the account".

The message usually names the reason (your plan, your session or the connection). With "Check the application log for details", sign in again and retry; if it still fails, send the log to support (**§55.15 Get help from the Fincept team** p. 1035). See **§15.5 Connect a broker account** p. 255.

My broker account turned red and says Token Expired.

A broker login does not last forever: Indian brokers end every session once a day, others after idle time or a nightly reset. Click **Log in again** on the red banner (or **Accounts**) and connect again. Until then the figures are the last ones the broker sent, and nothing can be placed or changed. See **§15.9 Keep your session alive** p. 259.

Fyers works in the morning and stops the same day.

You logged in before **08:15** Indian time, when Fyers resets every token. Log in again after 08:15. See **§15.14 Troubleshooting** p. 263.

The broker connects but its prices never move.

Your broker accepted the login but refuses live market data on your plan with them. Orders, positions and funds still work. In 5.0.6 the Equity Trading status pill does not say so: it counts Fincept Paper, which is always connected, so it only shows **n/m connected** (amber when a broker is down). See **§15.14 Troubleshooting** p. 263.

My order says "not confirmed for live trading".

Select the account in **Accounts** and click **Confirm for live trading**, or send the order from the Equity Trading ticket and confirm it there. See **§15.6 Confirm an account for live trading** p. 257.

An IBKR connection times out.

TWS is waiting for you to accept the connection. Accept it, or add `127.0.0.1` to **Trusted IPs** in the TWS API settings. See **§15.14 Troubleshooting** p. 263.

I added a broker account, but the screen still trades Fincept Paper.

A new broker account is never chosen for you. Pick it in the account button's menu on the trading screen. See **§15.8 Switch the account a screen trades** p. 258.

Can I switch a broker account to paper?

No. A broker account has no paper switch: demo keys make a DEMO account, live keys a LIVE one. To practise, use Fincept Paper. See **§15.3 Paper, demo and live** p. 251.

"Risk check unavailable: sent without the server's pre-trade check".

Fincept's pre-trade check did not answer within 5 seconds, so the order went to your broker anyway: an outage at Fincept must not trap you in a position. See **§15.13 For advanced users** p. 262.

Can my plan stop me from closing a position?

No. Closing positions and cancelling or changing orders are never blocked by your plan. See **§15.13 For advanced users** p. 262.

An account I added on another computer shows Disconnected here.

Broker logins are saved only on the computer where you entered them. Log in again on this one. See **§15.14 Troubleshooting** p. 263.

Approve is greyed out on a pending order.

Point at it for the reason. Most often the account is not confirmed for live trading yet, its session has ended, or it changed mode since the order was queued. See **§21.3 Approve or reject pending orders** p. 383.

A pending order is shown in amber.

It was queued in an earlier session, so the price and your position have probably changed. Check first, or reject it and send a fresh order. Pending orders never expire. See **§21.3 Approve or reject pending orders** p. 383.

I do not see the pending-orders badge.

It is hidden while nothing is pending. **Review** on the **Pending approvals** tile opens the panel anyway. See **§21.9 Troubleshooting** p. 389.

The portfolio monitor says "No active INR broker accounts".

It covers Indian broker accounts. Connect one, or use Equity Trading's own tabs for Fincept Paper. See **§21.6 Portfolio monitor** p. 387.

55.9 Paper trading and orders

Placing orders on Fincept Paper or a broker from Equity Trading, F&O and Crypto Trading. See **Chapter 16, Equity Trading** p. 264, **Chapter 17, F&O** p. 284 and **Chapter 18, Crypto Trading** p. 298.

Paper or live?

Every ticket names the account and its mode before anything is sent: **PAPER** for Fincept Paper, a red **LIVE** chip for a real broker account. A **Confirm LIVE order** window means real money: check the account name and mode before you click **Send LIVE order**. See **§15.3 Paper, demo and live** p. 251.

"Price not available yet - wait for quotes to load".

A paper market order needs a live price. Wait a second after picking the symbol, or use a limit order. See **§16.14 Troubleshooting** p. 283.

My paper order says "queued … market closed".

The market is shut. The order fills at the next open. See **§16.5 How an order is sent** p. 270.

Do paper orders cost credits?

Placing one is free. Each fill costs a small number of credits, shown above the **Buy** button; an order that never fills costs nothing. See **§15.3 Paper, demo and live** p. 251.

"… is listed on several markets - pick one from the suggestions".

Choose the listing in the search list, or type `EXCHANGE:SYMBOL`. See **§16.3 Pick a symbol** p. 267.

The depth panel is locked.

Full market depth needs a plan with Level 2 depth. Bid and ask still show in the top bar. See **§16.6 Watch the market** p. 271.

Market depth says "No depth data" on Fincept Paper.

Fincept Paper has no order book of its own. Depth comes from a broker account that sends one. See **§16.6 Watch the market** p. 271.

I pressed Square off all in one market's view. Did it close only that market?

No: it closes positions in every market, and its question says so. See **§16.8 View by market** p. 278.

Pressing Enter does not send my live order.

That is on purpose: Enter never sends a live order. Click **Send LIVE order**. See **§16.5 How an order is sent** p. 270.

One account was skipped when I sent an order to several accounts.

Accounts whose live session has ended are skipped and named. Semi-Auto accounts get the order in their approval queue instead. See **§16.10 Send one order to several accounts** p. 279.

Buy and Sell are greyed out on a research screen.

Point at the button: the tooltip says why, for example that an index cannot be bought or sold, or that no account trades that market. Fincept Paper trades every listing that has a market price. See **§22.21 Trade or backtest from research** p. 418.

I want to start my paper book again.

Select **Fincept Paper** in **Accounts** and use **Reset book**, which deletes every position, working order and trade of the main book. **Add cash** deposits more simulated money. See **§15.10 Manage your Fincept Paper account** p. 259.

The F&O chain says "Connect a broker to load F&O data."

Pick a Fincept source in **Broker** (for example **Fincept · NSE India**) for delayed data, or connect an Indian broker for live prices. See **§17.4 Know how fresh the prices are** p. 287.

F&O: Paper trade is greyed out.

F&O orders need a broker source, even on paper. Point at the button for the exact reason. See **§17.8 Place orders** p. 294.

F&O premiums look wrong next to the spot price.

Read the amber line: outside market hours or on a delayed source the premiums are from the last session while the spot may be live. Use a broker source for live premiums. See **§17.4 Know how fresh the prices are** p. 287.

F&O: IV PCTILE shows "…12/30".

The percentile needs 30 days of history recorded on this computer. Keep using the screen; it fills in. See **§17.11 Troubleshooting** p. 296.

F&O: the strategy builder shows no payoff, premium or Greeks.

The contract's lot size is unknown, which is common on the delayed Fincept sources, so nothing is computed. Load the chain through a connected broker. See **§17.5 Build an options strategy** p. 289.

F&O: a live basket stopped part-way.

Each leg is a capped limit order. A leg not filled within 20 seconds is cancelled and nothing after it is sent; use **Flatten filled legs** to close what filled. See **§17.8 Place orders** p. 294.

F&O: the top table on the Positions tab is empty.

It lists only your live broker accounts' F&O positions. Your Fincept Paper book is in the blotter below it. See **§17.7 Other tabs** p. 292.

Crypto: the paper Buy button is grey.

Read the line on the ticket: it names the reason. The most common are a venue paper trading cannot price, and a dated future or option. See **§18.5 Place a paper order** p. 308.

Crypto: "No answer from Fincept Paper yet."

The order may have landed. Check **Open orders** or **Positions** before you send again. Sending again is safe: it is the same order. See **§18.17 Troubleshooting** p. 329.

Crypto: the book, the tape or the price stopped moving.

The venue's live feed went quiet. A notice says so and a second one says when it is back; orders still go through. If a venue is down, pick another in the venue picker. See **§18.4 Read the market** p. 305.

Crypto: a notice says a venue refused this network.

Some exchanges block certain countries or networks. Pick a venue that works from your location. See **§18.3 Pick a venue and a pair** p. 303.

Crypto: Live mode says no API key is registered, or my key was refused.

Register a key for that venue on **Venues & keys**, or switch back to **Paper**. The server refuses a key that can withdraw funds, or whose permissions it cannot confirm: create a trade-only key and register it again. See **§18.8 Register an exchange key** p. 312.

Crypto: my registered key now shows STATUS REFUSED.

The key gained withdrawal permission, so the server stopped using it. Remove that permission on the exchange and register the key again. See **§18.8 Register an exchange key** p. 312.

Crypto: a LIVE order on a perpetual is refused ("Perpetuals, futures and options need a higher plan.").

LIVE orders on perpetuals, futures and options need Exclusive Pro. In 5.0.6 no upgrade sheet opens: the order is refused with that message. The ticket also reads **SPOT** for every pair and shows no **Leverage**, **Margin** or **Reduce only**, so a LIVE perpetual uses the leverage and margin mode set on your exchange account. See **§18.7 Trade LIVE** p. 310.

Crypto: my LIVE order button says "Submit for approval".

The order is above your organisation's four-eyes amount, so a member with the risk or admin role must approve it. In an organisation of one, an admin can set the amount to 0. See **§18.7 Trade LIVE** p. 310.

Crypto: every LIVE order is refused.

The kill switch is engaged. A member with the risk or admin role must clear it and give a reason. Paper trading is not affected. See **§18.13 Stop everything with the kill switch** p. 323.

Crypto: the Execution, Portfolio and Risk pages are empty.

They show your LIVE book, which needs registered keys and real balances. Your paper trades are in the Trade page's blotter. See **§18.12 The Portfolio and Risk pages** p. 321.

Prediction markets: my order was refused.

The exchange's reason is shown in red under the ticket: for example a price outside 0–1, a price step the market does not allow, or a size below its minimum. See **§14.10 Troubleshooting** p. 246.

Prediction markets: does an order ask me to confirm?

No. With an exchange account connected, orders and cancels go straight to the exchange as real-money orders. Fincept Paper does not cover prediction markets. See **§14.7 Connect an exchange account (optional)** p. 242.

55.10 Algo trading, backtesting and workflows

Strategies that run by themselves, tests on history, Alpha Arena and Node Editor workflows. See **Chapter 19, Algo Trading** p. 331, **Chapter 24, Backtesting** p. 464, **Chapter 20, Alpha Arena** p. 371 and **Chapter 40, Node Editor** p. 776.

Deploy is greyed out.

The strategy needs a name and at least one runnable entry rule. Point at the button: the tooltip says what is missing. Fix any rule flagged in red. See **§19.8 Deploy a strategy** p. 351.

An algo backtest shows no trades.

The entry rules never fired in that window. Check the Builder's live verdict (**Would enter now** / **Not triggering now**), loosen a rule, or test a longer window or another symbol. See **§19.7 Test a strategy on history** p. 346.

"Data starts …, later than the requested …".

Fincept's intraday history is limited: 1-minute bars 5 days, 5-minute bars 30 days, hourly bars 92 days. Use a shorter window, daily bars, or a connected broker's history. See **§19.16 Troubleshooting** p. 369.

Fincept cloud is greyed out in the deploy window.

It is offered only for Fincept Paper deployments of a single-share strategy on 1m, 5m, 15m, 30m, 1h, 1d or 1w bars without fundamentals rules. The line under the buttons says which condition failed. See **§19.8 Deploy a strategy** p. 351.

A deployment stopped trading when I closed the terminal.

It runs on **This device**: start the terminal again on the same computer and it resumes. For a paper strategy that should run without you, deploy it on **Fincept cloud**. See **§19.8 Deploy a strategy** p. 351.

A deployment row says OTHER DEVICE - READ-ONLY.

It runs on another of your computers. Control it there, or stop it there and use **Take over...** here. See **§19.9 Watch your deployments** p. 355.

My deployment stopped by itself after one trade.

Run defaults to **One trade**: the deployment completes when that trade closes. Choose **Every day until I stop it** to keep it running. See **§19.8 Deploy a strategy** p. 351.

Why is a paper deployment charged every day?

Paper and live deployments pay the same daily runtime rate, plus a small charge per paper fill. The price shows in the deploy window. See **§19.8 Deploy a strategy** p. 351.

I clicked Stop and my position is still open.

Stop leaves the position as it is. **Exit** squares it off at market and then stops; **Flatten all** does that for every deployment. See **§19.9 Watch your deployments** p. 355.

My edits to a library strategy were saved as a new strategy.

Library strategies cannot be changed. **Edit** opens a copy that becomes your own when you save it. See **§19.6 Manage your strategies** p. 344.

I cannot deploy my options strategy without a broker, or on Fincept cloud.

An F&O strategy deploys only with a connected broker account and runs on this device. Its backtest needs neither. See **§19.5 Build an options or futures strategy** p. 342.

