



Global Economic Viewpoint

AI Matters #1: The tip of the AI-iceberg?

19 March 2026 | Economics | Global

Key takeaways

- Aggressive AI capex plans should continue to boost US & global growth, adding 0.4pp to US GDP and benefitting key suppliers.
- A positive demand backdrop supports the investment plans but there are bottlenecks that could slow the pace of investment.
- AI has limited impact on near-term monetary policy. Over time it could make for difficult policy trade-offs for central banks

Abbreviations

AI: Artificial Intelligence

ROIC: Return on Invested Capital

LNG: Liquefied natural gas

Launching our AI macro series: first stop - investment

As AI disruption ripples through the global economy, in this first report of our new **AI Matters** series, we examine the **investment cycle**: Can momentum endure? What are the implications for US and global growth? Next, we will turn to the **labour market**: Jobs displacement or augmentation? Unemployment risk or skills challenge? Then, we will assess **productivity** potential: Incremental or step-change? When and how much? As we expand our series, we will map a **country-by-country leaderboard** - a few unexpected contenders may surprise as AI diffusion spreads over time and borders.

AI capex supports US and global growth

Spending plans suggest AI investment will keep contributing to US and global growth. We expect it to add 0.4pp to US growth this year, supporting our bullish outlook, before the contribution fades in 2027. Hyperscalers' capex plans pose upside risks. AI investment should also be a tailwind for Chinese growth, albeit a smaller one (<0.1pp). Meanwhile, AI suppliers like Taiwan, Mexico and Korea should be the biggest beneficiaries of US and, to a lesser extent, Chinese investment. Case in point: before the Iran war, we raised our Taiwan 2026E GDP forecast by 3.5pp to 8% on AI, and we remain comfortable with this unless geopolitical tensions are more protracted.

Capex plans are feasible but there are speedbumps

The investment projections are remarkable, and investors have expressed some scepticism over the ROIC. But we argue that they are feasible. AI usage remains low: in the US, only 8% report frequent use. Development of models, which is energy intensive, remains a focus. Competition will fuel aggressive and inelastic investment in the near-term. There are also few signs of overinvestment, with data center vacancy rates around 2%. That said, the list of speedbumps-LNG shortages, higher shipping costs, power generation, construction labor, financing needs, etc.-is growing. These shouldn't stop capex, but they should raise the cost and could limit the boost to growth.

AI not a big factor in near-term monetary policy

We do not expect AI to be a material factor in near-term monetary policy. It is likely to be modestly inflationary due to higher utility prices and a positive wealth effect, but not enough to warrant a shift in policy outlook. Yes, AI could be disinflationary in the long run, but it will probably also raise neutral interest rates by boosting productivity. This could make for difficult policy trade-offs for global central banks.

US-China AI race: one goal, two very different approaches

The US and China are the two countries competing most aggressively in the AI development race. The US leads in investment, innovation, and frontier models (the most advanced). Meanwhile, China benefits from a coordinated state-led model, cheaper energy, and dominance in manufacturing capabilities and critical minerals. Both approaches offer advantages: US dynamism fosters innovation depth, while China's central planning accelerates scaling and infrastructure deployment.



- **US leads in AI investment:** US private investment in AI was \$109bn in 2024, more than 10x China's investment and 5x Europe's [1].
- **Hyperscalers are spending aggressively:** US hyperscaler capex is projected to reach c.2.1% of GDP in 2026 - nearly 16% of non-residential investment [2].
- **US spends, others benefit:** Our Asia economics team recently raised its Taiwan 2026 GDP forecast by 3.5pp to 8% on AI demand [3].
- **US lags in AI usage:** AI usage in the US ranks low vs advanced economies. Generative AI usage in the working age population is estimated to be at 28% in the US. Global leaders are: the UAE and Singapore, at over 60%; Norway, Ireland, France, Spain, New Zealand, at over 40% [4].
- **Physical AI:** The first wave of AI was Generative - creating content and chatbots. The next is Physical - AI systems that interact with, manipulate and operate in the real world (vehicles, robots and drones) [5]. Case in point: the "robot population" could grow from 20k in 2025 to 10m by 2035 [6]; >3m deliveries have been made with autonomous drones [7]; 158 robotaxi pilots/tests underway globally, with 42% in the US [8].
- **US v China:** The US controls c.74% of global high-end AI compute, China 14% and the EU 4.8% [9]. China's industrial power is ~30-60% cheaper and it dominates >60% of processed critical minerals [2]; >80% of humanoid robots were made in China in 2025 [10].
- **No clear signs of overbuild:** US colocation data-center vacancy rates were around ~2% last year, with robust pre-leasing [11].
- **Electricity demand surge:** Data center electricity demand is currently around 5% in the US and could nearly double over the next two years [12].
- **Regulatory risk:** There are 36 gubernatorial elections this year. AI electricity usage and the impact on utility prices will likely be a key campaign issue.
- **Iran war could cause supply chain kinks:** Taiwan and Korea, top chip producers, rely on the Middle East for nearly 70% of their crude oil imports, and 20-25% of LNG imports. [3].

