

# Capital Markets Strategy

Essential insights for the C-Suite

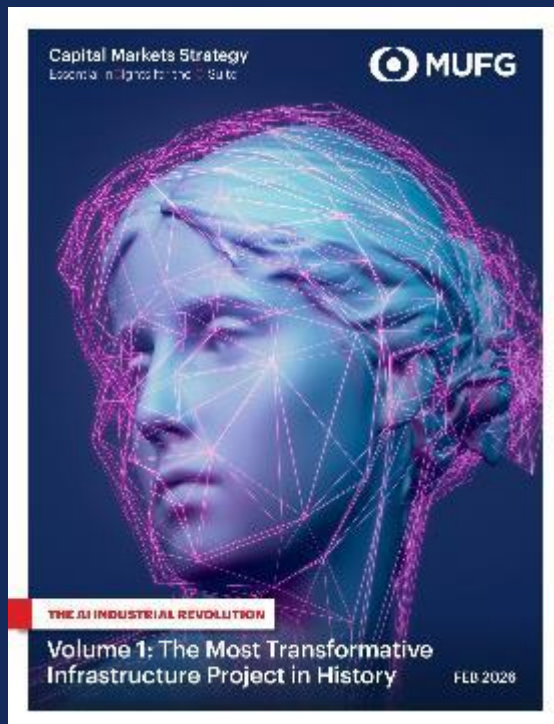


## Transformative Change

Artificial Intelligence, Geopolitics & Global Markets in 2026

MAR 2026

# The AI Industrial Revolution



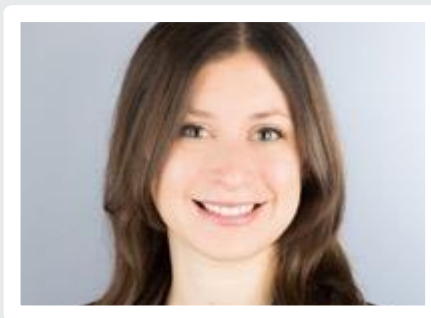
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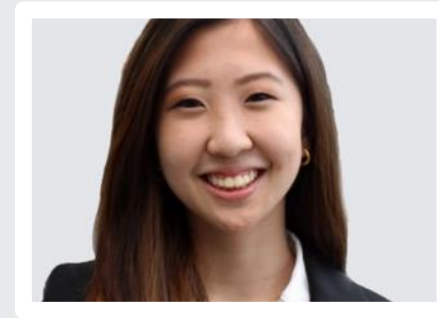
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policy notes and more.

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# Seeds of Today Were Planted Years Ago

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**Feb 24, 2022** Russia invades Ukraine

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**July 13, 2022** Post-COVID peak inflation (9.1%)

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**Oct 7, 2022** Stringent tech export controls on China

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**Nov 30, 2022** ChatGPT inflection point

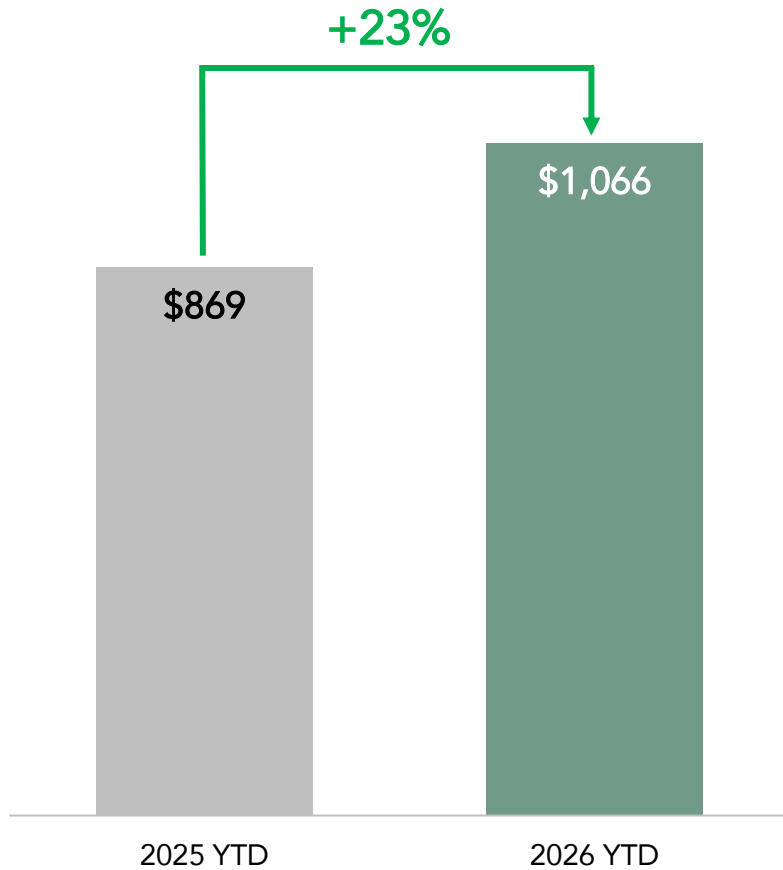
# 1 Resilient Corporate Credit Markets



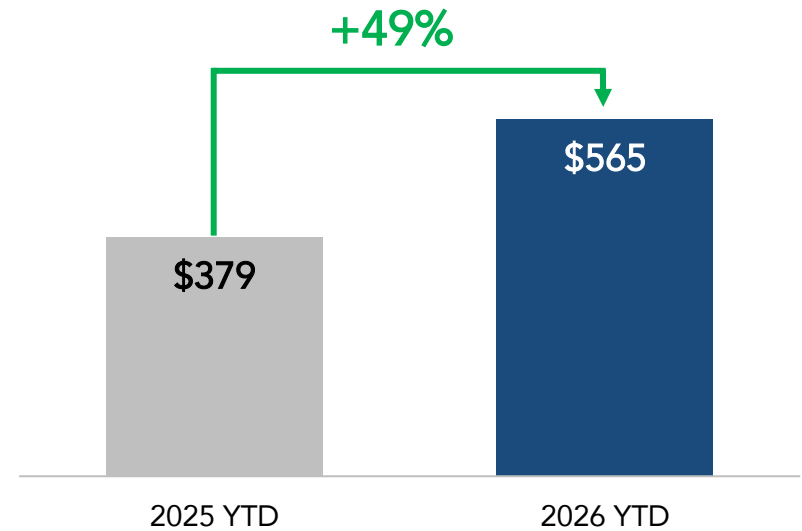
# 2026 M&A on Historic Pace



Global M&A volumes, USD bn



US M&A volumes, USD bn

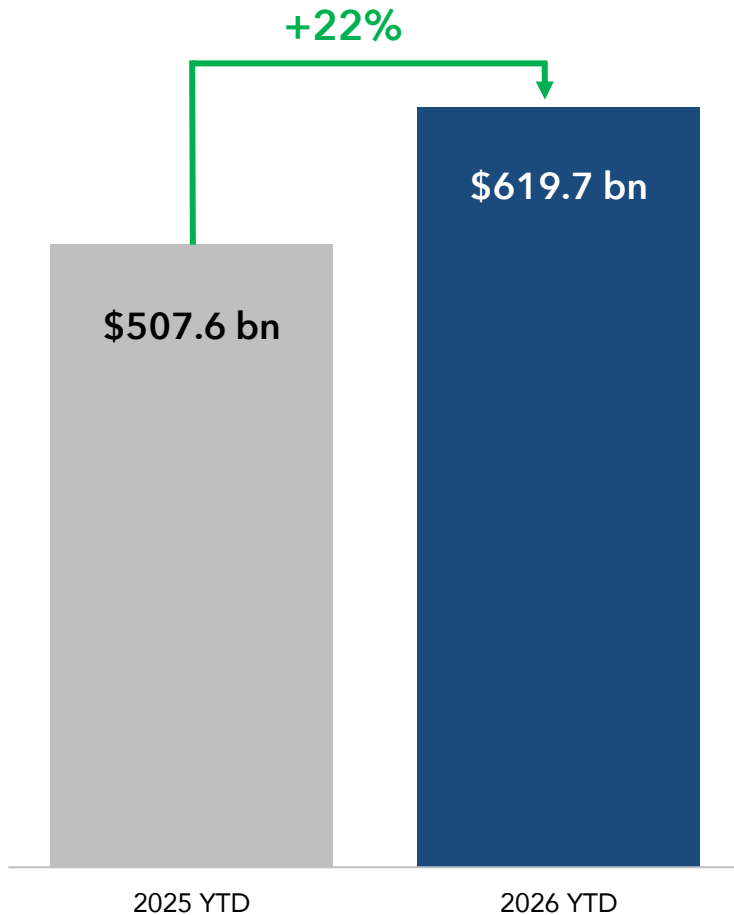


Source: (1-2) Dealogic. Cortex. Data through March 18, 2026, accessed on March 18, 2026. Rank eligible deals. Region is by target.

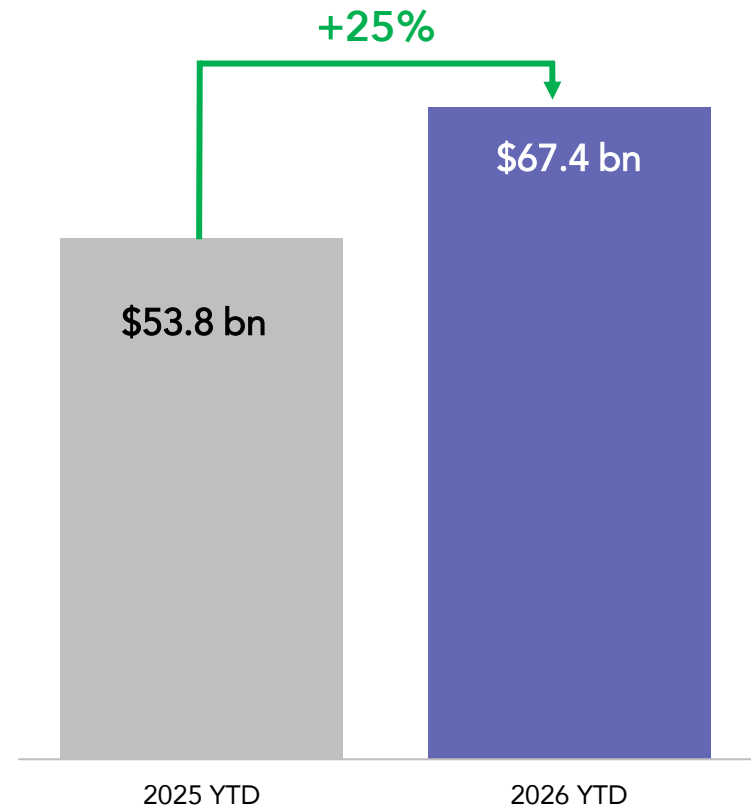
# 2026 USD Financing on Record Pace



2026 YTD IG deal volume, USD bn



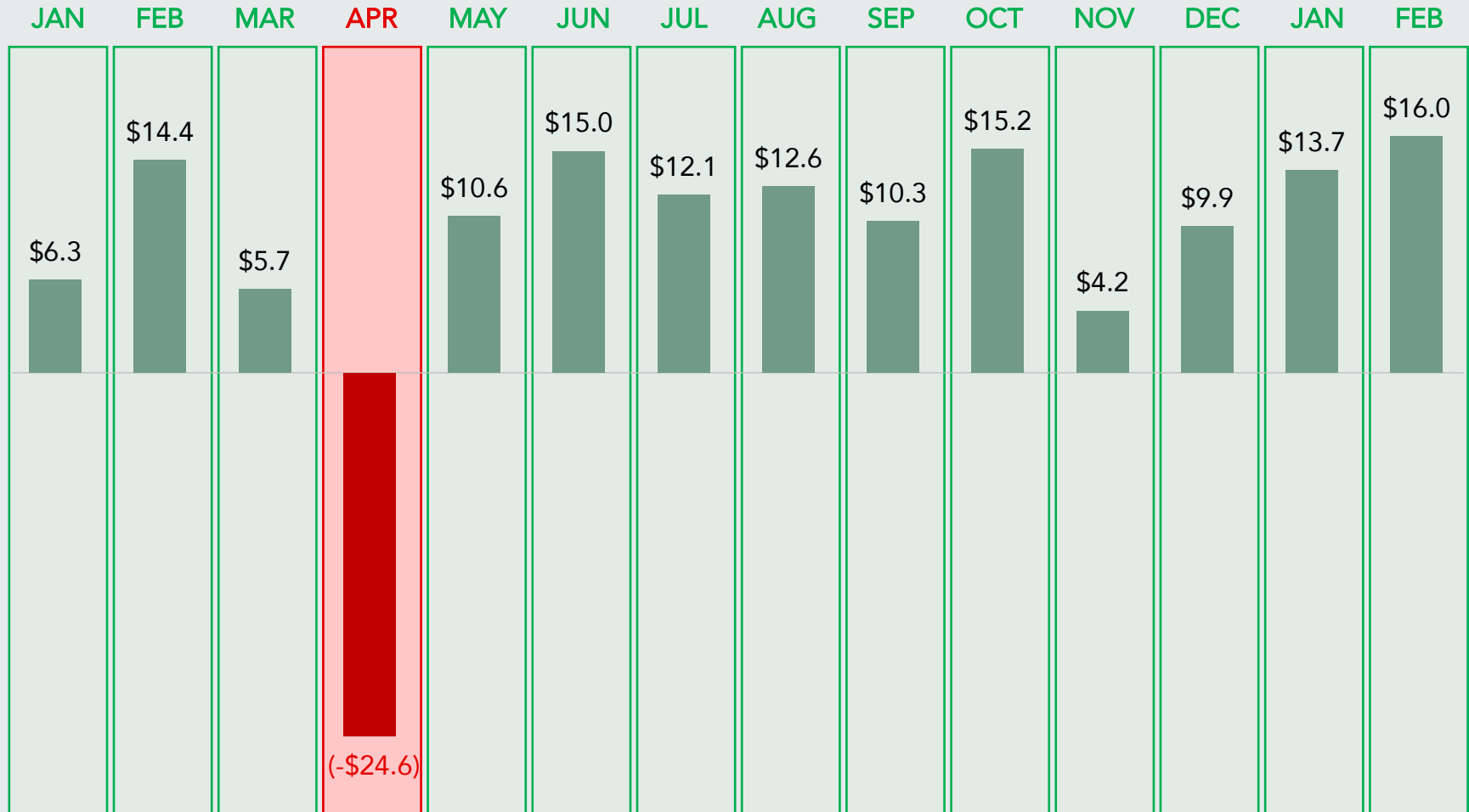
2026 YTD HY deal volume, USD bn



Source: (1-2) IG and HY bond data are CFR. 2026 YTD data through March 20, 2026.

# Resurgent USD Corporate Bond Flows

Monthly IG & HY fund flows since January 2025, USD bn



Source: (1) IFR. Data through the week ending February 25, 2026.

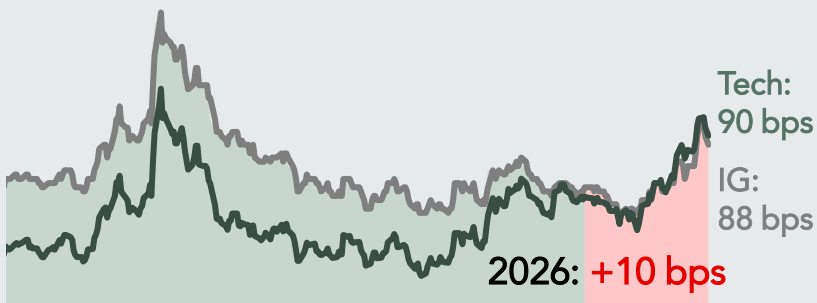
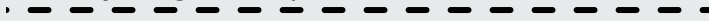
# Corporate Credit Spreads at Multi-Decade Tights

## USD IG OAS

Historic recession threshold: 250 bps



LT 30 yr avg: 148 bps

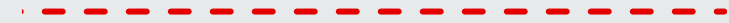


Jan-2025

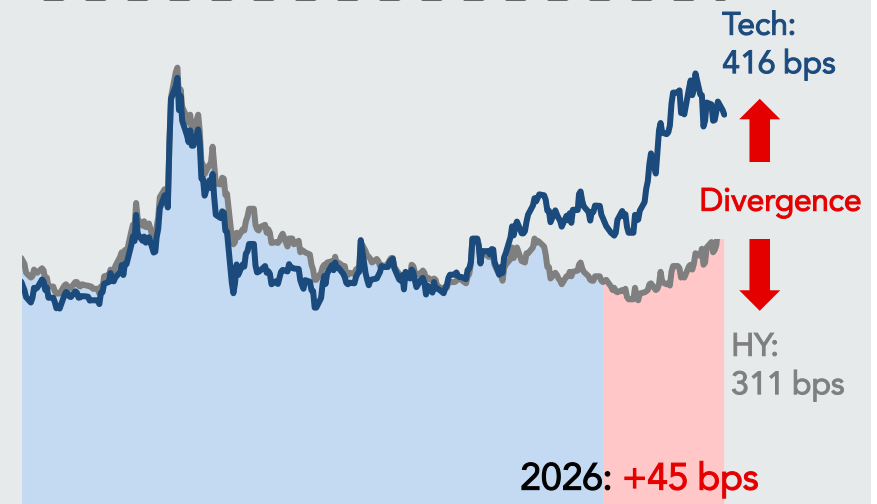
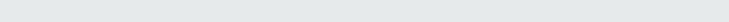
Mar-2026

## USD HY OAS

Historic recession threshold: 800 bps



LT 30 yr avg: 514 bps



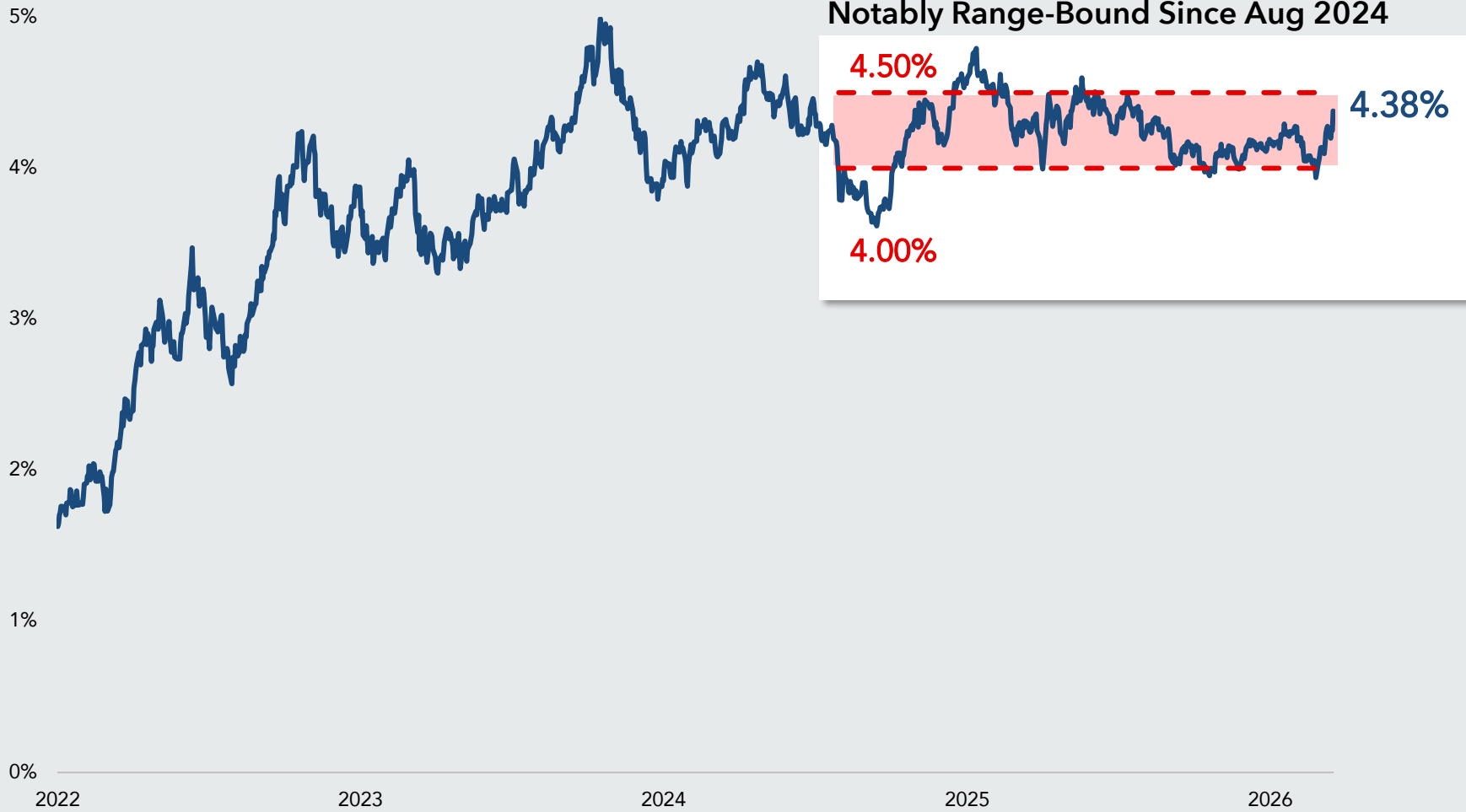
Jan-2025

Mar-2026

Source: (1-2) Bloomberg. Data as of March 20, 2026. 30-year average is 1995-2024.

# Remarkably Range-Bound 10 Yr UST Yields

10 yr UST since Jan 1, 2022



Source: (1) Bloomberg. Data as of March 20, 2026.

# The Fed Under Kevin Warsh

**Inflation focused** (*price stability over employment*)

**Balance sheet hawkish** (*i.e., normalization*)

**Supply side optimist** (*i.e., AI productivity*)

**Pro-growth stewardship** (*i.e., deregulation, cautious rate cuts*)

**Rules-based bank oversight** (*i.e., peel back post-GFC reg reach*)

**Lighter-touch reg approach** (*i.e., supervision, compliance, capital, liquidity*)

**Institutional neutrality** (*political independence*)

**Conviction vs. data driven** (*framework oriented over purely reactive*)

**Communication sparse** (*less forward guidance*)

**Pragmatic reformer** (*narrow statutory mandate, less mission creep*)

**Integrating academic rigor and market experience**

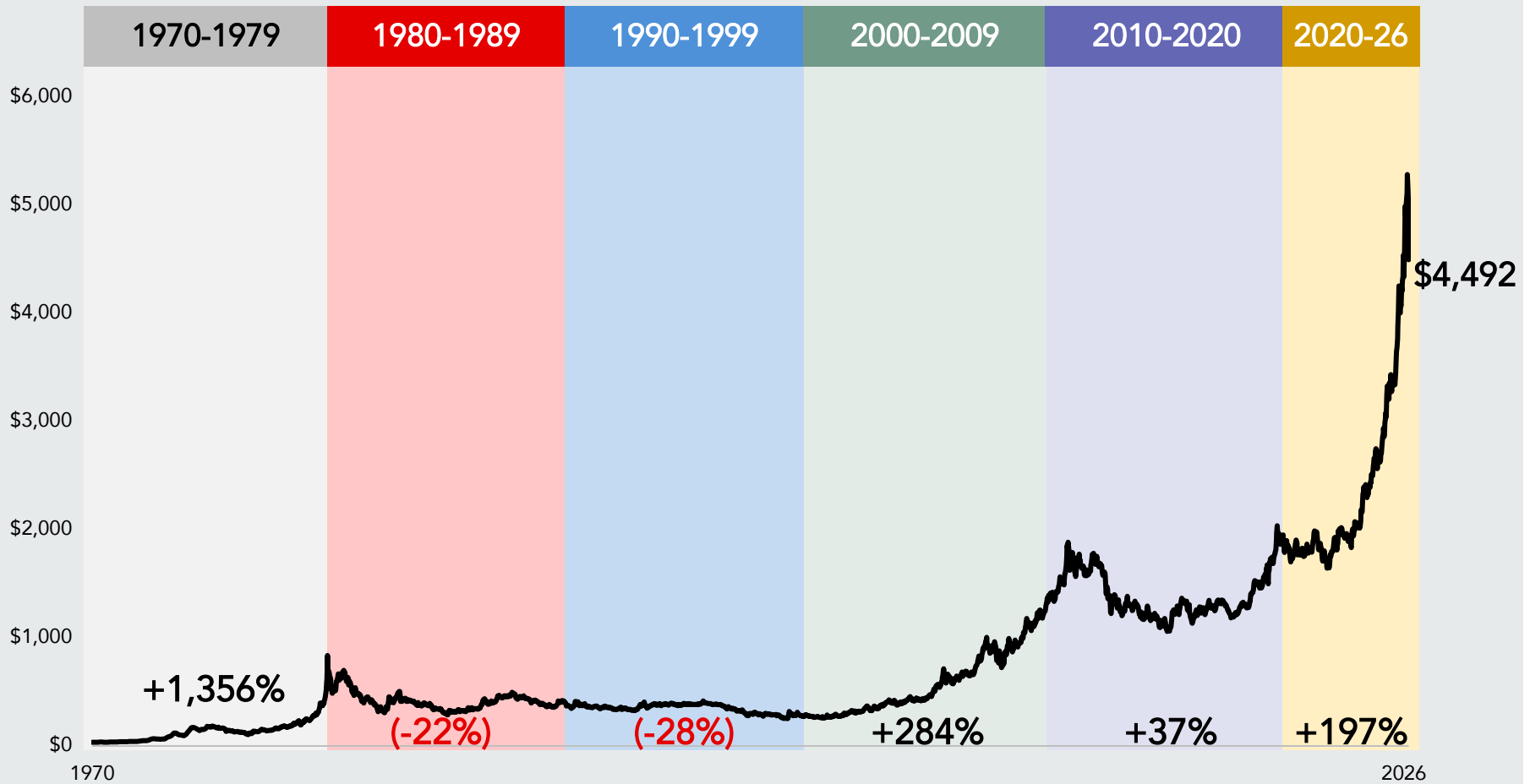


# 2 Searching for Reliable Safe-Havens



# Gold's Rise is More Structural Than Cyclical

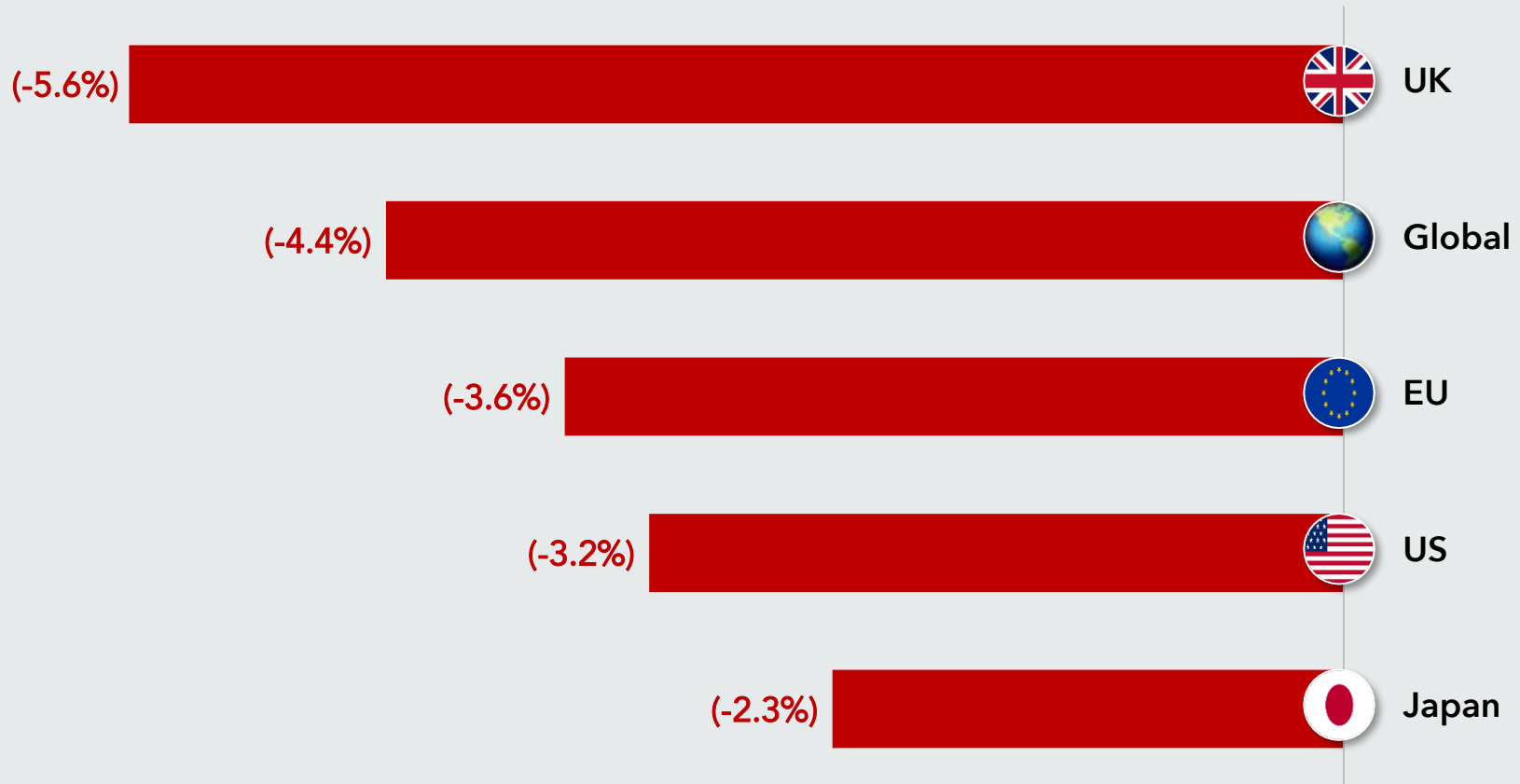
Gold since 2015



Source: (1) Bloomberg. Data as of March 20, 2026.

