The Owners

Who Holds the World's Capital

Figures current as of October 2026

The ownership map: the world's real estate, stocks, and bonds, the $504 trillion of financial assets on institutions' books, and the chain that holds them for households. It covers the very rich, the asset managers and the votes they cast, the pension funds, the sovereign funds and central banks, the insurers and banks, the money that trades, and corporations and the state as owners. It weighs the arguments over what owning so much lets a few institutions do, and ends with the dates to watch.

MODULE 1 — Foundations

Goal: Set the numbers and the chain.

About $740 trillion of real estate, stocks, bonds, and gold counted gross, and $504 trillion of financial assets on institutions' books; the chain from the household to the asset; the vocabulary; and a Treasury note, a Manhattan tower, and a data center, read down the chain.

MODULE 2 — Households and the Wealthy

Goal: See who owns it in the end.

The American distribution, with the top 1% at a record 32.5%; 3,428 billionaires and the founders who keep control; the family office; and Berkshire Hathaway under Greg Abel, the owner that is not an intermediary.

MODULE 3 — The Asset Managers

Goal: Understand the largest shareholders on earth, who own almost none of it.

BlackRock, Vanguard, and State Street at about $35 trillion; passive past active; the vote, ESG, and the backlash, from the climate coalitions to the antitrust suit; who owns Apple, worked; and whether the concentration is a problem, argued both ways.

MODULE 4 — Pension Funds

Goal: Read the $68 trillion and the plans that run it.

Defined benefit and defined contribution; Norway's fund, Japan's GPIF, the Canadians, the Dutch, Korea, CalPERS, and Australia; the move into private markets; and whether the largest owners should vote for the whole economy, argued both ways.

MODULE 5 — Sovereign Wealth Funds and Central Banks

Goal: Understand the state as investor.

Sovereign funds past $15 trillion and state-owned investors near $60 trillion; the Gulf's money in Western assets and the AI build; central banks as owners of their governments' debt; and whether state capital has a politics, argued both ways.

MODULE 6 — Insurers and Banks

Goal: See balance sheets as ownership.

Insurers' assets held against their promises; the private-credit chain; $191 trillion of bank assets, the largest banks Chinese; the banks' $1.3 trillion of commitments to private funds; the creditor's ownership; and whether the managers have made the insurers fragile, argued both ways.

MODULE 7 — Hedge Funds, Endowments, and the Money That Trades

Goal: Understand the small owners with the large footprint.

Hedge funds at a record $5.6 trillion and the basis trade; the endowment model's best year and its new tax; foundations; and who sets the price for the owners who do not trade.

MODULE 8 — Corporations and the State as Owners

Goal: Read the two owners the market forgets.

Buybacks and cross-shareholdings; Japan's unwinding and Korea's new law; China's state companies, Aramco, and Europe's state stakes; the American government's 39 deals; and whether the state should own companies, argued both ways.

MODULE 9 — Where Things Stand, and What to Watch

Goal: Assemble the map and name the dates.

Where things stand; five contradictions; four tests; a dated watch list from the Fed's October 27-28 meeting and the November 3 midterms to the Texas antitrust trial of January 2028; and a last word.

A note on the sources and the ground: The household figures come from the Federal Reserve, the managers' and funds' figures from their own reports and filings, the pension totals from the Thinking Ahead Institute, the state investors' from Global SWF, a firm that tracks them, and the world totals from the Financial Stability Board (FSB), the Securities Industry and Financial Markets Association (SIFMA), and Savills. Market prices are the close of Wednesday, October 14, 2026, and other figures are the latest release, with its date. Ownership is the subject with the largest numbers and the least exact. Totals differ by trillions depending on who counts and what is netted, and many owners, from sovereign funds to family offices, disclose little. The course names each figure's measure, gives ranges where sources disagree, and on the contested questions makes each side's case as its advocates make it, then gives the evidence and its own reading, once. It explains how ownership works; it is not advice.

Market Snapshot

Prices at the close of Wednesday, October 14, 2026, with the latest releases

Measure	Level	Source
S&P 500	7,718.94 (record close 7,818.93 on October 6); the Magnificent Seven 34.9% of its value	S&P Dow Jones Indices
Largest companies	Nvidia $5.34 trillion, Apple $5.01 trillion, Alphabet $4.20 trillion, Microsoft $3.96 trillion (mid-October)	S&P index weights
World stocks and bonds	Equities $157.8 trillion, 43.7% American; bonds $160.7 trillion (end of 2025)	SIFMA
Ten-year Treasury yield	5.19%; federal funds target 3.75-4.00% since September 16	Treasury; Federal Reserve
Dollar and gold	Dollar index about 102.6; gold about $4,106 an ounce	Market closes
Treasury debt	Marketable $31.84 trillion (September 30); foreign holders $9.25 trillion (July); the Fed $4.57 trillion	Treasury; Federal Reserve
Foreign-exchange reserves	$13.22 trillion, 56.7% of those with a reported currency in dollars (second quarter)	International Monetary Fund
American household net worth	$195.9 trillion, a record (second quarter); the top 1% hold 32.5% of households' own $185.7 trillion	Federal Reserve
The largest asset managers	BlackRock $15.5 trillion; State Street $6.31 trillion, with $59.2 trillion under custody or administration (September 30)	Company reports, October 14
Pension assets	$68.3 trillion in the 22 largest markets (end of 2025)	Thinking Ahead Institute
State-owned investors	About $60 trillion, sovereign wealth funds past $15 trillion (2025)	Global SWF, January 1, 2026
Norway's oil fund	22,683 billion kroner, about $2.27 trillion (June 30)	Norges Bank Investment Management
Private capital and hedge funds	Private capital $16.7 trillion (end of 2025); hedge funds $5.6 trillion (June 30)	PitchBook; Hedge Fund Research

Market prices are closes of October 14, 2026; the other figures are the latest releases, with their dates.

Module 1 — Foundations

The Numbers and the Chain

Recommended Reading / Reference

Book: Adam Tooze, *Crashed*, for how the balance sheets connect; Robin Wigglesworth, *Trillions*, for how the index fund came to own so much

Reference: The FSB's *Global Monitoring Report on Nonbank Financial Intermediation* (annual), the Federal Reserve's *Financial Accounts of the United States* (quarterly), and Global SWF's annual report, the sources for most of the totals in this course

1a. What There Is to Own

Four classes hold most of what can be owned. The world's real estate was worth about $393 trillion at the start of 2025 on Savills' count, 73% of it homes and the rest commercial property and farmland. The world's stocks were worth $157.8 trillion and its bonds $160.7 trillion at the end of 2025 (SIFMA). The 222,600 tonnes of gold above ground were worth about $29 trillion at the price of October 14, 2026.

Added together, the four come to about $740 trillion, a sum that counts some wealth twice: a company's shares are claims on its buildings, and its bonds are claims on its cash. A narrower total counts the financial assets on the books of the world's banks, insurers, pension funds, central banks, and other financial institutions: $503.7 trillion at the end of 2024 (FSB). That is about four years of the world's output, which the International Monetary Fund (IMF) projected in October 2025 at about $126 trillion for 2026.

What matters more than any total is the chain through which the assets are held (1b), and the concentration at its middle, the subject of Modules 3 to 8.

1b. The Chain

Nearly everything is owned, in the end, by households. The shares in a pension fund are its members' retirement, the bonds in an insurer stand behind its policyholders' claims, and a sovereign fund holds a nation's savings. And nearly everything is held by someone else on the households' behalf.

The chain has four links. The household saves through a pension plan, a 401(k), an insurance policy, a fund, or its government's surplus. The plan or fund is the *asset owner*: its balance sheet holds the claim, against liabilities such as pensions, policies, or a mandate. The owner hires an *asset manager* to invest the money, or invests it directly. The manager keeps the securities with a *custodian* bank, registered in the name of a nominee.

A company at the end of the chain sees the nominee on its share register, the manager behind it, and rarely the household. Each link holds a right the link above it delegated. The household holds the economic interest, the owner the legal claim, the manager the vote, and the custodian the record. The votes have gathered at one link, the managers, while the economic interest stays spread across another, the households, which is the argument of 3e.

1c. The Holders

Holder	Assets	Where the course treats it
Households	American net worth $195.9 trillion, a record (Federal Reserve, second quarter of 2026)	Module 2
Asset managers	$139.9 trillion at the 500 largest at the end of 2024, 47% of it at the top 20 (Thinking Ahead Institute)	Module 3
Pension funds	$68.3 trillion in the 22 largest markets at the end of 2025 (Thinking Ahead Institute)	The largest asset owners by type (Module 4)
State investors	Sovereign wealth funds past $15 trillion in 2025; about $60 trillion counting public pension funds and central banks (Global SWF)	Module 5
Central banks	$13.22 trillion of foreign-exchange reserves (IMF, second quarter of 2026)	Module 5
Insurers	American life insurers $9.3 trillion at the end of 2024 (American Council of Life Insurers)	Module 6
Banks	$191.3 trillion at the end of 2024 (FSB)	Module 6
Hedge funds	$5.6 trillion on June 30, 2026 (Hedge Fund Research)	Module 7
Endowments	American college endowments $944.3 billion in fiscal 2025, on the count of the National Association of College and University Business Officers (NACUBO) and Commonfund	Module 7
Family offices	Deloitte's count of single-family offices (2c)	Module 2
Corporations and the state	Companies' own shares and each other's; the state's companies at home and its stakes abroad	Module 8

The categories overlap: a pension fund's assets sit with a manager, and a public pension fund is also a state investor. The totals do not add up, and each is the latest its source has published.

1d. The Vocabulary

Term	Meaning	Why it matters
Beneficial and record owner	The person with the economic interest, and the name on the register	The household and the nominee, with the chain between them
Passive and active	Holding an index, or choosing what to hold	What an index fund can and cannot do (3a)
The proxy	The shareholder's vote, cast by the manager unless the owner takes it back	The power at issue in 3c and 3e
Private capital	Funds that buy companies, lend, or own property outside the public markets	$16.7 trillion at the end of 2025 (PitchBook), owned mostly by Modules 4-6
Common ownership	The same institutions holding large stakes in every competitor in an industry	Whether it dulls competition (3e)
The universal owner	An investor so large and diversified that it owns a slice of the whole economy	Whether it should vote for the whole (4d)

The chain's links, the asset owner, the asset manager, and the custodian, are defined in 1b.