New entries are paused.

A daily loss limit was hit, your credits ran out, or the price feed is down; the row or the banner says which. Exits keep working in every case. See **§19.9 Watch your deployments** p. 355.

The live scan will not start.

It needs a connected broker account, because its live feed is what is scanned. Use the one-time scan without a broker. See **§19.11 Scan the market** p. 360.

Run backtest shows no price, or says "The price of the backtest has not loaded yet".

Just after sign-in the run's price may not have arrived: the button shows no price and a run is refused with *The price of the backtest has not loaded yet…*. Nothing is charged. Wait a moment and press it again. See **§24.4 Run a test and what it costs** p. 468.

"The backtest costs 1 credit and your balance is … so it was not run."

Your credits are too low. Buy credits, then run again. Nothing was charged. See **§24.4 Run a test and what it costs** p. 468.

The backtest result says the window was TRUNCATED.

The data does not reach back to your start date, often with intraday bars. Use daily bars for long windows, or a later start. See **§24.14 Troubleshooting** p. 491.

Not validated, although the return looks great.

Read the failing checks on **Validate**: usually too few trades, a deflated Sharpe ratio below the bar after many tries, or a confidence interval that spans zero. Test a longer window or more symbols before you trust it. See **§24.8 Check whether the result is real** p. 476.

Backtesting: my deflated Sharpe gets worse each time I tune.

Every run and sweep of the same idea counts as a trial, so the bar rises with each one. That is the point of the check. See **§24.8 Check whether the result is real** p. 476.

Backtesting: some Validate checks say N/A.

Several checks need an optimisation, some with walk-forward or CPCV turned on. A check that did not run is never counted as a pass. See **§24.8 Check whether the result is real** p. 476.

Backtesting: I cannot optimise this strategy.

Only **Template** strategies have parameters to optimise. See **§24.9 Optimise parameters** p. 478.

Backtesting: does reopening or comparing old runs cost credits?

No. Opening runs from History, comparing them and every page of a finished result are free. Only starting a run or a sweep is charged, and answering **No** to "Run the backtest?" charges nothing. See **§24.4 Run a test and what it costs** p. 468.

Send to Algo Trading says only rule-based strategies can be imported.

A **Template** runs as a named strategy on the server; Algo Trading needs rules it can read. Rebuild the idea with **Rules**, then send it. See **§24.14 Troubleshooting** p. 491.

Alpha Arena: the competition paused by itself.

The server refused an answer (out of credits, a spending cap, the plan) or the competitors' paper books could not be opened. Fix the cause and click **Resume**. See **§20.5 Control a running competition** p. 377.

Alpha Arena: a competitor shows "halted: 3 failures".

Its model failed three rounds in a row. For Claude Code or Codex, check that the tool is still signed in on this computer, then click **Resume agent** on its leaderboard row. See **§20.8 Troubleshooting** p. 380.

Alpha Arena: "Market closed" and nothing happens.

No instrument's market is open. The header shows when the next one opens, and the competition starts again by itself a minute later. Use crypto instruments to test at any hour. See **§20.8 Troubleshooting** p. 380.

Alpha Arena: credits are still being spent after I closed the screen.

A competition keeps running while the terminal is open, whichever screen you look at. Use **Pause** or **Kill all** to stop it. See **§20.5 Control a running competition** p. 377.

Crypto: a bot keeps charging credits.

Each bot costs credits per day, sandbox bots included. Stop or delete bots you no longer use. See **§18.11 Run a bot** p. 319.

Node Editor: "Workflow Not Ready" appears when I press Execute.

Each line names a node and its problem: an empty required field, a condition that does not parse, an input with nothing connected. Fix them and run again, or click **Run Anyway**. See **§40.10 When a node fails** p. 790.

Node Editor: "Another workflow is running".

Only one workflow runs at a time. Wait for it, or stop it where it was started (another window or the AI chat). See **§40.8 Run a workflow** p. 789.

Node Editor: my alert fires every 15 minutes.

Put a **Change Detector** in front of the alert so it fires only when something changed. See **§40.20 Troubleshooting** p. 809.

Node Editor: a deployed workflow did not run.

It runs only while the terminal is open, and only on the computer that owns it. The badge says which computer runs it, or **paused**; **PAUSED** in capitals means Fincept has switched scheduled runs off for now. See **§40.13 Deploy a workflow on a schedule** p. 793.

Node Editor: I cleared the canvas, built something new, and my old workflow is gone.

Clear keeps you in the same workflow, so saving replaced it. While the screen is still open, **Undo** steps back through your edits (up to 200). Start a separate workflow from a template next time. See **§40.20 Troubleshooting** p. 809.

Node Editor: dropping a node opens an upgrade sheet.

You have reached your plan's number of nodes per workflow; the count is at the foot of the palette. See **§40.4 Add nodes** p. 784.

Node Editor: a node failed after 10 minutes.

A node that does not answer in 10 minutes fails (60 minutes for an AI Agent marked Long-Running Task, 30 for an AI Team). See **§40.8 Run a workflow** p. 789.

Node Editor: a secret field is empty on my other computer.

Secrets stay on the computer where you typed them. Enter it again there. See **§40.15 Secret parameters** p. 797.

Node Editor: the Code (Python) node fails at once.

No Python was found. Install Python 3.8 or later, then pick it in `Settings › Python`. See **§43.2 Set up Python** p. 835.

55.11 Research desks

Company research, portfolios, derivatives, M&A, alternatives and quant. See the chapter of each screen for more.

Equity Research: the title bar says "Loading…" and the sections stay empty.

The quote or profile could not be read yet. Wait a few seconds; a failed quote is asked again once. *Waiting for sign-in* means your session is still starting. See **§22.27 Troubleshooting** p. 428.

Equity Research: a figure shows "N/A" or a dash.

The figure is not published for this company. The line under it says why, and whether the filed statements were used instead. See **§22.4 Read the Overview** p. 396.

Equity Research: Filings says "coming soon" or "No filings yet".

Filings are SEC filings and exist only for US-listed companies. Indian listings use the NSE filings view. See **§22.22 Research an Indian (NSE) listing** p. 418.

Equity Research: the Valuation tiles show a dash.

A required input is missing (*… is not available - enter it above.*), or the discount rate is not above terminal growth. Fix the box named in the message. See **§22.6 Value the company** p. 399.

Equity Research: the DCF fair value swings a lot when I change one box.

A DCF is very sensitive to the discount rate and terminal growth: one point in either can move fair value by a third. Read **Bear** to **Bull** as a range, not a target. See **§22.6 Value the company** p. 399.

Equity Research: a Quality card says "Not applicable", "No data", FLAG or DISTRESS.

The distress and manipulation screens are not defined for banks and insurers, and a screen that needs two years of statements says **No data** with one. A FLAG or DISTRESS band is a reason to read the accounts more closely, not a finding. See **§22.8 Screen the quality of the accounts (Quality)** p. 402.

Equity Research: Peers shows fewer companies than I typed.

At most 16 peers load at once. The caption says how many were left out. See **§22.10 Compare with peers** p. 405.

Equity Research: does opening a filing cost credits?

The list is always free, and each month includes a number of documents. Past that, opening a document not fetched before costs credits; reopening one is free. See **§22.16 Read the filings** p. 412.

Equity Research: I cannot download 1-minute bars from last year.

Intraday intervals reach back only about 60 days. Use daily bars for longer periods. See **§22.20 Download the price history** p. 418.

Equity Research: Depth says broker depth is for NSE and BSE only.

The order book comes from a connected Indian broker, so it exists only for NSE and BSE shares. See **§22.27 Troubleshooting** p. 428.

Portfolio: a line shows a dash for its value.

Nothing quotes it, and the health pill counts it as *unvalued*. Set a manual mark, or check the symbol (right-click > **Change symbol**). See **§23.8 Work with positions** p. 438.

Portfolio: New shows a lock.

Your plan limits how many portfolios you keep; the counter beside **New** shows how many you have. See **§23.4 Create and manage portfolios** p. 433.

Portfolio: I cannot change the base currency.

Once a book has transactions, its base currency is fixed. Create a new book in the other currency and import the ledger into it. See **§23.4 Create and manage portfolios** p. 433.

Portfolio: I typed a symbol but the trade will not record.

Pick the instrument from the search list; a typed symbol alone is not booked. See **§23.9 Record transactions** p. 442.

Portfolio: the risk tiles say "computing" for a long time.

The risk engine needs price history for every line. It usually finishes within seconds and the tiles update by themselves. A new book with only a few days of history shows little. See **§23.13 Measure risk** p. 448.

Portfolio: the import says rows cannot be read.

Read the **Problem** column. Usual causes: an unknown type word, a date in another format (pick it in **Defaults**), or a column that was not recognised (fix it under **Column mapping**). See **§23.10 Import transactions from a file** p. 444.

Portfolio: Import is still off after Preview.

A file is imported whole or not at all. Fix or remove every row listed with a problem first. See **§23.10 Import transactions from a file** p. 444.

Portfolio: the ribbon says "P&L excludes n line(s) with unknown cost".

A lot whose cost was never stated is counted in NAV but left out of every P&L figure; the **Realised YTD** tile says *excl. n closing(s) with cost unknown* for such lots you sold. See **§23.24 For advanced users** p. 463.

Portfolio: the Allocation effect is always zero.

A single index or ETF benchmark has no sector weights, so the whole difference shows up as **Interaction**. See **§23.12 Explain the return (Attribution)** p. 447.

Portfolio: the optimiser put most of the book into one stock.

With no weight cap it can concentrate the book. Set **Max weight** (for example 25%) before you click **Optimise**. See **§23.15 Rebalance the book** p. 451.

Portfolio: the risk section is missing from my PDF.

The summary PDF includes the risk, attribution, limits and tax-lot sections only for the tabs you opened this session. Open them, then export again. See **§23.19 Reports and exports** p. 457.

Portfolio: cash goes negative.

Cash tracking is on but deposits were not recorded. Add a **Cash** transaction, or turn cash tracking off in Edit portfolio. See **§23.9 Record transactions** p. 442.

Portfolio: "All portfolios is a read-only view".

Pick a single portfolio in the picker to add, import or edit. See **§23.21 View all portfolios together** p. 460.

Derivatives: the header strip and tiles show dashes.

No board is loaded yet. Pick an underlying, then press **Fetch / refresh chain** on the Chain page. Signed out, switch **Source** to **Cboe direct (delayed)**, which works without a session. See **§25.3 Pick an underlying and an exchange** p. 497.

Derivatives: IV rank shows "needs more history".

IV rank needs at least 20 held sessions of implied volatility for this name. It fills in as sessions are captured. See **§25.7 Analyse volatility** p. 511.

Derivatives: a past session I want is not in the Session list.

For most venues a board cannot be rebuilt later: a day that was not captured is gone. The list is exactly what was collected. See **§25.3 Pick an underlying and an exchange** p. 497.

Derivatives: the same ticker shows different numbers on another venue.

A name listed on more than one exchange has different contracts there. Currency, contract size and exercise rules follow the venue. See **§25.3 Pick an underlying and an exchange** p. 497.

Derivatives: can I trust the rich and cheap readings?

Check **FIT RMSE** first. Above 2.5 vol points, rich and cheap mostly measure the fit's own error. See **§25.6 Read the volatility surface** p. 505.

Derivatives: RV21, VRP and IVR are blank in the header.

A page your plan does not include does not run in the background either; without Vol analysis those figures stay blank. See **§25.13 Reference** p. 534.

Derivatives: the Strategy lab margin differs from my broker's.

It is an estimate by the chosen rulebook. With a connected NSE or BSE broker, the broker's own basket margin shows beside it. See **§25.8 Build an options strategy** p. 514.

Derivatives: Butterfly arb or Calendar arb says Violation.

Very short expiries and illiquid wings often break the no-arbitrage checks. Untick the 0–1 day expiries, try **SSVI global**, or raise **Min quotes per expiry**. See **§25.6 Read the volatility surface** p. 505.

Derivatives: Positioning or the Strategy lab ask for a lot size.

The venue publishes no contract size for this board. Type it in **Pricing assumptions › Contract multiplier (units)**. See **§25.5 Set the pricing assumptions** p. 504.

Derivatives: Risk is empty in Book mode.

Book mode reads live F&O positions from a connected Indian broker account. With no broker, or on another venue, use **Simulated**. See **§25.9 Measure position risk** p. 520.

M&A: "No SEC XBRL figures … Enter them by hand".

The company files no machine-readable financials (a private company, a foreign filer, a fund). Type the figures into the card. See **§27.3 Set up a deal** p. 558.

M&A: a bar on the football field is grey and says "stale".

The deal changed after that method ran. Press **Re-run stale**. See **§27.5 Value the target** p. 562.