# Inflation Eroding Safe-Haven Appeal of Long-Duration Bonds


Global long duration government bond indices since US/Israel strikes on Iran (total returns)



Source: (1) Bloomberg. Indices are all 10+ yr duration. Data as of March 20, 2026. Change since Feb 27, 2026.

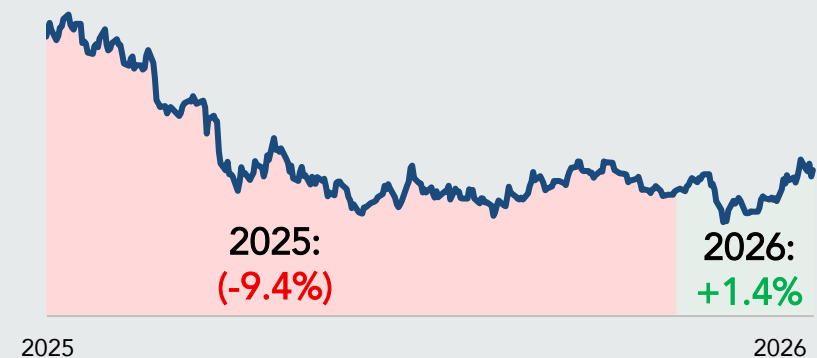
# Safe-Havens & Commodity Exporters

## Safe-have currencies


 CHF vs. EUR since Jan 1, 2025

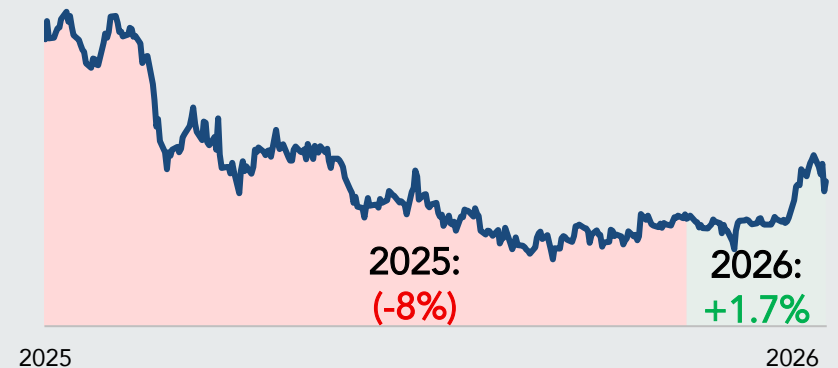


 USD index since Jan 1, 2025

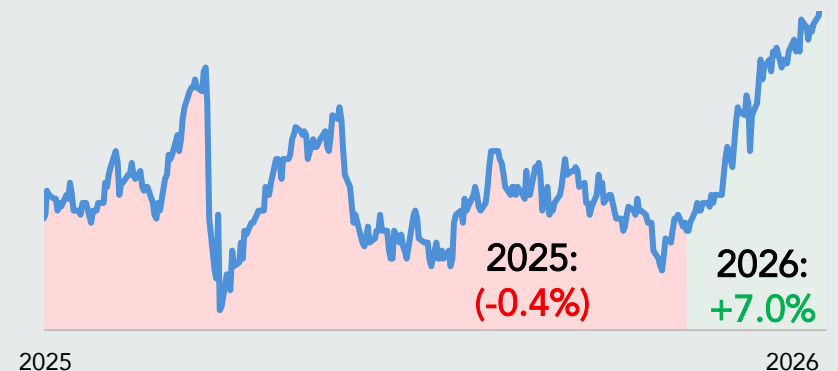


## Commodity exporters

 CAD vs. EUR since Jan 1, 2025



 NOK vs. EUR since Jan 1, 2025



Source: (1-2) Bloomberg. Data as of March 20, 2026.

# Energy Vulnerabilities Undermine Yen's Traditional Safe-Haven Status

● JPY vs. USD since Jan 1, 2025



Source: (1) Bloomberg. Data as of March 20, 2026.

# 3 Geo-Strategic Fragmentation & Multi-Polar Rebalancing



# From World Order to Regional Disorder

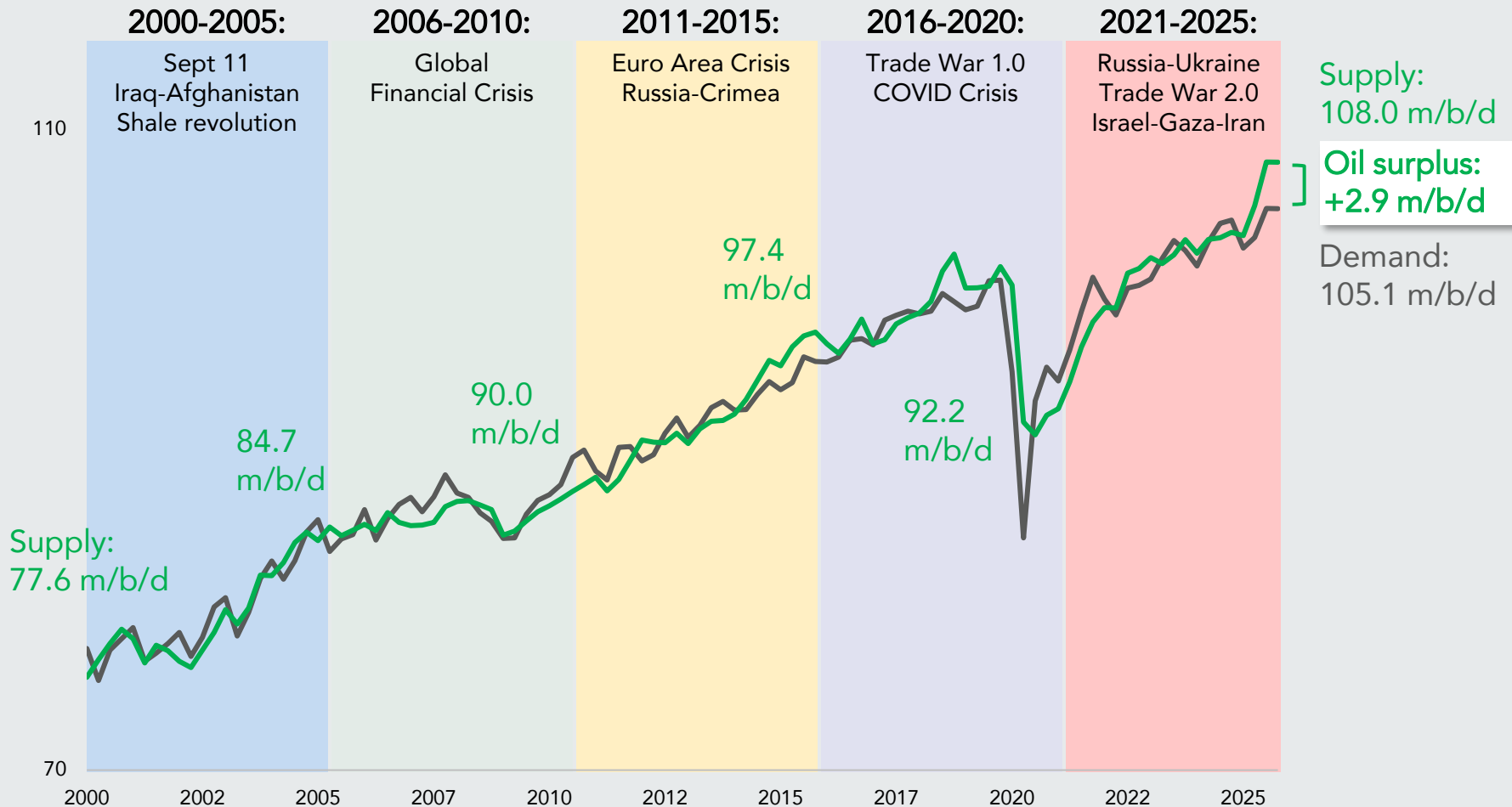
Selected areas of potential regional conflict in 2026



# Enter Crisis With Strong Global Oil Surplus



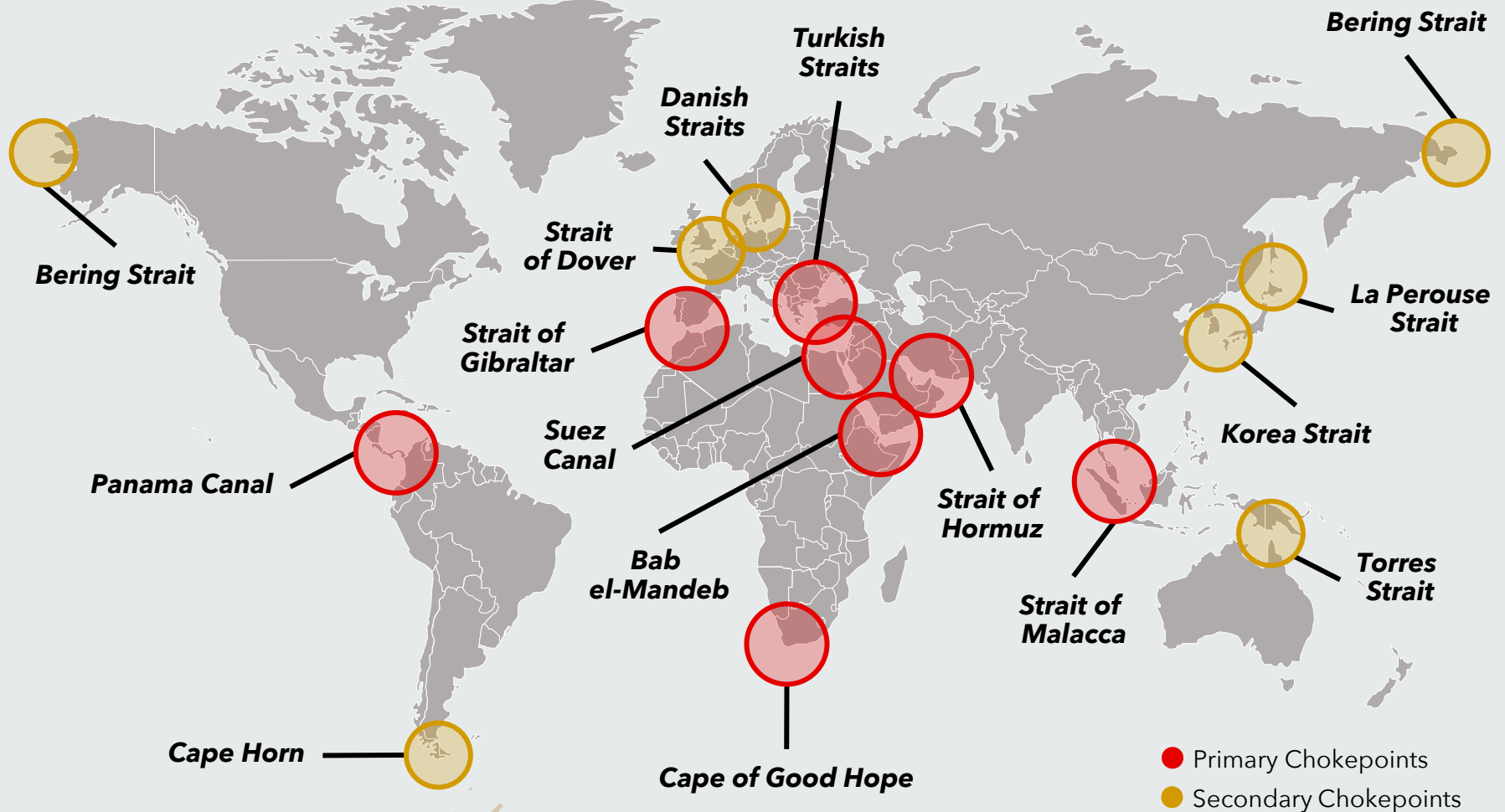
Global oil supply, million barrels per day



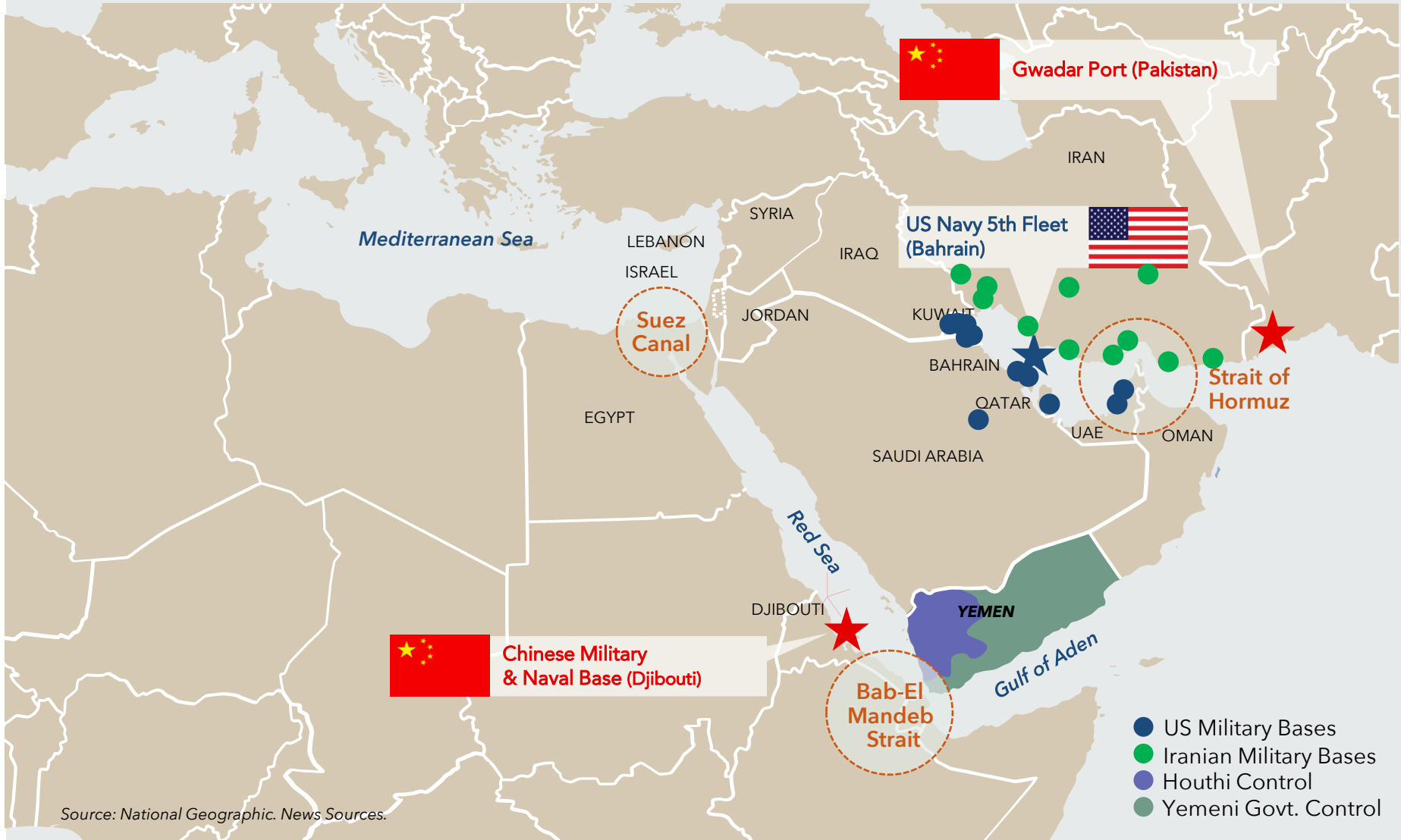
Source: (1) Bloomberg. Data through Q4 2025.

# The World's Most Important Maritime Chokepoints

The Middle East region contains several of the world's most critical geopolitical chokepoints for global commerce, as well as oil and gas transport.



# High Concentration of Persian Gulf Military Bases



# Ras Laffan, Qatar: The World's Most Consequential Gas Field



Located 80km northeast of Doha, Ras Laffan is the most strategically critical energy infrastructure site on the planet (the heartbeat of global energy markets). Following Israeli strikes on Tehran's South Pars gas field on March 18th, Iran's counter-strikes on Qatar's Ras Laffan facility represents a seismic escalation in the war.

## World's largest...

Natural gas field

LNG export facility

Gas-to-liquid (GTL) plant

Petrochemicals export hub

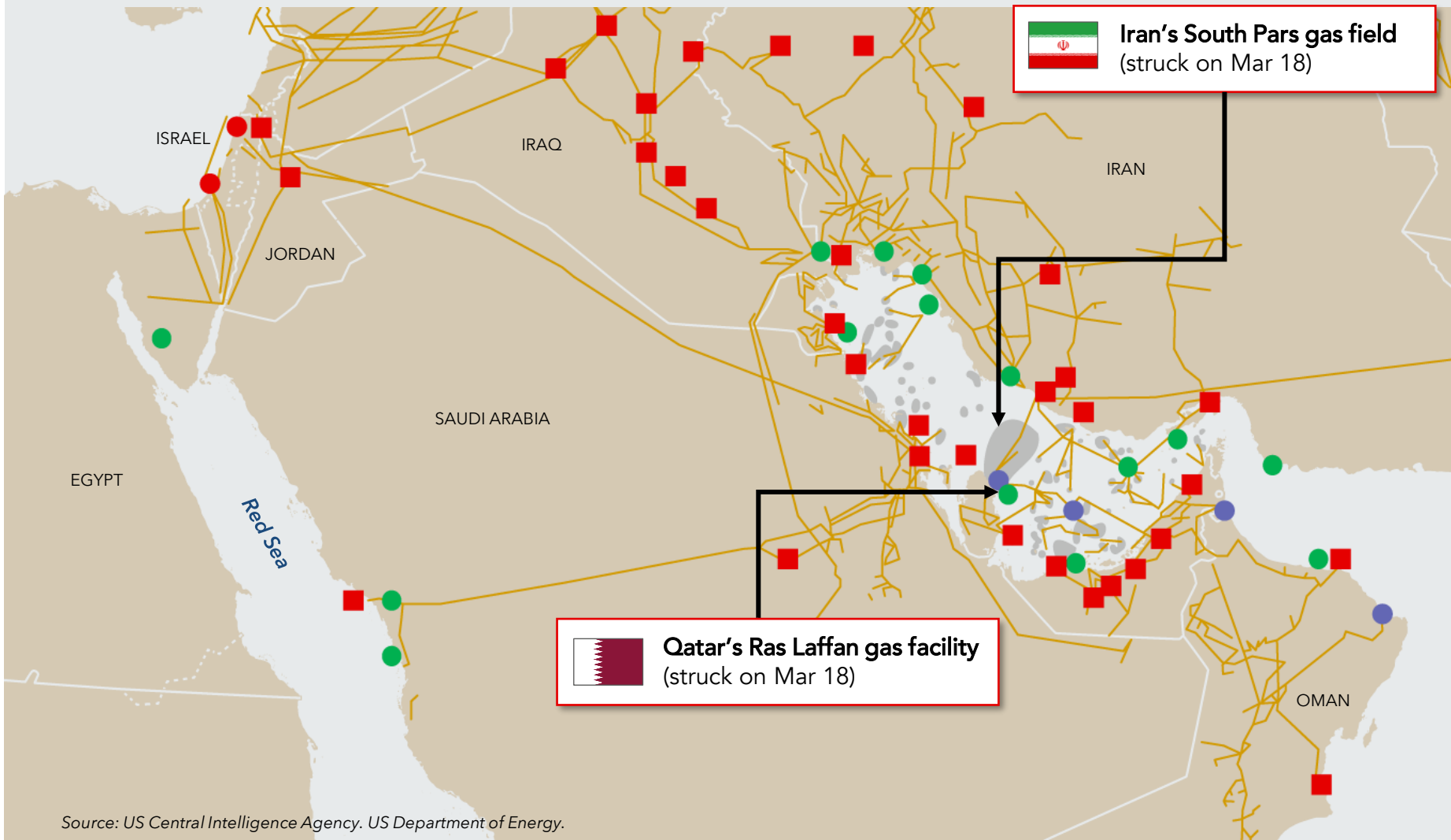
Artificial harbor



- **295 square kilometers** of infrastructure (5x the size of Manhattan)
- **70%** of Qatar's Gov revenue
- **85%** of Qatar's export earnings
- **14%** of proven global gas reserves (#3 globally)
- **20%** of global LNG exports (#1 globally)
- **35%** of global helium (#2 globally)
- Approx **77 million tons** per annum (mtpa)
- Expanding to **126 mtpa** by 2027
- Expanding to **142 mtpa** by 2030

# The Epicenter of Global Energy Supply

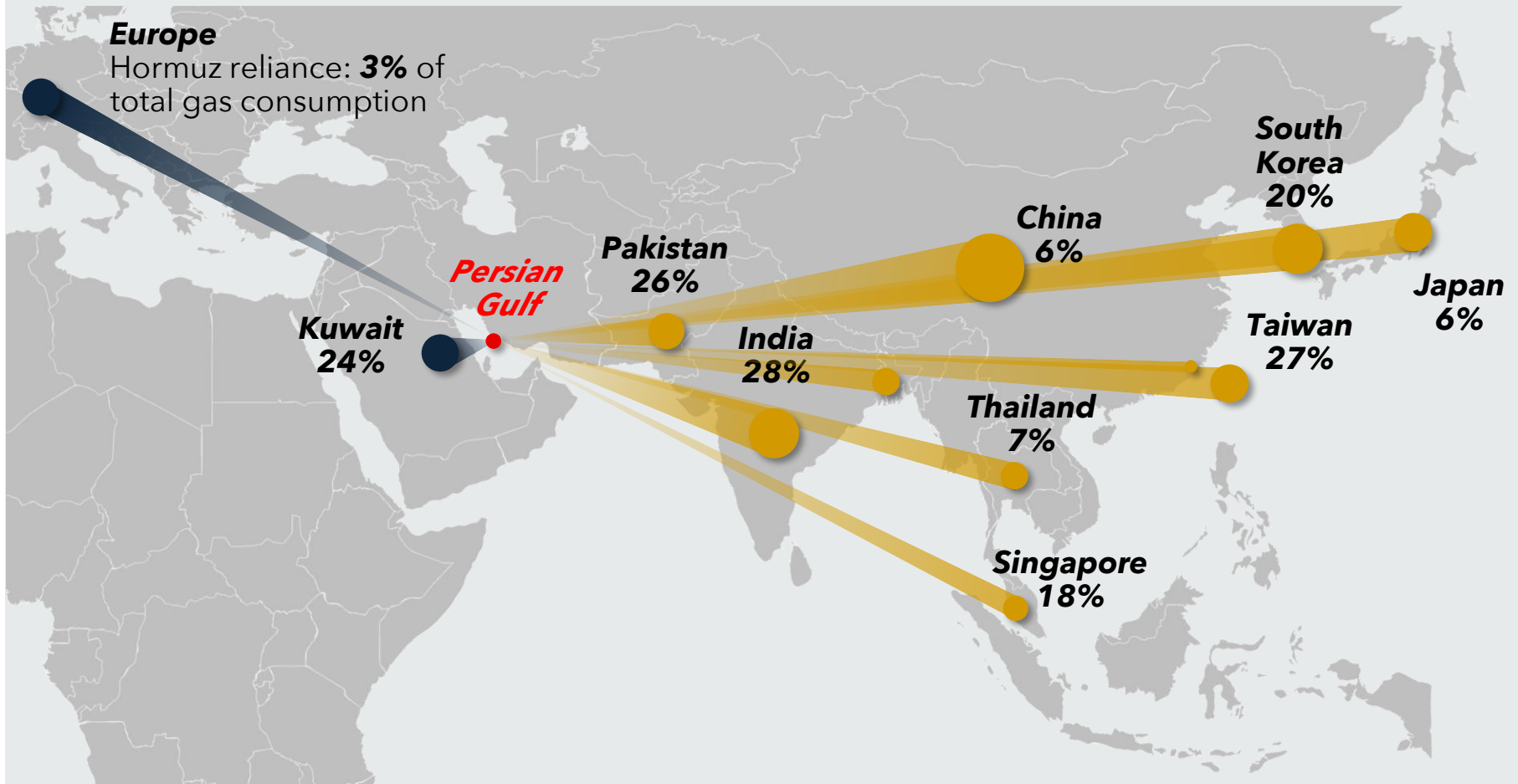
- Oil refinery, gas processing plant
- Oil terminal
- LNG export terminal
- Oil, gas field
- Oil, gas pipeline



Source: US Central Intelligence Agency. US Department of Energy.