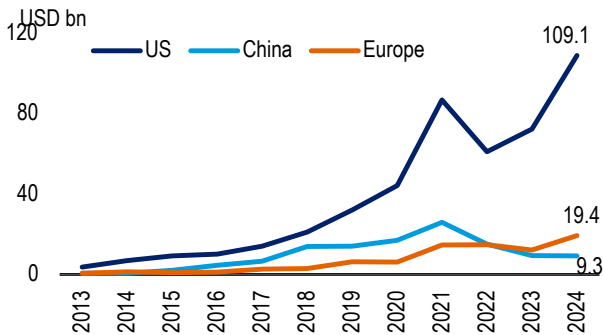
Sources: [1] Stanford University's Human-Centered Artificial Intelligence; [2] BofA Global Research, Equity Research; [3] BofA Global Research, Asia Economics; [4] Microsoft AI Economy Institute; [5] BofA Global Research, Thematic Research; [6] BofA Global Research, Greater China Industrials Year Ahead; [7] Zipline, Wing, Manna; [8] BNEF; [9] Epoch AI; [10] Counterpoint Research; [11] Jones Lang Lasalle. [12] Mytton & Ashtine, Schneider Energy Management Research Center, Berkeley Lab, McKinsey and Co.

Our AI series kicks off with investment

AI investment should keep driving global growth in 2026. Its contribution to US growth - where private investment dwarfs that of Europe and China - is set to rise from 0.3pp in 2025 to 0.4pp in 2026, with upside risk given this sits below hyperscaler capex plans. Meanwhile, China is snapping at the US's heels. Its AI investment should provide a smaller (<0.1pp) but still positive boost to its economic growth this year. The AI race between the two countries is compelling. China may have earlier potential for an economy-wide productivity impact thanks to co-ordinated state-led deployment, while the US's deep innovation could mean it ultimately stays out in front. In the near term, though, the greatest beneficiaries of AI spending will be the capex suppliers, like Taiwan, Mexico and Korea.

Exhibit 1: US private investment in AI is orders of magnitudes higher than China and Europe

Private investment in AI (US\$bn)

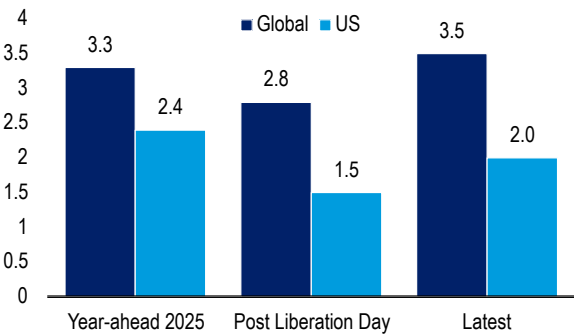


Source: NetBase Quid, Stanford

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Exhibit 2: Global growth topped our expectations in 2025

2025 real GDP estimates (% y/y)



Source: BofA Global Research

Note: the latest estimate for the US is based on actual data.

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AI capex supported 2025 growth...

Growth surprised to the upside last year despite the US trade policy uncertainty shock. Indeed, the global economy likely grew by 3.6% in 2025 (we are still awaiting 4Q data for many countries). US growth came in at 2.0%, despite a drag from the government shutdown in 4Q (Exhibit 2).

AI was a major reason for the upside surprise. It contributed to both US and global growth via 1) driving growth in equities, which fueled strong consumption despite slowing job growth, especially in the US; and 2) AI-related capex, which offset weakness in other sectors from fading fiscal stimulus, elevated borrowing costs, rising input costs and a spike in uncertainty. In this piece, we focus on the AI investment cycle - we will return to the wealth effect in a future note.