M&A: "Set up the deal on the Deal desk first".

The merger model needs the target with its share count, the acquirer and an offer per share; a stock offer also needs the acquirer's share price. See **§27.6 Build the merger model** p. 566.

M&A: my scenarios are missing on my other computer.

The deal, its scenarios and saved screens are stored on this computer. Only **MY COMPS** sync to your account. See **§27.11 Reference** p. 577.

M&A: which buttons cost credits?

Only the few that show a price on the button, such as **Write board memo**. Every model and valuation method is free. See **§27.3 Set up a deal** p. 558.

Alternatives: "Not saved: the demo program is still loaded".

Your edits cannot be mixed into the sample. Press **Start my program** first. See **§28.3 Set up your program** p. 583.

Alternatives: the IRR shows n/m.

The IRR did not converge, usually because there are too few cash flows or no NAV mark yet. Add the fund's calls, distributions and a NAV mark. See **§28.4 Measure performance** p. 588.

Alternatives: Solve commitment stays greyed out.

It stays off until every field it needs is filled. The line at the top of the canvas says how many still need your input. See **§28.5 Plan commitments (pacing)** p. 589.

Alternatives: a fund is missing from the program totals.

A fund in another currency with no FX rate is left out of the totals, and the header says so. Add its rate in **PROGRAM SETTINGS**. See **§28.14 For advanced users** p. 602.

M&A or Alternatives: a tab shows a lock.

Your plan decides how many tabs open, counted from the left. A tab beyond that shows a lock and opens the upgrade sheet. See **§28.13 Reference** p. 601.

Relationship Map: the map stays empty and says "Could not map …".

Pick the company from the suggestion list instead of typing the ticker, so the exchange suffix is right (for example `RELIANCE.NS`), then click **Analyze** again. See **§29.9 Troubleshooting** p. 614.

Relationship Map: I unticked Mutual funds and the institutional holders disappeared too.

Institutional and **Mutual funds** control the same thing: unticking either hides both groups. Tick it again to bring them back. See **§29.5 Show or hide groups** p. 609.

Concept Studio: the Explain button shows a lock.

Your credit balance is too low for a new page. Buy credits, or open a page that is already cached. See **§30.9 Troubleshooting** p. 622.

Concept Studio: I pressed Enter and a paid build started.

Enter in the search box starts a build, charged when it completes. A cancelled, failed or off-topic page costs nothing, and cached pages are free. A recent search only fills the box: click **Explain** to open it. See **§30.3 Explain a concept of your own** p. 618.

AI Quant Lab: every run says "No market data loaded yet".

Open **Desk**, check the symbols and click **Fetch data**. The context strip must show bars loaded. See **§31.3 Set up your research universe (Desk)** p. 627.

AI Quant Lab: "needs at least N bars".

The window is longer than the history. Lower the window, or choose a longer **Period** on the Desk. See **§31.14 Troubleshooting** p. 646.

AI Quant Lab: the Factor lab says NO IC and VERDICT UNSCORED.

Rank IC needs at least 10 symbols with data on each date. Load a larger universe on the Desk, for example an index. See **§31.4 Test factors (Factor lab)** p. 630.

AI Quant Lab: beta and relative charts are missing.

The **Benchmark** is empty. Set one on the Desk (SPY by default) and fetch again. See **§31.3 Set up your research universe (Desk)** p. 627.

AI Quant Lab: Micro, AI agents and Research log show a lock.

Your plan includes the first six tabs. Exclusive+ and Exclusive Pro include all nine. See **§31.14 Troubleshooting** p. 646.

55.12 Charts, maps and world data

Charts that draw badly, maps that stay empty, and the macro screens. See **§51.5 Appearance** p. 939, **Chapter 32, Global Data** p. 648, **Chapter 33, Sovereign Bonds** p. 660, **Chapter 34, Global Economy** p. 672, **Chapter 35, Geopolitics** p. 688, **Chapter 36, Maritime** p. 699 and **Chapter 26, Surface Analytics** p. 543.

Charts flicker, turn white, or the window draws badly.

Open **Settings** › **Appearance**, set **Drawing** to **CPU**, then restart the terminal. If the graphics card failed before, the terminal already holds itself on the CPU; **Reset to default** tries the GPU again at the next start. See **§51.5 Appearance** p. 939.

A map or chart stays empty until I press a button.

Some screens never load by themselves, because each question costs credits. Global Economy waits for **Load**, Geopolitics for **Apply filters**, Maritime for **Global view (200 vessels)** or a place. Changing a country or a filter only marks the view as out of date: press the button again. See **§34.10 Troubleshooting** p. 686.

Global Economy: "Pane too small for the chord diagram".

Make the panel larger, or switch to **Treemap**, which works at any size. See **§34.3 Read a country's trading partners** p. 675.

Global Economy: a country on the world map is grey.

The indicator has no value for that country. The legend counts these as **no data**. See **§34.6 Compare every country on the world map** p. 679.

Global Economy: an infrastructure layer stopped at "first 50000 of …".

That layer holds more features than one read can draw. Zooming does not load more. See **§34.7 Show infrastructure on the map** p. 681.

Global Economy: I turned on an infrastructure layer and the country shading vanished.

Turning on a layer sets **Indicator** to **None**. Pick an indicator after the layer is on to see both. See **§34.7 Show infrastructure on the map** p. 681.

Global Economy or Geopolitics: will the same question be charged again?

No. The same question again on the same UTC day is free (the footer says "no charge"). A new country, year, direction or filter is a new question. See **§34.8 Reference** p. 682 and **§35.2 Quick start** p. 690.

Geopolitics: the count says few events are mapped.

Many reports name a place that cannot be pinned down. They are still in the table; only events with a location get a pin. See **§35.9 Troubleshooting** p. 697.

Geopolitics: some pins are bigger and fainter.

The report named only the country, so the pin sits at the country's centre and its label says *(country-level)*. Read it as "somewhere in this country". See **§35.8 For advanced users** p. 696.

Maritime: "No vessels in this area."

The area holds no tracked ships, or it is too small. Draw a larger shape or search a busier place. See **§36.3 Load ships in an area** p. 701.

Maritime: Track or the AIS dark views say they need another plan.

Live positions, voyage history and the AIS dark views need Exclusive Pro. See **§36.4 Track one ship** p. 703.

Maritime: Auto would not turn on ("Temporarily unavailable…").

Fincept has paused the automatic sweep for everyone for a while. Press **Refresh** by hand meanwhile, and press **Auto** again later. See **§36.10 Troubleshooting** p. 716.

Maritime: credits keep going down while the screen is open.

Auto runs the area search again every 5 minutes while the screen is open, and each run is charged. Turn it off; it never turns itself back on. See **§36.3 Load ships in an area** p. 701.

Maritime: picking a ship from the suggestions charged me.

Picking a ship that can be tracked presses **Track** for you, which is charged. Use the free vessel profile to identify a ship first. See **§36.4 Track one ship** p. 703.

Surface Analytics: the SAMPLE DATA banner will not go away.

Either you have not pressed **Fetch** yet, or this surface has no source yet (the banner says which). Sample-only surfaces can still show your own numbers through **Import CSV**. See **§26.4 Choose a surface** p. 546.

Surface Analytics: the 3D view says "3D not applicable".

The surface is a single curve or a category matrix. Use **Table** or **Line**. See **§26.10 Troubleshooting** p. 555.

Surface Analytics: Export CSV is greyed out.

It stays off until raw rows have loaded. Press **Fetch** first. See **§26.6 Inspect and export the raw numbers** p. 551.

Surface Analytics: Correlation, VaR and the other Risk surfaces still show sample data.

These surfaces are not computed from fetched data on this screen yet, so they show sample data and **Fetch** is off. See **§26.4 Choose a surface** p. 546.

Global Data: "Each chart holds up to 6 series. Remove one first."

That chart is full. Remove a series with its ×, or add the new one to the other chart. See **§32.6 Chart a series and compare two** p. 653.

Global Data: the charts are empty after I reopen the screen.

Your series are remembered but not loaded. Click **Load N saved series** in the Series rail. See **§32.12 Troubleshooting** p. 659.

Global Data: "Nothing matched. Try fewer words, or Ask AI."

Use fewer or more general words, remove filters, or switch to **Ask AI**. See **§32.3 Search for data** p. 651.

Global Data: the search button turned into Ask with a price.

A search that reads like a question goes to the AI for 1 credit. Use short keywords to keep it a free search. See **§32.5 Ask a question with AI** p. 652.

Sovereign Bonds: a country's CDS or rating shows a dash.

No figure is published for it. See **§33.9 Troubleshooting** p. 671.

Sovereign Bonds: a yield chart shows a huge one-day move.

A line under the chart lists one-day jumps that usually mark a switch to another reference bond, not a market move. Read it before you trust the move. See **§33.4 Read a country's bond page** p. 664.

Sovereign Bonds: the summary tiles do not change when I filter.

The tiles always describe every country on the page. The search box and filters change only the table. See **§33.1 Screen tour** p. 661.

Report Builder: a chart says "add data in the Properties panel".

It has no data yet. Select it and **Fetch** a symbol's history, or type data under **Manual data**. See **§45.6 Set up data blocks** p. 863.

55.13 AI chat, agents and your own AI

The AI Chat screen and companion, Agent Studio, Mission Control, MCP servers and your own AI harness. See **Chapter 37, AI Chat** p. 719, **Chapter 38, Agent Studio** p. 739, **Chapter 39, Mission Control** p. 764, **Chapter 41, MCP Servers** p. 810 and **Chapter 42, Use Your Own AI** p. 819.

"AI chat is not configured. Open Settings → AI harness and pick a harness or Fincept AI."

No engine is selected. On the AI Chat screen the foot of the chat list says **No provider** instead. Open `Settings › AI harness` and click **Use** on **Fincept AI**, or on your own harness. See **§42.2 Quick start** p. 821.

An answer ends with an error about credits.

Your balance is too low for a Fincept AI answer. Buy credits, or switch to your own AI, which costs no Fincept credits. See **§37.14 Costs and credits** p. 734.

The chat sidebar says "Couldn't load your chats."

A connection problem: click **Retry**. *Sign in to see your chats.* means your session ended, so sign in again. See **§37.9 Your chats** p. 729.

"Failed to create chat session. Please try again."

The server could not create the chat. Check your connection and send again. See **§37.17 Troubleshooting** p. 738.

The AI says it was not allowed to do something.

You denied an approval, the prompt timed out, or the action is one the AI may never take. Do it yourself on the screen, or ask again and click **Approve**. See **§37.5 Approve what the AI does** p. 725.

The AI answers, but never looks anything up or works a screen.

On Fincept AI, tools (live look-ups, working the screens, web search) start on Exclusive+. On Exclusive the chat answers from the model alone, and no notice says so. Move to a higher plan, or use your own AI, which uses the terminal's tools on any plan. See **§37.4 Let the AI work the screens** p. 724.

The AI did not open the screen beside the chat.

Ask more precisely (*"open X next to this chat"*), or open the screen yourself with its code and ask the AI to work in it. See **§37.4 Let the AI work the screens** p. 724.

The answer stopped with "Step budget reached".

Click **Continue** under the answer. See **§37.8 Read an answer** p. 728.

The microphone does nothing.

Check that your operating system lets the terminal use the microphone (its privacy settings). If the voice service is paused, the controls say so. See **§37.13 Talk to the AI: voice** p. 733.

Does a deeper thinking level cost more? Is a failed answer charged?

Neither. A deeper level is slower and more thorough at the same price, and a stopped, failed or cut-off answer costs nothing. Tool steps are free; tools with their own price ask first. See **§37.14 Costs and credits** p. 734.

The AI asks for approval before a harmless click.

Some buttons count as spending or trading even when they only open a tab or save a setting, for example the **Trade** tab on Prediction Markets or **Save** in a feed window. Read what the prompt names and click **Approve** if you meant it. See **§37.5 Approve what the AI does** p. 725.

An approval prompt closed by itself.

After about three minutes without an answer the prompt closes and nothing is done. Closing it or pressing Esc counts as **Deny**. See **§37.5 Approve what the AI does** p. 725.

The AI will not sign in, add a broker or press an approval for me.

That is by design: the AI never signs in, never reads passwords or keys, and cannot press approval prompts, add brokers or switch trading modes. See **§37.4 Let the AI work the screens** p. 724.

Chat says "… is selected but …: chat fails until that is fixed."

The harness you picked cannot answer: it is signed out, uninstalled, or its own plan limit is reached. Fix that, or click **Use** on **Fincept AI**. See **§42.12 Troubleshooting** p. 830.

My own AI is signed out. Does chat fall back to Fincept AI?