# Asia's Qatari LNG Dependency & Disruption

Reliance on Strait of Hormuz for LNG imports as a share of total gas consumption



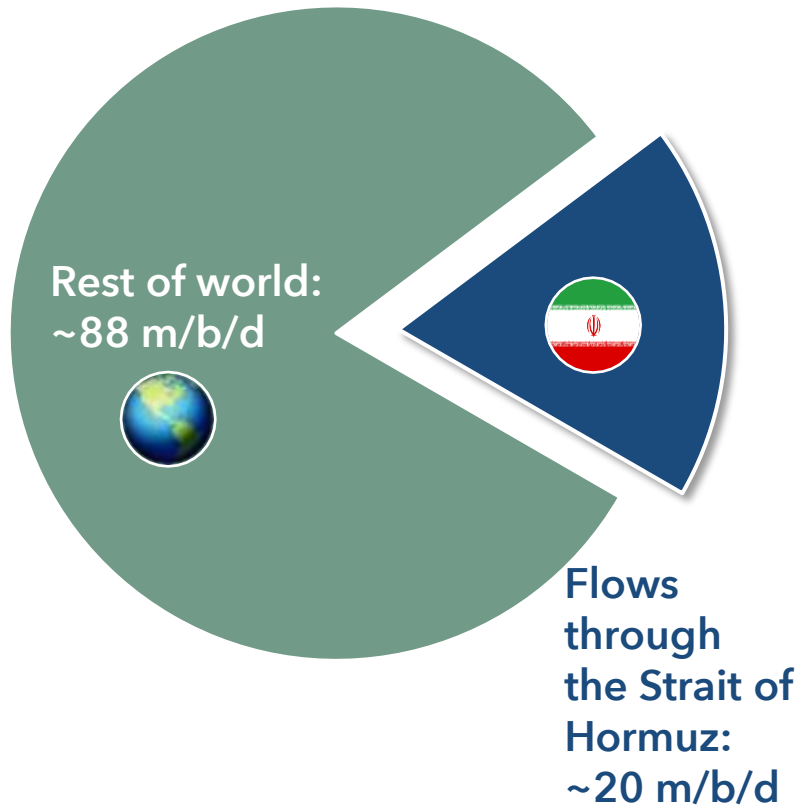
Source: GIGNL. Energy Institute. Bloomberg.

Note: Reliance is calculated as total Hormuz imports divided by total gas consumption.

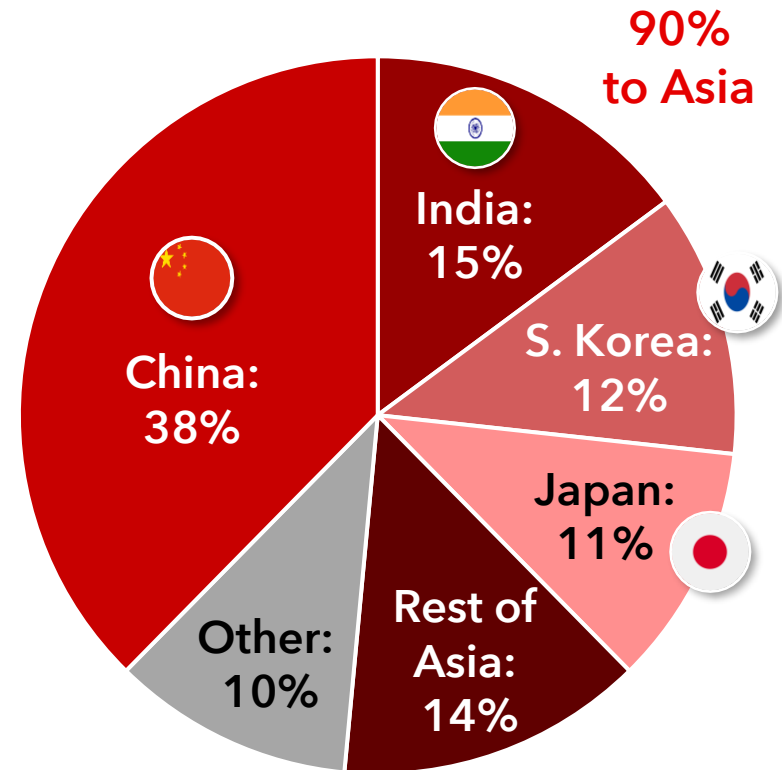
# Asia's Middle East Oil Dependencies

## Total global oil supply

Total global oil supply: 108 m/b/d



## Strait of Hormuz oil, by destination

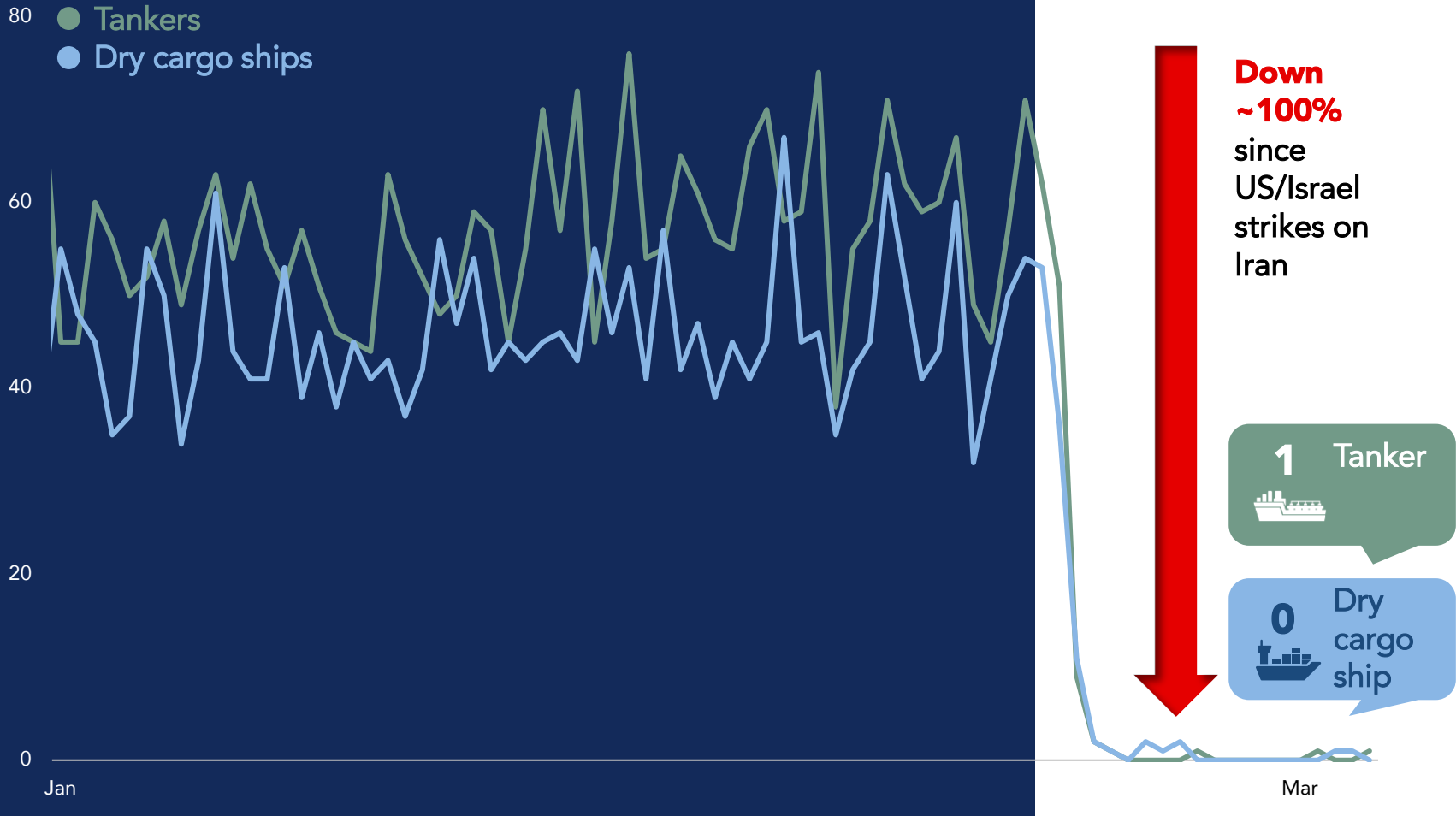


Source: (1) Bloomberg. Data through 2025. (2) US EIA, "Amid regional conflict, the Strait of Hormuz remains critical oil chokepoint". Data as of Q1 2025.

# Strait of Hormuz Ship Crossings

2026 YTD Strait of Hormuz bidirectional intraday ship crossings (over last 24 hrs)

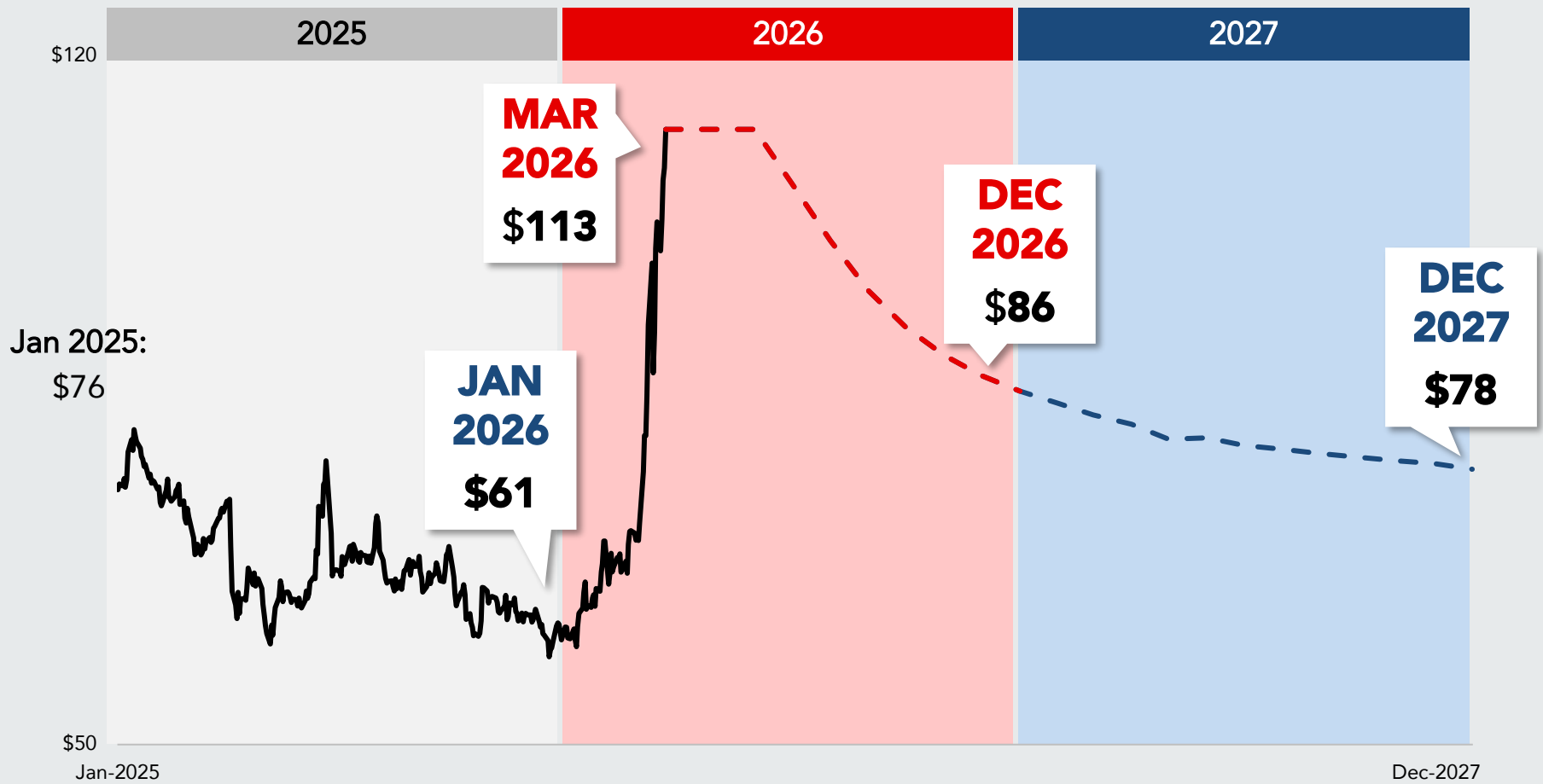
80 ● Tankers  
● Dry cargo ships



Source: (1) Bloomberg. Data as of March 18, 2026.

# Forward Curve Believes Crisis is Temporary

Brent oil futures curve



Source: (1) Bloomberg. Data as of March 20, 2026.

# Scenario Analysis for Strait of Hormuz Closure

## Impact of Strait of Hormuz closure

1

Brief disruption, then de-escalation:

**\$80 - \$100**

2

Sustained closure, no damage:

**\$100 - \$120**

3

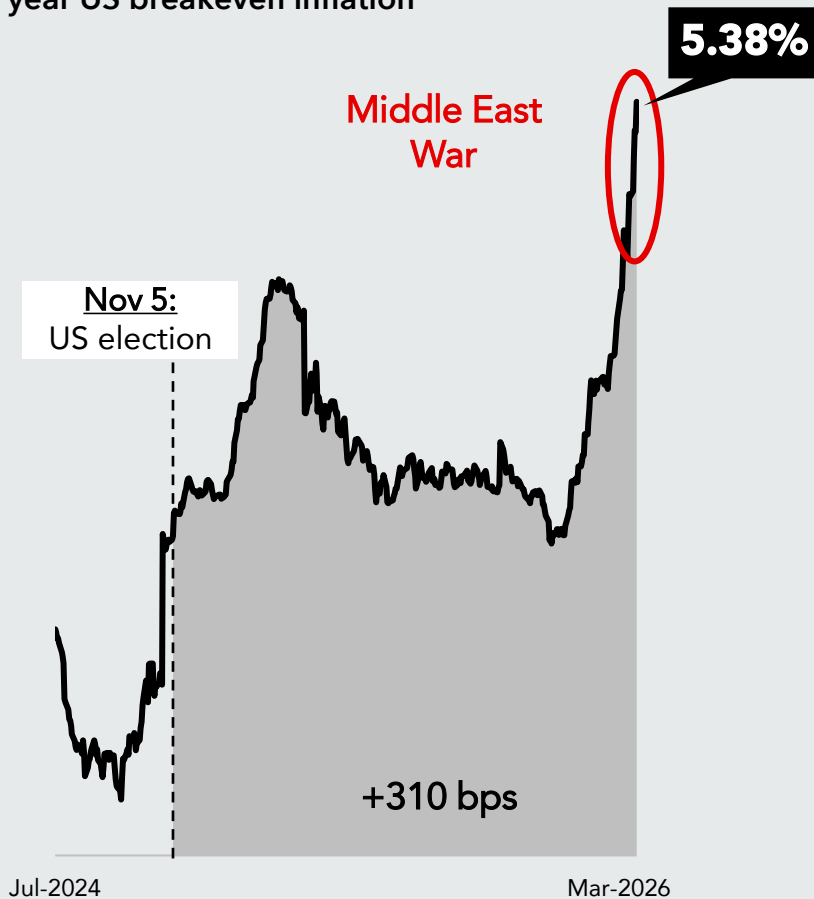
Closure + infrastructure damage:

**Above \$120**

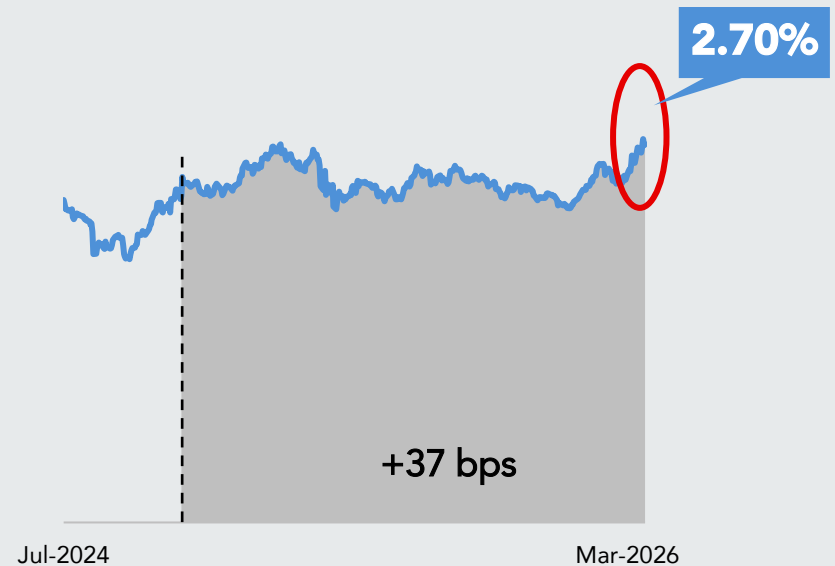
# Short Term Inflation Expectations Reprice Higher

The increase in oil prices pushed one-year inflation breakeven prices sharply higher while longer-term measures remain fairly stable, though they are elevated vis-à-vis expectations one year ago.

1 year US breakeven inflation



5 year US breakeven inflation



Source: (1-2) Bloomberg. Data as of March 20, 2026.

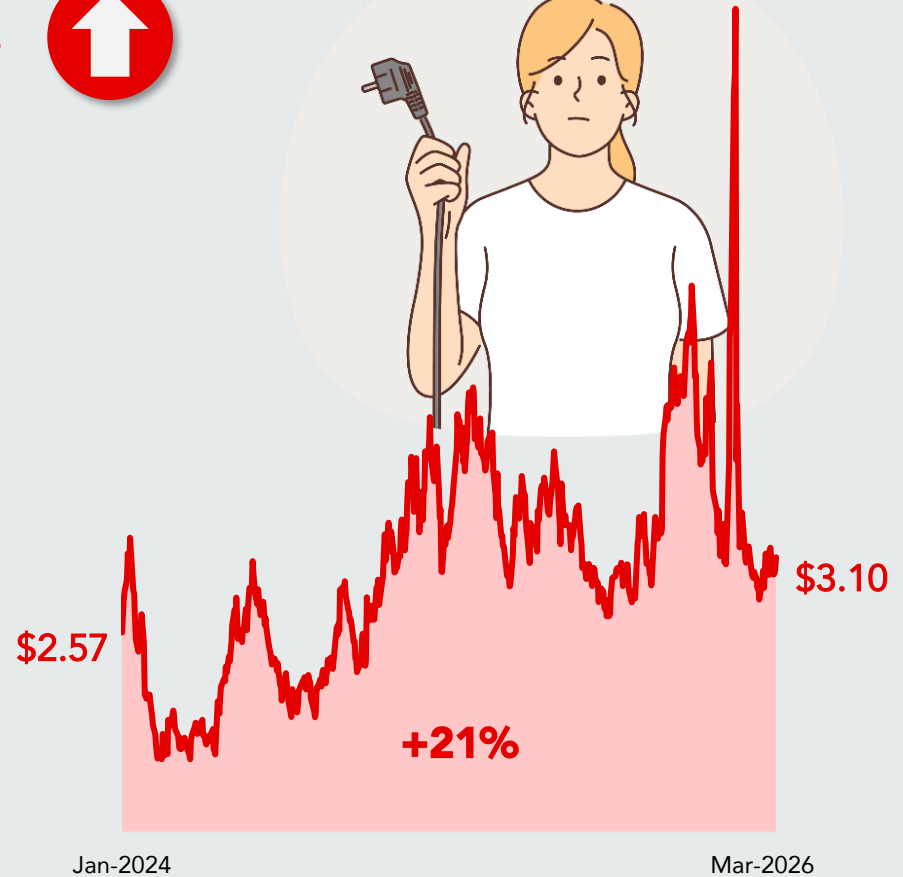
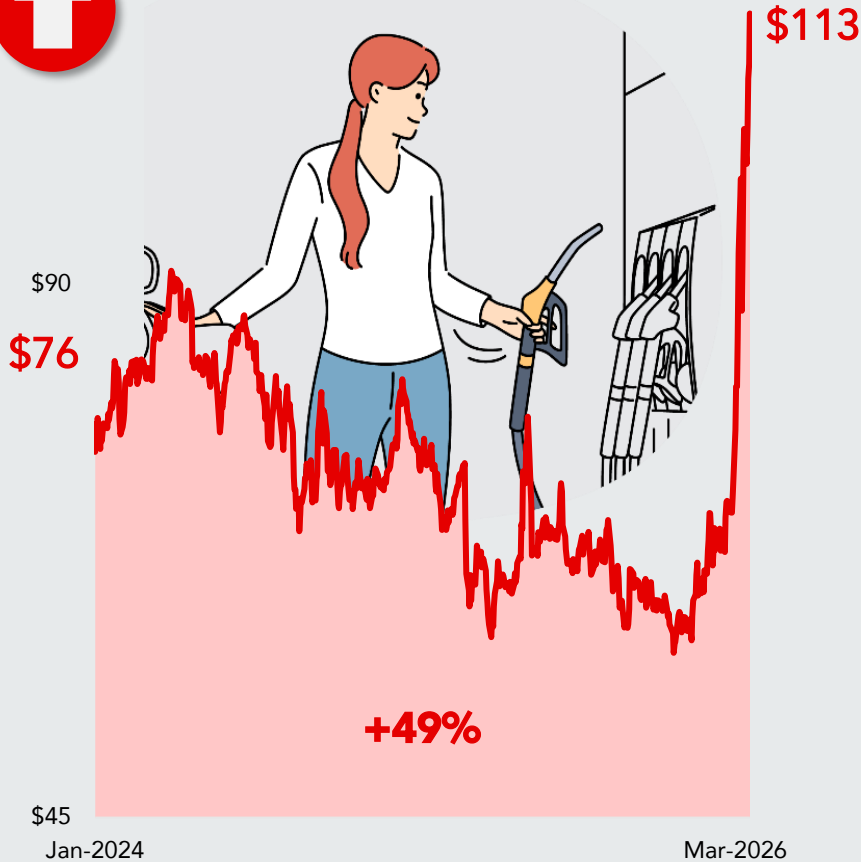
# "Affordability" a Core Theme for 2026 US Midterms

Lower oil prices

Higher electricity prices

Brent

US natural gas



Source: (1-2) Bloomberg. Data as of March 20, 2026.

# 4 The Rewiring of Global Trade

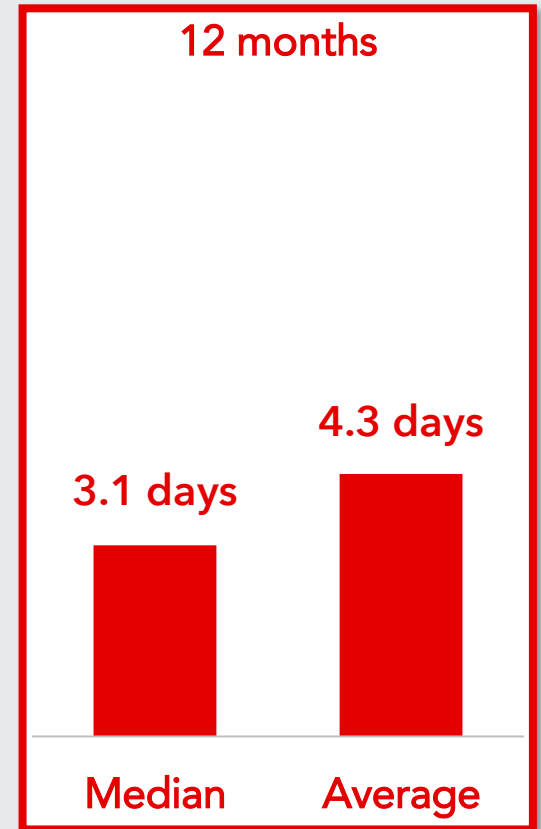
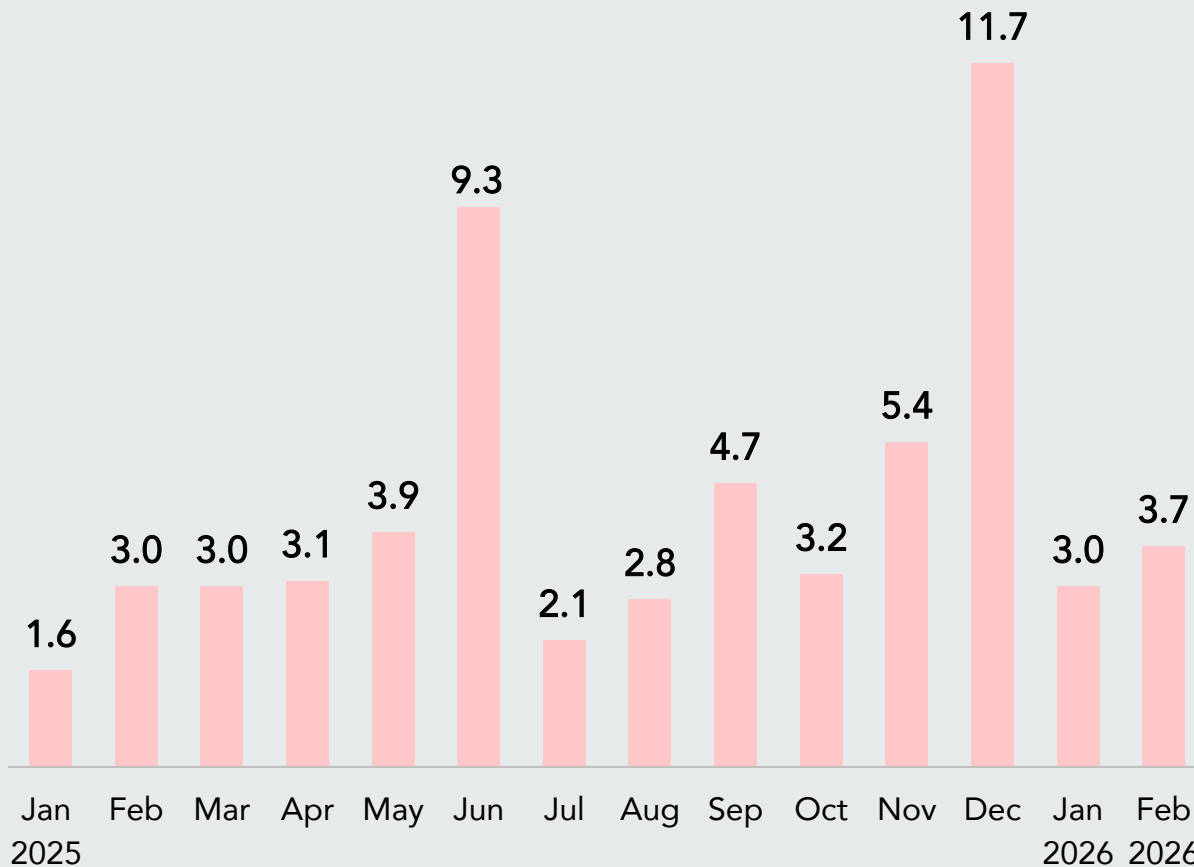


# New Tariffs Announced Every 3-4 Days



Over the first 400 days of his second term, President Donald Trump has made a significant new tariff policy announcement or threat every 3 - 4 days, on average. We expect this regime to continue.