1e. Three Assets, Read Down the Chain

Worked example — who owns a Treasury note, a Manhattan tower, and a data center

A Treasury note. The Federal Reserve's financial accounts counted $30.878 trillion of Treasury securities at the end of June 2026. Foreign investors held $9.248 trillion of them in July, 30.0%, with the reserve managers of Module 5 among them. The Federal Reserve held $4.49 trillion on July 1, 14.5%. Money-market and mutual funds held $5.023 trillion, 16.3%: the households of Module 2, through the managers of Module 3. Banks held $1.799 trillion, 5.8%, as a safe asset they can sell in a day. The household sector, which in these accounts also holds hedge funds and nonprofits, held $2.831 trillion, 9.2%. The remaining $7.487 trillion, 24.2%, belongs to insurers, pension funds, state and local governments, exchange-traded funds, dealers, and others. Every kind of owner in the map holds the note at once. **A Manhattan tower.** Deutsche Bank Center, the 1.1-million-square-foot office tower at Columbus Circle, shows the layers in a real register. Its equity belongs to two sovereign funds, Singapore's GIC, the government's investment fund, and the Abu Dhabi Investment Authority (ADIA), with 48.1% each, and to its developer, Related Companies, with the few percent left (Bisnow, October 17, 2025). Its debt is a $1.1 billion loan packaged into commercial mortgage-backed securities (CMBS), the bonds insurers and bond funds buy. Fitch, a rating agency, appraised the tower at $1.65 billion, so the loan is two-thirds of its value and the owners' equity is the remaining $550 million. A fall of a fifth in the tower's value would cut that equity by 60% and leave the bondholders whole. A fall of a third would wipe it out. **A data center.** Meta's Hyperion campus in Richland Parish, Louisiana, is planned at up to 5 gigawatts. Its buildings belong to a joint venture formed in October 2025, 80% owned by funds managed by Blue Owl, an alternative-asset manager, and 20% by Meta, which took a $3 billion cash distribution at closing. The deal, at $27 billion the largest private-credit transaction yet, was financed with $27.3 billion of bonds, rated A+ and yielding 6.58%, that Beignet Investor, the Blue Owl funds' vehicle, sold to Pimco and other investors (Dow Jones, October 22, 2025; International Financing Review). Meta leases the campus for an initial four years, with options to extend, and for 16 years guarantees it a minimum value. The bondholders lend against Meta's promise, Blue Owl's funds hold most of the equity, and the user owns a fifth. A larger deal shows the Gulf beside the managers. In July 2026 the AI Infrastructure Partnership (AIP), MGX, an Abu Dhabi investor in artificial intelligence, and BlackRock's Global Infrastructure Partners (GIP) completed their $40 billion purchase of Aligned Data Centers. Hyperion alone is about 4% of the $720-745 billion the four largest technology companies plan to spend in 2026.

Three lessons. Every asset in the map is owned by several kinds of owner at once, in layers, and the layers are the subject of the course. The creditor comes first: the tower's bondholders are paid before its sovereign owners see a dollar, which is the creditor's ownership of Module 6. And the newest assets, the data centers, are being financed the way the towers were, by managers using insurers' and pensions' money with the Gulf's money beside it, one link further from the households.

Module 1 Key Points

Foundations

• The world's real estate, stocks, bonds, and gold sum to about $740 trillion gross; financial institutions hold $504 trillion of financial assets.

• Nearly everything is owned by households and held by someone else: an asset owner, a manager, and a custodian.

• The votes have gathered at the managers, while the economic interest stays spread across households.

• The 500 largest managers hold $139.9 trillion, the top 20 with 47%; pension funds hold $68.3 trillion.

• A Treasury note, a Manhattan tower, and a data center each have several kinds of owner at once, in layers.

Module 1 Quiz

Check Your Understanding

1. Which is the largest of the four classes of what can be owned?

A) Stocks, about $158 trillion
B) Bonds, about $161 trillion
C) Gold, about $29 trillion at October's price
D) Real estate, about $393 trillion

2. What does the FSB's $503.7 trillion count?

A) Financial institutions' financial assets
B) All the world's wealth, net of every household's debts
C) World output in a year
D) The world's stocks, bonds, and real estate, added up gross

3. Which link in the chain usually casts the vote?

A) The household at the end of the chain
B) The custodian bank, in the nominee's name
C) The asset manager
D) The asset owner, through its board of trustees

4. What happens to Deutsche Bank Center's owners if the tower's value falls by a fifth?

A) Their equity falls by a fifth, the same as the building's value
B) Their equity falls by 60%, and the bondholders are still paid in full
C) The bondholders take a fifth of the loss before the owners do
D) The owners lose only when the floating-rate loan comes due

5. Who owns 80% of the Hyperion campus's buildings?

A) Meta itself
B) Funds managed by Blue Owl
C) The state of Louisiana
D) Abu Dhabi's MGX, through the AI Infrastructure Partnership

Module 2 — Households and the Wealthy

Who Owns It in the End

Recommended Reading / Reference

Book: Thomas Piketty, *Capital in the Twenty-First Century*, on the distribution; Warren Buffett's annual letters, the owner-operator's own account

Reference: The Federal Reserve's *Distributional Financial Accounts* (quarterly) and *Survey of Consumer Finances* (every three years), UBS's *Global Wealth Report* (annual), Forbes' billionaires list (annual), and Deloitte's family-office studies

2a. The Distribution

The Federal Reserve's distributional accounts divide American household wealth by tier each quarter, and they are this course's base map. In the second quarter of 2026 the top 1% held a record share in a series that began in 1989, and the top tenth held more than two-thirds. The bottom half of households held about twice what Norway's oil fund holds (Module 4).

Tier	Share of net worth	What it holds
Top 1%	32.5% ($60.3 trillion)	Stocks, private businesses, and real estate
Next 9%	36.4%	Retirement accounts, stocks, and home equity
50th to 90th percentile	28.8%	The house first, retirement accounts second
Bottom half	2.3% ($4.3 trillion)	Mostly homes, cars, and deposits

Federal Reserve, Distributional Financial Accounts, second quarter of 2026: households only, $185.7 trillion in all. The top 1% hold 50.9% of households' stocks and mutual-fund shares, and the top 10% hold 88.0%.

The typical family looks different from the totals. The Fed's Survey of Consumer Finances, published on October 9, 2026, put median family net worth at $215,900 in 2025 and the mean at $1.24 million, the gap a measure of how far the top pulls the average. Some 56% of families owned stocks, directly or through funds and retirement accounts, so most families' stake in the world's companies sits with the intermediaries of Modules 3 and 4.

Worldwide the figures are estimates. UBS, the Swiss bank, found that personal wealth rose 10.8% in dollars in 2025, the fastest in eight years and flattered, it said, by the dollar's fall, with the United States holding 35.7% and China 18.5% of the wealth it measures across 56 markets (*Global Wealth Report*, June 30, 2026). The concentration is the reason the rest of the course matters. The intermediaries of Modules 3 to 8 hold the assets of the top half, and the votes that come with them are cast for an interest that is, at every link, mostly the affluent's.

2b. The Very Rich

Forbes counted a record 3,428 billionaires worth $20.1 trillion on March 1, 2026, up from $16.1 trillion a year earlier. Twenty of them had $100 billion or more, $3.8 trillion together, and the five richest had founded technology companies: Elon Musk with $839 billion, Larry Page with $257 billion, Sergey Brin with $237 billion, Jeff Bezos with $224 billion, and Mark Zuckerberg with $222 billion.

The largest fortunes are held as they were made: as controlling stakes in a single company, rarely sold, often borrowed against, and voted personally. The founder is the exception to the chain of 1b, because the

beneficial owner, the record owner, and the voter are one person. Musk's largest holding shows the mechanism. SpaceX, which now includes xAI and X, listed on June 12, 2026 at $135 a share, a value of $1.77 trillion, and he kept about 42% of its shares and 82.4% of its votes (its registration statement of June 3).

The gap between shares and votes comes from dual-class shares, which give founders more votes per share than other investors get. In 2025, 37 of 90 American initial public offerings (IPOs), 41.1%, had them, the highest share since at least 2020 (Jay Ritter, University of Florida). Zuckerberg's control of Meta rests on the same device, which lets a founder direct a company with a minority of its equity.

2c. The Family Office

Below the founders sits the family office, a private firm that manages one family's wealth with its own investment staff. Deloitte counted 8,030 single-family offices holding $3.1 trillion in 2024, up from about 6,130 offices in 2019, and projects 10,720 offices with $5.4 trillion by 2030, growth of almost 10% a year. Other counts run higher: Campden Wealth's 2019 study put the assets of 7,300 offices at $5.9 trillion, and no register exists to settle the difference.

In the United States most family offices are exempt from registering with the Securities and Exchange Commission (SEC) as investment advisers, so they report little. They invest directly in private companies and property, alongside the funds of Module 7 or in place of them, and they are the most opaque owners in the map.

2d. Berkshire as the Model

Berkshire Hathaway is the course's example of the owner that is not an intermediary. It owns businesses outright, among them a railroad, utilities, insurers, and manufacturers, and holds a portfolio of listed shares it votes itself. Its shareholders control it in proportion to their stakes, with no fund and no fee between them and the vote.

Greg Abel became chief executive on January 1, 2026, succeeding Warren Buffett. On June 30, 2026, Berkshire held $365.5 billion of cash and Treasury bills, down from a record $397.4 billion at the end of March, and $299.25 billion of listed shares by its 13F, the quarterly report of holdings that large managers file with the SEC. It bought back $4.53 billion of its own stock in the second quarter. Its insurers' float, the premiums held before claims are paid, was about $177.5 billion, the same funding the annuity writers of Module 6 use, deployed by an owner rather than a manager.

Berkshire is the model the endowments and sovereign funds cite when they take direct stakes, and the counterexample to the index fund of Module 3: it chose every holding it has. Its third-quarter report, due by November 9, will add a third quarter of evidence on whether that model survives its founder.

Module 2 Key Points

Households and the Wealthy

• The top 1% of American households hold a record 32.5% of net worth; the bottom half hold 2.3%.

• The top 10% own 88% of households' stocks and funds, so intermediaries vote mostly for the affluent's interest.

• Forbes counted 3,428 billionaires worth $20.1 trillion in 2026; founders keep controlling stakes, unsold and voted personally.

• Deloitte counted 8,030 single-family offices with $3.1 trillion in 2024, most of them exempt from registering as advisers.