A quick look back at 2025 through the eyes of the US

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To gauge how significant AI investment was for growth in 2025, we focus on the US for three reasons: 1) it is the world's leading AI investor and development hub, 2) the detailed data allow us to better measure AI's role in the economy, and 3) investment by the US has implications for global growth due to its dependence on external suppliers.

AI-related capex surged in 2025

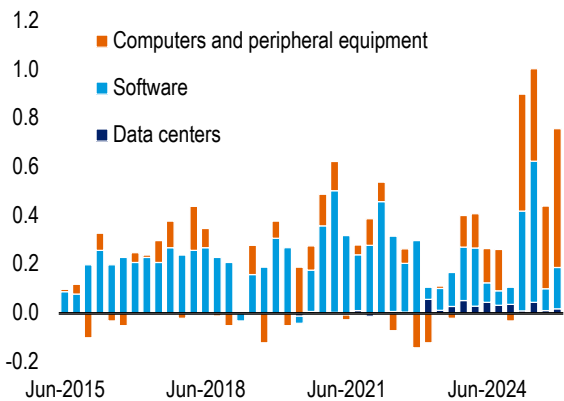
Contributions to GDP growth from investment in AI-related categories - data centers, computers and peripheral equipment, and software - averaged about 0.8pp in 2025 (Exhibit 3). Research and development also picked up significantly in 2Q and 3Q, which could be connected to AI as well. Therefore, it's plausible that non-residential investment would have contracted were it not for AI-related spending.

AI investment is less of a factor for US growth after accounting for imports

Simply looking at the investment contributions of these series, however, overestimates the role AI capex played in the US economy and understates the role that US AI demand played in global economies. This is because much of the equipment and materials used to construct AI equipment is imported. Indeed, imports of computer and peripheral equipment spiked last year. Granted, some of this may have been front-loading ahead of tariffs as imports of these products rose by 0.2% of GDP in 1Q 25 to 0.7%. However, this is unlikely to be the full story since imports of these goods remained elevated throughout 2025.

Exhibit 3: AI and technology-related investment was a positive source of US growth in 2025

Contribution to % q/q GDP growth by category

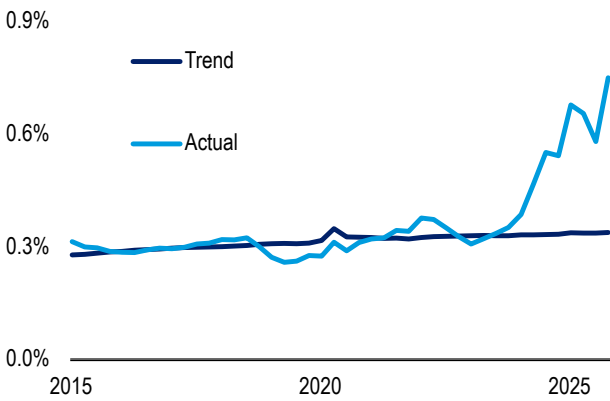


Source: Bureau of Economic Analysis

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Exhibit 4: AI-related imports also surged, meaning the true boost to US GDP was more modest

AI related imports (% of GDP)



Source: Bureau of Economic Analysis

Notes: Trend is based on 2015-2022 data. We define AI imports as computer Accessories, peripherals and parts

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To account for this spike in imports and refine our estimate of the contribution of AI investment to GDP, we detrend the AI investment and import data using a simple linear trend based on data from 2015-2022, in line with recent work by Brandsaas et. al (2025)¹. Then, to estimate the role of AI in the economy, we subtract the detrended import data from the detrended investment data. Based on this, we estimate that AI investment ex imports rose from around 0.1% of GDP in 2024 to 0.4% in 2025, implying a positive but smaller contribution to growth of around 0.3pp (Exhibit 9).

US-driven AI investment benefited capex suppliers globally

Though the contribution to US growth from AI-related investment may be only a few tenths, demand from US companies benefitted other economies embedded in the AI supply chain. The largest beneficiaries were countries that play key roles in producing AI-related hardware - those handling server assembly, supplying advanced components and manufacturing semiconductor-related products.