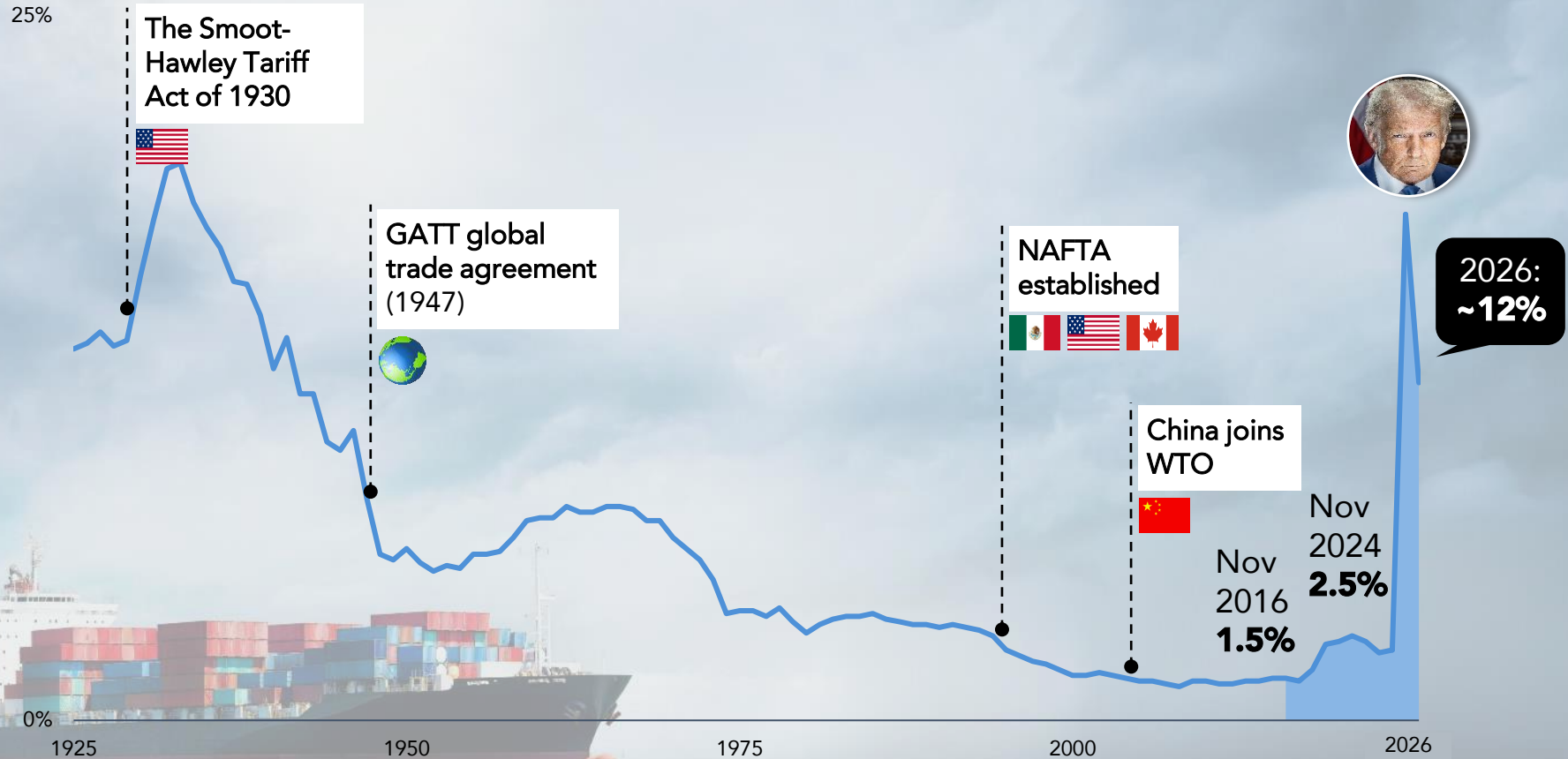
**Average # of days between changes in President Trump tariff policy (includes new threats and announcements)**



Source: (1) Various News Sources. January 2025 is Jan 20-31.

# Post IEEPA, Effective US Tariff Rates Now at ~ 12%

Average tariff rate on all imports



Source: (1) US International Trade Commission, "US Imports for Consumption, Duties Collected, and Ratio of Duties to Value." Table 1. US Census Bureau. The Tax Foundation, "Trump Tariffs: Tracking the Economic Impact of the Trump Trade War." 2025 rate is an estimate from Yale Budget Lab, Capital Econ & Oxford as of February 2026.

# 8 Notable Takeaways on SCOTUS IEEPA Ruling



**Trade war continues on more cumbersome path.**

(More process - Sec. 122, 232, 338, 201, 301)

**Tariff threats, rollbacks & exemptions will continue.**

(Every 3-4 days; 75% of threats don't materialize; 50% exempt)

**Modest market impact.**

(Equities sector specific; USD weakness; rate vol slightly higher)

**Section 122 tariffs have meaningful constraints.**

(15% cap, 150 days, non-discriminatory manner)

**Limited impact on 2025-26 US trade agreements.**

(Substantive renegotiation unlikely; Ratification may slow)

**IEEPA exemptions extended to new Sec 122 tariffs.**

(50% of US imports exempt)

**150 days provides a bridge.**

(Sec 232 & 301 investigations underway)

**More litigation.**

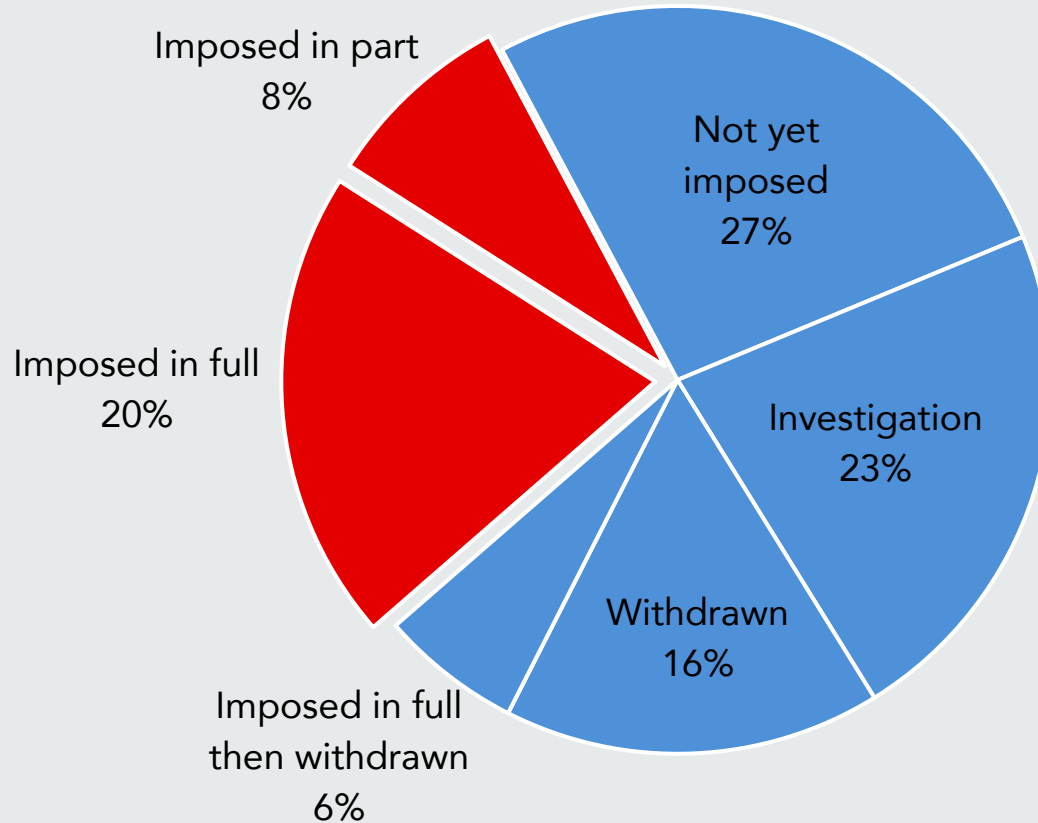
(Plaintiffs emboldened; thousands of suits underway)

# Breakdown of Trump's Tariff Threats Since 2024



According to a review of President Trump's nearly 50 tariff threats in his first 12 months in office by Bloomberg Economics, only about a quarter of President Trump's tariff threats are actually imposed, while well over 50% are withdrawn or delayed for future consideration.

Breakdown of Trump tariff threats since November 2024

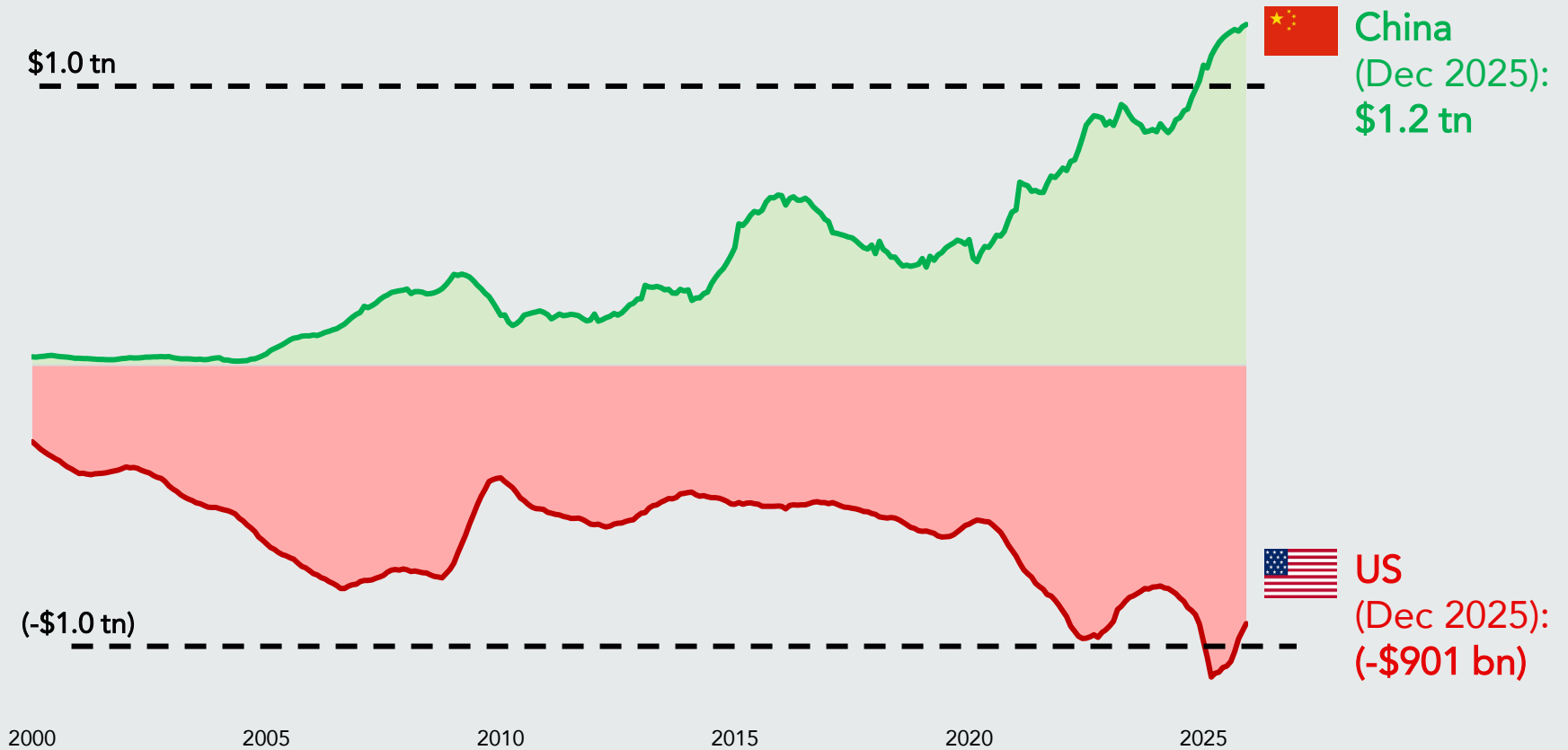


Source: (1) Bloomberg Economics. Bloomberg Government, *Trump's Empty Tariff Threats Start to Pile Up.*

# Record China Trade Surpluses & US Deficits

Despite a decade of escalating trade conflict, China has emerged with the world's largest goods surplus, while the US runs by far the world's largest trade deficit. China has very effectively reduced its US trade dependencies, redirecting exports to other markets and driving its trade surplus above \$1 trillion for the first time in history.

US & China trailing 12 months trade balance, USD bn



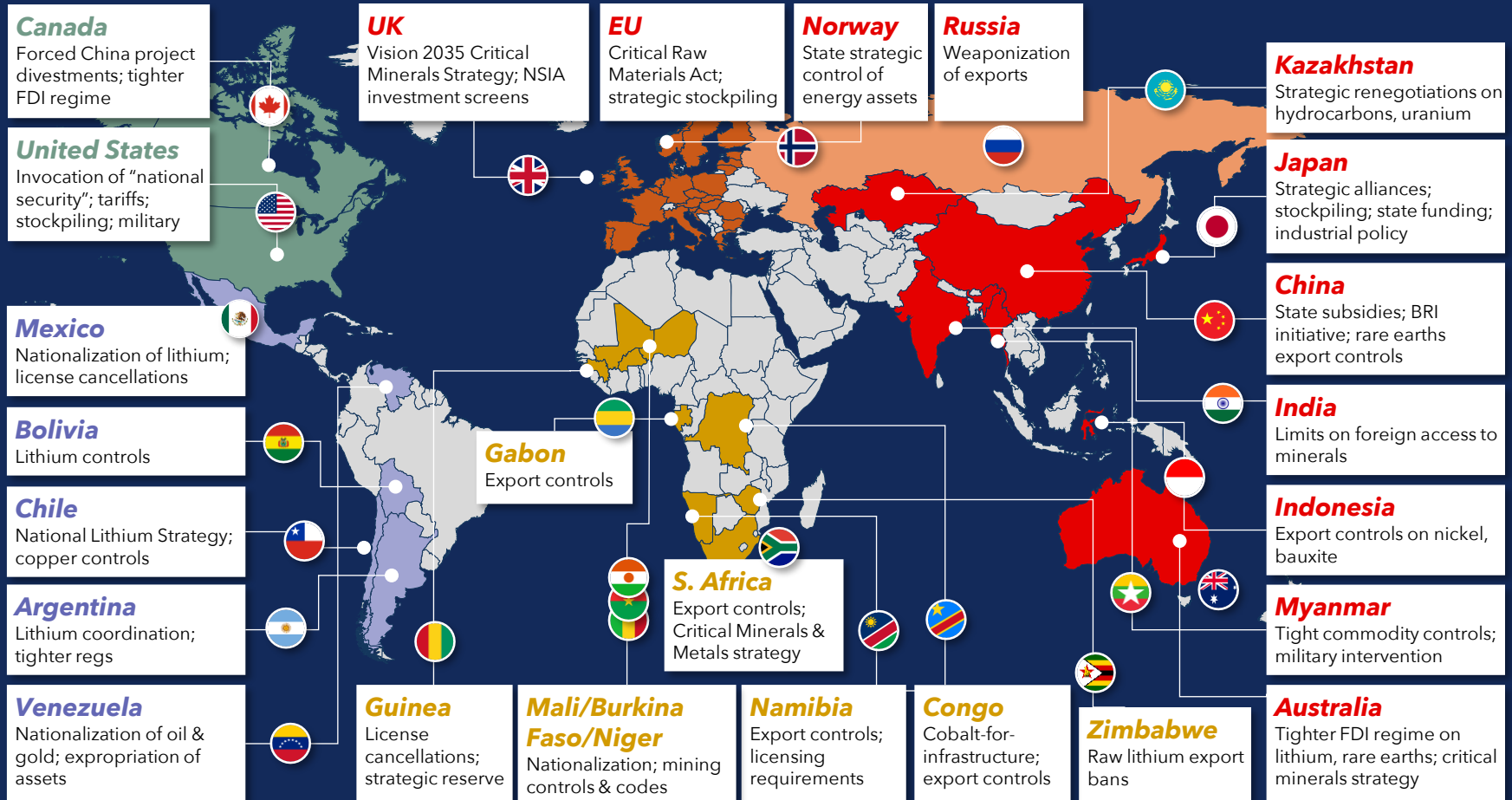
Source: (1) Bloomberg. Data through December 2025. China's General Administration of Customs.

# 5 New Era of Resource Nationalism



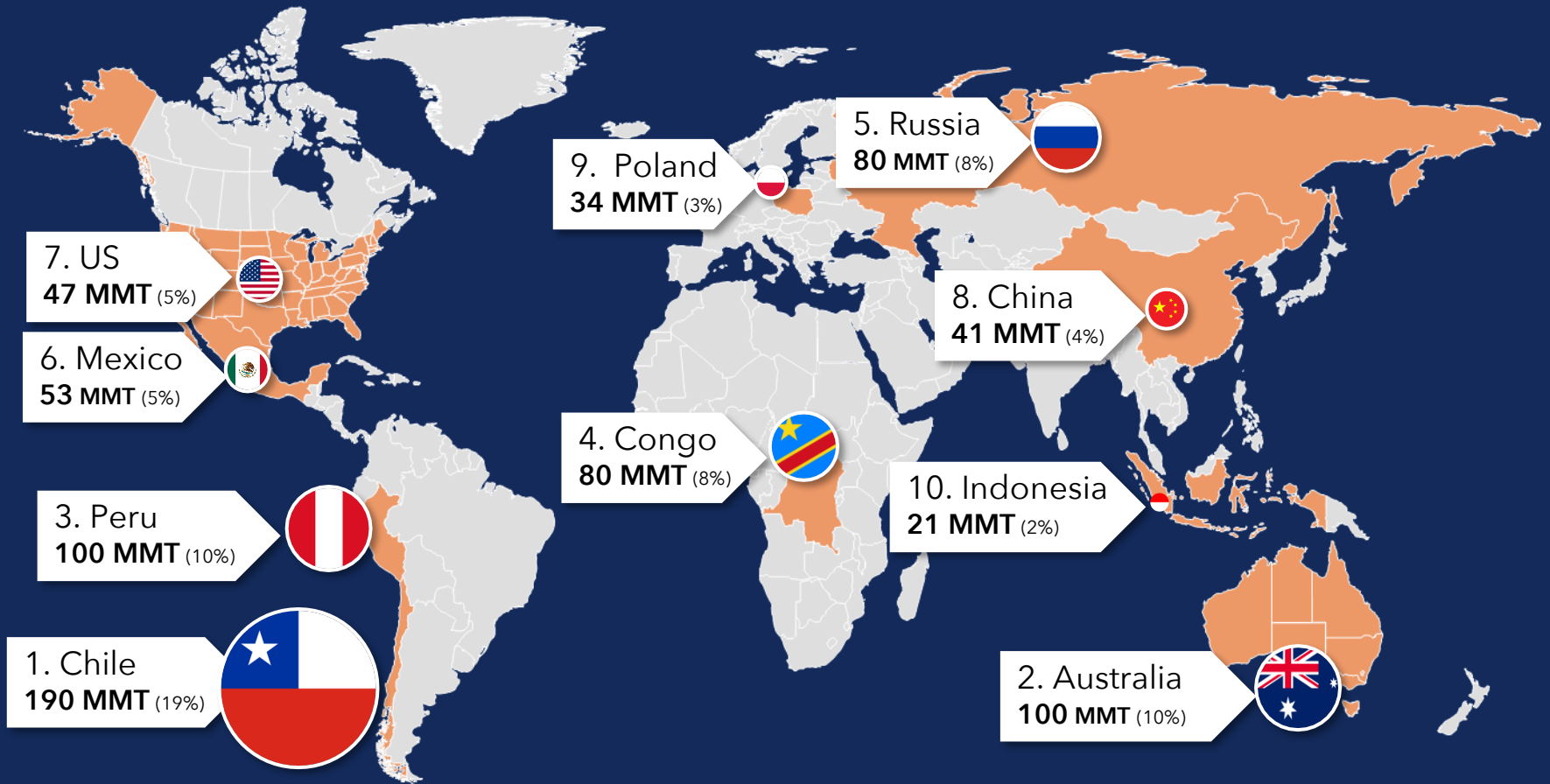
# New Era of Resource Nationalism

Countries are layering a broad range of traditional resource nationalism tools with newer geoeconomic and industrial policy instruments that target entire supply chains and the most strategically significant minerals for high-end manufacturing (EVs, defense, semis, AI).



# Top 10 Sources of Global Copper Reserves

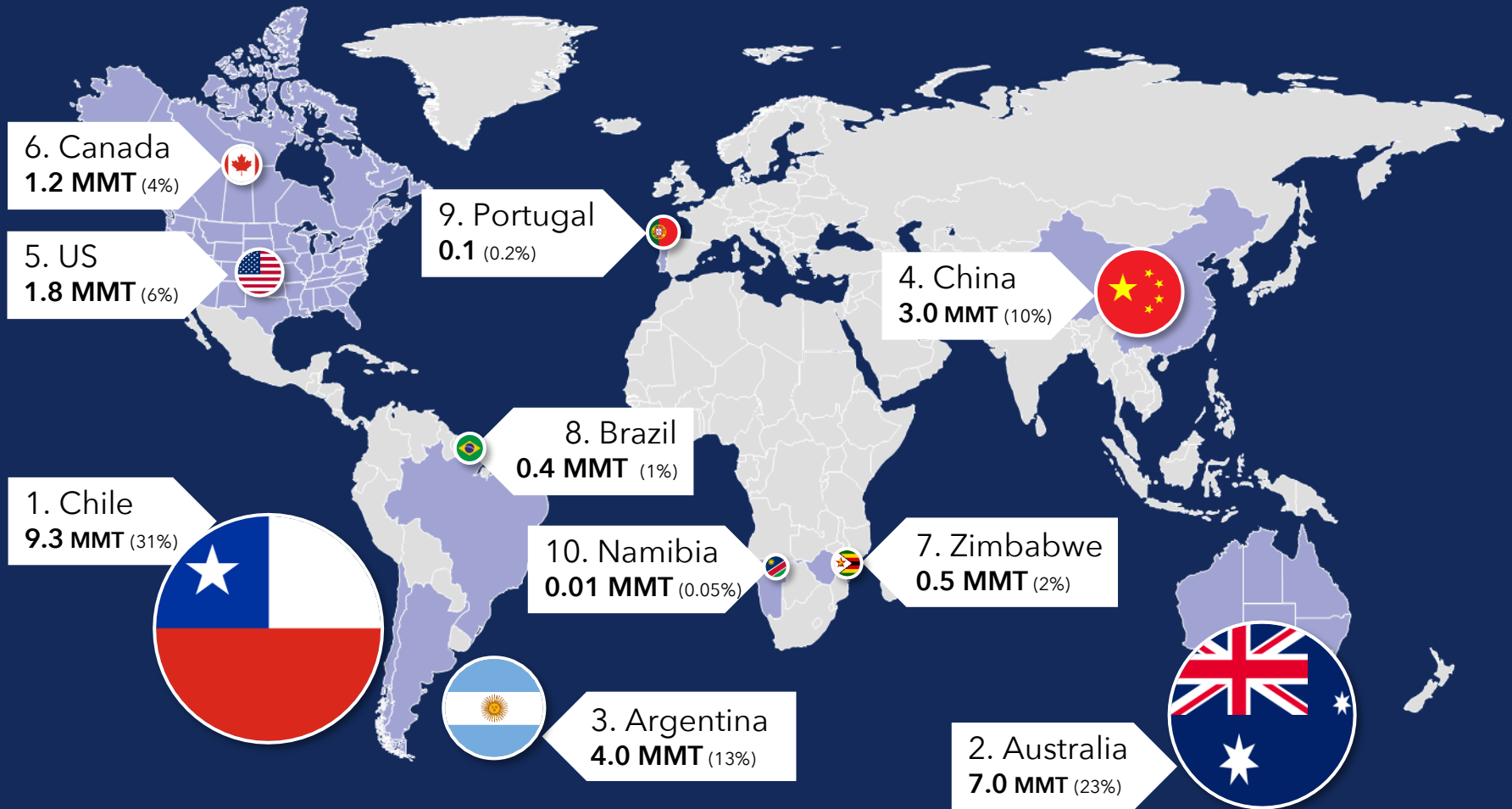
Global copper reserves, million tons (2024)



Source: US Geological Survey. Mineral Commodity Summaries 2025.