• Berkshire owns businesses outright and votes its own shares; under Greg Abel it still held $365.5 billion of cash in June.

Module 2 Quiz

Check Your Understanding

1. What share of American household net worth did the top 1% hold in the second quarter of 2026?

A) About 10%
B) About half of it, as in 1929
C) A record 32.5%
D) About a fifth, as it was in 1990

2. How do the largest founders typically hold their wealth?

A) In diversified index funds, rebalanced each year by their advisers
B) In sovereign-style funds that disclose every holding and every vote
C) In cash and Treasury bills, waiting for the next downturn
D) As controlling stakes in one company, rarely sold and often borrowed against

3. Roughly how many single-family offices did Deloitte count in 2024?

A) About 8,000
B) About 800, most of them in Asia
C) About 80,000, counting multi-family firms
D) About 2,000, all registered with the SEC

4. What gave Musk control of SpaceX with well under half of its shares?

A) A golden share held by the Pentagon
B) A voting trust run by its first investors
C) Proxies lent to him by the index funds that hold it
D) Super-voting shares

5. What makes Berkshire Hathaway the course's model of the owner that is not an intermediary?

A) It charges the lowest fees
B) It is a mutual fund owned by its investors
C) It owns businesses outright and votes its own shares
D) It holds only cash and Treasury bills until the market falls, then buys

Module 3 — The Asset Managers

The Largest Shareholders on Earth, Who Own Almost None of It

Recommended Reading / Reference

Book: Robin Wigglesworth, *Trillions*, on the index fund; John Coates, *The Problem of Twelve*, the case that concentration is the problem, read against the managers' replies

Reference: BlackRock's, Vanguard's, and State Street's stewardship reports (their own accounts of how they vote), Morningstar's active-passive data, and the academic work on common ownership by José Azar, Martin Schmalz, and Isabel Tecu and by their critics

3a. The Big Three

Three firms manage about $35 trillion. BlackRock, led since its founding in 1988 by Larry Fink, had $15.5 trillion on September 30, 2026, after record net inflows of $205 billion in the third quarter. Vanguard, owned by its own funds and run since July 2024 by Salim Ramji, reports no quarterly results, but it gave its global assets as $13.3 trillion on July 30, 2026 (Vanguard, September 21, 2026). State Street Investment Management had $6.31 trillion on September 30, and its parent is one of the custodians of 3b.

They own almost none of it. The shares belong to the funds, the funds to their investors, and the investors are the pension plans, 401(k)s, and households of Modules 2 and 4. What the managers hold is the vote, cast at every annual meeting on directors, pay, mergers, and shareholder proposals, and the fee, which averaged 0.06% a year across Vanguard's funds after its February 2026 cuts (May 1, 2026).

Most of the money sits in index funds, which must hold every company in an index in proportion to its size. Passive funds passed active ones in American fund assets at the end of 2023, on Morningstar's count, and held about 55% of long-term fund assets by the end of 2025. In the year to June 30, 2026, passive funds took in $1.25 trillion while active funds lost $2 billion (Morningstar).

An index fund is a permanent owner. It cannot sell a company it dislikes without leaving the index, so its only tool is the vote. A 2017 study found BlackRock, Vanguard, and State Street together the largest shareholder in 88% of the companies in the S&P 500 (Jan Fichtner, Eelke Heemskerk, and Javier Garcia-Bernardo).

3b. The Managers Beyond Them

Manager	Assets	Model
Fidelity	$7.1 trillion managed (end of 2025)	Active and index funds; the largest administrator of 401(k) plans
JPMorgan Asset Management	$4.05 trillion (end of 2024)	A bank's manager, fifth largest in the world
Amundi	About €2.6 trillion, about $2.9 trillion (June 30, 2026)	Europe's largest
Capital Group, T. Rowe Price, Franklin, Invesco	Each in the low trillions	Mostly active, losing share to index funds for two decades
The alternatives firms	Blackstone $1.37 trillion (September 30); Apollo $1.05 trillion, Brookfield over $1 trillion, KKR nearly $800 billion (June 30)	Owners and lenders in private markets, with insurers' and pensions' money (Modules 4 and 6)
The custodians	BNY over $63 trillion and State Street $59.2 trillion under custody or administration (September 30)	Keep the records; vote nothing

Company reports; Bloomberg (Fidelity, March 2, 2026); the Thinking Ahead Institute's ranking of the largest 500 managers (November 10, 2025). Euro at $1.1158 (October 14).

3c. The Vote and the Backlash

The Big Three's votes decided the decade's governance fights. In 2021 they helped Engine No. 1, a small fund, put three directors on Exxon Mobil's board in a campaign over climate strategy. The movement for environmental, social, and governance (ESG) investing asked the largest owners to use their votes that way, on the reasoning of 4d, and for a few years they did.

The backlash came from both sides. Republican officials argued that unelected managers were imposing a politics their clients had not chosen, and states passed anti-ESG laws: 11 such bills in 2025 by July 1, while 2026 brought 14 ESG-related laws of both kinds, the fewest since 2021 (Pleiades Strategy; Ballotpedia). Critics on the left argued that the managers' votes were cosmetic. A group of states took the argument to court as an antitrust case (3e).

The managers retreated. BlackRock's voting-choice program, launched for institutions in January 2022 and for some retail investors in 2024, lets fund investors direct their own shares' votes. On June 30, 2026, $3.96 trillion of its $8.79 trillion of index equity was eligible and $923 billion was enrolled. Vanguard's Investor Choice covered nearly $4 trillion of fund assets on July 31, 2026, of which $151 billion took part (Vanguard). The Net Zero Asset Managers initiative (NZAM) suspended its work in 2025 as American members left, then relaunched with about 250 signatories and no 2050 deadline.

Washington changed the rules around the vote. In February 2025 the SEC's staff said that a holder that presses management for specific changes may lose the 'passive' status that lets it file the short 13G form. In November 2025 the staff stopped ruling on most companies' requests to exclude shareholder proposals for the 2025-26 season.

The 2026 proxy season showed the result. Shareholders filed 626 proposals, about 15% fewer than in 2025, and environmental proposals fell to 69, from 163 in 2024. Average support for them rose to 17.0%, from 12.4%, but none won a majority, while 19 governance proposals did (Cooley, June 4, 2026).

3d. Who Owns Apple

Worked example — who owns Apple

Take Apple, the second-largest company in the world, worth about $5.01 trillion in mid-October 2026, and read its register down to the households. The 13F filings for June 30, 2026 show about 14.6 billion shares. Vanguard's funds held 8.86%, BlackRock's 7.97%, and State Street's 4.21%: together 21.0%, a stake worth about $1.05 trillion. Most of it sits in index funds that hold Apple because it is 7.10% of the S&P 500 and cannot be left out. Geode, which runs index funds for Fidelity, held 2.54%, and Fidelity's own funds 2.23%. Berkshire Hathaway held 1.56%, about $78 billion, and Norway's fund 1.31%, about $65 billion. Institutions of every kind held 66.4%, which leaves about a third with individuals and with owners too small to file. Now trace one link. Of Vanguard's 8.86%, its Total Stock Market Index fund held 3.19% and its 500 Index fund 2.61%, two-thirds of the stake. Those funds are owned by millions of investors, many through employers' 401(k) plans and target-date funds, who own Apple without choosing it.

Three lessons. The largest owners of the largest companies own them by arithmetic, not judgment. The economic owners are millions of households who rarely see a proxy. And the holders who chose Apple and

vote as owners, Berkshire and the active funds, hold a few percent between them, against the index funds' fifth: the whole subject in one company.

3e. Is the Concentration a Problem?

The case that it is. A few managers, its critics argue, hold voting power over the world's companies that no group in history has held, and it is unelected and answerable to no one. John Coates, a Harvard law professor, calls it 'the problem of twelve': a handful of index managers and private-equity firms that together control much of the economy. When the same holders own every competitor in an industry, the argument runs, the competitors have less reason to compete, since an owner of every airline gains nothing from a fare war. The retreat from ESG, on this view, hid the power rather than dispersing it. The remedies its advocates propose are caps on any manager's stake in an industry and pass-through voting required by law.

The case that it is not. The index fund, its defenders argue, is the best deal finance has offered the ordinary saver: the market's return for a few hundredths of a percent a year. Its scale is the scale of the savers it serves, and the managers own nothing and are handing the vote back. The airline findings, they add, have not held up, and the managers do not tell companies how to price. Every proposed remedy would raise savers' costs, break up the market's liquidity, or hand the power to a regulator less accountable than a fund.

The evidence. A 2018 study by José Azar, Martin Schmalz, and Isabel Tecu found higher fares on routes where the same investors owned more of the competing airlines. Patrick Dennis, Kristopher Gerardi, and Carola Schenone (Atlanta Fed, 2019) traced the result to how the measure was built and found no anticompetitive effect, and the original authors published a rebuttal. The question has now reached a court. Texas and ten other states sued all three managers in November 2024, arguing that their stakes in coal producers cut output; two more states joined later. The Justice Department and the Federal Trade Commission (FTC) backed the states' theory in May 2025, and on August 1, 2025 the judge largely denied the managers' motion to dismiss.

Vanguard settled on February 26, 2026 for $29.5 million, without admitting wrongdoing. It agreed not to direct companies' strategy, nominate directors, or file proposals, to keep its American businesses out of climate groups, and to widen Investor Choice across its American stock funds by the end of June 2027. BlackRock and State Street are defending the case, which is scheduled for trial in January 2028; in September the Justice Department was weighing whether to join it (Bloomberg Law, September 18, 2026). The voting record supports neither side's strongest claim: the managers have given back part of the vote, about a tenth of BlackRock's index equity and less at Vanguard, not all of it.

The course's reading. Whether common ownership raises prices is unsettled, and the coming trial is the first test in court. What the record shows is that the threat of antitrust and the SEC's 2025 guidance have pushed the largest holders toward passivity, by settlement at Vanguard and by policy at the others. The power is real and mostly unexercised, and the changes of 2025-26 left it less exercised still: the vote returned in form and kept by default.

Module 3 Key Points

The Asset Managers

• BlackRock, Vanguard, and State Street manage about $35 trillion; a 2017 study found them the largest holder in 88% of S&P 500 companies.

• Passive funds passed active ones in America at the end of 2023, and an index fund's only tool is its vote.

• BlackRock's voting choice had $923 billion enrolled in June 2026, a tenth of its index equity: the vote returned in form.