No. Chats fail until you fix your harness or click **Use** on **Fincept AI**; your questions are never sent to Fincept's AI behind your back. See **§42.3 What changes when your own AI answers** p. 822.

I use my own AI, but Agent Studio teams, workflows and schedules still spend credits.

They run on Fincept's servers and keep using Fincept AI, whatever your chat uses. See **§38.18 For advanced users** p. 763.

The Claude Code card says it is not found, or shows Sign in.

Install it, then reopen the page (or click **Detect**). For **Sign in**, finish in the browser, or run `claude auth login` (Codex: `codex login`) once in a terminal window. See **§42.2 Quick start** p. 821.

Test says the endpoint answered but did not call the terminal's tools.

The model may not handle tool calls well. Pick another model on the card, or another endpoint. See **§42.4 Set up an LLM endpoint** p. 823.

Scheduled tasks or a mission did not run overnight.

They run only while the terminal is running on this computer. Keep **Always on** ticked in **Settings › AI harness** and do not quit from the tray. See **§42.7 Scheduled tasks** p. 824.

Closing the last window does not quit the terminal.

While AI tasks are scheduled, the terminal keeps running in the system tray or menu bar so they can run. Use **Quit** on the tray icon to quit. See **§4.9 For advanced users** p. 68.

My scheduled task refused to trade or spend.

Nobody is there to approve, so spending and money-moving actions are refused unless the task's **Allow trading tools** is on (off by default). See **§42.7 Scheduled tasks** p. 824.

My own Claude Code session cannot see the terminal.

Tick **Allow my own CLI sessions to connect** and keep the terminal open. If you added the terminal by hand earlier, remove that entry and let the terminal add its own. See **§42.8 Let your own Claude Code or Codex work the terminal** p. 825.

Fincept MCP reads "Not in your plan".

Fincept MCP is part of every paid plan, so this means your account has no active plan right now (for example it has run out). Renew it; see **§50.5 Plans and pricing** p. 926.

Mission Control: "No AI harness is selected yet".

Missions run only on your own Claude Code or Codex. Pick one in **Settings › AI harness**. See **§39.3 Set up a mission** p. 768.

Mission Control: the mission never wakes.

Check the state chip: **PAUSED** → **Resume**; **IDLE** → press **Run now**. A mission sleeps while its market is closed, and stops for the day at **Max wakes / day** or **Max tokens / day**. See **§39.5 Control a mission** p. 772.

Mission Control: wakes are waiting.

When your Claude or ChatGPT plan hits a usage limit, wakes wait until the limit resets. See **§39.8 For advanced users** p. 774.

Mission Control: the mission is read-only here.

It runs on another of your computers. **Run on this device instead** moves it here. See **§39.9 Troubleshooting** p. 775.

Agent Studio: Run agent says to sign in.

Agent runs need a signed-in session. Sign in and run again. See **§38.19 Troubleshooting** p. 763.

Agent Studio: an agent says it cannot use a tool.

Check its **TOOLS** on the card, the **Tools** tab and the **TERMINAL TOOLS** switches on **Create**. Also check that the tool is ticked in MCP Servers > **Tools**. See **§38.9 Give agents tools** p. 754.

Agent Studio: Triggers lists no agents.

Triggers work with your own agents only. Create one on **Create** first. See **§38.14 Triggers: wake an agent automatically** p. 759.

Agent Studio: the Features have no effect.

They apply only when your own AI harness answers. See **Chapter 42, Use Your Own AI** p. 819.

Agent Studio: credits keep going after I set up a desk.

An armed desk runs on its own and every run is charged. Set **Max runs/day** before you arm it, and disarm it when you no longer need it. See **§38.12 Desks: an agent in charge of an area** p. 756.

Agent Studio: my trigger does not fire on this computer.

A trigger made on another computer runs only while that computer is on. **Run it on this computer instead** moves it here. See **§38.14 Triggers: wake an agent automatically** p. 759.

MCP Servers: a server says "Not installed on this PC".

Its command (usually `uvx`) was not found. Install it (for `uvx`, install `uv`), restart the terminal and click **Enable**. See **§41.3 Add a server from the marketplace** p. 812.

MCP Servers: "Server failed to start".

Read the message and open **Logs**. Common causes: a wrong **Arguments** value, a missing environment variable (the **Needs:** line), or a database address that cannot be reached. See **§41.5 Start, stop and check a server** p. 815.

The AI does not use my MCP server's tools.

The server must be **Running** on the **Installed** view and its tools ticked in **Tools**. For an agent, tick **Include external MCP servers** on its **Create** form. See **§41.6 See and switch every AI tool** p. 815.

MCP Servers: my servers are missing on my other computer.

Each computer keeps its own list of servers. Add them again there. See **§41.8 For advanced users** p. 817.

55.14 Sync, files and tools

What follows you between computers, and the desk tools: Notes, Excel, Report Builder, File Manager, Code Editor, Data Sources and Data Mapping. See **§51.14 Cloud sync** p. 960 and each tool's chapter.

What stays on one computer

Broker logins, AI keys, data-source passwords, secret fields of workflow nodes and keys in data mappings are kept only on the computer where you typed them. On another computer, enter them again. Your work itself (workspaces, dashboards, portfolios, watchlists, notes, chats, settings) follows your account. See **§51.14 Cloud sync** p. 960.

A setting I changed on one computer did not reach my other computer.

Check **Settings** › **Cloud sync** on both: **Cloud sync enabled** ticked, status **All synced**. Press **Sync now** to pull at once. Settings marked *This computer* never sync. See **§51.14 Cloud sync** p. 960.

My note is not on my other computer.

On both computers, check **Settings** › **Cloud sync**: sync on, the **Notes** row ticked, status **Synced**. Press **Sync now**. **Plan limit** means your plan's note limit is full. See **§46.11 Troubleshooting** p. 880.

I clicked Save in Notes and nothing happened.

The note has no title. Type one and click **Save** again. See **§46.3 Write and edit a note** p. 874.

A note disappeared from the list.

Check **Archived** in the sidebar and clear the search box. A note in an unusual category shows only under **All notes**. See **§46.4 Find a note** p. 876.

Can I get back a deleted note?

No. There is no bin, and the note also disappears from your other computers. Archive a note if you only want it out of the way. See **§46.5 Favourite, archive and delete** p. 877.

My notes vanished after I signed in with another account.

Signing in with another account removes the previous account's notes from this computer. They stay in that account if they had synced. See **§46.10 For advanced users** p. 880.

My Excel workbook was empty after a restart.

The workbook lives in the screen: closing it, moving it to another window or restarting starts an empty one. Use **Save to cloud** (it then saves every change) or **Export**, and reopen with **Open from cloud** or **Import**. See **§44.8 Keep your workbook: cloud, import and export** p. 853.

Excel: a cell shows #REF! or #NAME?.

#REF!: the formula points at a sheet that was renamed or deleted, or a cell that does not exist. **#NAME?**: the function is not in the sheet's library, or is misspelt. See **§44.4 Functions** p. 847.

Excel: "Not saved: changed on another device".

The cloud copy changed after you opened it. Click **Save to cloud** and choose **Keep mine**, **Take theirs** or **Save mine as a copy**. See **§44.12 Troubleshooting** p. 857.

Excel: how do I bring in a CSV file?

The sheet exports CSV but imports only `.xlsx`. Save the CSV as `.xlsx` in another spreadsheet program, or paste its contents into a sheet. See **§44.8 Keep your workbook: cloud, import and export** p. 853.

File Manager: the Cloud button is greyed out.

You are signed out. Sign in; files stay on this computer until then and upload afterwards. See **§47.3 Cloud or local storage** p. 885.

File Manager: a file shows WAITING.

Your cloud storage is full (the usage bar is red), or the file is larger than the upload limit. Delete files or raise your plan; waiting files upload on their own. See **§47.3 Cloud or local storage** p. 885.

I exported something but cannot find it.

In the File Manager, pick **All** and clear the search. Exports land in the library you use now (Cloud or Local); switch the storage mode to look in the other. See **§47.5 Find a file** p. 886.

File Manager: I switched to Local (or Cloud) and my files are gone.

Cloud and Local are two separate libraries, and switching does not move files. Switch back to see them; switching to Cloud offers to upload copies of your local files. See **§47.3 Cloud or local storage** p. 885.

Is it safe to uninstall or clear data while files show SYNCING, WAITING or FAILED?

No. Those files exist only on this computer until they show **CLOUD**. See **§47.10 For advanced users** p. 889.

Report Builder: my PDF has a watermark.

Your plan exports with the Fincept watermark. The message after the export names the plan that removes it. See **§45.8 Preview and export the PDF** p. 867.

Report Builder: a quote tile shows dashes or "not fetched".

Click **Refresh all**, or the chip on the tile. Check the ticker (Indian shares in the exchange form, such as `RELIANCE.NS`). See **§45.6 Set up data blocks** p. 863.

Code Editor: "Python not found" in the toolbar.

Install Python 3.8 or later (on Windows tick *Add python.exe to PATH*), then click **Detect again**, or pick the python program in **Settings** › **Python**. See **§43.2 Set up Python** p. 835.

Code Editor: ModuleNotFoundError.

The package is not installed for the Python in use. Run the command the error suggests, or `%pip install <package>` in a cell. See **§43.4 Write and run your own code** p. 838.

Code Editor: my variables are gone, or a cell runs forever.

A restarted kernel (or another notebook) clears every variable: run the cells again from the top. **Restart kernel** stops a cell that runs forever. See **§43.6 The kernel** p. 840.

Data Sources: Test says UNREACHABLE or AUTH FAILED.

UNREACHABLE: check the host and port, that the server runs, and that your firewall or VPN lets you reach it. AUTH FAILED: the server refused the user name, password or key; retype them with **Edit**. See **§48.5 Test a connection** p. 897.

Data Sources: a connector says "not available in this build".

This installation lacks the driver for that database (in 5.0.6: MySQL and MariaDB), so a connection to it cannot be added here. For a database reached through ODBC, fill **ODBC DSN / Connection String**. See **§48.12 Troubleshooting** p. 903.

Data Sources: imported connections do not work.

Each imported connection keeps the on/off state written in the file (off when the file does not say). Tick a switched-off one in the list to enable it. See **§48.8 Import, export and the template** p. 898.

A read says the connection "is switched off in Data Sources".

That connection's tick box is off. Switched-off connections are refused by readers and hidden from workflow nodes and the **My data** tile. See **§48.6 Manage your connections** p. 897.

Exported connection files

An exported connections file can hold passwords and keys in plain text (those not yet moved to the encrypted store, and anything typed into a text box such as a connection string). A copy also goes to the File Manager. Remove them before you share the file, and delete copies you do not need. See **§48.8 Import, export and the template** p. 898.

Data Mapping: Save mapping stays greyed out.

Run **Run test** first, with at least one field mapped. See **§49.3 The five steps** p. 907.

Data Mapping: Run fails although Run test passed.

Run calls the API again. The API may limit how often you call it, need a fresh key, or be unreachable now. See **§49.4 Run a saved mapping** p. 913.

Data Mapping: a scheduled refresh stopped running.

Each run costs credits; a schedule pauses itself when you run out and resumes after you buy credits. Schedule hours are in UTC. See **§49.5 Scheduled refreshes** p. 914.

Data Mapping: how do I edit a saved mapping?

You cannot. Build a new one (from a template or **New mapping**) and delete the old one. See **§49.4 Run a saved mapping** p. 913.

Settings: Test send fails for a notification service.

The card shows the service's own error. Check the token or URL, and for email the host, port and an app password. Fix any field with a red edge first. See **§51.6 Notifications** p. 940.

Settings: I changed Logging, Usage analytics or Auto-lock and nothing happened.

Most Settings pages apply at once, but these three need their own button: **Apply & save**, **Save** or **Save security settings**. See **§51.1 Screen tour** p. 933.

Settings: some Clear buttons in Storage & cache are greyed out.

That data is synced to your account (delete it in its own screen, or it comes back at the next sync), managed by Cloud sync, or is your PIN and credentials. **Clear all user data** keeps credentials, the sync queue and synced items. See **§51.13 Storage & cache** p. 955.

Settings: Reset all to defaults in Keybindings changed my other computer too.

It removes every change on this computer and in your account (it asks first). See **§53.3 Change a shortcut** p. 985.

55.15 Get help from the Fincept team

When a problem is not in this guide, the Fincept team answers by email. A good report gets a fast answer. See **Chapter 52, Help, Docs and Support** p. 967 for the support form in full.

Before you write

- **Your version.** It is at the right of the bottom bar, and on the About page (`INFO`).
- **What you did, and what happened.** Copy the exact words of any message.
- **The time it happened**, so the team can find it in the log.