# Top 10 Sources of Global Lithium Reserves

Global lithium reserves, million tons (2024)

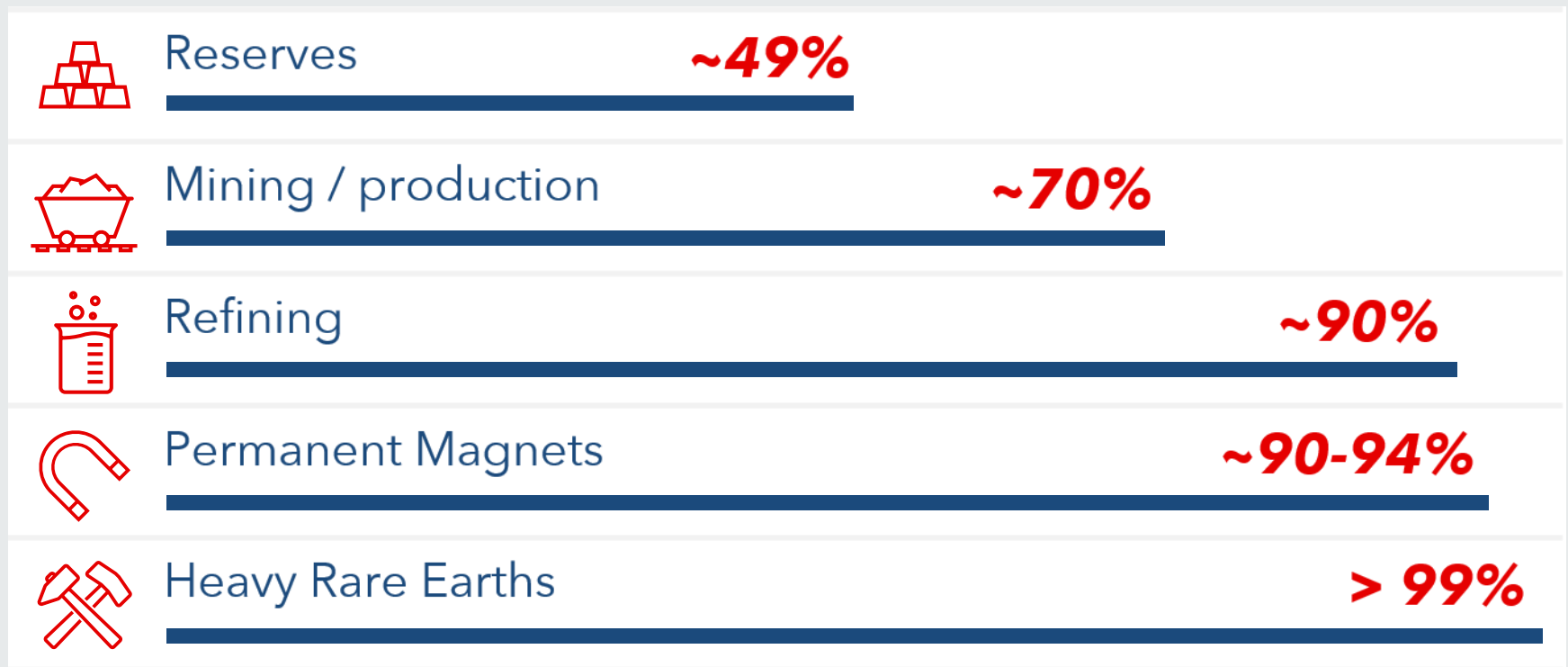


Source: US Geological Survey. Mineral Commodity Summaries 2025.

# China's Dominance of the Rare Earth Value Chain

China's dominance of the complete rare earths value chain - from reserves to refining - and the 10+ year lead to the West in this regard, is one of the most consequential and underappreciated structural stories in the global economy and geopolitics. Further, as evidenced by policy decisions in 2025, China has demonstrated a willingness to use this leverage.

## China's global share in the rare earth value chain



Source: Reserves is US Geological Survey data as of 2025. Mining / production is IEA 2025 data. Refining is CSIS 2025. Permanent magnets is IEA / CFR 2026. Heavy rare earths is IEA data.

6

# The AI-Tech Capex Supercycle



# When We Look Back a Decade from Now...



Most transformative technology revolution in history



Largest private-sector infrastructure project in history



Extraordinary power expansion buildout (both scale & speed)



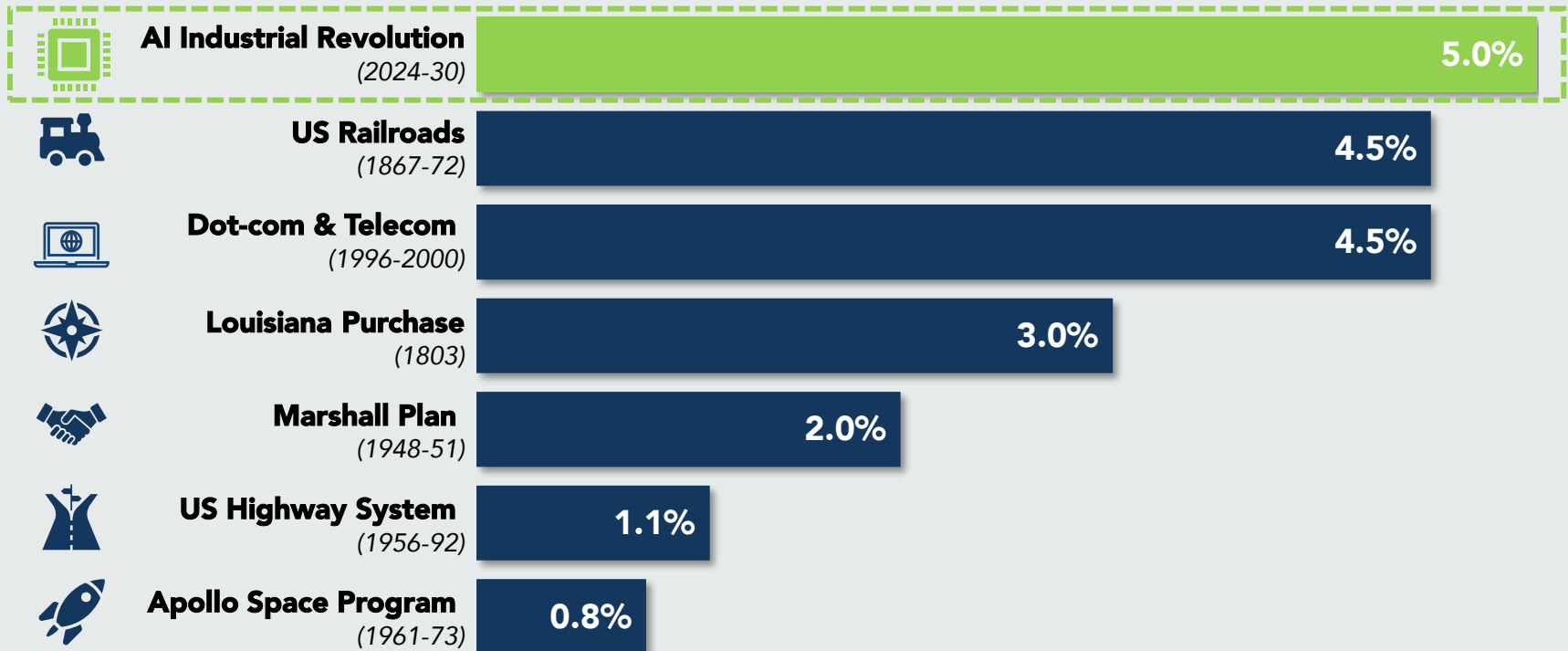
One of the largest capex super-cycles in history

# AI & GPT Investment in Historical Context



At over 5% of GDP in peak year of spend, the AI industrial revolution ranks among the largest US investment projects in history. What unites each of these historical episodes is a pattern that economists call **general-purpose technology (GPT) investment**, a new capability that is so broadly applicable that it requires a massive, economy-wide infrastructure buildout before its productivity benefits fully materialize.

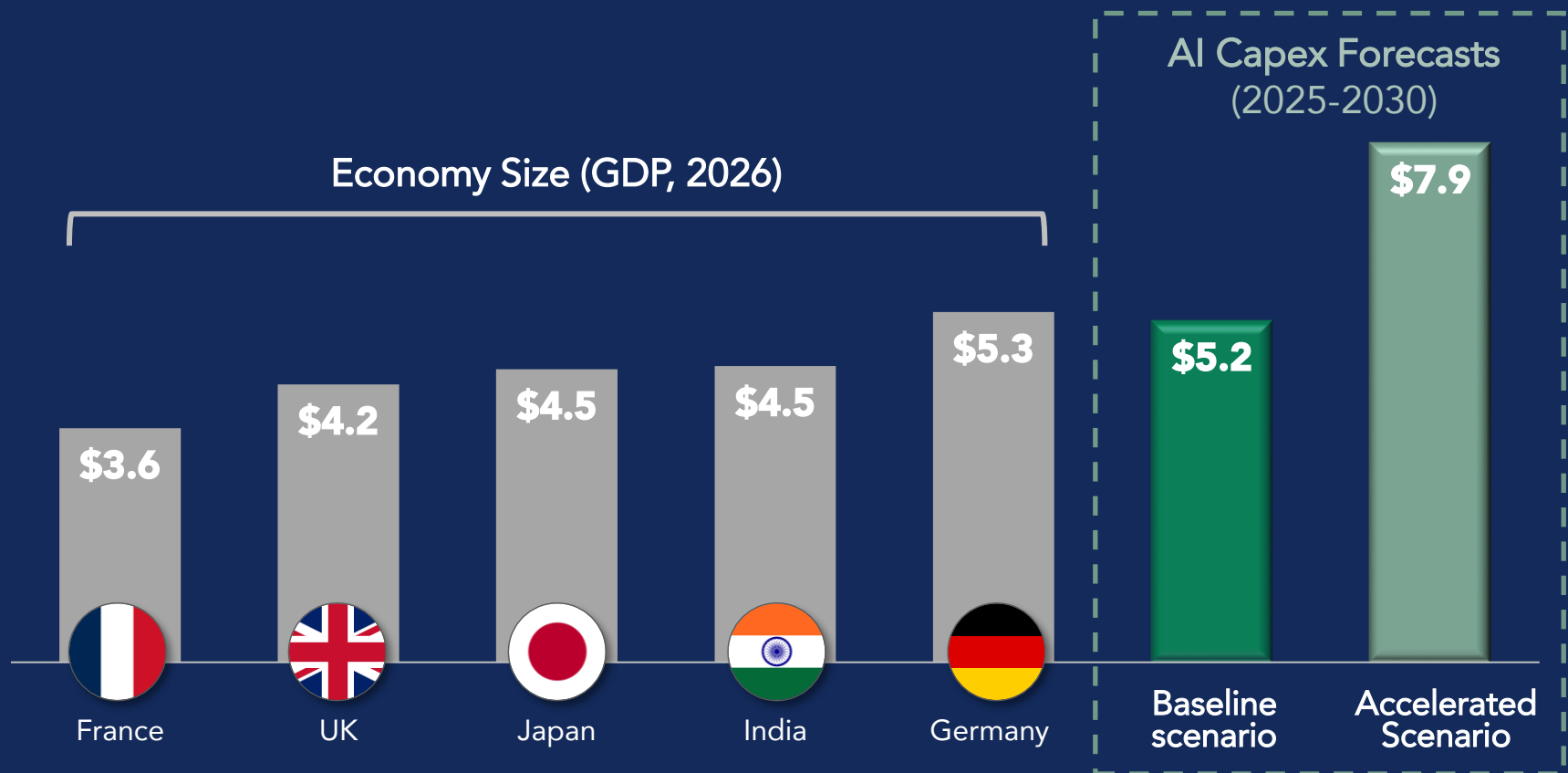
## Historical GPT investment in peak year of spend (% of GDP)



Source: (1) Percent of GDP is peak value during duration of project. AI Capex includes utilities: Alger Report, McKinsey, JPM, DWS. Dot-com includes broader IT buildout (software & Hardware): US BEA, Fred. Railroads: NBER / Alber Fishlow. Louisiana purchase: US Census historical records. Marshall Plan: Congressional Research Service. Interstate highways: CBO, includes public spend and federal grants. Apollo: NASA, the Planetary Society.

# AI Capex Demands Larger than Most Global Economies

To put the scale of AI's capex requirements in context, McKinsey and Company's baseline and accelerated AI forecasts over the next five years (2030) are larger than the GDP of every global economy, except the US and China.



Source: (1) McKinsey, "The cost of compute - a \$7 trillion dollar race to scale data centers." McKinsey Data Center Capex TAM model. McKinsey Data Center Demand Model. Data center infrastructure excludes IT services and software (e.g. operating system, data center infrastructure management), since they require relatively low capex compared with other components. GDP forecast is 2026 IMF.

# Projected Global AI Spend by Region (2025-26)

US AI capex is running at a different order of magnitude than other regions globally, and has already become a visible part of US GDP, perhaps even masking areas of US economic weakness. The magnitude of this AI driven capex supercycle has, in turn, reshaped public policy, business strategy and global capital markets.

Projected AI investment by region (2025-26), USD bn

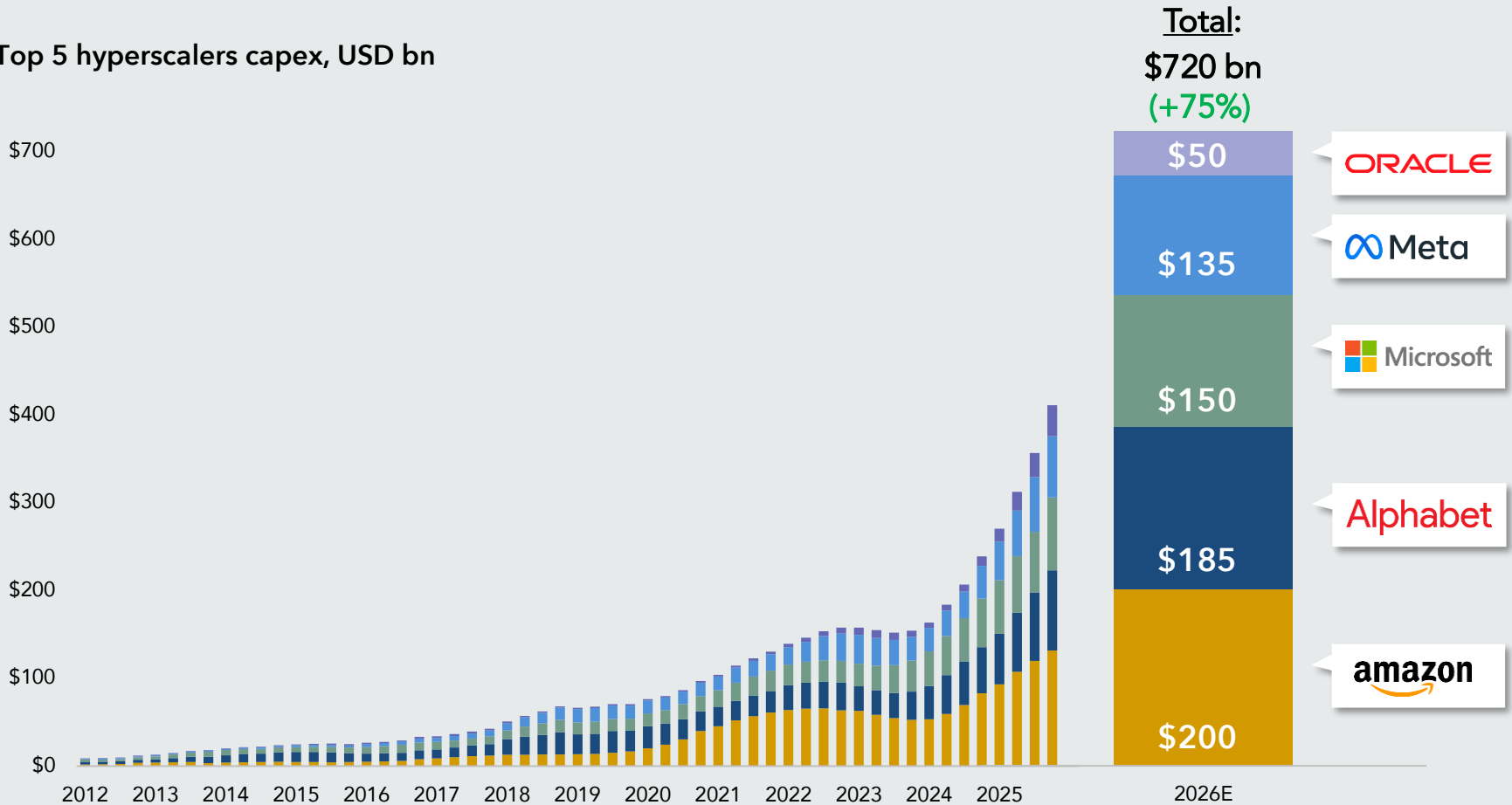


Source: (1) IDC. Implan. Gartner. Wall Street tech sector research. Nordics includes Denmark, Finland, Iceland, Norway, and Sweden.

# Hyperscalers' Capex Above \$700 Bn in 2026

Hyperscaler capex spending for the "big five" is now widely forecast to exceed \$700 bn in 2026, a 75% increase over 2025. Roughly 75%, or \$540 bn, of that spend is directly tied to AI infrastructure (i.e., servers, GPUs, datacenters, equipment), rather than traditional cloud.

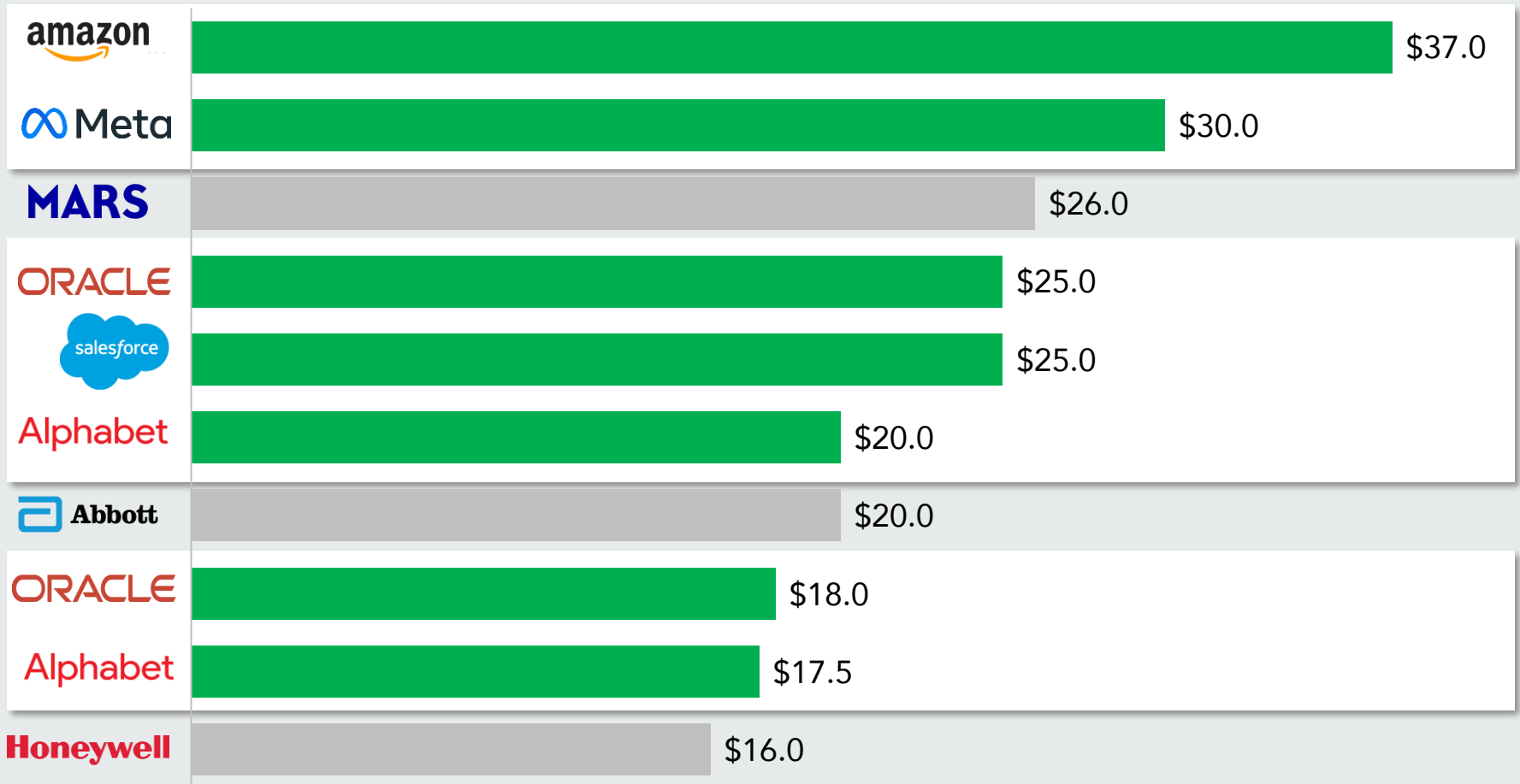
Top 5 hyperscalers capex, USD bn



Source: (1) Bloomberg, "The AI Spending Boom Is Huge But Not Unprecedented". Apollo (Torsten Slok). Data trailing 12 months. Oracle's quarters end a month earlier than the other companies. 2026E data is based on company announcements. Oracle estimate for FY 2026.

# Tech Sector Driving USD Volumes Since Early 2025










Largest USD IG deals since Jan 2025, bn



Source: (1) CFR. Data as of March 18, 2026. Excludes bank and auto financing deals.

# Tech & Telecom Also Driving Multi-Currency Financings

## Selected Multi-Currency IG Deals since January 2025 (excluding banks)

Company		 USD	 EUR	 GBP	 CHF	Total size (USD)
 <b>amazon</b>	(Mar 10-11, 2026)	37.0 bn	14.5 bn			\$53.8 bn
<b>Alphabet</b>	(Feb 9-10, 2026)	20.0 bn		5.5 bn	3.1 bn	\$31.4 bn
<b>Alphabet</b>	(Nov 3-4, 2025)	17.5 bn	6.5 bn			\$25.2 bn
 <b>NTT FINANCE</b>	(Jul 9, 2025)	11.3 bn	5.5 bn			\$17.7 bn
<b>verizon</b>	(Nov 5-10, 2025)	11.0 bn	2.3 bn	1.0 bn		\$15.0 bn
<b>Alphabet</b>	(Apr 28, 2025)	5.0 bn	6.8 bn			\$13.0 bn
<b>Baker Hughes</b> 	(Mar 5, 2026)	6.5 bn	3.0 bn			\$10.0 bn
 <b>EATON</b>	(Mar 4-5, 2026)	8.5 bn	1.2 bn			\$9.9 bn
<b>Johnson&amp;Johnson</b>	(Feb 18-19, 2025)	5.0 bn	4.0 bn			\$9.7 bn
 <b>IBM</b>	(Feb 5, 2025)	4.8 bn	3.0 bn			\$8.3 bn

Source: (1) CFR. Data as of March 18, 2026. Total size calculated used current USD exchange rates. Excludes bank and auto-financing deals.

 Tech / telecom

# 7 Power Grid Capacity & Expansion

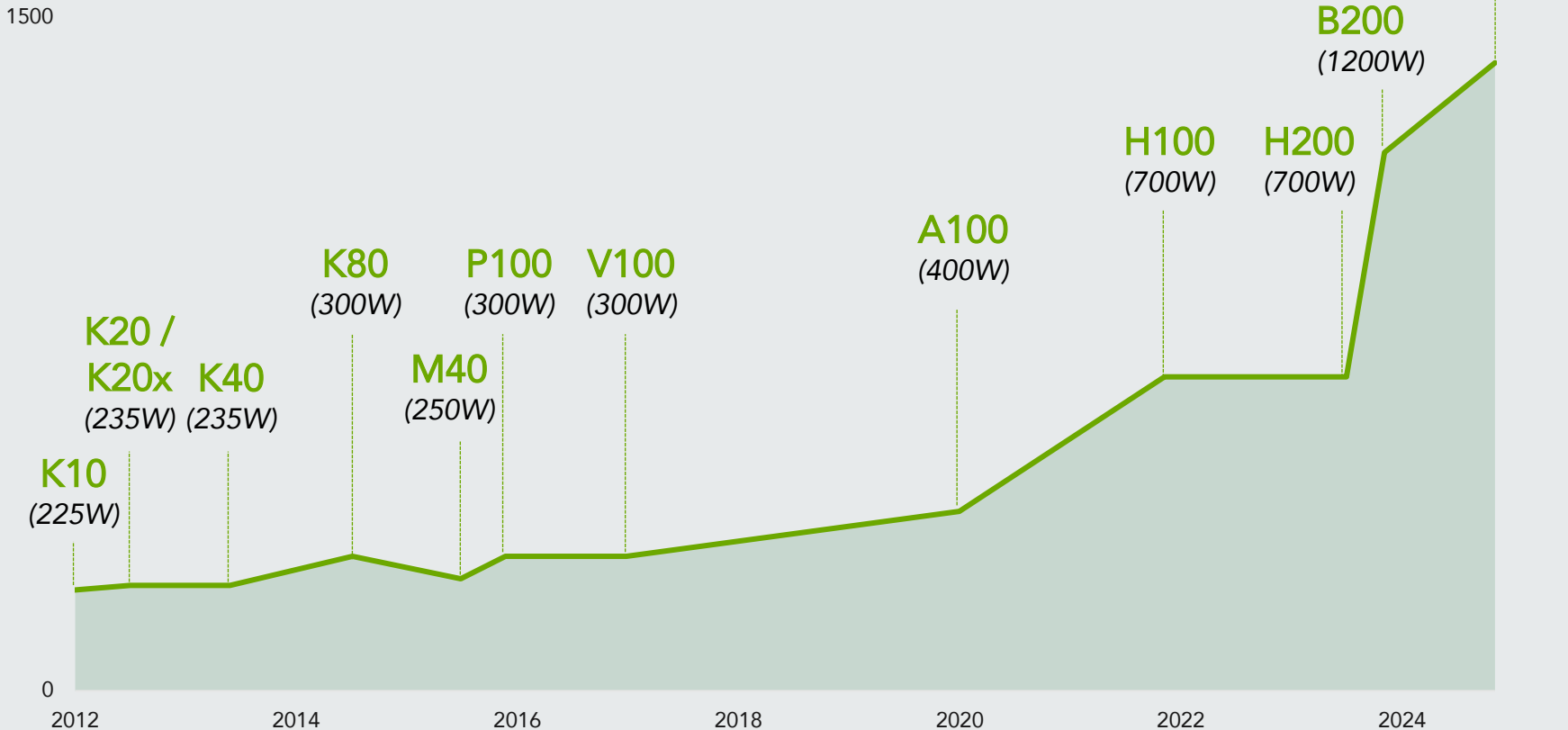


# Most Advanced Chips Require More Power



Standard configuration power demands of Nvidia microchips since 2012

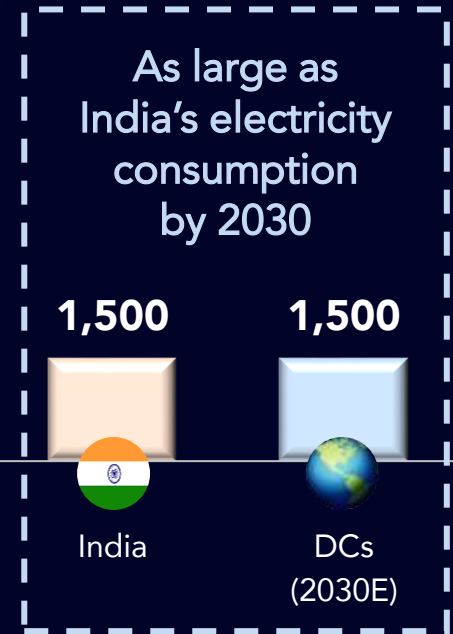
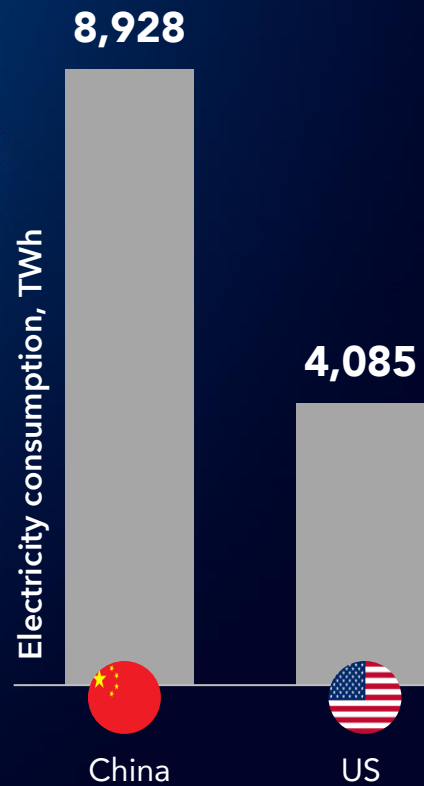
Power demands (TDP)



Source: (1) Nvidia. Various news sources.