• The Big Three hold 21% of Apple because the index says so; Berkshire, which chose its stake, holds 1.6%.

• Common ownership's effect on prices is contested; the states' antitrust case against BlackRock and State Street goes to trial in January 2028.

Module 3 Quiz

Check Your Understanding

1. Why can an index fund not sell a company it dislikes?

A) The SEC forbids index funds to sell shares they have held a year
B) It must hold every company in its index, so its only tool is the vote
C) The shares are locked in the custodian bank's accounts
D) Selling would trigger taxes for every investor in the fund

2. When did passive funds pass active funds in American fund assets, on Morningstar's count?

A) At the end of 2023
B) In 2010
C) In 2019, at the peak of the bull market
D) Not yet; active funds still hold more

3. What did BlackRock's voting-choice program cover on June 30, 2026?

A) All of its index equity
B) Retail shares only
C) About $8.8 trillion of index equity, all of it enrolled by default
D) $923 billion enrolled

4. In the worked example, about how much of Apple do Vanguard, BlackRock, and State Street hold?

A) About 2%, like Berkshire
B) About 21%
C) About half, through the index funds
D) About 66%, every institution's stake added up

5. What did Vanguard agree to when it settled the states' antitrust suit?

A) To pay $29.5 million, stay passive, and widen investor choice by June 2027
B) To sell its coal stocks and leave the energy sector within the year
C) To admit that its votes had cut coal output and to pay damages
D) To hand all of its proxy votes to a court-appointed trustee

Module 4 — Pension Funds

The Promises and the Plans That Keep Them

Recommended Reading / Reference

Book: James Hawley and Andrew Williams, *The Rise of Fiduciary Capitalism* (2000), the book that set out the universal owner

Reference: The Thinking Ahead Institute's *Global Pension Assets Study* and, with Pensions & Investments, its *Top 300 Pension Funds* (annual), the Organisation for Economic Co-operation and Development's *Pension Markets in Focus*, and the funds' own reports, from Norway's, Japan's, and Canada's national funds to CalPERS

4a. The Liability That Owns the Asset

A pension fund is a promise with a portfolio behind it. The promise is to pay retirees for decades, and the portfolio exists to keep it. That makes the pension fund the clearest asset owner in the map: it holds the legal claim, against a liability it cannot walk away from, over a horizon of thirty to fifty years.

The funds are large and concentrated. The 300 largest held $27.7 trillion on the 2026 ranking's data, mostly for the end of 2025, up 13.4% in a year, the fastest growth since 2017, and the 20 largest held $11.9 trillion of it (Thinking Ahead Institute and Pensions & Investments, September 8, 2026). American funds are about two-thirds of the 22 largest markets' assets, and Canada has passed Japan as the second-largest market.

The funds come in two kinds. Defined-benefit funds promise a payment and bear the risk: the public plans of the American states, the Canadian, Dutch, Japanese, and Korean national plans, and the corporate plans that are closing. They are the owners the course means. Defined-contribution plans, such as the American 401(k) and Australia's superannuation, promise only what the account earns and pass the risk to the member. They hold 90% of Australia's pension assets, 72% of America's, and about 40% of Britain's (Thinking Ahead Institute).

American defined-contribution plans held $15.0 trillion on June 30, 2026, $10.8 trillion of it in 401(k)s (Investment Company Institute). That money belongs to the members and is managed and voted by the firms of Module 3, most of it through target-date funds that the employer chose. In the largest retirement system in the world, the voter is a manager two links from the saver.

4b. The Plans That Run It

Fund	Assets	Model and holdings
Norway's Government Pension Fund Global	22,683 billion kroner, about $2.27 trillion (June 30, 2026); 22,014 billion kroner on September 30, as the krone strengthened	Oil revenue invested abroad; 72.1% listed stocks, 25.8% bonds, and a little unlisted property and renewable infrastructure; no private equity; the largest asset owner in the world
Japan's Government Pension Investment Fund (GPIF)	¥317.76 trillion, about $2.0 trillion (June 30, 2026)	The national pension reserve: a quarter each in Japanese and foreign bonds and stocks; a record ¥24.1 trillion gain in April-June 2026
Korea's National Pension Service (NPS)	₩1,526 trillion, about $1.0 trillion (March 31, 2026)	The national pension reserve; deficits from 2050 and depletion in 2069 on the National Assembly Budget Office's projection of June 2026, 2071 on the government's

Fund	Assets	Model and holdings
The Dutch funds: ABP, the civil servants' fund, and PFZW, the health-care workers'	$624.7 billion and $295.3 billion (end of 2025)	Moving from promised pensions to individual accounts: 42 of the 44 funds approved had moved by mid-2026; ABP is set to move on January 1, 2027, and the legal deadline is January 1, 2028
Canada Pension Plan Investments and Canada's large plans	C$863.6 billion, about $605 billion (June 30, 2026)	Independent boards, in-house staff, and direct investing in private companies and infrastructure; Canada's eight largest invested $61 billion in 2025 (Global SWF)
CalPERS and the American public plans	CalPERS $637.1 billion (June 30, 2026); state and local plans $6.55 trillion (second quarter)	State and city plans with political boards; CalPERS returned 14.8% in fiscal 2025-26 and was 85% funded
Australia's superannuation	A$4.77 trillion, about $3.3 trillion (June 30, 2026)	Compulsory contributions of 12% of wages; one of the largest defined-contribution systems

The funds' reports; Thinking Ahead Institute; Korea's SBS (June 21, 2026); IPE (Dutch funds); the Census Bureau's survey of public pensions; Australia's prudential regulator. Conversions at the closes of October 14, 2026.

4c. Where the Money Went

Fifty years ago a pension fund held bonds. The large ones now hold the world, after three moves: from bonds to stocks in the 1980s and 1990s, from home markets to global ones in the 2000s, and from public markets to private ones in the 2010s. The last move took the largest funds into private equity, private credit, infrastructure, and property, often for a large and growing share of their assets, and made them the main backers of the private capital of 1d.

The private move has paid and has locked them in. CalPERS's private equity returned 17.0% in fiscal 2025-26, against 24.1% for its public stocks (July 13, 2026). But private funds have paid back less than 15% of their value a year for four years (Bain), so the pensions cannot easily get their money out. The world's retirees are, at the end of the chain, the owners of its private companies, and they cannot sell them.

In public markets the largest funds are shareholders of last resort, though smaller ones than often said. Norway's fund and GPIF together held about $2.7 trillion of stocks in mid-2026, about 1.7% of the world's listed equity. The two differ in how they use it. Norway's fund voted at 6,899 shareholder meetings on 75,757 resolutions in the first half of 2026 and publishes every vote. GPIF, by law, does not pick stocks itself and leaves the votes to its managers.

4d. Should the Largest Owners Vote for the Whole Economy?

The case that they should. A fund that owns a slice of every company, its advocates argue, cannot profit when one company pushes its costs onto others, because it owns the others. James Hawley and Andrew Williams called such investors universal owners in 2000. A universal owner bears the pollution, the instability, and the public-health costs that any single holding might ignore, so it should press every company on them, through its vote. On this view the largest pension funds have both the incentive and the standing to manage risks no single company will.

The case that they should not. A pension fund's duty, its critics argue, is to pay its members' pensions, not to manage the economy. A board that votes on climate or social questions puts its own views in place of its members', who never chose them, and a public fund's views become politics. The costs a company shifts to others are for governments to price through taxes and rules, not for unelected trustees to decide by proxy. The backlash of 3c, they say, showed how little the members' consent was asked.

The evidence. The arithmetic holds: a fund holding a slice of the world's stocks, as Norway's fund and GPIF do (4c), gains little from any company's profit made at another's expense. The practice is uneven. Norway's fund acts on the argument, under ethical guidelines set by its government. Elsewhere the retreat is plain, in the climate-investor initiative, the proxy season, and Vanguard's settlement (3c and 3e). How much engagement has changed what companies emit is still disputed.

The course's reading. The universal owner's logic gives the largest funds standing, not a mandate. The form of the argument the evidence supports is the narrower one: a fund that owns the whole market should press companies on the risks that cost its own members across the portfolio, and say so in its own name, as Norway's does. Most funds have instead handed the question to managers who now decline to act on it.

Module 4 Key Points

Pension Funds

• The 300 largest pension funds held $27.7 trillion at the end of 2025, and the top 20 held $11.9 trillion.

• Defined-benefit funds bear the risk; defined-contribution plans pass it to members, whose $10.8 trillion of 401(k)s managers vote.

• Norway's fund, about $2.27 trillion, is the largest asset owner; with GPIF it holds about 1.7% of the world's stocks.

• The funds moved into private markets, which have paid back under 15% of their value a year for four years.

• The universal-owner idea gives the largest funds standing to press on economy-wide risks; the course reads it as standing, not a mandate.

Module 4 Quiz

Check Your Understanding

1. What makes a pension fund the clearest asset owner in the map?

A) It holds more assets than any other owner
B) It pays no fees to anyone
C) It holds a claim against a liability it cannot walk away from
D) It is owned by the government that sponsors it, in every country with one

2. Who usually votes the shares held in an American 401(k)?

A) The employer that sponsors the plan
B) Each employee, on every ballot, by mail
C) The plan's managers
D) The Labor Department, through the plan's trustee

3. About what share of the world's listed stocks did Norway's fund and GPIF hold together in mid-2026?

A) About 3%, the share long cited for the pair
B) About 1.7%, some $2.7 trillion of stocks between the two funds
C) About 10%, a tenth of every listed company on earth
D) About 0.2%, less than a single large index fund holds

4. Why can the pensions not easily get their money out of private funds?

A) Ten-year lockups
B) The regulators froze them in the drought of 2022
C) Private funds pay out only when the pension's members retire
D) Distributions are low

5. What is the course's reading of the universal-owner argument?

A) It gives the largest funds standing, not a mandate
B) It binds every fund to vote for the economy
C) It is wrong, since owners bear no costs at all
D) It applies only to sovereign funds, which answer to their governments

Module 5 — Sovereign Wealth Funds and Central Banks

The State as Investor

Recommended Reading / Reference

Paper: Stephan Roll, *Sovereign Wealth Funds and Foreign Policy: How Saudi Arabia, the UAE and Qatar Invest in Their Power* (German Institute for International and Security Affairs, February 4, 2026)

Reference: Global SWF's annual report and its regional playbooks, the funds' own reports (Norway's, Saudi Arabia's, Mubadala's, and Temasek's), the IMF's data on reserves, and the central banks' balance sheets

5a. The Sovereign Funds

A sovereign wealth fund is a state's savings invested as capital: oil revenue, an export surplus, or reserves beyond what a central bank needs. With public pension funds and central banks, the state's investors hold about four times what the sovereign funds hold (1c). Global SWF projects $22 trillion for sovereign funds and $80 trillion for all state investors by 2030. Sovereign funds held 40.8% of the assets of the world's 100 largest asset owners at the end of 2024 (Thinking Ahead Institute).