Send a ticket from the terminal

1. Click **HELP** in the top bar and press **EMAIL SUPPORT**, or choose **Menu** › **Help** › **Contact support...** .
2. Pick a **Type of request** (for example **Bug report**) and a **Priority**.
3. Write a **Subject** (5 to 200 characters) and a **Message** (10 to 10,000 characters). For a bug, fill **Steps to reproduce**, **What you expected** and **What happened instead**.
4. Leave **Attach recent warnings and errors from this device** ticked. **What will be sent** shows everything the ticket carries.
5. Press **SEND TO SUPPORT**. Note the reference, for example *FS-7KQ2MX*. The reply comes by email.



Figure 55.3 The bottom of the support form: the log attachment and the send button.

1. Leave the log excerpt ticked: it helps the team find the problem.
2. See exactly what goes with the ticket before you send it.
3. Nothing leaves your computer before you press it.

Signed out, or the form will not send? Write to **support@fincept.in** from any mail app. **My tickets** shows whether each ticket reached the team; a ticket marked **Not delivered** should be emailed with its reference (**§52.4 Follow your tickets** p. 971).

What a ticket never carries

Passwords, API keys, tokens and broker credentials are never attached. The log excerpt has tokens, passwords, keys and other people's email addresses removed.

Where the log files are

The terminal writes a log file on your computer. Support may ask for it, or for a crash report.

System	Log file
Windows	`%LOCALAPPDATA%\com.fincept.terminal\logs\fincept.log`
macOS	`~/Library/Application Support/com.fincept.terminal/logs/fincept.log`
Linux	`~/.local/share/com.fincept.terminal/logs/fincept.log`

Settings › **Logging** shows the exact path on your computer, with **Open log folder** and **Copy path**. A new file starts at 5 MB and three older ones are kept.

- **More detail.** If support asks, set **Global log level** to **Debug** on the Logging page and press **Apply & save**. Set it back to **Info** afterwards. See **§51.8 Logging** p. 947.
- **Crash reports** are saved in the `crashdumps` folder beside `logs`. The About page (`INFO`) shows the folder under **Diagnostics**, with **Open folder**. Attach the newest file to your ticket. See **§52.10 For advanced users** p. 979.
- **Update problems**: the `updates` folder in the same place holds `update.log`, a log of the last update. See **§2.8 Reference** p. 35.

Do it with AI

The AI can open the support form and fill it in for you. Try: "Report a bug: the Portfolio screen shows no positions after I import a file." It writes the subject, message and steps, then stops: you read the form and press **SEND TO SUPPORT** yourself.

CHAPTER 56

Glossary

The words this guide uses, from A to Z — market and finance terms such as implied volatility, Sharpe ratio or TVPI, and the terminal's own words such as panel, link group, Fincept Paper or harness — each explained in a sentence or two, with the chapter that tells you more.

At a glance

Open it	• Ask the companion: click **AI Chat** in the bottom bar and type, for example, *What is implied volatility?*
You need	• Nothing
Best for	• Looking up a word you met on a screen • Checking what a figure measures
Time to learn	Look up what you need
Related	**Chapter 55, Troubleshooting & FAQ** p. 1005, **Chapter 54, Screen Codes** p. 993, **Chapter 53, Keyboard Shortcuts** p. 983

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56.1 0–9

2s10s spread — The 10-year yield minus the 2-year yield, in basis points (the **10Y-2Y** column on Sovereign Bonds). Negative means the curve is inverted. See **§33.1 Screen tour** p. 661.

10-K and 10-Q — A US company's annual report (10-K) and quarterly report (10-Q) to the SEC. The last twelve months (LTM) add up the last four quarterly reports. See **§27.3 Set up a deal** p. 558.

10b5-1 plan — A trading plan an insider sets up in advance, so a sale under it is routine rather than a signal. See **§29.3 Read the map** p. 605.

56.2 A

Account — Where a trading screen sends its orders: your Fincept Paper account, or a broker account you connect yourself. See **Chapter 15, Brokers & Accounts** p. 248.

Accretion and dilution — A deal is accretive if it raises the buyer's earnings per share, and dilutive if it lowers it. See **§27.6 Build the merger model** p. 566.

ADR (depositary receipt) — A certificate traded on one market, often the US, that stands for shares of a company listed elsewhere. `/dr` in the command line searches ADRs and GDRs. See **§6.7 Search one kind of instrument** p. 101.

After-market order (AMO) — An order you queue with your broker outside market hours, for the next session. See **§16.4 The order ticket** p. 267.

Agent — An AI with a job description: its own instructions, the tools it may use and how it should answer. The terminal has 53 built-in agents, and you can build your own. See **Chapter 38, Agent Studio** p. 739.

AI harness — The engine that answers the terminal's AI: Fincept AI, paid in credits, or your own model (Claude Code, Codex, an LLM endpoint or another coding-agent CLI). See **Chapter 42, Use Your Own AI** p. 819.

AIS — The radio system ships use to broadcast their position, speed and destination. Maritime's ship positions come from it. See **Chapter 36, Maritime** p. 699.

AIS dark — A ship whose last position report is more than 72 hours old: it stopped broadcasting or is out of range. The AIS dark views need Exclusive Pro. See **§36.8 Reference** p. 711.

Algorithm (algo) — A set of written trading rules the terminal follows for you: when this happens, buy; when that happens, sell. See **Chapter 19, Algo Trading** p. 331.

Alpha — Return beyond what an index explains. In AI Quant Lab, an alpha is also a signal meant to predict returns. See **§31.4 Test factors (Factor lab)** p. 630.

Altman Z-score — A distress score built from a company's balance-sheet and profit ratios. Equity Research reads **DISTRESS** below 1.81 (1.10 for the four-term version used outside manufacturing). See **§22.8 Screen the quality of the accounts (Quality)** p. 402.

API (application programming interface) — A system's interface for programs, usually a web address that answers in a structured format such as JSON. See **§48.4 Connect an API** p. 896.

API key — A secret key that lets software use an account: your broker's or exchange's for trading, an AI endpoint's, or a data provider's. Each chapter says where its keys are kept. See **§18.8 Register an exchange key** p. 312.

Approval — The prompt the AI shows before it spends credits or money, or does something that cannot be undone. Closing or ignoring it counts as **Deny**. See **§37.5 Approve what the AI does** p. 725.

At the money (ATM) — The strike nearest the current price of the underlying. See **§17.3 Read the option chain** p. 286.

Attribution — Splitting a book's return against its benchmark into allocation (how much each bucket was weighted), selection (what was picked inside it) and the two together (interaction). See **§23.12 Explain the return (Attribution)** p. 447.

Average true range (ATR) — A volatility indicator: the average of each day's true range (high to low, stretched to include any gap from the previous close), over 14 days in Equity Research. See **§22.9 Check the technical picture (Technicals)** p. 403.

56.3 B

Backtest — Replaying a strategy over past prices as if you had traded it then, with costs taken off, to see what would have happened. See **Chapter 24, Backtesting** p. 464.

Base currency — The currency a portfolio, or the Fincept Paper book, keeps its totals in. Holdings in other currencies are converted at live rates. See **§23.4 Create and manage portfolios** p. 433.

Basis — The gap between a dated future's price and the spot price: positive when the future trades above spot. See **§18.10 Study funding, basis and options** p. 317.

Basis point (bp) — One hundredth of a percentage point: 25 bp is 0.25%. Yield spreads, rate shocks and trading costs are quoted in it. See **Chapter 33, Sovereign Bonds** p. 660.

Benchmark — What performance is measured against, usually an index or an index fund. See **§23.5 Set a benchmark** p. 435.

Beneish M-score — An eight-ratio score that flags accounts that may have been dressed up. Equity Research shows **FLAG** above −1.78: a reason to read the accounts closely, not a finding. See **§22.8 Screen the quality of the accounts (Quality)** p. 402.

Beta — How much a share or a book moves when the market moves 1%. Above 1 moves more than the market; near 0 moves independently of it. See **§22.4 Read the Overview** p. 396.

Bid and ask — The bid is the highest price a buyer offers; the ask is the lowest price a seller accepts. See **§16.6 Watch the market** p. 271.

Black-Scholes — The classic model for pricing options, used for greeks when a broker sends none and in the pricers. See **§25.12 Use the pricers** p. 531.

Board — On the Dashboard, the grid of tiles you arrange; your account has one board. In Derivatives, one underlying's option chain from one venue and one session. See **Chapter 8, Dashboard** p. 123 and **§25.3 Pick an underlying and an exchange** p. 497.

Bollinger bands — A band two standard deviations either side of a 20-day average price. See **§22.9 Check the technical picture (Technicals)** p. 403.

Bot — An automated crypto strategy (grid, DCA, market maker, arbitrage) that runs on Fincept's server, so it keeps working while your computer is off. See **§18.11 Run a bot** p. 319.

Bracket order — An order with a stop loss and a take profit attached; when one of them fills, the other is cancelled. See **§16.4 The order ticket** p. 267.

Breadth — How many names in a group are up against how many are down. See **§8.10 The Market Pulse panel** p. 133.

Breakeven — The underlying price at which an options strategy neither makes nor loses money at expiry. See **§17.5 Build an options strategy** p. 289.

Brief — A short AI write-up, charged in credits: of a Markets panel, or of the headlines in view on News. See **§9.6 Read a written brief or a regime scan** p. 165.

Broker account — An account at your own broker, added with your own login. Its orders are real orders at that broker, or demo orders if the login points at the broker's demo. See **Chapter 15, Brokers & Accounts** p. 248.

Buy and hold — Buying at the start and holding to the end: the plain baseline every strategy should beat. See **§24.11 The numbers explained** p. 484.

56.4 C

CAGR (compound annual growth rate) — The steady yearly growth that would turn the starting money into the ending money. It is the fair way to compare tests of different lengths. See **§24.11 The numbers explained** p. 484.

Call and put — A call is the right to buy the underlying at the strike price; a put is the right to sell. The right lasts until expiry (European-style options can be used only on the expiry date). Indian exchanges label them CE and PE. See **Chapter 17, F&O** p. 284.

Calmar ratio — Yearly return divided by the maximum drawdown: return per unit of worst pain. See **§24.11 The numbers explained** p. 484.

Capital call — A private fund asking for part of the money you committed. See **Chapter 28, Alternative Investments** p. 580.

Cash tracking — A portfolio setting. On, the book carries cash: buys spend it, sales and dividends add to it, and deposits must be recorded. See **§23.4 Create and manage portfolios** p. 433.

CDS (credit default swap) — Insurance against a borrower's default. Its price in basis points is the yearly cost of insuring against the country defaulting. See **Chapter 33, Sovereign Bonds** p. 660.

Chg and Chg % — The change since the previous close, in price units and in per cent. See **§9.8 Reference** p. 167.

CLOSED — A freshness state: the market is shut and the value is the last traded price. See **§9.8 Reference** p. 167.

Cloud sync — Keeps your data in your Fincept account, so your other computers open where this one left off. See **§51.14 Cloud sync** p. 960.

CNC (cash and carry) — The Indian delivery product: you own the shares, and they appear under Holdings. See **§16.4 The order ticket** p. 267.

Command line — The **Search everything** box at the top of the window. It finds and opens symbols, screens, commands, workspaces and settings; `Ctrl` + `K` jumps to it. See **Chapter 6, The Command Line** p. 89.

Commitment — The amount you promised a private fund. It is called over time. See **Chapter 28, Alternative Investments** p. 580.

Companion — The AI in a small panel over any screen, opened with **AI Chat** in the bottom bar. It shares one chat history with the AI Chat screen. See **§37.12 The companion** p. 730.

Competition — An Alpha Arena contest between AI models. Each competitor trades the same instruments in its own Fincept Paper book, round by round. See **Chapter 20, Alpha Arena** p. 371.

Confirm for live trading — A one-time confirmation a LIVE broker account needs before it sends real orders. See **§15.6 Confirm an account for live trading** p. 257.

Connection status — The top bar's word for the link to Fincept's servers: LIVE, CONNECTING, RECONNECTING, OFFLINE or SIGNED OUT. See **§5.3 The top bar** p. 72.

Connector and connection — In Data Sources, a connector is a kind of system (a database type, a REST API, a CSV file); a connection is one you set up, with a name. See **Chapter 48, Data Sources** p. 891.

Consensus forecast — The average of many economists' forecasts for a release. See **§13.5 Read a release** p. 223.

Contango and backwardation — In a futures curve, contango means later months cost more than nearer ones; backwardation is the reverse. See **§26.5 Curves in the Line view** p. 549.

Correlation — How closely two things move together, from −1 (opposite) to +1 (in step). See **§22.12 See what the stock moves with (Cross-Asset)** p. 406.

Cost basis — What the lots you still hold cost. Unrealised P&L is market value minus cost basis. See **§23.8 Work with positions** p. 438.