# Data Center Electricity Demand Increasing

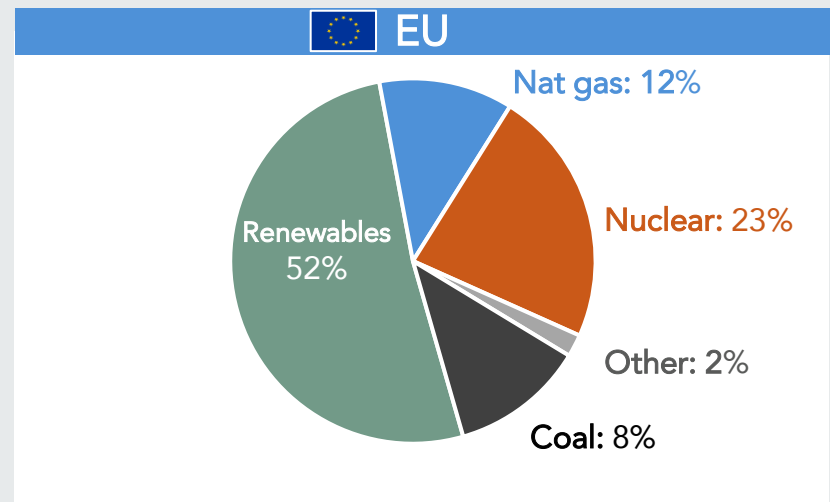
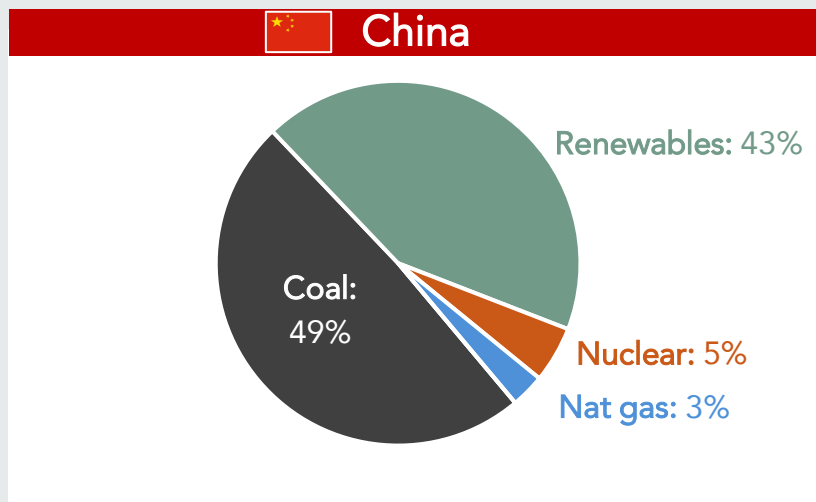
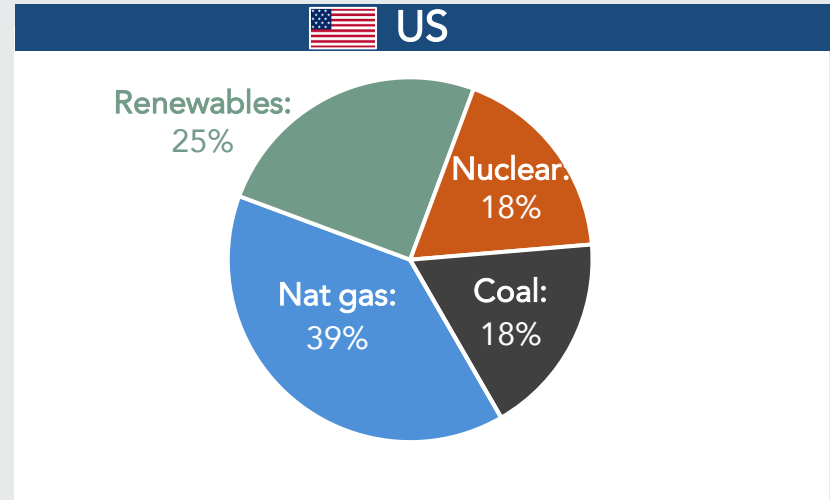
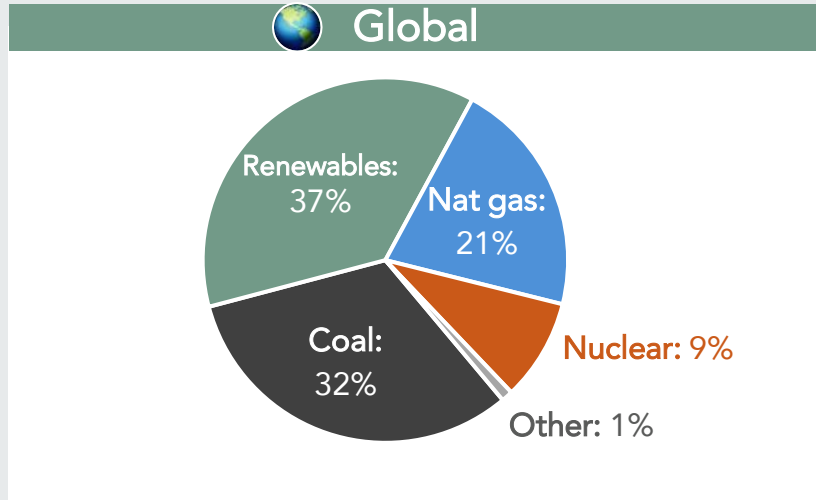
By 2030, AI-driven global electricity consumption could hit 1,500 TWh, comparable to the level of India's electricity consumption today.



Source: (1) IMF, "World Economic Outlook, April 2025 - Commodity Special Feature." IEA. US EIA. Data for countries as of 2023. 2030 and 2023 estimates are OPEC.

# Dramatic Variance in DC Energy Supply by Region

Data center power supply mix (2025)

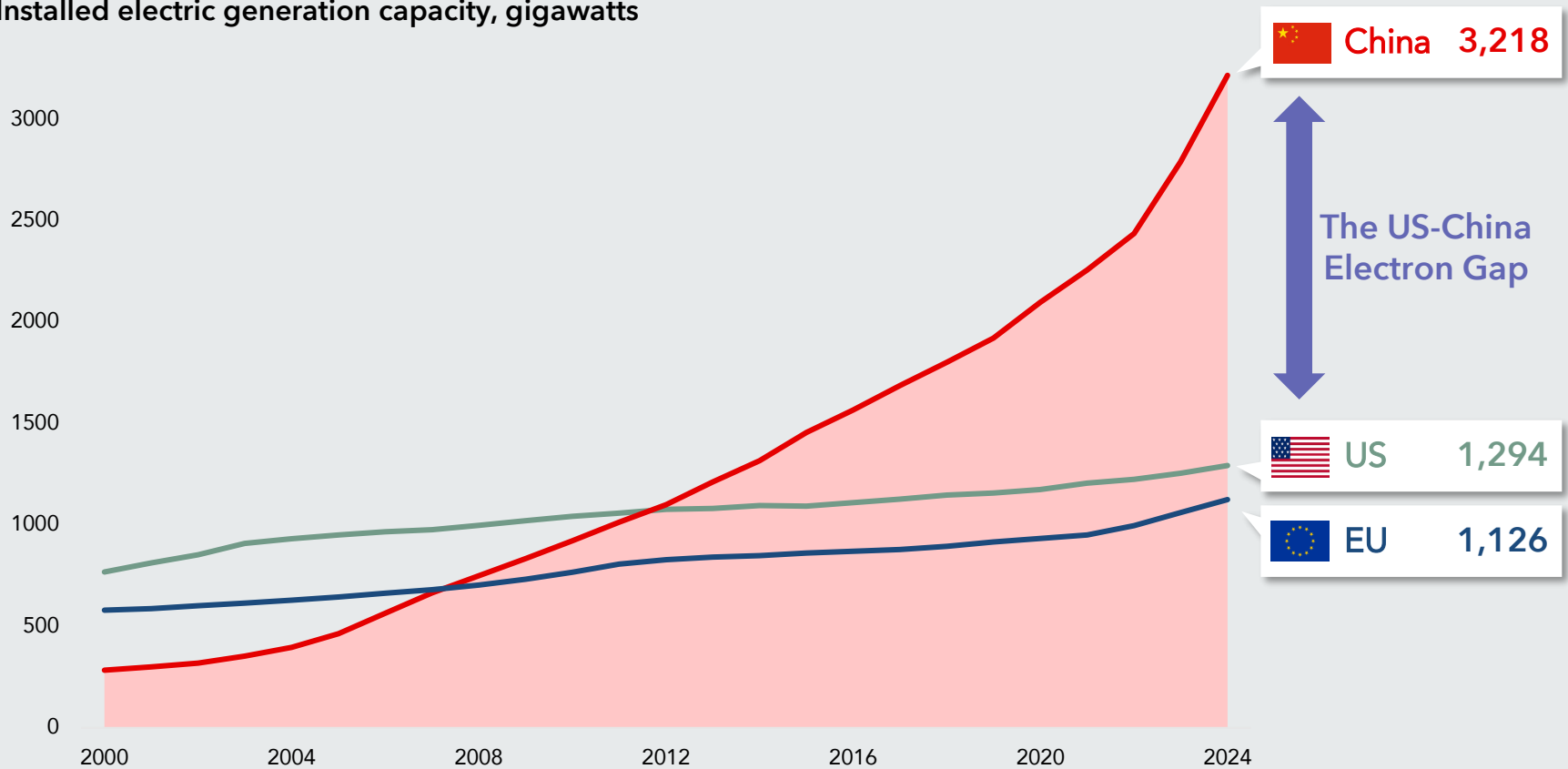


# The World's Largest Power Grid



Power and electricity has become a **core competitive advantage** for China in the AI arms race. Over the last 15 years, **China increased its power production more than the rest of the world combined**, and currently boasts **the world's largest power grid**. Last year, China generated **more than twice as much electricity as the US**. Looking ahead, China is expected to invest **more than \$500 billion on power grid projects through 2030**.

Installed electric generation capacity, gigawatts



Source: (1) WSJ, "China's AI Power Play: Cheap Electricity from World's Biggest Grid." EIA (US), National Bureau of Statistics (China). IEA. Federal Reserve.

# 8

## AI Data Centers



# Top 10 Countries by Data Centers

Global data centers

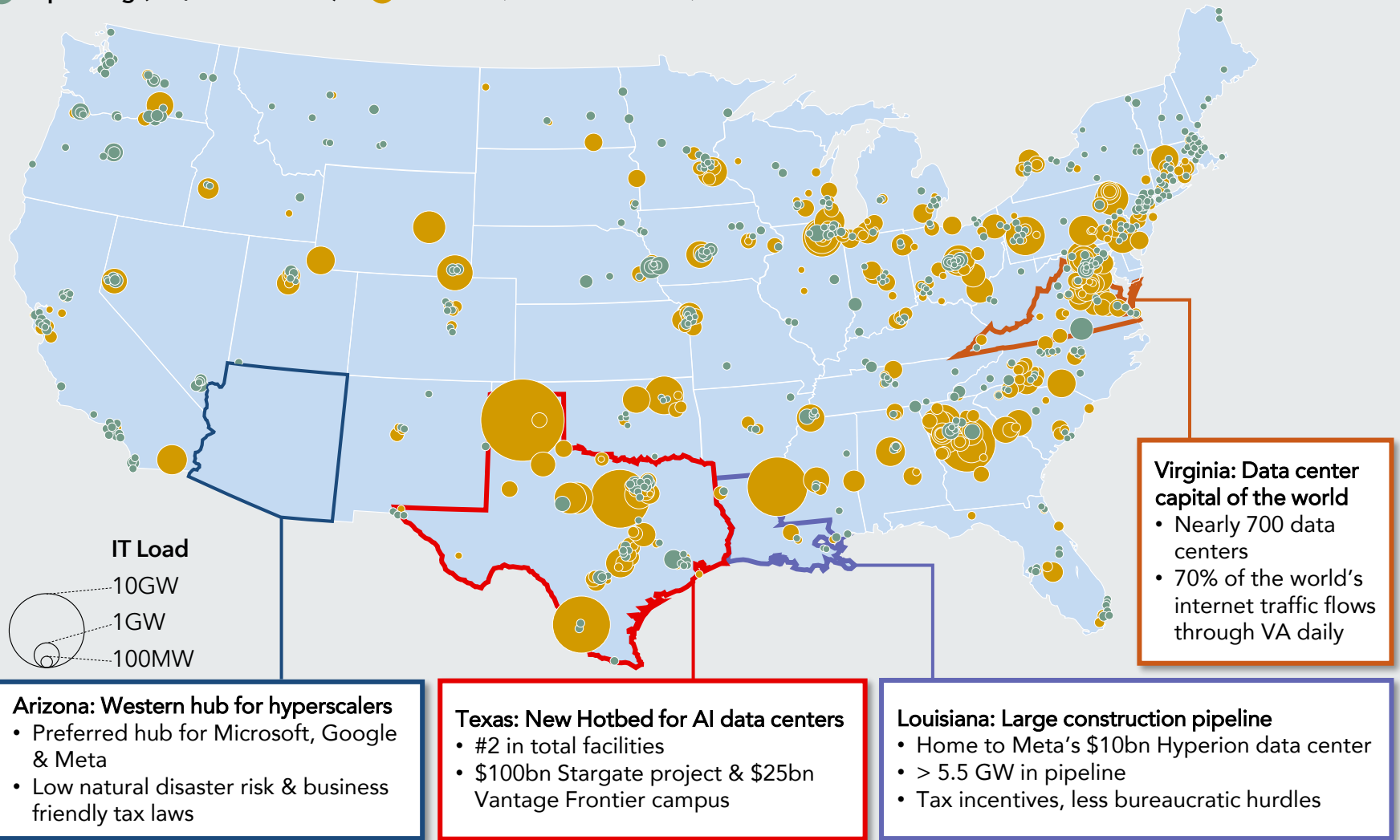


Source: Cloudscene. Data as of February 2026.

# Operating & Planned US Data Center Sites



● Operating (< 5,000 locations) ● Planned (< 3,000 locations)



Source: DC Byte. CMRA. FT, "The Power Crunch Threatening AI's Ambitions."

# Meta's Hyperion Data Center

## *Meta's Hyperion Data Center in Louisiana (superimposed over Manhattan)*

- 2,250 acres  
(2.7x Central Park)
- 5 GWh of power  
(mid-size American city)
- 30% increase to Louisiana  
energy demand
- Millions of GPUs  
(2030 compute power >  
RoW in 2020)



# Texas: New Hotbed for AI Data Centers

## Largest data centers in Texas

### #2 Advanced Energy Campus (Amarillo)

- 5,800 acres
- 11 GW of capacity
- Phased for multiple cluster GPUs

### #1 GW Ranch (Pecos County)

- 8,000+ acres, largest permitted data center campus in the US
- 7.65 GW
- Designed for 1 million+ GPUs

### #4 Vantage Frontier (Shackelford)

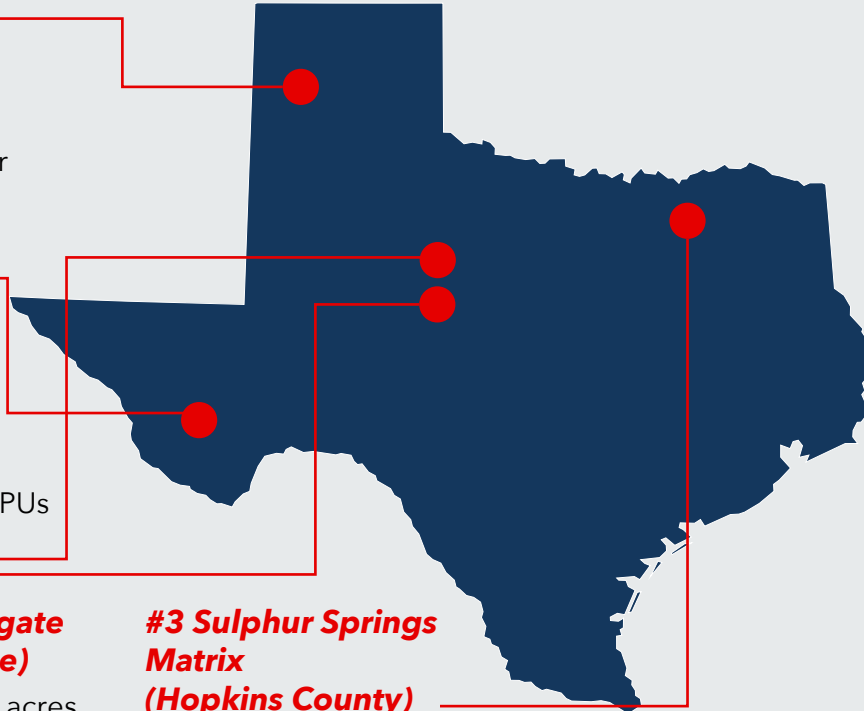
- 1,200 acres
- 1.4 GW
- High density Blackwell pods

### #5 Stargate (Abilene)

- 1,100 acres
- 1.2 GW
- 150k+ NVIDIA GB200s

### #3 Sulphur Springs Matrix (Hopkins County)

- 1,700 acres
- 3.0 GW
- ~450k GPUs



- Total number of data centers: **> 400**
- Total number of planned data centers: **>100**
- Active construction: **35 facilities**
- Current power capacity: **8.5 GW (grid)**
- Current power capacity: **57.9 GW (off-grid)**
- Planned power capacity additional: **~38.1 GW**
- Commercial construction spend: **\$90bn / year**

**"You can mark my words,  
in 36 months but probably  
closer to 30 months, the most  
economically compelling place  
to put AI will be in space."**

Elon Musk, Founder of Tesla, xAI and SpaceX,  
on the "Cheeky Pint" podcast with John Collison & Dwarkesh Patel  
(February 2026)

# Data Centers in Space?

Space-based data centers have evolved from a long-term research goal to a potentially achievable milestone inside five years. In January 2026, SpaceX filed an application with the FCC to launch up to one million satellites to facilitate orbital data centers. While the challenges remain formidable (high launch costs, unstable GPU environment), the daunting concept also promises several compelling advantages (i.e., obviates excessive demands on land & water, accessible solar energy, carbon neutral, low temperatures for natural cooling).

## Power & Energy

- ✓ Solar panels in space are 5x more efficient than on Earth
- ✓ Unlimited access to solar power (>95% capacity)
- ? Power-conversion challenge of delivering energy to high-density GPU racks in orbit
- ? Launch energy (rocket fuel)

## Infrastructure & Security

- ✓ Accelerated scalability (real estate, power, regulation)
- ✓ No local zoning / permitting
- ✓ Enhanced physical and digital security
- ? Limited maintenance capabilities
- ? Kessler effect (low orbit collisions)
- ? Potential radiation damage to GPUs

## Environment & Cooling

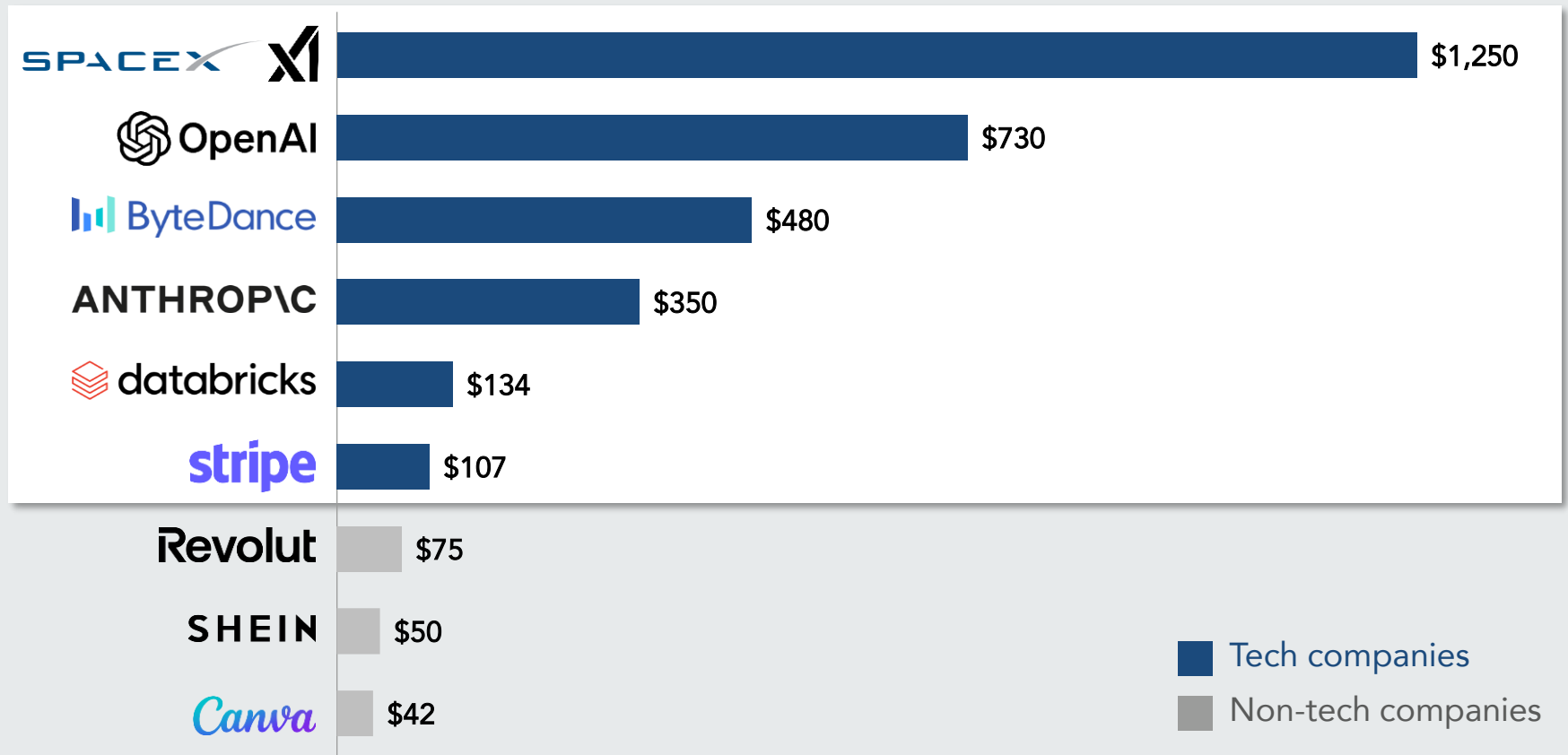
- ✓ Naturally cold temperature (-270°C)
- ✓ Reduced impact on water, electricity, land
- ✓ Carbon-neutral long term
- ? "Thermos" effect (vacuum constraint, no air to "blow" away heat)
- ? Launch pollution



# Tech & AI Dominate Private Company Valuations

Tech and AI-centric names dominate the global private company valuation league tables, both in absolute valuation and in how rapidly they have accreted value. Following their announced merger in Feb 2026, bank and deal documents indicate the combined valuation of SpaceX and xAI at approximately \$1.25 trillion, the highest private company valuation globally.