Two models divide them. The financial model, followed by Norway's fund, Abu Dhabi's ADIA, Singapore's GIC, and China's State Administration of Foreign Exchange (SAFE), invests abroad for return, mostly in listed markets and often by index. The strategic model, followed by Saudi Arabia's Public Investment Fund (PIF), Abu Dhabi's Mubadala and ADQ (Abu Dhabi Developmental Holding Company), the Qatar Investment Authority (QIA), and Singapore's Temasek, takes large stakes, builds industries at home, and carries the state's interests abroad.

PIF is the clearest strategic fund. Its net profit more than doubled to $17 billion in 2025 (August 17, 2026). Its strategy for 2026-30 organizes its domestic holdings into six connected ecosystems, with artificial intelligence, the energy transition, advanced manufacturing, and sport and entertainment its themes abroad. Yasir Al-Rumayyan, its governor since 2015, also chairs Saudi Aramco. With Silver Lake and Affinity Partners it completed the buyout of Electronic Arts, a video-game maker, at $210 a share, about $55 billion, in early August 2026.

Fund	Assets	Note
Norway's Government Pension Fund Global	The largest (4b)	A pension fund by name, covered in Module 4
China's SAFE and China Investment Corporation (CIC)	Each estimated at $1.3-2 trillion; not disclosed	Both reserves-based; CIC the more strategic
Abu Dhabi: ADIA, Mubadala, ADQ	ADIA estimated near $1.1 trillion; Mubadala 1.4 trillion dirhams, about $385 billion (end of 2025)	The United Arab Emirates' state investors together about $2.93 trillion, fourth in the world (Global SWF, January 1, 2026)
Saudi Arabia's PIF	More than $900 billion (end of 2025, its own figure)	The engine of Vision 2030, the kingdom's plan to diversify from oil
Kuwait Investment Authority	Estimated near $1 trillion	Financial; the oldest Gulf fund
Qatar's QIA	Estimated at more than $500 billion	London property, European banks and carmakers

Fund	Assets	Note
Singapore's GIC and Temasek	GIC estimated at $800-940 billion; Temasek S$518 billion, about $400 billion (March 31, 2026)	Temasek calls itself a commercial investment company

The funds' reports where they publish, with the conversions they or the financial press gave; otherwise estimates by Global SWF and other trackers, since most Gulf and Chinese funds do not disclose.

The United States has no national fund. A February 3, 2025 executive order called for a plan for one, and by May 2025 the plan had been put on the back burner (Bloomberg, May 16, 2025). The American state instead took stakes in companies directly (Module 8).

5b. The Gulf's Money

The Gulf's funds became the world's most active state investors. State-owned investors put a record $278 billion into 562 deals in 2025, and seven Gulf funds supplied $119 billion of it, 43%, with the United States taking 47% of the total (Global SWF, January 1, 2026). Gulf sovereign funds committed a record 198 billion dirhams, about $54 billion, in the first half of 2026, and Mubadala and its affiliates invested $26.2 billion in January-September, the most of any of the region's state investors.

Despite the war between the United States and Iran, the region's state investors put $102 billion into 245 deals in January-September 2026, 39% of all state investors' dealmaking, though below their pace of 2023-25 (Global SWF, October 1, 2026). The money has followed the artificial-intelligence build: MGX joined 2026 funding rounds for OpenAI, Anthropic, and Databricks, besides its part in the AI Infrastructure Partnership of 1e.

5c. The Central Banks

Central banks own by a different route. They hold the foreign-exchange reserves of 1c, of which China's $3.40 trillion (September) are the largest. Of the reserves whose currency is reported, 56.7% were in dollars in the second quarter of 2026, down from about 72% in 2001 (IMF). And they hold the government bonds they bought in the easing rounds of 2008-21, which made several of them the largest owners of their own governments' debt.

The Federal Reserve's holdings (1e) stopped shrinking on December 1, 2025, when it ended quantitative tightening, the run-off of the bonds it had bought; from December 12 until mid-August 2026 it bought Treasury bills to keep bank reserves ample. The European Central Bank held €3.31 trillion of securities for monetary policy on October 16, 2026, buying none, and about €5.3 billion matured that week without being replaced (Eurosystem, October 20). The Bank of Japan held 46.7% of Japan's government bonds at the end of June 2026, and 41.2% counting bills.

Japan is the case in which a central bank's holdings make the bond market an instrument of policy. The Bank of Japan has been slowing its purchases since 2024. On June 16, 2026 it decided to hold purchases at about ¥2 trillion a month from April 2027, ending the cuts, and it raised its policy rate to 1.0% that day and to 1.25% on September 18. The ten-year yield was 3.00% on October 14, near its highest since 1996. Central banks also bought gold: more than 1,000 tonnes a year in 2022-24, 863 tonnes in 2025, and about 345 in the first half of 2026 (World Gold Council).

5d. Does State Capital Have a Politics?

The case that it does not. Sovereign funds, their defenders argue, are investors like any other. Most hold minority stakes for decades, many have signed the voluntary Santiago Principles of 2008 on governance and disclosure, and their patient money steadies markets in crises. Norway's fund may not hold more than 10% of any company's votes. The Gulf funds' returns, on this view, are their mandate, and their purchases of Western assets are what any long-term investor with surplus savings would buy.

The case that it does. Where a fund is chaired by a ruler or a security chief, critics argue, every large stake is also a political act. In February 2026 Saudi Arabia's crown prince, Mohammed bin Salman, chaired PIF, and Abu Dhabi's national security adviser, Tahnoon bin Zayed, chaired ADIA and ADQ (Roll, below). The funds' stakes in chipmakers, AI laboratories, ports, and football clubs, on this view, buy access and influence as well as return, which is why host governments screen them.

The evidence. Stephan Roll's study of February 2026 found the economic and foreign-policy motives of five Gulf funds, PIF, QIA, ADIA, Mubadala, and ADQ, 'often difficult to clearly distinguish'. It found that ties of institution and personnel let the three governments use the funds strategically. It also found that in most cases the funds are not direct tools of foreign policy, and that direct evidence of deliberate political use is hard to find. Qatar ended its foreign minister's chairmanship of QIA in 2023. Disclosure differs most: Norway's fund publishes every holding as well as its votes (4c), while most Gulf and Chinese funds publish neither.

The course's reading. State capital has a politics wherever the fund's managers are the state's ministers, which is true of most of the Gulf's strategic funds and not of Norway's. The evidence does not show those funds acting as instruments in most deals, and it cannot rule it out. The useful test is how visible a fund's governance is, and on that test the state investors range from the most transparent owners in the world to some of the least.

Module 5 Key Points

Sovereign Wealth Funds and Central Banks

• Sovereign funds passed $15 trillion in 2025; with public pensions and central banks, state investors hold about $60 trillion.

• Financial funds such as Norway's invest abroad for return; strategic funds such as PIF and Mubadala take stakes for the state.

• State investors deployed a record $278 billion in 2025, 43% of it from seven Gulf funds, 47% of it into America.

• The Bank of Japan holds 46.7% of Japan's government bonds; the Fed stopped shrinking its holdings in December 2025.

• State capital has a politics where a fund's managers are the state's ministers; the test is how visible its governance is.

Module 5 Quiz

Check Your Understanding

1. What separates the financial model of a sovereign fund from the strategic model?

A) The financial model is always the larger of the two, by every ranking the trackers publish
B) The strategic model must disclose every stake it takes, under the Santiago Principles
C) They are the same model, with different names in different regions of the world
D) The financial invests abroad for return; the strategic takes stakes and builds the state's economy

2. Who completed the buyout of Electronic Arts in August 2026?

A) Norway's fund, alone
B) Mubadala and GIC
C) A PIF-led group
D) BlackRock's infrastructure arm

3. What share of 2025's state-investor deals by value went into the United States?

A) About 4%
B) About 47%, nearly half
C) About 90%, nearly all of it
D) About 20%, a fifth

4. What share of Japan's government bonds did the Bank of Japan hold at the end of June 2026?

A) About 46.7%
B) About 5%
C) About 90%, almost all of them
D) About 14%, the Fed's share of Treasuries

5. What did Stephan Roll's 2026 study find about the Gulf funds' motives?

A) Economic and foreign-policy motives are often hard to tell apart
B) Every large deal is directed by the foreign ministry
C) The funds have no political ties of any kind
D) Only Norway's fund mixes policy with return

Module 6 — Insurers and Banks

The Creditors Who Own the Debt

Recommended Reading / Reference

Reference: The American Council of Life Insurers' *Life Insurers Fact Book* (annual), the International Association of Insurance Supervisors' *Global Insurance Market Report*, the FSB's *Global Monitoring Report on Nonbank Financial Intermediation*, the Federal Deposit Insurance Corporation's *Quarterly Banking Profile*, and the Boston Fed's 2026 note on bank lending to nonbank financial firms

6a. The Insurers

An insurer owns by obligation. It collects premiums now, pays claims and annuities for decades, and invests the money in between in assets that pay on a similar schedule. That makes the life insurers, whose promises run longest, among the largest holders of bonds and mortgages, and small holders of stock.

The American life insurers of 1c split their assets between general accounts, $6.0 trillion at the end of 2024, which back their own promises, and separate accounts, $3.3 trillion, which hold variable annuities and pension money at the customers' risk (American Council of Life Insurers). Bonds were $4.4 trillion of the total, $3.4 trillion of them corporate and $466 billion government, and mortgages $873 billion. The general accounts held only $136 billion of stock, 2.3% of their assets.

The largest insurers in the world by assets are a mix of conglomerates and national champions. AM Best's ranking of January 2026 put Berkshire Hathaway first, with $1.15 trillion of nonbanking assets, ahead of Allianz with $1.09 trillion, followed by China Life, Ping An, Prudential Financial, Legal & General, AXA, Manulife, MetLife, and the Life Insurance Corporation of India. Berkshire's place shows the float of 2d at work.