Cost method — How a sale is matched to earlier buys: FIFO (oldest first, the default), LIFO (newest first), HIFO (highest cost first) or average cost. See **§23.4 Create and manage portfolios** p. 433.

CPCV (combinatorial purged cross-validation) — A test that splits history into many train-and-test combinations, so a result cannot rest on one lucky split. Tick **Enable CPCV** when you optimise. See **§24.9 Optimise parameters** p. 478.

Credit (CR) — The unit paid features are priced in: AI answers, research reports, briefs, scheduled jobs. Each plan includes credits for its period; bought credits never expire. See **§50.3 Credits** p. 922.

Credit rating — An agency's grade of how likely a borrower is to repay. See **Chapter 33, Sovereign Bonds** p. 660.

Cron expression — A schedule in five fields: minute, hour, day of month, month and day of week. `30 9 * * 1-5` means 09:30 Monday to Friday. See **§40.6 Set a node's parameters** p. 786.

CVaR (expected shortfall) — The average loss on the days worse than the VaR level. See **§23.13 Measure risk** p. 448.

56.5 D

Dashboard — Your home screen: a board of live tiles you arrange yourself, with a ticker and a Market Pulse panel. See **Chapter 8, Dashboard** p. 123.

Data mapping — A saved recipe that calls a web API and turns its answer into rows of a known shape, such as candles or quotes. See **Chapter 49, Data Mapping** p. 904.

Data source — A system of your own (a database, an API, files, a cloud bucket) connected so the AI, workflows and tiles can read it. The terminal never writes to it. See **Chapter 48, Data Sources** p. 891.

DCF (discounted cash flow) — Values a company as all the cash it will generate in future, brought back to today's money with a discount rate. See **§22.6 Value the company** p. 399.

Deadweight tonnage (DWT) — How much cargo a ship can carry, in tonnes. Maritime can weigh lanes, ports and idle ships by it. See **§36.8 Reference** p. 711.

Deflated Sharpe ratio (DSR) — The probability that the true Sharpe ratio is above zero, after allowing for how many versions of the idea were tried. See **§24.8 Check whether the result is real** p. 476.

DELAYED — A freshness state: the exchange's feed for this instrument runs a set number of minutes behind. The price moves, but it is not the current one. See **§9.8 Reference** p. 167.

Delta — The change in an option's price for a one-unit move in the underlying. A delta of 0.52 means about 52 cents per dollar. See **§25.4 Read the option chain** p. 499.

Demo account — A broker account whose login points at the broker's practice environment. Its orders are real orders there, but no real money moves. See **§15.3 Paper, demo and live** p. 251.

Deploy, deployment — Starting a strategy running, so the terminal watches the market and places its orders. A deployed workflow runs on a timetable. See **§19.8 Deploy a strategy** p. 351.

Depth (market depth) — The bids and asks waiting at each price, with their sizes. Full depth (Level 2) needs a plan that includes it. See **§16.6 Watch the market** p. 271.

Desk — A ready-made arrangement for a job: a workspace, or a Dashboard template built for a field of work. In Agent Studio, an agent or team put in charge of one area. See **§7.3 Start from a ready-made desk** p. 114.

Discount rate — In a DCF, the yearly return investors demand for the risk. In Derivatives, the rate option prices are discounted at. See **§22.6 Value the company** p. 399.

Distribution — Cash a private fund pays back to you. See **Chapter 28, Alternative Investments** p. 580.

Dividend yield — A year's dividends per share divided by the share price. Option pricing uses it as an input. See **§25.5 Set the pricing assumptions** p. 504.

DPI (distributions to paid-in) — Distributions divided by the money called so far: the cash already returned. See **§28.4 Measure performance** p. 588.

Drawdown — How far a value is below its own previous peak. **Maximum drawdown** is the deepest fall from a peak to a later low. See **§24.11 The numbers explained** p. 484.

Drawing (GPU or CPU) — How the terminal draws charts and web pages: on the graphics card or on the processor. **CPU** helps when charts flicker. See **§51.5 Appearance** p. 939.

DTE (days to expiry) — Days left until an option or future expires; 0 on expiry day. See **§17.7 Other tabs** p. 292.

56.6 E

EBITDA — Earnings before interest, tax, depreciation and amortisation: a rough measure of the cash a business makes from operations. See **§22.5 Read the financial statements** p. 397.

Economic release — A figure a statistics office, government agency or central bank publishes on a set day: inflation, jobs, growth, a rate decision. See **Chapter 13, Economic Calendar** p. 218.

Encrypted store — The protected store on this computer, guarded by your PIN, that holds passwords and keys. Its contents do not sync. See **§48.9 Where passwords and keys are kept** p. 899.

Endpoint (LLM endpoint) — An AI server address, used with your own key and model. Any OpenAI-compatible server works as your own AI. See **§42.4 Set up an LLM endpoint** p. 823.

Enterprise value (EV) — What a whole business is worth to all its investors: equity value plus debt minus cash. See **Chapter 27, M&A Analytics** p. 556.

EPS (earnings per share) — A company's profit divided by its number of shares. See **§22.5 Read the financial statements** p. 397.

Equity — For an account, cash plus the value of everything held. Also the owners' share of a company. See **§15.10 Manage your Fincept Paper account** p. 259.

Equity curve — A strategy's value over time, drawn against a baseline such as the benchmark or buy and hold. See **§24.5 Read the results** p. 468.

EV/EBITDA — Enterprise value divided by EBITDA: a valuation multiple that ignores how a company is financed. M&A uses it for exit multiples and comparable deals. See **§27.5 Value the target** p. 562.

Expectancy — The average profit or loss per trade: what each new trade is worth if the past repeats. See **§24.11 The numbers explained** p. 484.

Expected move — About one standard deviation of the price move to expiry, worked out from the at-the-money straddle. See **§25.4 Read the option chain** p. 499.

Expiry — The date an option or a future ends. See **Chapter 17, F&O** p. 284.

56.7 F

F&O — Futures and options, especially as traded on India's NSE and BSE. See **Chapter 17, F&O** p. 284.

Factor — A number worked out for each symbol on each day, such as momentum or value, that might predict future returns. See **§31.4 Test factors (Factor lab)** p. 630.

FII and DII — Foreign and domestic institutional investors. The terminal shows their daily net buying in India's cash market. See **§17.7 Other tabs** p. 292.

Fincept AI — The managed AI that runs on Fincept's servers and is paid in credits. It is the terminal's default engine. See **Chapter 42, Use Your Own AI** p. 819.

Fincept cloud — A deployment that runs on Fincept's servers and keeps going when the terminal is closed. Offered for Fincept Paper deployments of a single-share strategy. See **§19.8 Deploy a strategy** p. 351.

Fincept MCP — A server on Fincept's side that gives your own coding agent Fincept's data and engines as tools, on your account. See **§42.9 Fincept MCP: Fincept inside your own coding agent** p. 825.

Fincept Paper — The practice account every account has: simulated money, real market prices, nothing sent to a broker. See **§15.3 Paper, demo and live** p. 251.

Float — The shares that can actually be traded, not held by insiders. See **§22.4 Read the Overview** p. 396.

Floating panel — A panel in a window of its own, for example on a second monitor. Docking puts it back into the main window. See **§5.4 Panels** p. 79.

Focus mode — Hides the top and bottom bars so the panels get the whole window (F10). See **§5.7 Focus mode, full screen and always on top** p. 85.

FOK (fill or kill) — Fill the whole order now, or not at all. See **§18.7 Trade LIVE** p. 310.

Forecast — On the Economic Calendar, what economists expected a release to show. In Mission Control, a claim the agent makes with a probability and a date. See **§13.5 Read a release** p. 223.

Four-eyes approval — A rule that a second person must approve a LIVE order above a set amount. On the Crypto desk an admin sets the amount; 0 switches it off. See **§18.7 Trade LIVE** p. 310.

Free cash flow (FCF) — Operating cash flow minus capital spending on buildings, machines and software. See **§22.5 Read the financial statements** p. 397.

Freshness badge — The word or dot that says how current a price is: LIVE, DELAYED, STALE, CLOSED or SNAPSHOT. See **§9.8 Reference** p. 167.

Funding rate — The payment that keeps a perpetual's price close to spot. When it is positive, longs pay shorts. See **§18.10 Study funding, basis and options** p. 317.

Future — An agreement to buy or sell at a set price on a later date. See **Chapter 17, F&O** p. 284.

56.8 G

Gamma — How fast an option's delta changes as the price moves. See **§25.4 Read the option chain** p. 499.

GEX (gamma exposure) — Dealer gamma added up over all strikes. Positive means dealers' hedging damps moves; negative means it amplifies them. See **§25.10 Read dealer positioning** p. 524.

GP and LP — The general partner (the fund manager) and the limited partners (the investors). See **Chapter 28, Alternative Investments** p. 580.

Greeks — Measures of how an option's price reacts to change: delta (price), gamma (speed of delta), theta (time), vega (volatility) and rho (rates). See **§17.5 Build an options strategy** p. 289.

GTC (good till cancelled) — An order that stays working until you cancel it. See **§18.7 Trade LIVE** p. 310.

GTT (good till triggered) — A resting order that waits up to about a year for its trigger price, then places an order. Live brokers only. See **§16.4 The order ticket** p. 267.

56.9 H

Health pill — The Portfolio header pill that says **All priced**, or how many lines are unvalued, stale or at cost. See **§23.1 Screen tour** p. 431.

Holdings — Shares you own outright (delivery), as opposed to open intraday or margin positions. See **§16.7 Positions, holdings and orders** p. 274.

56.10 I

Iceberg order — An order that shows only part of its size in the market at a time. On the Equity Trading ticket, **Disclosed qty** sets the part shown. See **§16.4 The order ticket** p. 267.

Implied probability — A prediction-market price read as the crowd's odds: a Yes share at $0.62 means about a 62% chance. See **Chapter 14, Prediction Markets** p. 233.

Implied volatility (IV) — The market's forecast of how much the price will move, worked out from the option's price. It differs by strike and expiry. See **§25.6 Read the volatility surface** p. 505.

Information coefficient (IC) — The correlation between today's factor values and the next returns. Rank IC uses ranks instead of values. See **§31.4 Test factors (Factor lab)** p. 630.

Information ratio — Active return (the book minus the benchmark) divided by tracking error. See **§23.11 Track performance** p. 446.

Inverted curve — Short-term yields above long-term ones, often read as a warning of slower growth. See **Chapter 33, Sovereign Bonds** p. 660.

Investment grade and high yield — Investment grade is a rating of BBB− (or Baa3) or better; anything below is high yield. See **Chapter 33, Sovereign Bonds** p. 660.

IOC (immediate or cancel) — Fill what you can now and cancel the rest. See **§16.4 The order ticket** p. 267.

Iron condor — An options strategy of four legs: a short put spread below the price and a short call spread above it. It earns the most when the price stays between the two short strikes. See **§17.5 Build an options strategy** p. 289.

IRR (internal rate of return) — The yearly rate that, used to discount every dated cash flow back to today, makes them add up to zero. For your own money in and out, it is the money-weighted return. See **§28.4 Measure performance** p. 588.

IV rank and IV percentile — Where today's implied volatility sits within its own history. IV rank places it between the lowest (0%) and highest (100%) level; IV percentile is the share of past days with a lower value. See **§25.7 Analyse volatility** p. 511.

56.11 J

J-curve — A fund's cumulative net cash flow by age: negative while capital is called, rising as distributions come back. See **§28.4 Measure performance** p. 588.

JSON — A text format for structured data. API answers, connection lists and structured log lines use it. See **Chapter 49, Data Mapping** p. 904.

56.12 K

Kelly fraction — A position size worked out from a strategy's win rate and payoff, meant to grow money fastest. Full Kelly swings hard, so traders often use part of it. See **§24.12 Reference** p. 486.

Kernel — The Python process that runs a notebook's cells and keeps their variables. **Restart kernel** clears them. See **§43.6 The kernel** p. 840.

Keybinding — The key assigned to a terminal action. You change it in `Settings › Keybindings`. See **§53.3 Change a shortcut** p. 985.

Keyword monitor — Words Fincept's servers watch for in headlines, even while the terminal is closed. Charged per day while switched on. See **§11.8 Keyword monitors** p. 194.

Kill switch — The Crypto desk's emergency stop for LIVE trading: it cancels working orders, halts algorithms and bots, and blocks new LIVE orders. See **§18.13 Stop everything with the kill switch** p. 323.

56.13 L

Laden — Carrying cargo. Maritime counts a ship as laden when its draught is 85% or more of its maximum. See **§36.8 Reference** p. 711.

Lakh and crore — Indian number words: a lakh is 100,000 and a crore is 10 million. Settings can group digits the Indian way. See **§51.4 Currency** p. 937.