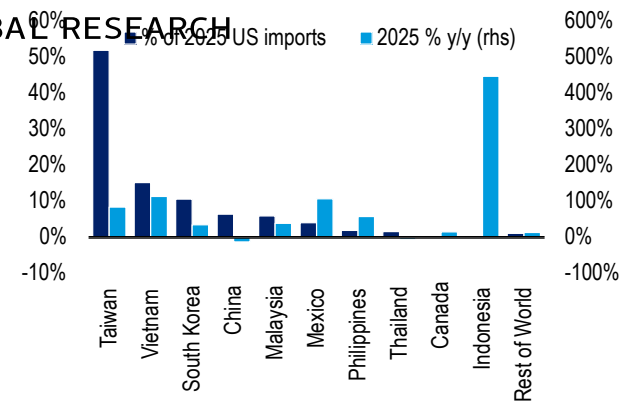
For servers and GPUs, these are primarily assembled in and imported from Mexico, Taiwan, Vietnam and Thailand. Upstream components show a slightly different geographic mix: the US sources electronic circuits mostly from Israel, Taiwan, Malaysia and Japan, while cooling equipment comes chiefly from Canada, China, Mexico and Thailand (Exhibit 5-Exhibit 6).

This distribution underscores how AI-related demand taps into a wide, regionally diverse production network. It is also a key reason for our structural positive views on Taiwan and Korea (see the report [Taiwan Viewpoint: Upgrade 2026 GDP forecasts as AI-driven growth expands](https://rsch.baml.com/r?q=y-yyN9YYCAFIqQNcrEJglw) (<https://rsch.baml.com/r?q=y-yyN9YYCAFIqQNcrEJglw>) and [Emerging Insight: Four reasons to ride the Korean bull in 2026](https://rsch.baml.com/r?q=ygBeGJz-D8cn8oCX!pcjqQ) (<https://rsch.baml.com/r?q=ygBeGJz-D8cn8oCX!pcjqQ>)).



to the US, but other countries are seeing faster growth

US imports of semiconductor by country*



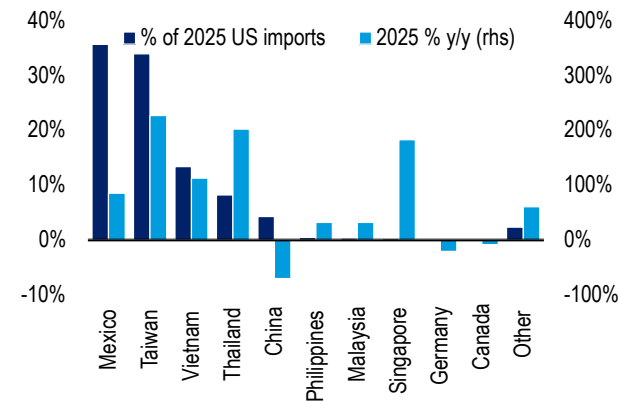
Source: Census Bureau, BofA Global Research

*Note: We use HS code 8473 to measure semiconductor imports

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servers to the US. China is losing share

US imports of servers by country*



Source: Census Bureau, BofA Global Research

Note: We use HS code 8471 to measure server imports

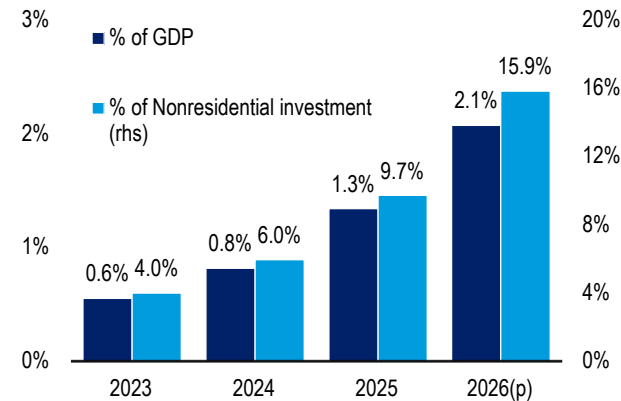
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... and should accelerate in 2026

We expect AI investment to keep driving global growth in the coming year. In the US, our equity analysts estimate that capex by hyperscalers - Microsoft, Amazon, Google, Meta, and Oracle - will increase from 1.3% of US GDP in 2025 to 2.1% in 2026 (Exhibit 7). They also project data center investment will rise by 0.4pp of US GDP to 1.7% in 2026 and then by a similar 2.0% in 2027 (Exhibit 8).