The managers of 3b bought into the industry. Apollo owns Athene and KKR owns Global Atlantic, and insurers owned by private-equity and other private-capital firms held 19.8% of American life insurers' invested assets at the end of 2025 (ALIRT, an insurance research firm). Their money went into the loans those firms arrange: private credit was $807 billion at the end of 2025, about a fifth of life insurers' bonds on Moody's count. And the promises moved offshore. Life reserves ceded to reinsurers abroad, mostly in Bermuda, passed $1.1 trillion at the end of 2024 (AM Best).

6b. The Banks

Banks are the largest holders by assets and among the smallest holders of companies' shares. The world's banks, with the assets of 1c, hold mostly loans and bonds funded by deposits. Capital rules make shares costly for a bank to hold, so banks own the economy as lenders (6c).

Bank	Assets	Owner
Industrial and Commercial Bank of China (ICBC)	$7.65 trillion (end of 2025)	The Chinese state, mainly through Central Huijin, CIC's domestic arm (5a), and the Ministry of Finance
Agricultural Bank of China	$6.97 trillion	The Chinese state
China Construction Bank	$6.52 trillion	The Chinese state
Bank of China	$5.48 trillion	The Chinese state

Bank	Assets	Owner
JPMorgan Chase	$4.42 trillion (end of 2025); $5.09 trillion (September 30, 2026)	Listed; the index managers of Module 3 are its largest holders
Bank of America	$3.43 trillion (September 30, 2026)	Listed

S&P Global's ranking of the largest banks (end of 2025); the banks' quarterly reports for September 30, 2026. The four Chinese banks held $26.62 trillion together.

The four largest banks in the world are Chinese and state-owned, so the largest creditors in the map are arms of a state (Module 8). In the United States, 4,238 banks insured by the Federal Deposit Insurance Corporation (FDIC) held $26.46 trillion on June 30, 2026, and the four largest held 40.2% of it.

The banks have also become lenders to the other owners. On new reporting, American banks had committed $1.3 trillion to private-equity funds and to private-credit funds and similar lenders in the first quarter of 2026, 48% of their commitments to nonbank financial firms, and had lent more than $800 billion of it. Their lending to all nonbanks was $1.7 trillion, or $2.7 trillion counting undrawn lines, about 40% more than at the end of 2024, partly because loans were reclassified (Boston Fed, July 29, 2026). Earlier estimates had been closer to $300 billion.

6c. The Creditor's Ownership

A creditor owns a claim, not a company, and the claim is paid first (1e). The claim turns into ownership when the borrower fails: in a bankruptcy or a foreclosure the lenders take the company or the building, and the shareholders keep what is left, often nothing. The office market is testing that order. Office loans in CMBS were 12.16% delinquent in September 2026, against a record 12.34% in January (Trepp), with office vacancy at 19.8% in the third quarter (Cushman & Wakefield).

The creditors have owners of their own, and in 2026 some of them could not leave. The non-traded business development companies (BDCs), funds that make private loans and let savers redeem a few percent a quarter, left $9.6 billion of redemption requests unfilled in the second quarter (Stanger). Two of Blue Owl's funds, asked in the first quarter of 2026 to redeem 21.9% and 40.7% of their shares, paid out 5% (April 2, 2026). Whatever the loans were worth, the savers behind them held claims on claims, and their exits were rationed.

6d. Have the Managers Made the Insurers Fragile?

The case that they have. Critics argue that private-capital firms bought insurers to fund the loans the same firms arrange, creating a chain of exposures that no single regulator sees whole. On this view, an annuity buyer's savings now sit in private loans arranged and valued by the insurer's owner, often reinsured offshore under lighter rules. In a crisis the policyholders would learn that their claim rests on loans no one can sell.

The case that they have not. Defenders reply that a life insurer's promises run for decades and can be cashed in early only slowly and at a cost, so it is the natural holder of long loans that banks no longer make. The managers, they add, brought capital and skill to an industry weakened by a decade of low rates. And the insurer stays regulated, and liable to its policyholders, wherever its risks are reinsured.

The evidence. The scale of the shift is in 6a. On July 9, 2026 the International Association of Insurance Supervisors (IAIS) named insurers' growing allocations to illiquid assets as a liquidity risk and called insurers 'major institutional investors in private credit markets'. The year's rationed exits came in the BDCs of 6c. The record does not yet show losses on the insurers' private loans large enough to threaten their promises.

The course's reading. The managers' insurers are less exposed to a run than a bank or a BDC, because their policyholders can leave only slowly. Their risk is opacity: a chain of owner, insurer, lender, and offshore reinsurer that is hard to value from outside. The course reads disclosure along that chain as the test that matters, and the supervisors' warning as a reason to apply it before losses arrive rather than after.

Module 6 Key Points

Insurers and Banks

• American life insurers held $9.3 trillion at the end of 2024, mostly bonds and mortgages, with stocks just 2.3% of their general accounts.

• Insurers owned by private-capital firms held 19.8% of the industry's invested assets; private credit is a fifth of its bonds.

• Banks own as lenders: the world's held $191.3 trillion, and the four largest banks are Chinese and state-owned.

• American banks had committed $1.3 trillion to private-equity and private-credit funds by early 2026, on new reporting.

• The managers' insurers are less exposed to runs than banks, but their chain of ownership is opaque; disclosure is the test.

Module 6 Quiz

Check Your Understanding

1. Why do life insurers hold mostly bonds and mortgages and little stock?

A) Federal law has forbidden insurers to own common stock since the crash of 1929
B) Stocks are taxed more heavily when insurers hold them than when households do
C) Their policyholders vote each year to keep stocks out of the general account
D) Long promises need long, steady assets

2. Who ranked first among the world's insurers by assets in AM Best's ranking of January 2026?

A) Allianz
B) Berkshire Hathaway
C) Ping An Insurance of China
D) MetLife, the largest American life insurer

3. What share of American life insurers' bonds is private credit, on Moody's count?

A) About 2%
B) About a twentieth
C) About a fifth, some $807 billion
D) Nearly all of the corporate bonds in the general account

4. What did the Boston Fed's July 2026 note find about banks' commitments to private-equity and private-credit funds?

A) About $1.3 trillion, far more than the earlier estimates of about $300 billion
B) About $300 billion, the figure earlier estimates had given for the funds
C) About $50 billion, after the rules limited bank lending to funds
D) About $27 trillion, more than all the banks' assets

5. What is the course's reading of the managers' insurers?

A) Bound to fail in the next crisis, as the banks did in 2008
B) Riskless, because the policyholders are always paid in full
C) Less exposed to runs, but opaque
D) Better run than any other insurers, by every measure

Module 7 — Hedge Funds, Endowments, and the Money That Trades

Small Owners, Large Footprints

Recommended Reading / Reference

Book: David Swensen, *Pioneering Portfolio Management* (2000; revised 2009), the endowment model by its author

Reference: Hedge Fund Research's quarterly industry reports, the Office of Financial Research's Hedge Fund Monitor, the NACUBO-Commonfund Study of Endowments (annual), and Candid's data on foundations

7a. The Hedge Funds

A hedge fund is a private pool, open to institutions and the wealthy, that can borrow, sell short, and trade almost anything. The industry's capital, the record of 1c, rose by $409.3 billion in the second quarter of 2026, the largest quarterly increase Hedge Fund Research (HFR) has recorded: $364 billion from performance and $45.2 billion from new money (July 23, 2026). Equity strategies held $1.76 trillion, event-driven funds $1.59 trillion, relative-value funds $1.43 trillion, and macro funds $857.5 billion.

Among the best known are the multi-strategy platforms, such as Citadel and Millennium, which run hundreds of trading teams under one roof with tight limits on each team's losses; HFR counted $880 billion in them. Activist funds are the industry's owners in the old sense: they buy a few percent of a company and campaign for board seats, a sale, or a breakup. Barclays' review of the third quarter of 2026 found their demands for mergers and sales rising as the number of new campaigns slowed.

Hedge funds are small by assets, about a sixth of what the three largest managers run (3a), and large by trading, because they borrow. One of their largest positions is in Treasuries. In the basis trade a fund buys Treasury securities, sells futures on them, and borrows against the bonds in the repo market to earn the small gap between the two prices, many times over. Estimates of its size depend on the measure: about $830 billion in September 2025 (a Federal Reserve note of June 22, 2026), or $1.2 trillion after a fall of a fifth in 2026 (Morgan Stanley, September 24).

Hedge funds held about $2.0 trillion of Treasuries in all, on the count of the Office of Financial Research (OFR). Under a rule of the SEC's, cash Treasury trades must be centrally cleared from December 31, 2026 and repo trades from June 30, 2027. The rule is designed to bring much of the basis trade, and the repo loans that finance it, into a clearinghouse.

7b. The Endowments and Foundations

An endowment is an institution's permanent capital, spent at a few percent a year to fund its mission. The 657 college endowments in the NACUBO-Commonfund study (1c) returned 10.9% in fiscal 2025 and 7.7% a year over ten years, net of fees, and paid for 15.2% of their institutions' operating budgets (reported February 12, 2026).

Their model was built at Yale by David Swensen, its chief investment officer from 1985 until his death in 2021. It tilts the portfolio away from bonds toward private equity, venture capital, hedge funds, and real assets, on the reasoning that a perpetual owner can hold what others must sell. The average endowment

held 54.5% in such alternative assets in fiscal 2025, 16.8% of the total in private equity and 12.2% in venture capital, against 31.5% in public stocks and 11% in bonds.

The model's largest practitioner had a strong year just as its tax rose. Harvard's endowment was worth $68.0 billion on June 30, 2026, up 19.5% in a year after a return of 27.1%, with private equity now its largest part; it paid out $2.6 billion, about 40% of the university's operating revenue (October 15, 2026). The tax law of July 4, 2025 raised the excise tax on the investment income of the richest private colleges in three tiers by endowment per student: 1.4% from $500,000 to $750,000, 4% to $2 million, and 8% above.

The tax covers only colleges with at least 3,000 tuition-paying students and applies from taxable years beginning after December 31, 2025. Harvard's rate rises from 1.4% to 8% in fiscal 2027, about $300 million a year. In 2025 the largest endowments also sold stakes to raise cash: Yale was near a deal in June to sell about $2.5 billion of private-equity and venture holdings at an expected discount of less than 10%, and Harvard was in talks in April to sell about $1 billion to Lexington Partners. The market where such stakes trade set a record $118 billion in the first half of 2026 (Jefferies).