Leg — One order or contract inside a basket or an options strategy. See **§17.5 Build an options strategy** p. 289.

Leverage — Trading a position larger than the money behind it. In 5.0.6 the Crypto ticket has no leverage field: a LIVE perpetual uses your exchange account's own setting, and paper perpetuals are fully margined. See **§18.7 Trade LIVE** p. 310.

Limit order — An order that fills only at your price or better. See **§16.4 The order ticket** p. 267.

Limit (portfolio) — A rule the book should obey, such as no single stock above 25%. It is checked every time the book changes. See **§23.17 Set limits and check trades (Limits)** p. 455.

Link group — Panels that share a letter and follow the same symbol: pick a symbol in one and the others load it. See **§5.5 Link panels with link groups** p. 82.

Liquidity — How easily something can be traded. In an order book, the money resting there, ready to trade. See **§14.4 Read a market** p. 238.

LIVE — On a price, a real-time feed. On an account or order, real money at a broker or exchange (a red chip). In the top bar, connected to Fincept's servers. See **§15.3 Paper, demo and live** p. 251.

Log file — The file where the terminal writes what it does, for support to read. See **§55.15 Get help from the Fincept team** p. 1035.

Log level — How important a log line is: Trace, Debug, Info (the default), Warn, Error or Fatal. See **§51.8 Logging** p. 947.

Lot — On Indian exchanges, the fixed number of units one F&O contract holds. In a portfolio, a **tax lot** is one purchase with its own date, quantity and cost. See **Chapter 17, F&O** p. 284.

LTP (last traded price) — The price of the latest trade. See **§16.4 The order ticket** p. 267.

56.14 M

MACD — The gap between a 12-day and a 26-day exponential average price, compared with its own 9-day average (the signal line). See **§22.9 Check the technical picture (Technicals)** p. 403.

MAE and MFE — Maximum adverse and favourable excursion: how far a trade went against you, and in your favour, before it closed. See **§24.6 See every trade** p. 472.

Manual mark — Your own price for a holding that nothing quotes. It is used until you remove it. See **§23.8 Work with positions** p. 438.

Margin — The money a broker blocks to hold a position. See **§16.4 The order ticket** p. 267.

Mark price — An exchange's fair price for a derivative, used for profit and loss and for liquidations. See **§18.4 Read the market** p. 305.

Market capitalisation (market cap) — Share price times the number of shares: what the market values a company's equity at. See **§22.1 Screen tour** p. 393.

Market order — An order that fills now, at the best available price. See **§16.4 The order ticket** p. 267.

Market Pulse — The Dashboard's one-column market summary: risk appetite, world markets, movers, breadth, rates, commodities and sessions. See **§8.10 The Market Pulse panel** p. 133.

Max pain — The expiry price at which option buyers as a whole would collect the least. See **§25.10 Read dealer positioning** p. 524.

MCP (Model Context Protocol) — An open standard for giving an AI model extra tools. An **MCP server** is a small program that offers a set of tools. See **Chapter 41, MCP Servers** p. 810.

MIS (margin intraday square-off) — The Indian intraday product: the position uses margin and is closed the same day. See **§16.4 The order ticket** p. 267.

Mission — A goal an AI agent pursues for days or weeks on paper money, on your own Claude Code or Codex. It wakes, works, records its decisions and sleeps again. See **Chapter 39, Mission Control** p. 764.

Mode (PAPER, DEMO, LIVE) — What an account's orders move: simulated money, a broker's practice money, or real money. See **§15.3 Paper, demo and live** p. 251.

Money-weighted return (MWR) — What the investor earned: the internal rate of return of the money that went in and out, so its timing matters. See **§23.11 Track performance** p. 446.

Monte Carlo simulation — Thousands of random paths that give a range of outcomes rather than one number. See **§23.14 Stress-test the book (Scenarios)** p. 450.

Moving average — The average of recent prices. A crossover strategy buys when a fast average crosses above a slow one. See **§22.9 Check the technical picture (Technicals)** p. 403.

56.15 N

NAV (net asset value) — What a portfolio or fund is worth: its holdings plus cash. For a private fund, the value its manager reports. See **§23.6 Read the KPI ribbon** p. 436.

Node — A box on the Node Editor canvas that does one job, such as getting quotes or showing an alert. Nodes joined by connections make a workflow. See **Chapter 40, Node Editor** p. 776.

Notebook — A page of cells of Python code and text, saved as a standard `.ipynb` file. See **Chapter 43, Code Editor** p. 833.

Notices — Messages from Fincept under the bell in the top bar: service news, new features, planned maintenance. See **§5.3 The top bar** p. 72.

Notional — The money value of an order or a position. See **§18.7 Trade LIVE** p. 310.

NRML — The Indian margin product a position can be held overnight on. See **§16.4 The order ticket** p. 267.

56.16 O

OHLCV — Open, high, low, close and volume: the parts of one price bar. See **§49.3 The five steps** p. 907.

Open interest (OI) — How many option or futures contracts are open right now. **Chg OI** is its change since the previous close. See **§17.3 Read the option chain** p. 286.

Option — The right, but not the duty, to buy (a call) or sell (a put) an underlying at a fixed strike price, up to its expiry. The price of an option is its premium. See **Chapter 17, F&O** p. 284.

Option chain — Every strike of one expiry: calls on one side, puts on the other, strikes in the middle. See **§17.3 Read the option chain** p. 286.

Order approval — A per-account setting: **Auto** sends orders at once; **Semi-Auto** makes new orders wait for your approval (a confirmation window for a single ticket order, the Pending Orders panel for multi-account, basket and workflow orders). See **§15.7 Choose how orders are approved** p. 258.

Order book — The prices at which people are waiting to buy (bids) and sell (asks), with the size at each. See **§16.6 Watch the market** p. 271.

Overfitting — Choosing settings because they happened to fit one stretch of history. They rarely work as well afterwards. See **§24.8 Check whether the result is real** p. 476.

56.17 P

P&L (profit and loss) — **Realised** P&L is booked on closed trades; **unrealised** P&L is open positions at live prices. See **§16.7 Positions, holdings and orders** p. 274.

P/B ratio — Share price divided by book value per share (the accounting value of net assets). See **§22.4 Read the Overview** p. 396.

P/E ratio — Share price divided by earnings per share. **Forward P/E** uses next year's expected earnings. See **§22.4 Read the Overview** p. 396.

Pair — Two assets priced against each other, such as BTC/USDT. See **§18.3 Pick a venue and a pair** p. 303.

Panel — Every screen opens as a panel: a tab with its name, buttons on the right and the screen below. On Markets, a panel is one price table. See **§5.4 Panels** p. 79.

Paper trading — Practice orders that fill at real market prices but move no real money. See **§15.3 Paper, demo and live** p. 251.

Payoff chart — A strategy's profit or loss at expiry across a range of underlying prices. See **§17.5 Build an options strategy** p. 289.

PBO (probability of backtest overfitting) — How often the best setting on past data did worse than the median on unseen data. See **§24.8 Check whether the result is real** p. 476.

PCR (put-call ratio) — Put open interest (or volume) divided by call open interest. Above 1 means more puts are open. See **§17.3 Read the option chain** p. 286.

Pending order — An order waiting for your **Approve** before it is sent. Pending orders never expire. See **§21.3 Approve or reject pending orders** p. 383.

Perpetual (perp) — A crypto contract that tracks a coin's price with no expiry date, so you can go long or short without owning the coin. See **§18.3 Pick a venue and a pair** p. 303.

Persona — An agent's own instructions and character. Picking one makes the chat answer as that agent. See **§37.6 Choose who answers: personas** p. 726.

PIN — A six-digit code that opens and unlocks the terminal and seals its stored passwords. It belongs to your account, not to one computer. See **§3.4 Set up your PIN** p. 45.

Piotroski F-score — Nine pass/fail tests of profit, cash flow, leverage, liquidity and efficiency. Equity Research rates 7–9 passed as **STRONG**. See **§22.8 Screen the quality of the accounts (Quality)** p. 402.

Placement word — A word after a screen code that says where the screen goes: `RIGHT`, `LEFT`, `UP`, `DOWN`, `TL`, `TR`, `BL`, `BR` or `TAB`. Words such as `ONLY`, `FLOAT` and `DOCK` act on the screen instead. See **§6.6 Open screens side by side** p. 97.

Plan — Your Fincept subscription: Exclusive, Exclusive+ or Exclusive Pro, paid once for 30 or 90 days. See **§1.4 Plans at a glance** p. 23.

Plan limit — A cap your plan sets, for example on portfolios, watchlists, tiles or connections. Reaching it shows a lock or the upgrade sheet. See **§50.9 Reference** p. 929.

PME (public market equivalent) — Compares a private fund with putting the same cash into a stock index on the same dates. A **KS-PME** above 1.0x means the fund beat the index. See **§28.4 Measure performance** p. 588.

Point-in-time data — Data as it stood on a past date, so a test does not know what happened later. See **§31.3 Set up your research universe (Desk)** p. 627.

Policy rate — The interest rate a central bank sets. See **Chapter 33, Sovereign Bonds** p. 660.

Positions — Open trades held intraday or on margin. See **§16.7 Positions, holdings and orders** p. 274.

Post only — An order option that only adds to the order book: the order is cancelled rather than filled at once against a resting one. See **§18.7 Trade LIVE** p. 310.

POV (percentage of volume) — An execution algorithm that trades a set share of the market's volume as it happens. See **§18.9 Work a large order with an algorithm** p. 315.

Prediction market — A market that trades on the outcome of a future event. A share pays $1 if the outcome happens and nothing if it does not. See **Chapter 14, Prediction Markets** p. 233.

Premium — An option's price. In M&A, how far the offer is above the target's share price. See **§17.5 Build an options strategy** p. 289.

Pre-trade check — Fincept's server check of every live order before it reaches the broker. In Portfolio, a test of whether trades would break the book's limits. See **§15.13 For advanced users** p. 262.

Price alert — Watches one symbol and tells you when it crosses a level. It is checked on Fincept's servers, so it fires while the terminal is closed. See **§10.6 Set a price alert** p. 176.

Price status — The bottom bar's word for the pinned symbols' prices: LIVE, DELAYED, STALE, CLOSED or SNAPSHOT. See **§5.6 The bottom bar** p. 84.

Price strip — The top-bar row of symbols you pinned, each with its live price and change. See **§5.3 The top bar** p. 72.

Product — How an Indian position is held: intraday (MIS), delivery (CNC) or margin (NRML). See **§16.4 The order ticket** p. 267.

Profit factor — Money won on winning trades divided by money lost on losing ones. Above 1 is profitable overall. See **§24.11 The numbers explained** p. 484.

56.18 Q

Quick launch — Up to six one-click chips after the command line that open your favourite screens. See **§5.3 The top bar** p. 72.

56.19 R

Realised volatility — How much the price actually moved, measured from daily bars. RV21 uses 21 sessions. See **§25.7 Analyse volatility** p. 511.

Rebalancing — Turning target weights into a list of trades that brings the holdings back to them. See **§23.15 Rebalance the book** p. 451.

Recover previous session — The window that offers to restore your workspace after the terminal did not close cleanly. See **§4.9 For advanced users** p. 68.

Regime scan — A charged scan of a Markets panel's breadth, correlation and volatility that names the market regime. It needs five symbols or more. See **§9.6 Read a**

written brief or a regime scan p. 165.

REIT (real estate investment trust) — A listed company that owns property, or lends on it, and pays out most of its income. Alternative Investments quotes them as a stand-in for private real estate. See **§28.12 Market** p. 600.

Research universe — The list of symbols you set once on AI Quant Lab's Desk tab; every tab works on it. See **§31.3 Set up your research universe (Desk)** p. 627.

Reset book — Deletes every position, working order and trade of the Fincept Paper main book and starts it again from the starting cash. See **§15.10 Manage your Fincept Paper account** p. 259.

Rho — The change in an option's price for a one-point change in interest rates. See **§25.4 Read the option chain** p. 499.

Risk-free rate — The yearly return of a safe investment, which the Sharpe and Sortino ratios measure returns above. See **§24.12 Reference** p. 486.

ROE (return on equity) — Net income divided by shareholders' equity. See **§22.5 Read the financial statements** p. 397.

Round — In Alpha Arena, one turn: every competitor gets the same market snapshot and answers open, close or hold. See **Chapter 20, Alpha Arena** p. 371.

RSI (relative strength index) — A 0 to 100 gauge of recent gains against losses. Above 70 is usually called overbought, below 30 oversold. See **§22.9 Check the technical picture (Technicals)** p. 403.

RSS feed — A web address that lists a site's newest items in a format programs can read. See **Chapter 12, RSS Feeds** p. 203.