Exhibit 7: Hyperscalers are projecting to increase capex to 2.1% of US GDP in 2026, or nearly 16% of nonresidential investment

Hyperscaler capex



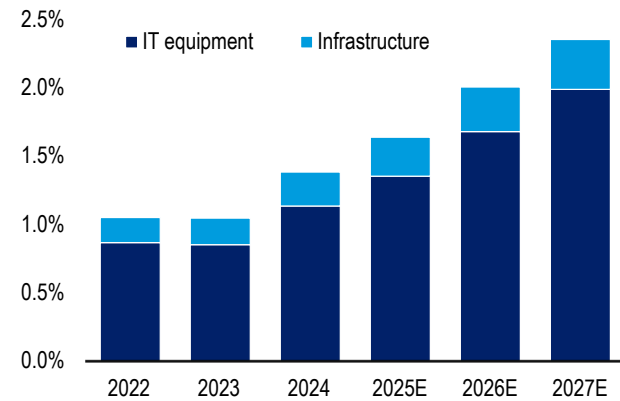
Source: BofA Equity Strategy, Factset, BEA

Note: Hyperscalers include Microsoft, Google, Meta, Amazon, and Oracle

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Exhibit 8: Data center investment is expected to increase by 0.4% to 1.7% of US GDP this year

Actual and predicted data center investment



Source: BofA Global Research

See: [Industrials/Multi-Industry: Who Makes the Data Center 2025 15 September 2025](#)

(<https://rsch.baml.com/r?q=Ql4FqNQqZlpuelPnzFIfqg>)

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Our Asia team, meanwhile, sees China AI capex rising to nearly US\$330bn (1.2% of GDP) in 2030E from around US\$90bn (0.5% of GDP) in 2025, implying a 29% CAGR over 2025-30E. This should be supported by continued AI spending by internet firms and government-led initiatives. We expect these trends to be similar in several other countries for fear of falling behind, though the gap is wide vs the US and China.

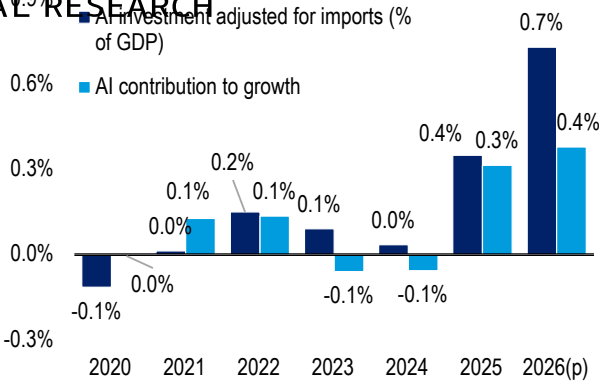
What does this mean for 2026 growth? We expect the contribution of AI investment to US growth to increase from 0.3pp in 2025 to 0.4pp in 2026 (Exhibit 9). This is less than hyperscaler capex plans indicate, for several reasons. First, some of the planned investment could get delayed due to lead times for key inputs and construction times. Second, a lot of the inputs for the anticipated AI capex will be imported, limiting the upside to US growth. Third, inflation for AI supplies should continue to outpace the broader GDP price index, resulting in a smaller impact on GDP than the headline numbers from AI hyperscalers suggest. Fourth, some of the planned spending is likely for projects outside the US.

Accordingly, we expect the acceleration of AI investment to have substantial spillover effects on capex suppliers like Taiwan, Mexico and Korea. This is a key reason why we recently raised our forecast for 2026 Taiwan growth from 4.5% to 8.0%. At this stage, we do not expect the energy shock related to Iran war poses major downside risks to Taiwan GDP, unless protracted geopolitical tensions, and thus extended gas shortages, become the base case. Meanwhile, our expectations for AI investment in China should provide a smaller but still positive boost to growth, given the more closed AI ecosystem compared to the US.