Foundations are endowments with a donor's purpose, and most are meant to last forever. The largest American foundation is the exception: on May 8, 2025 the Gates Foundation said it would spend more than $200 billion and close on December 31, 2045.

7c. Who Sets the Price

The permanent owners of Modules 3 to 5 rarely trade. An index fund buys or sells only when money comes in or goes out, and index stock funds held about 19% of the value of American stocks at the end of 2025 (Investment Company Institute). The pension and sovereign funds rebalance slowly. So the price of a share is set at the margin by the minority that trades: hedge funds, active managers, individual traders, and companies buying back their own shares (8a).

Who trades also decides who bears a shock. A fund that has borrowed must sell when its lenders ask for more collateral, whatever it thinks the asset is worth. That is why the basis trade matters beyond its size: it sits in the market that every other owner in the map uses as its safe asset, and its unwinding would force sales there first.

Module 7 Key Points

Hedge Funds, Endowments, and the Money That Trades

• Hedge funds held a record $5.6 trillion in mid-2026, about a sixth of the Big Three's assets, and trade with borrowed money.

• The basis trade in Treasuries is $830 billion to $1.2 trillion, by the measure; central clearing of cash trades starts December 31, 2026.

• College endowments hold 54.5% in alternatives on average: the Yale model of a perpetual owner holding what others must sell.

• Harvard's endowment reached $68.0 billion in June 2026, as its tax rate rises from 1.4% to 8% in fiscal 2027.

• Index funds and long-term owners rarely trade, so traders and companies buying back stock set prices at the margin.

Module 7 Quiz

Check Your Understanding

1. What is the basis trade?

A) Buying stocks just before they join an index
B) Lending to private companies at a premium over the rates banks charge them
C) Selling dollars for yen at night
D) Buying Treasuries, selling futures, and borrowing to earn the gap

2. By how much did hedge funds' capital rise in the second quarter of 2026, on HFR's count?

A) About $41 billion
B) About $409 billion
C) About $4 trillion, as money poured in
D) About $1.2 trillion, from new money alone

3. What share of the average college endowment was in alternative assets in fiscal 2025?

A) About 5%
B) About 20%, a fifth
C) About 90%, nearly all of it in private equity
D) About 54.5%, more than half

4. What does the 2025 tax law do to the excise tax on Harvard's endowment income?

A) Cuts it to zero
B) Leaves it at 1.4% until 2030
C) Raises it from 1.4% to 8%
D) Raises it to 21%, the corporate rate

5. Why do traders rather than index funds set most share prices?

A) Index funds trade only when money moves in or out, so prices are set by those who trade
B) The SEC lets only hedge funds trade in each day's closing auction
C) Index funds may buy shares only at the price set at the market's opening each day
D) Traders own most of the shares of every large listed company

Module 8 — Corporations and the State as Owners

The Owners That Make the Rules

Recommended Reading / Reference

Book: Aldo Musacchio and Sergio Lazzarini, *Reinventing State Capitalism* (2014), on the state as majority and minority owner

Reference: The Council on Foreign Relations' tracker of the American government's equity stakes, Nomura's surveys of Japan's cross-shareholdings, the State Council's annual report on China's state-owned assets, and S&P Dow Jones Indices' quarterly buyback reports

8a. Corporations as Owners

Companies own shares too: their own, which they buy back, and each other's. S&P 500 companies bought back a record $293 billion of their own stock in the first quarter of 2025, $235 billion in the second, and $249.0 billion in the third, and S&P Dow Jones Indices expected a record $1 trillion for the year (December 18, 2025). A buyback pays cash to the holders who sell and raises the stakes of those who do not, so a founder who never sells owns more of the company each year without buying.

For decades Japan's companies and banks held each other's shares, the cross-shareholdings, as a defense against takeovers and a bond of business ties. They are being unwound. The Tokyo Stock Exchange asked listed companies on March 31, 2023 to manage with an eye to their cost of capital and share price, and the megabanks have been selling their strategic stakes; by 2026 the unwinding was reshaping Japan's mergers (Nomura, July 2026).

Korea's family groups, the chaebol, have long controlled their companies through cross-holdings and treasury shares with a small part of the economic interest. Three amendments to the Commercial Act changed the rules. The first, in 2025, gave directors a duty to protect shareholders' interests, and the second made cumulative voting mandatory in director elections and had more audit-committee members elected separately. The third, in force on March 6, 2026, requires listed companies to cancel treasury shares within a year of buying them.

Treasury shares the Korean companies already held must be cancelled by about September 6, 2027, unless the company's articles let it keep them under a plan its annual meeting approves (Kim & Chang, May 18, 2026). In Europe the family holding companies, such as the Wallenbergs' Investor AB and the Agnellis' Exor, and the industrial foundations, such as the one that controls Novo Nordisk, hold controlling stakes for generations.

8b. The State at Home

The Chinese state is the largest owner of companies in the world. At the end of 2024 its non-financial state-owned enterprises held 401.7 trillion yuan of assets, about $60 trillion, and its state financial enterprises 487.9 trillion yuan, about $73 trillion: some $133 trillion together at October's exchange rate (State Council report to the National People's Congress Standing Committee, October 26, 2025). The State-owned Assets Supervision and Administration Commission (SASAC) oversees the largest

non-financial companies, the state banks have holders of their own (6b), and a Communist Party committee sits inside each company.

In the Gulf the state's largest company is its oil company. The Saudi state owns about 81.5% of Saudi Aramco directly, and PIF and its companies about 16%. Aramco earned $32.69 billion in the second quarter of 2026, up 44%, and declared a base dividend of $21.9 billion for the quarter, most of it the state's, while it kept crude moving through its East-West Pipeline around the disruption at Hormuz (August 4, 2026). Amin Nasser has been its chief executive since 2015.

Europe's states own national champions as well. Norway's state owns 67% of Equinor, and France has owned all of EDF, the nuclear-power company, since June 2023. Where the state owns at home it is the controlling shareholder rather than a portfolio investor, and the company's goals include the state's: jobs, energy prices, and industries it deems strategic.

8c. The American State as Shareholder

The United States, with no sovereign fund (5a), became a shareholder deal by deal. By the count of the Council on Foreign Relations, the federal government made 39 deals worth $27.7 billion from January 2025 to September 30, 2026; the Cato Institute counts 30, leaving out those of the Development Finance Corporation (DFC) (The National, September 30, 2026). The largest is Intel, and no agency has published a portfolio, a valuation, or an exit plan for the stakes.

Company	Stake	Terms
Intel	433.3 million shares, about 9.9%, at $20.47 each, about $8.9 billion (August 2025)	Paid with $5.7 billion of unpaid CHIPS Act grants and $3.2 billion from the secure-enclave program
MP Materials	About 15%, for $400 million from the Defense Department (July 2025)	The only American rare-earth miner, with a price floor and a purchase guarantee
Lithium Americas and Trilogy Metals	5% of Lithium Americas and of its Thacker Pass venture; 10% of Trilogy for about $35.6 million, plus warrants (October 2025)	Mines in Nevada and Alaska
U.S. Steel	A golden share (June 2025)	Veto rights, the condition of its sale to Nippon Steel
Westinghouse	20% of cash distributions above $17.5 billion (October 28, 2025)	Contingent on a final investment decision and definitive agreements for at least $80 billion of reactors
The 2026 additions	USA Rare Earth ($280 million, up to $1.6 billion; January); a $300 million letter of intent with GlobalFoundries (January); $1 billion in L3Harris's missile unit (April); 35% of North American Blue Energy Partners' parent (August)	Plus the DFC's $600 million in the Orion Critical Mineral Consortium, beside Abu Dhabi's ADQ, and stakes in 10 other chip companies

The National (September 30, 2026), citing the Council on Foreign Relations and Cato; Cameco's report of February 13, 2026 (Westinghouse); Barchart via Yahoo Finance (May 6, 2026), for Intel's price. Mubadala owns about 73% of GlobalFoundries, and L3Harris keeps more than 80% of its unit.

The Intel stake shows the arithmetic: at about $108 a share in May 2026 it was worth about $46.8 billion, a paper gain of about $38 billion on the $8.9 billion paid. A shareholder suit seeking to void the deal is in federal court, and the government has asked the judge to dismiss it. The suit names Commerce Secretary Howard Lutnick, in office since February 21, 2025, and Intel's chief executive, Lip-Bu Tan, in office since March 18, 2025. On August 13, 2026 Democrats in Congress asked the Government Accountability Office (GAO) to review the mining stakes.

8d. Should the State Own Companies?

The case for. Advocates argue that some industries are too strategic, too risky, or too long-lived for private owners alone: chips, rare earths, nuclear power, and the champions that compete with other states' champions. A state that pays for a company's rescue or its subsidies, on this view, should share in the gains, as the Intel stake has, rather than handing grants to shareholders. Equity gives the taxpayer a return and the state a say in the industries it depends on.

The case against. Critics on the left and the right argue that a state that owns a company also regulates it, buys from it, and taxes it, and cannot do all four impartially. A Pentagon that owns its supplier is negotiating with itself, rivals face a competitor with the state behind it, and the stakes invite political direction of investment. The Cato Institute's analysts have urged Congress to stop the stakes rather than write them into law.

The evidence. The International Monetary Fund's survey of state-owned firms (*Fiscal Monitor*, April 2020) found them a third less productive than private firms on average, and found state firms' productivity more than three times higher in countries with lower perceived corruption. The returns are real in some cases: Aramco is among the most profitable companies in the world, and the Intel stake has gained on paper (8c). The American program is too young to judge by its returns.

The course's reading. Whether the state should own companies depends less on the industry than on the terms. The course's test is four records: a published portfolio, a valuation, an exit plan, and a manager at arm's length from the officials who regulate the company. China's state enterprises meet few of them. As of September 2026 the American stakes meet none of the four (8c), which makes them the state's most consequential new holdings and its least visible.

Module 8 Key Points

Corporations and the State as Owners

• S&P 500 buybacks were on course for a record $1 trillion in 2025, raising the stakes of every holder who did not sell.

• Japan's cross-shareholdings are being unwound, and Korea now requires listed companies to cancel the treasury shares they buy.

• China's non-financial state enterprises held about $60 trillion of assets at the end of 2024, about $133 trillion with finance.

• The American government made 39 deals worth $27.7 billion from January 2025, with no published portfolio, valuation, or exit plan.

• The course judges state ownership by its terms: a published portfolio, a valuation, an exit plan, and arm's-length management.