Company valuations, USD bn



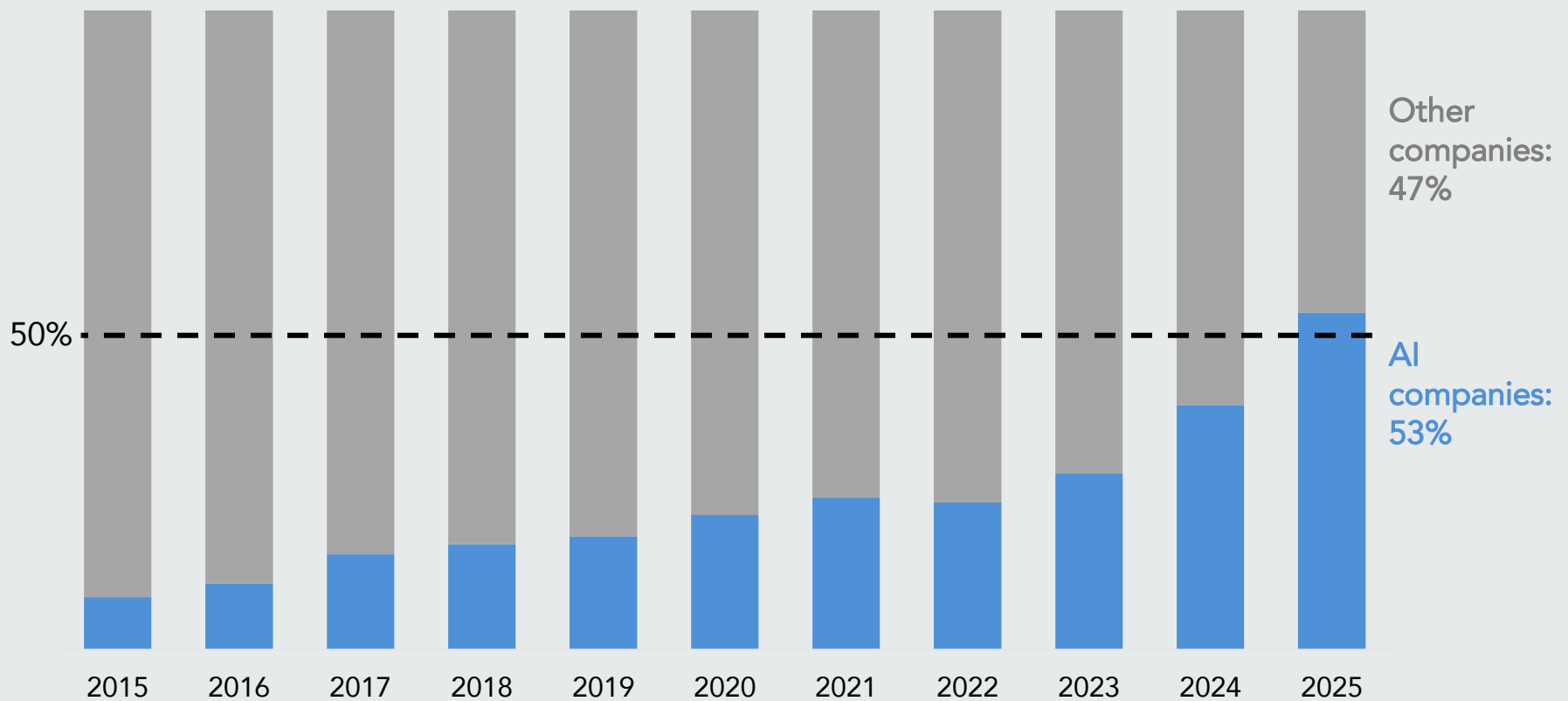
Source: (1) Yahoo Finance. Reuters. Bloomberg. Company announcements. Some valuations are based on initial announcements, final valuation may differ. Data as of Mar 2026.

# Majority of Global VC Investment is Now AI



New Pitchbook data shows AI startups are now attracting a majority of global VC dollars in 2025 at 53%. Comparable VC AI investment in the US was even more highly concentrated in 2025 at approximately 65% of deal values, up from 25% and 40% in 2023 and 2025, respectively.

Share of global VC deal value, by company type



Source: (1) Pitchbook, "Q4 2025 Global VC First Look." Data through December 31, 2025.

# 9

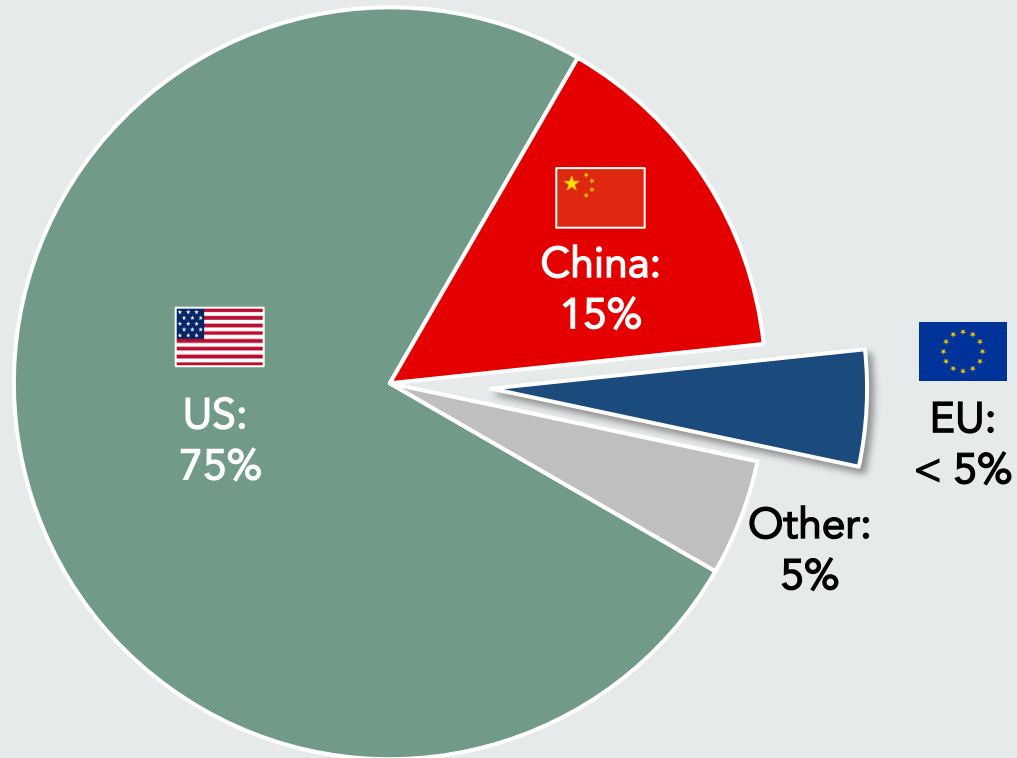
## GPUs & Computing Power



# Relative AI Computational Power

The United States currently controls about 75% of global frontier AI compute, a core competitive advantage in the global AI arms race. US innovation, led by the integration of advanced software and microchip hardware, has given it control of large GPU clusters and high-end AI supercomputing capacity.

Estimated AI computing power, by country



Source: (1) Epoch AI. Federal Reserve. Data shows 2025-26 estimates.

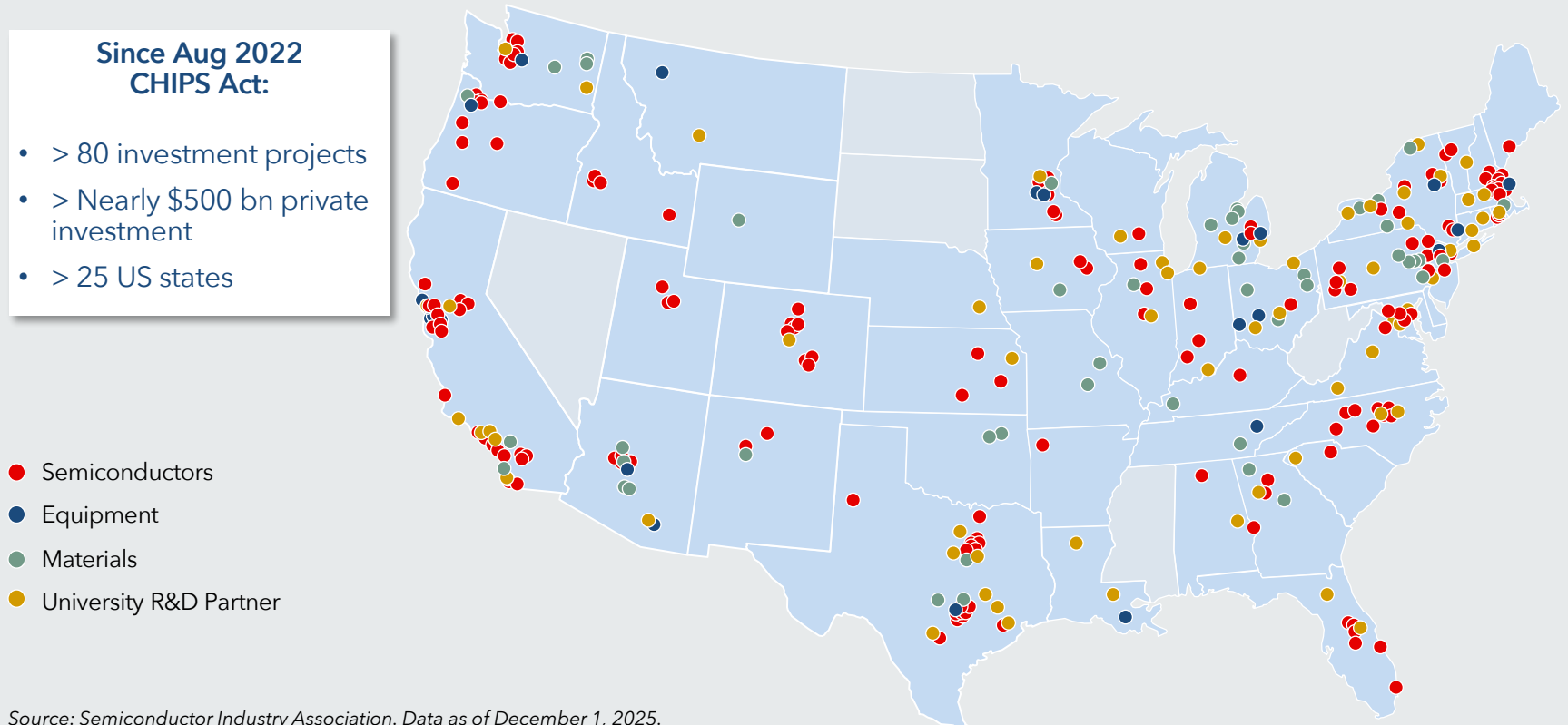
# TSMC's Arizona Semi Fab

- Largest direct investment in US history (\$165 - \$465 bn)
- 1,100 acres (3.5 million square feet)
- 600k wafers (150-200mm chips) per year
- 4.7 mm gallons of water (per day)
- 2.8 GWh of electricity (per day)
- 6 fabs, 2 packaging plants & 1 R&D center



# Rapid Expansion in US Semiconductor Manufacturing Since 2022

According to the Semiconductor Industry Association (SIA), **more than 80 new semiconductor-ecosystem projects across 25 US states with aggregate private investment close to \$500 billion** have been announced since passage of the CHIPS Act in August 2022. The scale of private investment includes materials, equipment and **manufacturing fabs (leading-edge logic, DRAM, analog, mixed-signal, specialized MEMS/sensors)**.



Source: Semiconductor Industry Association. Data as of December 1, 2025.

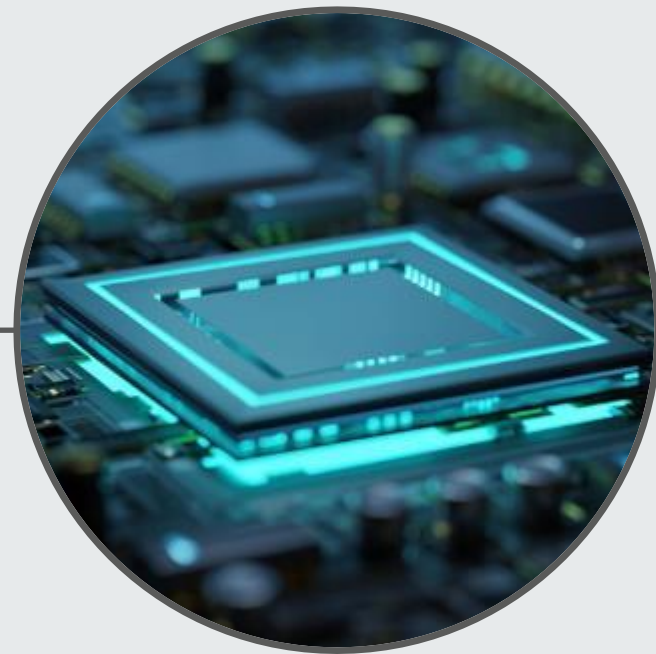
# China's Twin Technology Deficits



China has made extraordinary progress across a wide range of foundational technologies over the last decade, well establishing themselves as the world's second most formidable global technology power. However, more so than most other areas, China notably lags US and western innovation in two fundamental, core technology arenas: software and advanced microprocessors.



**Software**

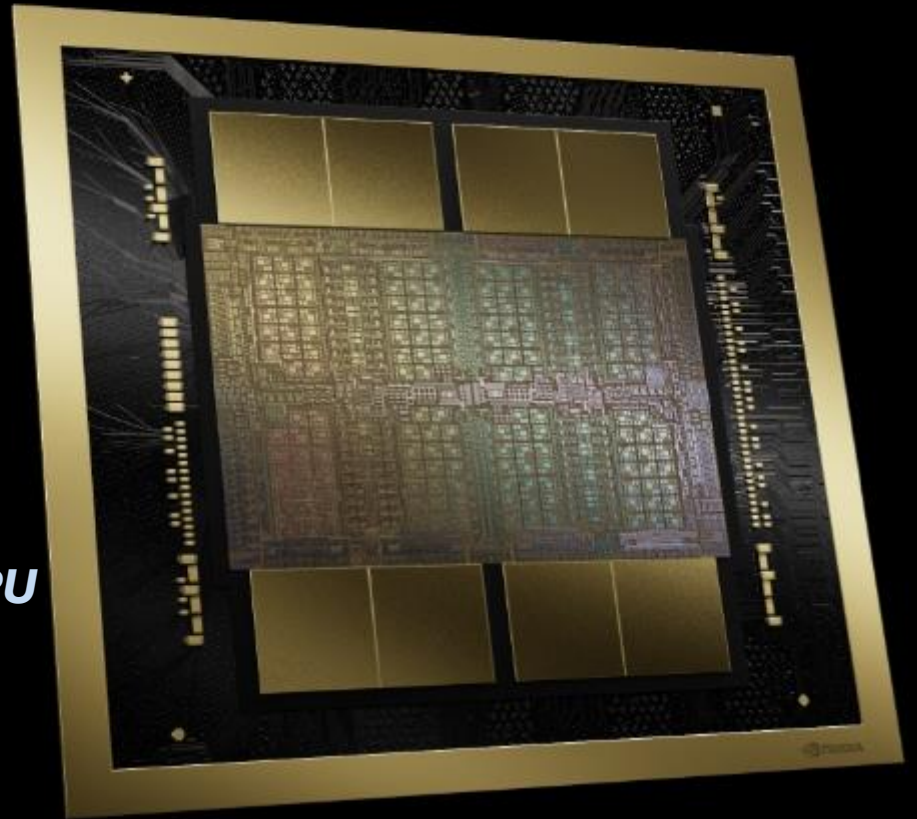


**Advanced Semiconductors**

# World's Most Complex Piece of Hardware

## ***NVIDIA's Blackwell Ultra B300 GPU***

- 208 billion transistors per GPU
- Complex software architecture overlay
- CUDA platform for parallel computing
- Dozens of integrated domain tools for programmers



# World's Most Complex Piece of Equipment

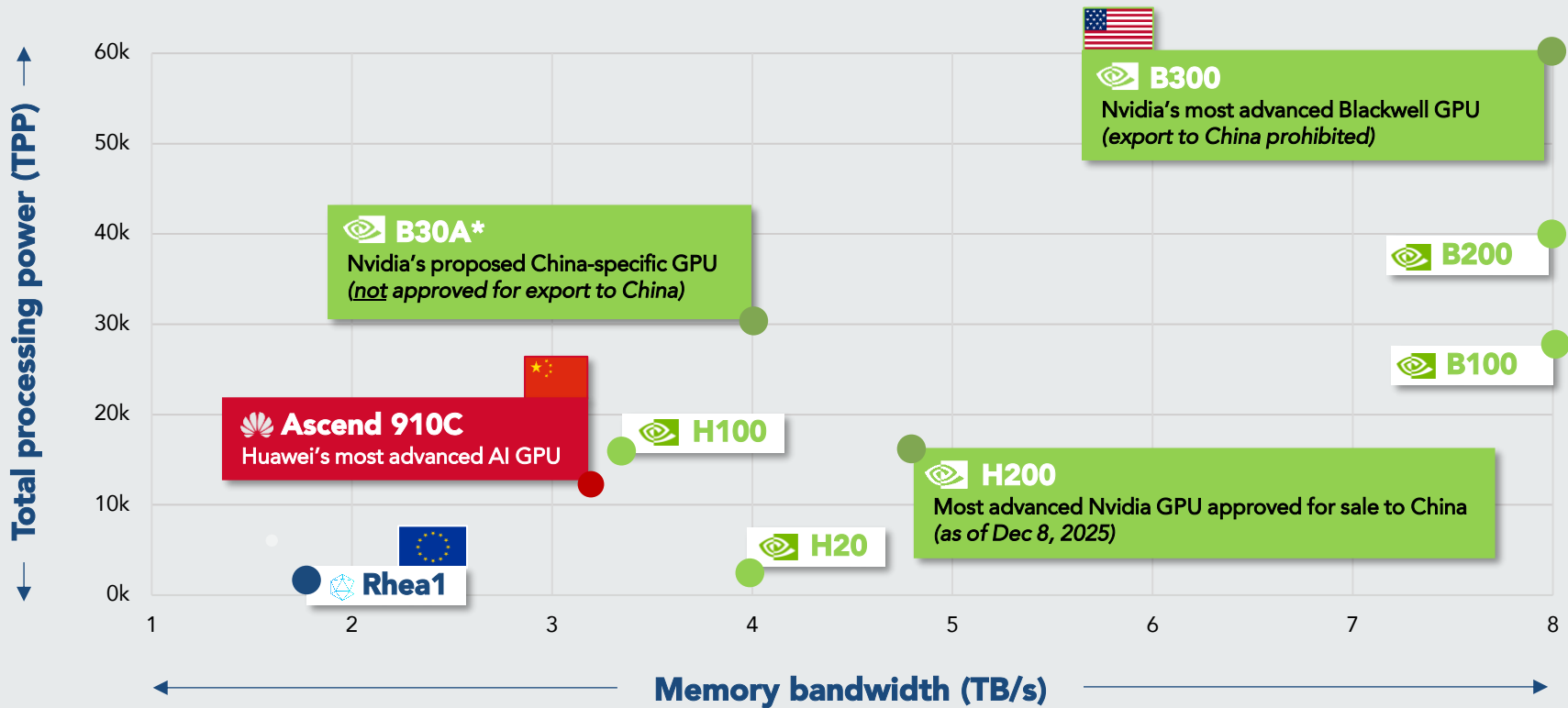
## *ASML's High-NA TWINSCAN EXE:5200B*

- Over 700,000 parts per machine
- 165 tons per machine
- No defect precision at 0.7 nm with atomic level stability
- > \$400 million sale price per machine

# GPU Design Leadership & Export Controls

The US Government has explicit restrictions on the sale of NVIDIA's most advanced **Blackwell generation B300 AI GPU** to China. However, on Dec 8, 2025, the US Government did approve exports of **NVIDIA's most advanced Hopper generation H200** chip, the most advanced US AI GPU approved for commercial use in China to date. While not nearly as high performing as the B300, NVIDIA's H200 is generally more capable than Huawei's most advanced chip, the **Ascend 910C**.

## Nvidia & Huawei & SiPearl AI chip capabilities

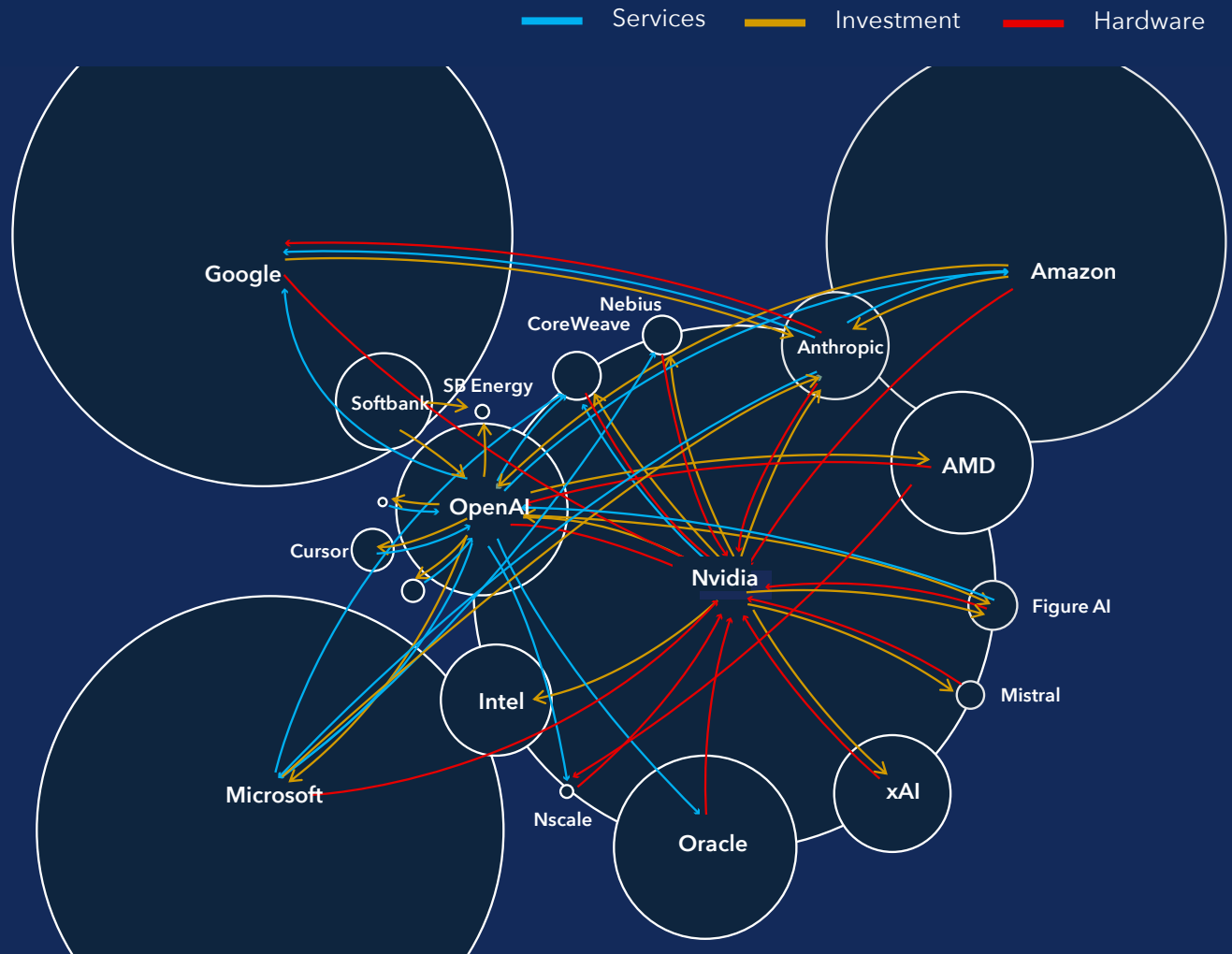


Source: (1) Bloomberg, "Nvidia's H200 Could Turbocharge China's AI Clout". IFP. Tom's Hardware. \*B30A performance is speculated based on public reporting. Some metrics are estimates based on reporting of components of the Rhea1. Actual names and specifications may be different than those listed above.

# Complex Web of AI Corporate Cross-Holdings

## NVIDIA is at the center of circular AI deals

Over the last few years, NVIDIA has sat at the epicenter of an extraordinary and complex web of AI investment and cross-holdings in a multi-trillion capex buildout powered substantially by NVIDIA hardware and software. Notably, NVIDIA has become the indispensable supplier, customer, partner, and in some cases competitor, of every major AI hyperscaler, as well as numerous other critically important players in the AI ecosystem.



Source: Bloomberg, "Nvidia CEO Says New OpenAI Investment May Be Largest Yet." (February 2026). Size of circle denotes company market cap.





# 10 AI Implementation & Disruption



# The Structural Evolution of AI Language Model Rankings

Over the last three years, there has been a notable structural shift in AI language model (LM) rankings across several dimensions. For one, China's DeepSeek has demonstrated that the **open-closed LM gap** has narrowed. **Task specialization** has also surpassed general rankings as the most competitive framework for analysis. Increasingly, specific capabilities matter more. A **geopolitical overlay** has also become a larger part of interpretative assessment, with consideration to training data source, privacy laws, security architecture and export controls.

## Historical ranking of top 10 AI language models

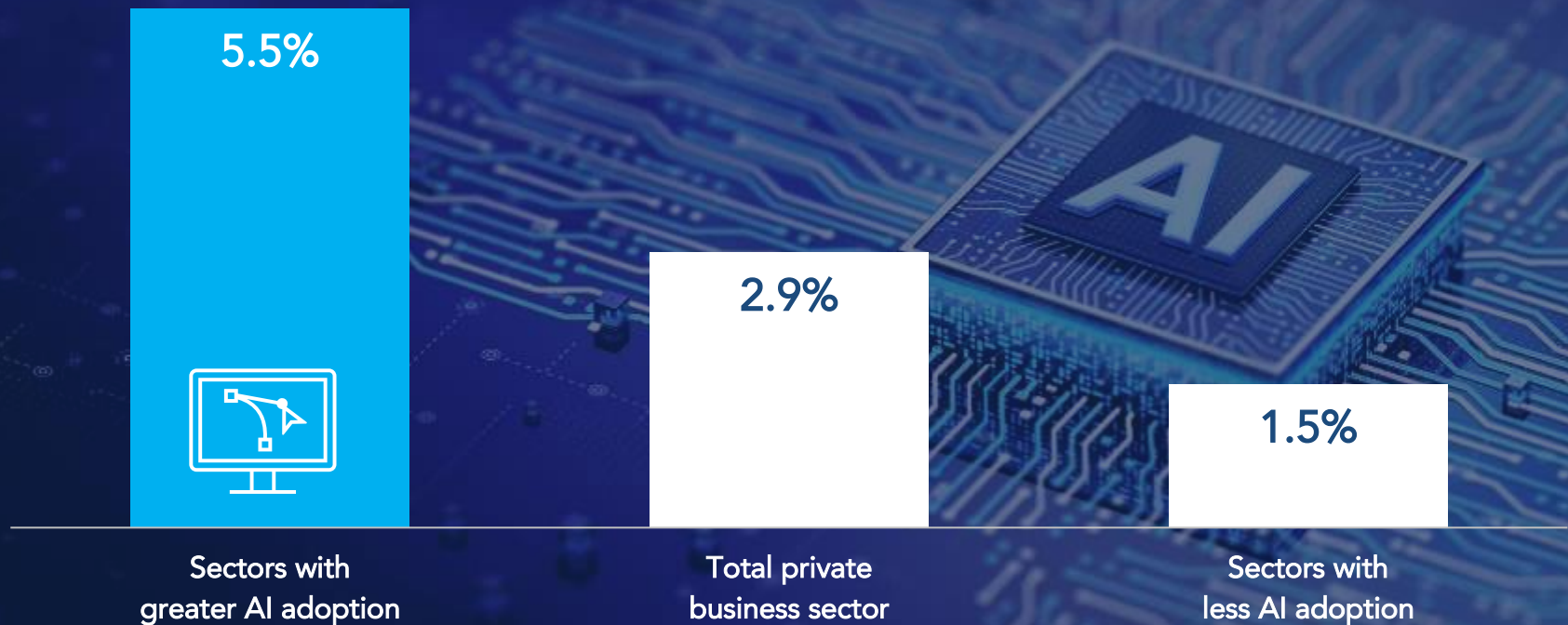
2024			2025			2026		
Rank	Language model		Rank	Language model		Rank	Language model	
1.		Chat GPT 4o	1.		Grok 3 (Chocolate)	1.		Claude Opus 4.6
2.		Gemini Advanced	2.		Gemini 2.0 Flash Thinking Exp	2.		Claude Opus 4.6 Thinking
3.		Gemini 1.5 Pro	3.		Gemini 2.0 Pro Exp	3.		Gemini 3.1 Pro Preview
4.		Gemini 1.5 Pro Preview	4.		ChatGPT 4o Latest	4.		Gemini 3 Pro
5.		Chat GPT 4 Turbo	5.		DeepSeek R1	5.		Dola Seed 2.0 Preview
6.		Chat GPT 4-1106 Preview	6.		Gemini 2.0 Flash	6.		Grok 4.1 Thinking
7.		Claude Opus 3	7.		Chat GPT o1	7.		Gemini 3 Flash
8.		Chat GPT 4-0125 Preview	8.		Chat GPT o1 Preview	8.		Claude Opus 4.5 Thinking
9.		Yi Large Preview	9.		Qwen 2.5 Max	9.		Claude Opus 4.5
10.		Gemini 1.5 Flash	10.		Chat GPT o3 Mini High	10.		Grok 4.1

Source: (1) Arena.ai. Data as of February 20, 2026. 2024 is earliest available ranking (June 2024). 2025 and 2026 rankings are February.