What about growth beyond 2026? After this year, we expect the contribution from AI investment to slow in the US and potentially fall to zero or even become negative. This is mostly because GDP is a flow-based measure and it's hard to see AI capex growth rates accelerating here given the front-loading of investment. That's not to say that the level of spending won't remain elevated. A recent parallel is the mini-boom in semiconductor fabrications facilities owing to the CHIPS and science act. This drove a surge in manufacturing structures investment in 22-23, but the contribution to growth has been flat to down over the last two years as investment levels have edged lower. Outside of the US, in areas that have been slower to invest in AI like Europe, AI capex is more likely to be a positive contributor to growth in the years ahead.

estimated 0.3pp to growth last year and should add 0.4pp this year

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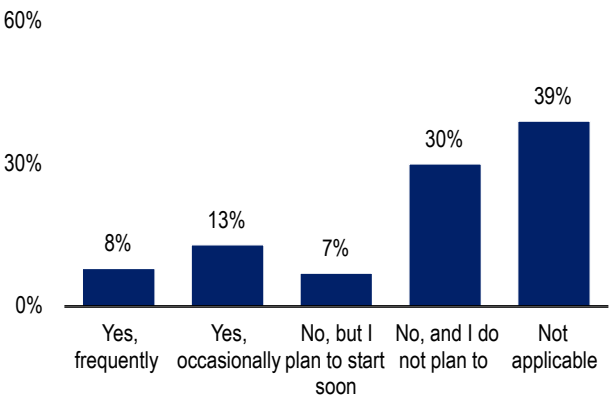


Source: BEA, BofA Global Research

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use AI tools in a professional setting

Do you use AI in a professional setting? (%)



Source: Brookings Institute

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AI investment has room to run but there are speedbumps

These investment projections seem staggering, and recently investors have expressed some doubt over the return on investment on capital (ROIC). That said, we think the near-term AI investment cycle is mostly sustainable due to a positive demand outlook, no signs of over-investment, and since we view potential constraints (energy, labor, etc) as speedbumps rather than limiting factors in the near term. Additionally, the companies are incentivized to spend aggressively now to limit the risk of losing the race.

There are many reasons to be positive on near-term AI demand

One of the biggest risks to the AI investment cycle is weak demand. That said, the near-term demand outlook for AI is positive for the following reasons.

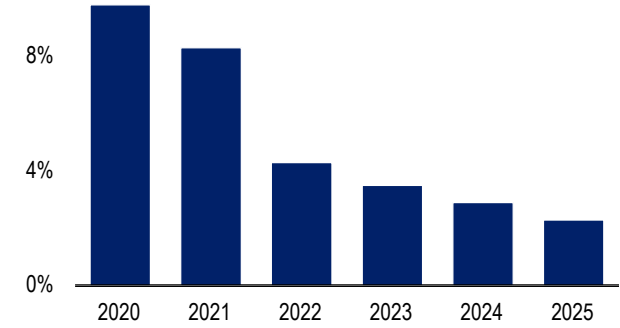
1. AI usage remains relatively modest with a recent Brookings Institute survey showing only 8% of respondents use AI frequently in the workplace (Exhibit 10), with the most popular use being for writing or editing documents. AI diffusion in the working age population in the US is also low, estimated by the Microsoft AI Economy Institute to be at 28% compared to the UAE and Singapore > 60%.
2. Since AI, or at least generative AI models, is seen as a winner-takes-all or regional winner-takes-all race, companies will need to continue to pursue aggressive capex plans, or else risk falling behind their competitors. This seems to be happening in real time as hyperscalers have continued to revise up their capex forecasts.
3. AI uses will broaden to include tasks that require more energy usage, like image and video generation. According to MIT, energy used by large text models is around 0.931 watts per hour, while AI-generated videos require over 944 watts per hour. Therefore, the investment being made today will need to account for growth in these uses.

AI investment to date shows no signs of oversupply

Most major investment cycles follow a similar pattern. There is the boom period when businesses aggressively build capacity on expectations for future demand, and then a bust period when the sector becomes oversupplied. This was the case during the 1970s for oil, 1990s for tech/telecom and 2010s for oil/gas (shale).

Vacancy rates of data centers suggest we are a long way from oversupply in AI capacity. Jones Lang Lasalle, a firm specializing in real estate management, reports that vacancy rates for colocation data centers - third party, multi-tenant facilities - are currently below 2% and should remain depressed based on pre-leasing activity. Additionally, we find that investment in AI trails the peaks of previous investment cycles currently. And though it has been climbing sharply recently, it likely has more room to run (Exhibit 11-Exhibit 12).