Module 8 Quiz

Check Your Understanding

1. What does a buyback do to the stakes of shareholders who do not sell?

A) Cuts them, since the company issues new shares to pay for it
B) Raises them
C) Leaves them unchanged, since only the share price moves
D) Converts part of them into cash at the buyback price

2. What does Korea's third Commercial Act amendment require of listed companies?

A) Elect a foreign director
B) Sell their stakes in the group's other companies within a year
C) Cancel the treasury shares they buy
D) Pay out half of their profits as dividends each year

3. About how large were the assets of China's non-financial state enterprises at the end of 2024?

A) About $6 trillion
B) About $60 trillion, 401.7 trillion yuan
C) About $13 trillion
D) About $600 trillion, more than the world's real estate

4. How did the American government pay for its Intel stake?

A) With $5.7 billion of unpaid CHIPS Act grants and $3.2 billion from the secure-enclave program
B) With new Treasury bonds sold to Intel's largest shareholders at the market price
C) By swapping the government's golden share in U.S. Steel for Intel's shares
D) With a loan from the Federal Reserve, repaid out of Intel's future dividends

5. What is the course's test for state ownership?

A) Whether the industry is strategic to national defense
B) Whether the stake has gained in value since purchase
C) Whether the state holds a majority of the votes
D) Its terms and disclosure

Module 9 — Where Things Stand, and What to Watch

The Map Assembled, and the Dates

Recommended Reading / Reference

Reference: The releases that will move the map: the Federal Reserve's financial and distributional accounts (quarterly), the 13F filings, the managers' and funds' own reports, Global SWF's annual report, and the Council on Foreign Relations' tracker of the American government's stakes

9a. Where Things Stand

The world's capital in October 2026 is owned by households and held by institutions. In the United States the top tenth of households hold more than two-thirds of the wealth and 88% of households' stocks and funds, so the economic interest at the end of the chain is mostly the affluent's. The votes sit at another link: BlackRock, Vanguard, and State Street manage about $35 trillion and hold a fifth of companies such as Apple because their indexes require it, and they have handed back little of that vote: a tenth of BlackRock's index equity, and less at Vanguard.

Around the managers stand the asset owners that answer to their own liabilities: pension funds with $68.3 trillion, state investors with about $60 trillion, life insurers whose balance sheets are bonds and mortgages, and banks that own as lenders. The newest assets, the data centers of the AI build, are being financed by alternative-asset managers with insurers' and pensions' money and the Gulf's money beside it. And the American state, with no sovereign fund, has become a party to 39 deals without publishing a portfolio.

9b. Five Contradictions

- **Owners who own nothing.** The largest shareholders on earth are managers whose clients own the shares, so the vote and the economic interest sit at different links of the chain (Modules 1 and 3).
- **Permanent owners, marginal prices.** The index funds and pensions that hold the most trade the least, so the prices that value their holdings are set by the hedge funds, active managers, and companies that trade at the margin (Modules 3, 7, and 8).
- **The state abroad and at home.** State investors abroad mostly hold minority stakes as portfolio owners, while China's state controls its largest companies at home and the American state buys stakes without a fund to hold them (Modules 5 and 8).
- **The vote returned and kept.** The managers have offered the vote back to their investors, who have taken a tenth of it at BlackRock and less at Vanguard, while the antitrust suit and the SEC's guidance pushed the managers toward passivity and most pension funds left the universal owner's questions to them (Modules 3 and 4).
- **The creditor's growing claim.** The claims that come before the shareholders', the banks' lending to the funds and the insurers' private credit, have grown fastest, in a chain of owner, insurer, lender, and offshore reinsurer that is hard to see whole (Module 6).

9c. Four Tests

• **The trial.** Whether the Texas case against BlackRock and State Street, set for January 2028, finds that common ownership cut competition, which would decide how large the managers' stakes can stay (3e).

• **The vote.** Whether pass-through voting grows from a tenth of BlackRock's index equity, and less at Vanguard, toward a majority, which would move the vote back down the chain to the households (3c).

• **The state's records.** Whether the American government publishes a portfolio, a valuation, or an exit plan for its stakes, the course's test of 8d.

• **The private chain.** Whether the insurers' and banks' private credit holds its value through a downturn, which would settle the supervisors' warning of 6d.

9d. The Watch List

When	What	Why it matters
October 27-28, 2026	Federal Reserve meeting	The rate on the Treasury note of 1e, and the Fed's own holdings
October 28-29, 2026	Microsoft's and Alphabet's results (October 28) and Amazon's (October 29), after the close	The first signals of 2027 spending on the AI build that the managers and the Gulf are financing
October 29-30, 2026	The European Central Bank's meeting (October 29) and the Bank of Japan's (October 29-30)	The run-off of €3.31 trillion, and the purchases of the bonds the Bank of Japan holds 46.7% of
Late October or November 2026 (expected)	The State Council's report on China's state-owned assets in 2025; the World Gold Council's third-quarter *Gold Demand Trends*	The largest owner of companies; the central banks' gold
November 2, 2026	Apple's fiscal fourth-quarter results	The company of 3d
November 3, 2026	The midterm elections	Democrats have sought a GAO review of the stakes (8c)
November 4, 2026	The Treasury's quarterly refunding announcement	How much new debt the owners of 1e must absorb
By November 9, 2026	Berkshire Hathaway's third-quarter report	Cash, buybacks, and the portfolio under Abel (2d)
November 16, 2026	13F filings for September 30 holdings	The managers' stakes, the Big Three's in Apple among them
November 2026 (expected)	The Thinking Ahead Institute's ranking of the 500 largest managers; Nvidia's results late in the month	The managers' totals; the largest company's spending signal
December 2026	The distributional accounts for the third quarter	Whether the top 1%'s record share holds
December 31, 2026	Central clearing of cash Treasury trades begins	The basis trade (7a)
January 1, 2027	ABP and PME, the metal and electrical engineering fund, are set to move to the new Dutch pension contract; Global SWF's annual report (expected)	The largest Dutch fund's switch; the state investors' totals and deals for 2026
February 2027 (expected)	The Thinking Ahead Institute's *Global Pension Assets Study*; the NACUBO-Commonfund study for fiscal 2026	The pension total; the endowments' last year before the higher tax reaches June-year colleges
April-June 2027	The proxy season	Whether support for environmental and social proposals keeps rising (3c)

When	What	Why it matters
June 30, 2027	Vanguard's deadline to offer Investor Choice in its American-stock funds; repo clearing begins; the end of Harvard's first year at the 8% rate	The vote, the basis trade, and the endowment tax
About September 6, 2027	Korea's deadline to cancel treasury shares held before March 6, 2026	The chaebol's control (8a)
January 1, 2028	The Dutch transition's legal deadline	The end of promised pensions in the Netherlands
January 2028	The Texas antitrust trial of BlackRock and State Street	The first test of common ownership in court
December 31, 2045	The Gates Foundation closes	The largest American foundation spends out
Ongoing	The Intel suit's motion to dismiss; any published portfolio for the American stakes; the BDCs' redemption queues	The state's test and the private chain's

Dates as announced on October 25, 2026: 'expected' marks a date not yet announced, set from the pattern of earlier years.

9e. The Last Word

The throughline of nine modules is this. Nearly everything is owned by households and held by someone else, and the someone else has become a short list: three managers with the votes, a few hundred pension and sovereign funds with the long money, the banks and insurers with the prior claims, and states that own as investors abroad and as controllers at home. Each link in the chain holds a different right, and the rights have drifted apart. The economic interest sits with the households, the vote with the managers, the claim with the creditors, and the strategy with the states.

Most of it is on the record, spread across filings, registers, and reports that few people read together. A reader who has followed a share of Apple, a Treasury note, a tower, and a data center down to the households can read the next ownership headline, a 13F filing, a sovereign deal, or a government stake, for what it is, and ask the course's question: who holds which right, and to whom does each holder answer?

Module 9 Key Points

Where Things Stand, and What to Watch

• Households own the world's capital in the end; institutions hold it, and the votes have gathered at three managers.

• Five contradictions: owners who own nothing, permanent owners and marginal prices, the state abroad and at home, the vote kept, the creditor's claim.

• The tests: the January 2028 trial, pass-through voting's growth, the American stakes' records, and private credit through a downturn.

• The watch list runs from the Fed's October 27-28 meeting to the Texas antitrust trial of January 2028 and beyond.

• Every ownership headline is a question of rights: who holds the interest, the vote, the claim, and the strategy.

Module 9 Quiz

Check Your Understanding

1. Which contradiction describes the index funds and the prices of their holdings?

A) The index funds own their shares outright and vote them for their own account
B) The managers trade the most and own the most, so their trades decide every price
C) Prices are set by the Fed's purchases of stocks, which hold the market up
D) Permanent owners hold the most and trade the least, so traders at the margin set the prices

2. When is the Texas antitrust case against BlackRock and State Street set for trial?

A) January 2028
B) June 2027
C) March 2027
D) It was settled in February 2026, with Vanguard

3. What does the watch list mark for December 31, 2026?

A) The midterms
B) Cash Treasury clearing begins
C) The Gates Foundation closes, as it announced in 2025
D) The Dutch pension transition's legal deadline

4. Which test does the course set for the American government's stakes?

A) Whether the Intel stake keeps rising in value
B) Whether Congress votes to make the stakes permanent
C) A published portfolio and exit plan
D) Whether the stakes are sold before the 2028 election

5. What question does the course say to ask of every ownership headline?

A) Who holds which right, and to whom does each holder answer?
B) How much did the asset's price change this quarter?
C) Which country does the owner come from, and why?
D) Is the owner listed on an exchange, or private?

Answer Sheet

Answers to every module's Check Your Understanding quiz.

Module	Answers
Module 1 Quiz	1. D 2. A 3. C 4. B 5. B
Module 2 Quiz	1. C 2. D 3. A 4. D 5. C
Module 3 Quiz	1. B 2. A 3. D 4. B 5. A
Module 4 Quiz	1. C 2. C 3. B 4. D 5. A
Module 5 Quiz	1. D 2. C 3. B 4. A 5. A
Module 6 Quiz	1. D 2. B 3. C 4. A 5. C
Module 7 Quiz	1. D 2. B 3. D 4. C 5. A
Module 8 Quiz	1. B 2. C 3. B 4. A 5. D
Module 9 Quiz	1. D 2. A 3. B 4. C 5. A