Run (deployment) — When a deployment ends by itself: **One trade** (the default), **Today only** or **Every day until I stop it**. See **§19.8 Deploy a strategy** p. 351.

RVPI (residual value to paid-in) — A fund's remaining value divided by the money called so far. See **§28.4 Measure performance** p. 588.

56.20 S

SAMPLE DATA — Generated numbers a surface shows before you fetch real ones, so you can see its shape. They are not market data. See **Chapter 26, Surface Analytics** p. 543.

Scheduled refresh — A Data Mapping job that pulls data on Fincept's servers daily, weekly or monthly, even while your computer is off. Charged per run. See **§49.5 Scheduled refreshes** p. 914.

Scheduled task — An AI job your own harness runs on a timetable on this computer, while the terminal runs. See **§42.7 Scheduled tasks** p. 824.

Screen code — Four capital letters, such as `MKTS` or `PORT`, that always open the same screen. See **Chapter 54, Screen Codes** p. 993.

Seat — One computer using your account. Each plan includes a number of seats; you can release one or buy more. See **§3.8 Seats and devices** p. 51.

Secret parameter — A masked node field for a key or token. It stays encrypted on this computer and is never saved with the workflow. See **§40.15 Secret parameters** p. 797.

Security command — A symbol, a space and a short command that opens one view of it, such as `AAPL G` for a chart or `AAPL FA` for financials. See **§6.4 Run a command on a security** p. 94.

Sentiment — A headline's lean, bullish, bearish or neutral; the gauge sums it from −1 to +1. See **§11.11 For advanced users** p. 200.

Series — One indicator for one place at one frequency, for example a country's monthly unemployment rate. See **Chapter 32, Global Data** p. 648.

Session — Your sign-in to Fincept, which renews itself while you work. A broker session is a broker login; Indian brokers end every session once a day. See **§15.9 Keep your session alive** p. 259.

Sharpe ratio — Yearly return above the risk-free rate, divided by yearly volatility. Below 0.5 is weak, around 1 is good, above 2 is rare. See **§24.11 The numbers explained** p. 484.

Short interest — The share of the tradable shares sold short by investors betting the price will fall. See **§22.4 Read the Overview** p. 396.

Skew — How implied volatility differs across strikes. In equities, puts usually cost more than calls (put skew). See **§25.6 Read the volatility surface** p. 505.

Skill — Reusable know-how, such as a checklist or a house style, that an agent loads only when its work needs it. See **§38.13 Skills** p. 758.

Slash search — A search limited to one kind of instrument: `/stock`, `/etf`, `/fund`, `/bond`, `/option` and more. See **§6.7 Search one kind of instrument** p. 101.

Slippage — How far a fill lands from the expected price; positive is worse. See **§19.10 Read the Trade log** p. 359.

SNAPSHOT — A freshness state: the price is not on the live stream and is read again about once a minute. See **§9.8 Reference** p. 167.

Sortino ratio — Like the Sharpe ratio, but only downward moves count as risk. See **§24.11 The numbers explained** p. 484.

Spot — The current price of the underlying. In crypto, spot trading means buying the coin itself. See **§17.3 Read the option chain** p. 286.

Spread — A gap between two prices: the best bid and ask, two bond yields (in basis points), or a target's price and the offer. See **Chapter 33, Sovereign Bonds** p. 660.

Square off — Close a position at market. See **§16.7 Positions, holdings and orders** p. 274.

STALE — A freshness state: the last price received, not the current one, because a stream dropped or a broker price stopped updating. See **§9.8 Reference** p. 167.

Step budget — The limit on how many steps one AI turn may take. When it is used up, **Continue** carries on. See **§37.16 For advanced users** p. 737.

Stop loss (SL) — A protective exit price that closes a position when the price moves through it. On the Equity Trading ticket, **SL** is a stop-limit order and **SL-M** a stop-market order. See **§16.4 The order ticket** p. 267.

Stop order — An order that waits for a trigger price, then becomes a market or limit order. See **§16.4 The order ticket** p. 267.

Storage mode — Where the File Manager keeps its library: **Cloud** (your account) or **Local** (this computer only). See **§47.3 Cloud or local storage** p. 885.

Straddle and strangle — A call and a put bought or sold together: at the same strike (straddle), or at strikes on either side of the money (strangle). See **§17.5 Build an options strategy** p. 289.

Stress test — Applying a shock or a past crisis to a book to see the damage. See **§23.14 Stress-test the book (Scenarios)** p. 450.

Strike — The fixed price at which an option lets you buy or sell. See **Chapter 17, F&O** p. 284.

Surface — A grid of numbers that depends on two things at once, such as implied volatility by strike and by expiry. See **Chapter 26, Surface Analytics** p. 543.

Surprise — An economic release's actual figure minus the forecast. See **§13.5 Read a release** p. 223.

Symbol (ticker) — The short code of an instrument: `AAPL`, `RELIANCE.NS`, `^GSPC`, `BTC-USD`. See **§4.5 Open your first symbol** p. 63.

56.21 T

Take over — Moves a deployment that runs on another of your computers to this one. See **§19.9 Watch your deployments** p. 355.

Take profit (TP) — An exit price that books a profit. See **§16.4 The order ticket** p. 267.

Team — Several agents answering one question together in one of six modes: coordinate, route, collaborate, pipeline, debate or vote. See **§38.6 Build a team** p. 750.

Template — A ready-made starting point: a Dashboard board, a report, a workflow, a backtest strategy or an options shape. See **§8.8 Start from a template (Reset)** p. 130.

Terminal growth — The growth rate a DCF assumes after its projection years. The discount rate must be higher. See **§22.6 Value the company** p. 399.

Theta — The value an option loses each day if nothing else moves. See **§25.4 Read the option chain** p. 499.

Thinking depth — How long Fincept AI thinks before it answers. Deeper is slower and more thorough; the price stays the same. See **§37.7 Thinking depth** p. 727.

This device — A deployment that runs inside this terminal. It stops checking its rules while the terminal is closed. See **§19.8 Deploy a strategy** p. 351.

Tile (widget) — A small window on the Dashboard that shows one thing, such as an index board, a chart or your paper account. See **Chapter 8, Dashboard** p. 123.

Time in force (validity) — How long an order stays working. The Equity Trading ticket's **Validity** offers **Day** or **IOC**; the Crypto ticket offers **GTC**, **IOC** and **FOK**. See **§16.4 The order ticket** p. 267.

Timeframe (bar size) — The length of each price bar a strategy is judged on, from one minute to one month. See **§19.4 Write a strategy by hand in the Builder** p. 337.

Token — A measure of the text an AI model reads and writes. A broker token is a login key that expires. See **§39.4 Watch a mission** p. 771.

Token Expired — A broker has ended its session. The account turns red until you log in again. See **§15.9 Keep your session alive** p. 259.

Tool — Something the AI can call to do one job, such as reading a quote or opening a screen. Internal tools are the terminal's own; external tools come from your MCP servers. See **§41.6 See and switch every AI tool** p. 815.

TOTP (time-based one-time password) — A six-digit code that changes every 30 seconds, from an authenticator app. Some brokers need it to log in; with its secret saved, the terminal can log in for you. See **§15.4 Supported brokers** p. 252.

Tracking error — How far a book's returns stray from its benchmark's, scaled to a year. See **§23.6 Read the KPI ribbon** p. 436.

Trade log — Every fill the algo engine has booked, paper and live. See **§19.10 Read the Trade log** p. 359.

Trailing stop — A stop that follows the price up from the best level since entry and closes the position on a set pullback. See **§19.4 Write a strategy by hand in the Builder** p. 337.

Trial — One run or sweep of the same strategy idea. The more trials, the higher the bar a result must clear. See **§24.8 Check whether the result is real** p. 476.

Trigger — In Agent Studio, a rule that runs one of your agents by itself: on a schedule, a price or the news. A trigger price fires a stop order; a trigger node starts a workflow. See **§38.14 Triggers: wake an agent automatically** p. 759.

TVPI (total value to paid-in) — Distributions plus remaining value, divided by the money called so far. It equals DPI plus RVPI. See **§28.4 Measure performance** p. 588.

TWAP (time-weighted average price) — An execution algorithm that splits an order into equal slices over a set time. See **§18.9 Work a large order with an algorithm** p. 315.

TWR (time-weighted return) — The return of the investments themselves, with the effect of money added or taken out removed. It is the fair way to compare with a benchmark. See **§23.6 Read the KPI ribbon** p. 436.

56.22 U

Underlying — The stock, index, ETF or coin an option or future is based on. See **Chapter 25, Derivatives** p. 493.

Universe — The set of symbols a backtest, an auto-trader or a research tab works on. See **§24.3 Set up a test** p. 467.

Up and down capture — How much of the benchmark's rises (and falls) the book captured. Below 100% on the falls is good. See **§23.11 Track performance** p. 446.

Usage analytics — The record of how the terminal is used, at a level you choose. Passwords and keys are never recorded. See **§51.9 Usage analytics** p. 948.

UTC — Coordinated Universal Time, the world's reference clock. Some schedules and stamps are shown in it. See **§49.5 Scheduled refreshes** p. 914.

56.23 V

Value at risk (VaR) — A loss level that should be exceeded only rarely: at 95% confidence, on only 5% of days. See **§23.13 Measure risk** p. 448.

Vega — The change in an option's price for a one-point change in implied volatility. See **§25.4 Read the option chain** p. 499.

Venue — The exchange prices come from and orders go to. On the Crypto screen each venue is tagged LIVE, PAPER or DATA. See **§18.3 Pick a venue and a pair** p. 303.

Vintage — The year a private fund started investing. Funds are compared with others of the same vintage. See **§28.1 Screen tour** p. 581.

VIX — The S&P 500's expected volatility over the next 30 days, worked out from option prices; often called the market's "fear gauge". In Market Pulse, a VIX above 25 or 30 lowers the risk-appetite score and one below 15 raises it. See **§8.10 The Market Pulse panel** p. 133.

Volatility — How much returns swing from day to day, scaled to a year. See **§23.6 Read the KPI ribbon** p. 436.

Volatility risk premium (VRP) — Implied volatility minus realised volatility. Positive means options are priced above what the stock has actually done. See **§25.7 Analyse volatility** p. 511.

Volatility surface — Implied volatility across strikes (the smile or skew), across expiries (the term structure), or both. See **§25.6 Read the volatility surface** p. 505.

Volume — In quote tables, the units traded today. In a prediction market, the money traded so far. See **§9.8 Reference** p. 167.

VWAP (volume-weighted average price) — The average price weighted by how much traded at each price. Also an execution algorithm that follows the usual volume through the day. See **§18.9 Work a large order with an algorithm** p. 315.

56.24 W

WACC (weighted average cost of capital) — The cost of equity and the after-tax cost of debt, weighted by how much of each the company uses. See **§27.5 Value the target** p. 562.

Wake — One working session of a mission: the agent reads its journal, acts, records its decisions and sleeps again. See **Chapter 39, Mission Control** p. 764.

Walk-forward — Re-optimising on a training window and scoring on the next, unseen window, then moving on. See **§24.9 Optimise parameters** p. 478.

Wash sale — A loss sale with a purchase of the same security within 30 days before or after it. Some tax systems, such as the US one, do not allow that loss at the time of the sale. See **§23.16 Lots, income and tax (Lots & Income)** p. 453.

Watchlist — A named list of symbols you choose, with live prices, saved to your account. See **Chapter 10, Watchlist** p. 172.

Watermark — The Fincept mark on an exported report PDF. Whether you can export without it depends on your plan. See **§45.7 Metadata, branding and theme** p. 866.

Win rate — The share of closed trades that made money. See **§24.11 The numbers explained** p. 484.

Wire — The News screen's list of headlines, one line each, newest first. See **Chapter 11, News** p. 182.

Workflow — In the Node Editor, nodes joined by connections that run from left to right. In Agent Studio, a ready-made one-click analysis. See **Chapter 40, Node Editor** p. 776.

Workspace — A saved arrangement of panels: which screens are open, where they sit and what each shows. Switch between them with the tabs in the bottom bar. See **Chapter 7, Workspaces** p. 112.

56.25 Y

Yield — The yearly return a bond pays if you buy it today and hold it to maturity. See **Chapter 33, Sovereign Bonds** p. 660.

Yield curve — A government's bond yields by maturity. Its shape reads normal, flat or inverted. See **§33.4 Read a country's bond page** p. 664.

Yield to worst — The lowest yield a bond can deliver if it is repaid early. See **§33.6 The European bonds window** p. 668.

56.26 Z

Zero-gamma flip — The price level where dealers' net gamma crosses zero: above it their hedging damps moves, below it amplifies them. See **§25.10 Read dealer positioning** p. 524.