# High AI Adoption Sectors Have Higher Productivity

Research and data (industry, academic, Fed) increasingly show that sectors with higher AI adoption tend to exhibit faster productivity growth, frequently J-shaped over time.

Labor productivity, % change

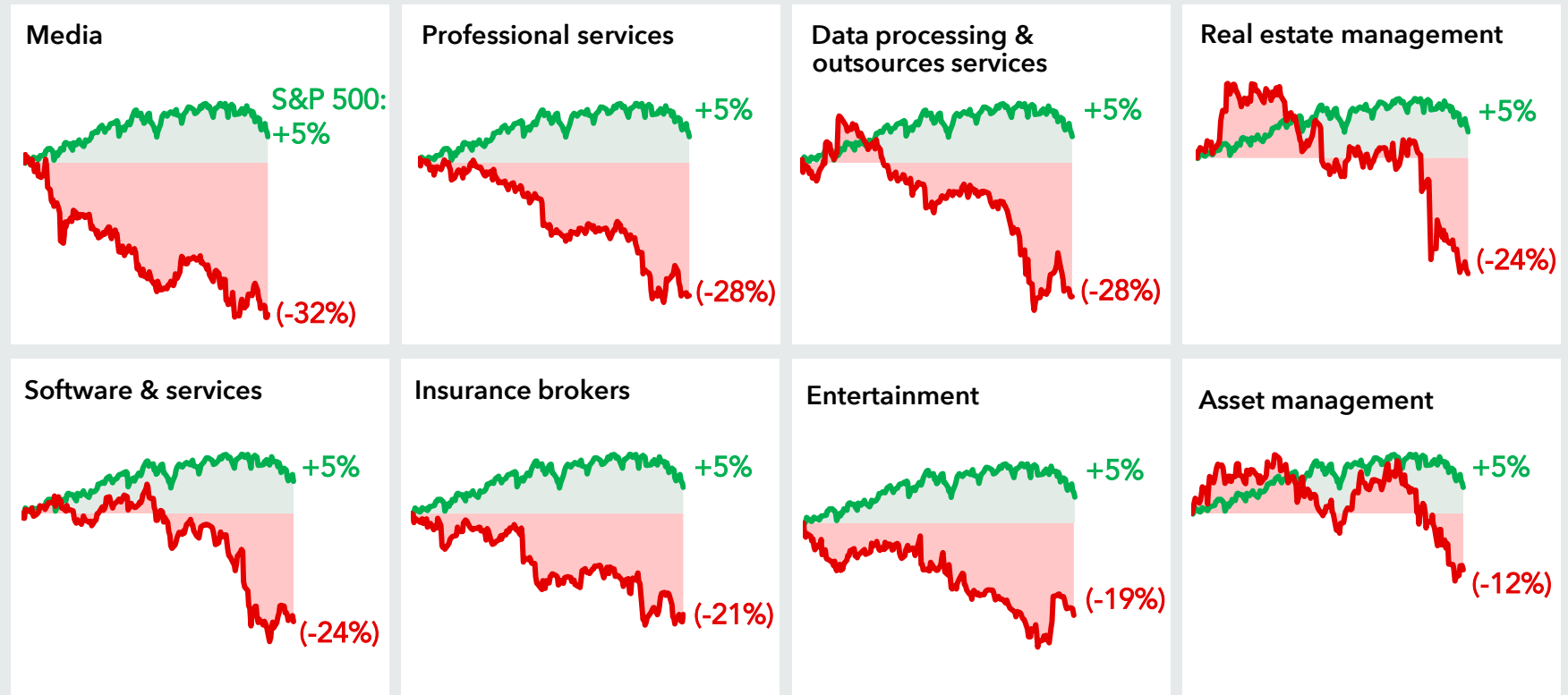


Source: (1) BLS. Data is latest available from 2024. Sectors with greater AI adoption include information, finance & insurance, educational services, and professional & technical services. Labor productivity is average of industry labor productivities.

# AI Tools Disrupting Business Models

After several years of building out AI infrastructure (data centers, power grid, computing equipment), the adoption and implementation phase of the AI buildout has accelerated in early 2026. The rapid and visible rollout of disruptive, AI-automation tools has precipitated a **“sell-first, think-later”** mentality also known as the **“AI fear trade”** as investors reprice business models deemed to be either labor-intensive or vulnerable to disintermediation. The range of specific concerns include new product shocks, fee and margin compression, automation and contagion risk.

## S&P 500 vs. S&P 500 sector performance since Jul 1, 2025











































Source: (1-8) Bloomberg. Data as of March 20, 2026.

# Highest-Ranked AI Language Models Globally



The highest-ranked AI large language models globally cluster around a small group of companies in a hierarchy that evolves quickly over time. While performance on raw benchmarks may be similar, comparisons diverge when analyzed through specific metrics such as reasoning, speed, openness and cost.

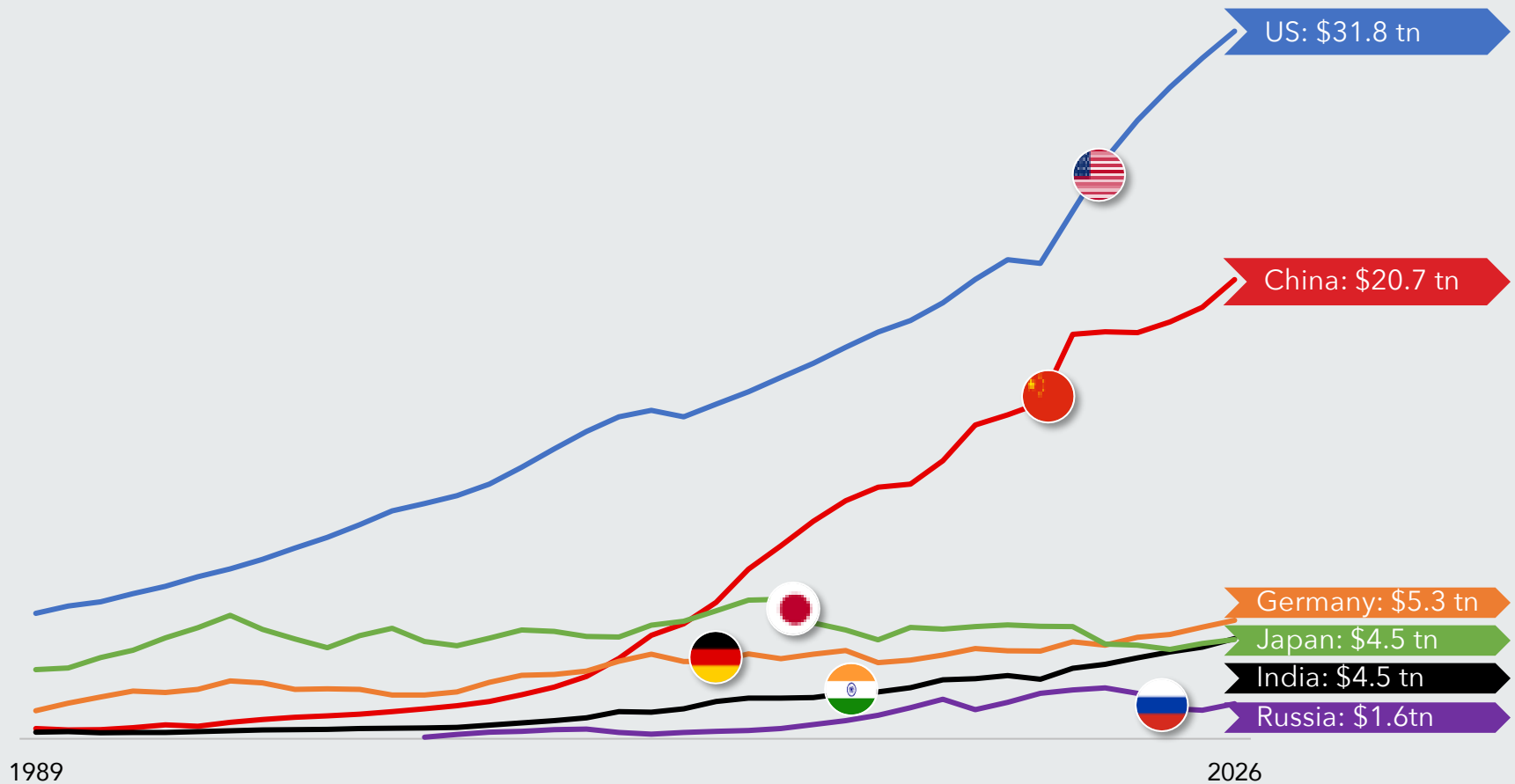
## LMarena global ranking of top 40 AI language models

Rank	Language model	Rank	Language model
1.	 Claude Opus 4.6	21.	 Qwen 3.5 397b-a17b
2.	 Claude Opus 4.6 Thinking	22.	 Claude Opus 4.1
3.	 Gemini 3.1 Pro Preview	23.	 Chat GPT 4.5 Preview
4.	 Gemini 3 Pro	24.	 Chat GPT 4o
5.	 Dola Seed 2.0 Preview	25.	 GLM 4.7
6.	 Grok 4.1 Thinking	26.	 Chat GPT 5.2 High
7.	 Gemini 3 Flash	27.	 Kimi K2.5 – Instant
8.	 Claude Opus 4.5 Thinking	28.	 Chat GPT 5.2
9.	 Claude Opus 4.5	29.	 Chat GPT 5.1
10.	 Grok 4.1	30.	 Chat GPT 5 High
11.	 Gemini 3 Flash Thinking	31.	 Qwen 3 Max Preview
12.	 Chat GPT 5.1 High	32.	 Chat GPT o3
13.	 GLM 5	33.	 Grok 4.1 Fast Reasoning
14.	 Ernie 5.0 – 0110	34.	 Kimi K2 Thinking Turbo
15.	 Claude Sonnet 4.5	35.	 Chat GPT 5 Chat
16.	 Kimi K2.5 Thinking	36.	 GLM 4.6
17.	 Claude Sonnet 4.5 – Thinking	37.	 Qwen 3 Max
18.	 Gemini 2.5 Pro	38.	 Claude Opus 4 Thinking
19.	 Ernie 5.0 Preview – 1203	39.	 Deepseek v3.2 – Exp Thinking
20.	 Claude Opus 4.1 Thinking	40.	 Deepseek v3.2 – Exp

Source: (1) Arena.ai. Data as of February 19, 2026. Ranking is based on user-submitted prompts and relative performance of language models. Based on over 250 million real conversations and over 3.5 million head-to-head votes.

# AI & Innovation Driving Outsized GDP Growth

Nominal GDP, current USD



Source: (1) IMF. Data as of January 2026. 2026 GDP is an estimate.



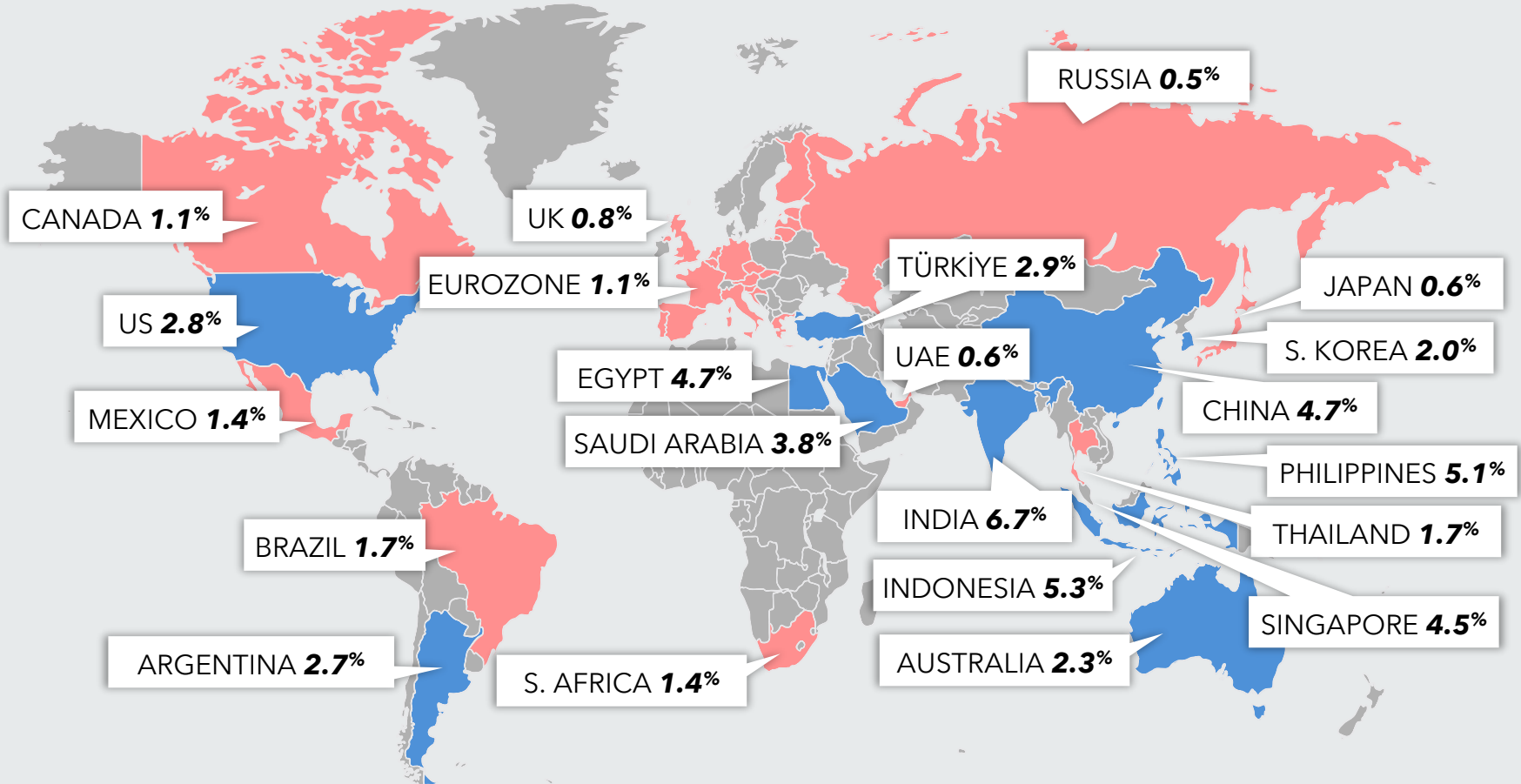
# Appendix



# Resilient Though Subdued Global Growth in 2026



2026 GDP growth, y/y














Source: (1) Oxford Economics. Data as of March 16, 2026.

0% – 1.9% 2% +

# 2026 Global Economic Forecasts

GDP growth forecasts, y/y

Region	2025E	2026E	
<b>North America</b>			
 US	2.2%	2.8%	↑
 Mexico	0.8%	1.4%	↑
 Canada	1.7%	1.1%	↓
<b>Eurozone</b>			
Spain	2.8%	2.5%	↓
Netherlands	1.9%	1.5%	↓
Finland	0.2%	1.0%	↑
France	0.9%	0.9%	—
Italy	0.7%	0.7%	—
Germany	0.4%	0.6%	↑
Ireland	12.4%	(-0.4%)	↓
<b>Other Europe</b>			
Poland	3.6%	3.6%	↑
Türkiye	3.6%	2.9%	↓
Czech Republic	2.6%	2.4%	↓
Sweden	1.8%	2.3%	↑
Norway	1.2%	1.3%	↑
Switzerland	1.3%	0.9%	↓
 UK	1.3%	0.8%	↓
 Russia	1.0%	0.5%	↓
Denmark	2.9%	0.3%	↓

Region	2025E	2026E	
<b>APAC</b>			
 India	7.5%	6.7%	↓
Philippines	4.4%	5.1%	↑
Indonesia	5.1%	5.3%	↑
 China	5.0%	4.7%	↓
Singapore	5.0%	4.5%	↓
 Australia	2.0%	2.3%	↑
South Korea	0.9%	2.0%	↑
New Zealand	0.7%	2.0%	↑
Thailand	2.4%	1.7%	↓
 Japan	1.1%	0.6%	↓
<b>LatAm</b>			
Colombia	2.6%	3.2%	↑
Argentina	4.4%	2.7%	↓
 Brazil	2.4%	2.3%	↓
Brazil	2.6%	1.7%	↓
<b>MENA</b>			
Egypt	5.1%	4.7%	↓
Sub-Saharan Africa	4.0%	4.0%	↓
Saudi Arabia	4.6%	3.8%	↓
 Kuwait	2.1%	2.4%	↑
Oman	2.1%	2.2%	↑
South Africa	1.3%	1.4%	↑
UAE	5.5%	0.6%	↓
Qatar	3.0%	(-1.3%)	↓

Source: (1) Oxford Economics. Data as of March 16, 2026.

# 2026 Global Currency Forecasts

Currency pair	Spot (Mar 18)	Q1 2026	Q2 2026	Q3 2026	Q4 2026
EUR / USD	1.15	1.15	1.18	1.21	1.23
GBP / USD	1.33	1.31	1.33	1.36	1.37
USD / JPY	160	154	152	150	148
USD / CNY	6.89	6.85	6.85	6.83	6.80
AUD / USD	0.70	0.70	0.71	0.72	0.73
NZD / USD	0.58	0.59	0.60	0.61	0.62
USD / CAD	1.37	1.37	1.36	1.35	1.34
USD / NOK	9.60	9.57	9.49	9.42	9.35
USD / SEK	9.40	9.39	9.07	8.76	8.46
USD / CHF	0.79	0.78	0.78	0.76	0.75
USD / MXN	17.86	17.50	17.25	17.00	16.75
USD / BRL	5.27	5.30	5.15	5.25	5.25
USD / CLP	917	890	870	850	830

Source: (1) MUFG Foreign Exchange Monthly - March 2026. (Derek Halpenny). Bloomberg.

# 2026 MUFG Global Rates Forecasts

	Spot (Mar 18)	Q1 2026		Q2 2026		Q3 2026		Q4 2026	
		MUFG	Consensus	MUFG	Consensus	MUFG	Consensus	MUFG	Consensus
Fed Funds	3.75%	3.75%	3.74%	3.75%	3.61%	3.25%	3.38%	3.00%	3.26%
2 yr UST	3.78%	3.50%	3.48%	3.50%	3.41%	3.13%	3.34%	3.00%	3.30%
5 yr UST	3.88%	3.75%	3.72%	3.75%	3.68%	3.38%	3.64%	3.25%	3.63%
<b>10 yr UST</b>	4.27%	<b>4.13%</b>	<b>4.17%</b>	<b>4.00%</b>	<b>4.14%</b>	<b>3.88%</b>	<b>4.12%</b>	<b>3.75%</b>	<b>4.11%</b>
30 yr UST	4.88%	4.63%	4.78%	4.75%	4.75%	4.38%	4.71%	4.25%	4.68%

Source: (1) MUFG Global Macro Research (George Goncalves). Bloomberg. Data as of March 18, 2026. Fed funds is upper bound.

# 2026 Commodities Forecasts

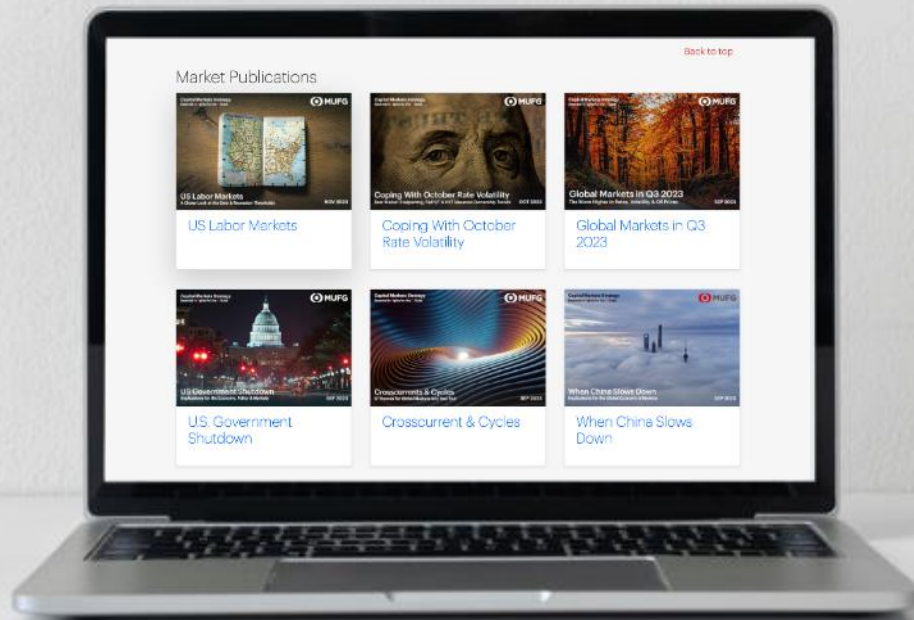
	Spot (Mar 18)	Q1 2026	Q2 2026	Q3 2026	Q4 2026
WTI	\$96	\$61	\$61	\$61	\$60
Brent	\$111	\$65	\$65	\$65	\$66
US Nat Gas	\$3.07	\$4.00	\$3.60	\$3.77	\$4.10
Euro Nat Gas	€55	€36	€32	€32	€30

Source: (1) Bloomberg. Data as of March 18, 2026. Forecasts are Bloomberg Consensus.



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## **Role**

Tom Joyce is a Managing Director and Capital Markets Strategist within MUFG's global capital markets and investment banking business. Based in New York, Tom heads a team that creates customized analytical content for multi-national S&P 500 companies. His team provides in depth analysis on the impact of economic, political, public policy and regulatory dynamics on the US credit, foreign exchange, rates and commodities markets.

## **Experience**

Tom has over 30 years of Investment Banking experience in New York, London, Hong Kong, and San Francisco. Tom created and built the Capital Markets Strategy role, advising corporate C-Suite executives (Boards, CEOs, CFOs, and Treasurers) on the pervasive macro forces driving markets. Tom also presents at dozens of corporate events each year including Board meetings, CEO ExCo sessions, CFO and Treasury off-sites, corporate leadership events and conferences.

## **Education**

Tom's educational background includes a year of study at Oxford University from 1991 - 1992, a Bachelor of Arts in Political Science from Holy Cross College in 1993, and a MBA from Kellogg Business School, Northwestern University in 2000.

## **Personal**

Tom resides in New Canaan, CT with his wife and four sons, where he previously served on the Board of Trustees of the New Canaan Library. Tom also serves on the President's Council of Holy Cross College.

# About the Authors



## Stephanie Kendal

Vice President  
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### Role

Stephanie Kendal is a Vice President in MUFG's Capital Markets Strategy group within the global capital markets and investment banking business. The team provides market based content for corporate clients to assist in strategic decision making. Focus areas include the impact of economic, political, public policy and regulatory dynamics on the US credit, foreign exchange, rates and commodities markets.

### Experience

Stephanie has spent nearly eight years as a Capital Markets Strategist. She is an active member of the University of Michigan recruiting team and is focused on the diversity recruiting effort at MUFG. Stephanie is also a part of MUFG's DEI, Culture & Philanthropy (DCP) Council.

### Education

Stephanie graduated with honors from the University of Michigan's Ross School of Business with a BBA .

### Personal

Stephanie is involved in NYC's iMentor program, mentoring high school students with their journey to college graduation. She also volunteers at Experience Camps, a free summer camp program for grieving children, as the associate program director.



## Angela Sun

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### Role

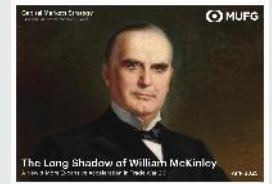
Angela Sun is an Associate in MUFG's Capital Markets Strategy group within the global capital markets and investment banking business. The team provides market based content for corporate clients to assist in strategic decision making. Focus areas include the impact of economic, political, public policy and regulatory dynamics on the US credit, foreign exchange, rates and commodities markets.

### Experience

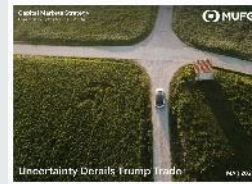
Angela previously interned at MUFG working in Capital Markets within the Equity Capital Markets and Leveraged Finance divisions. She is also an active member of the Carnegie Mellon University recruiting team.

### Education

Angela graduated with honors from Carnegie Mellon University's Tepper School of Business with a BS in Business Administration with an additional major in Statistics and a minor in Media Design. She was a member of Alpha Kappa Psi business fraternity and the Undergraduate Entrepreneurship Association.



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