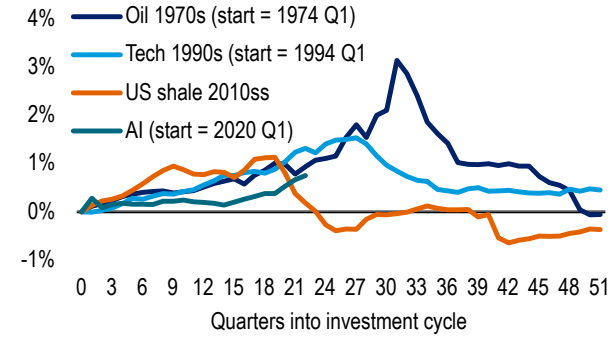
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Source: Jones Lange Lasalle

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compared to other investment cycles but it is expected to climb sharply
Investment cycles - Capex by sector (% of GDP; change from initial quarter)



Source: BEA, BofA Global Research

Note: We use the following line items from the national account data to define each investment cycle: (1) 1970s oil: mining shafts & wells, mining & oilfield machinery, petroleum & natural gas wells. (2) Tech 1990s: communication equipment, computers & peripheral equipment, communication facilities and software. (3) 1990s oil: mining shafts & wells, mining & oilfield machinery, petroleum & natural gas wells. (4) AI: Computers & peripheral equipment, software, data centers

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Supply-side factors: speed bumps in the near-term not binding constraints

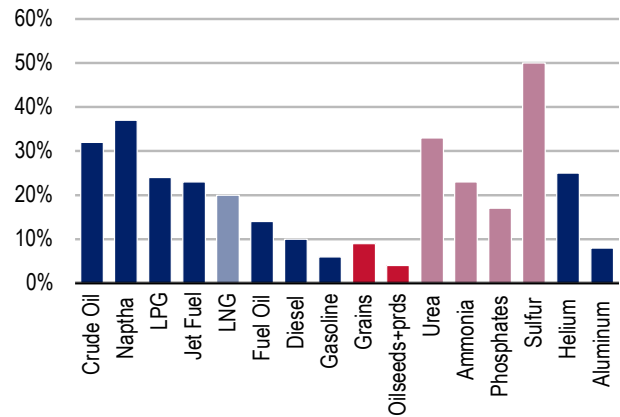
The pace of investment is not simply a function of demand; there are also supply-side factors to consider. These include energy generation, labor, financing needs, and more recently potential shortages caused by the Iran war. We argue that these will not stop companies from investing aggressively in AI but they could drive up the costs and limit the impact to the real economy.

Iran war could cause LNG shortages and affect production of key AI inputs

A recent risk to the AI investment outlook is the Iran war. It has driven up shipping costs, LNG prices, and costs of other commodities. Around 20% of global LNG supply passes through the Strait of Hormuz (Exhibit 13). Economies key to the AI supply chain like Taiwan is heavily reliant on external LNG supply, and Korea also being a net importer of LNG that is impacted by the Middle-East supply bottleneck. (Exhibit 14). So, the shortage from the Iran war could drive up the costs of AI inputs like servers, GPU and memory. We wouldn't expect this risk to lead to less nominal spending on AI. However, it could lead to less real activity due to rising costs.

Exhibit 13: Approximately 20% of global LNG supply passes through the Strait of Hormuz, with nearly all those volumes from Qatar

Share of global trade via the Strait of Hormuz in 2025

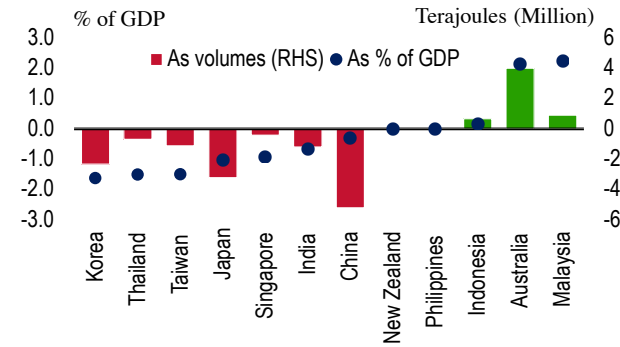


Source: S&P Global

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Exhibit 14: China, Japan and Korea are the largest importers of natural gas in terms of the volume

Net trade balance of natural gas in Asia



Source: IEA, BofA Global Research

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Energy: unlikely to be a constraint but could be problematic in regions

Energy generation in China is unlikely to be an issue given its expansion in power generation, but it has garnered a lot of attention in the US given rising utility bills.

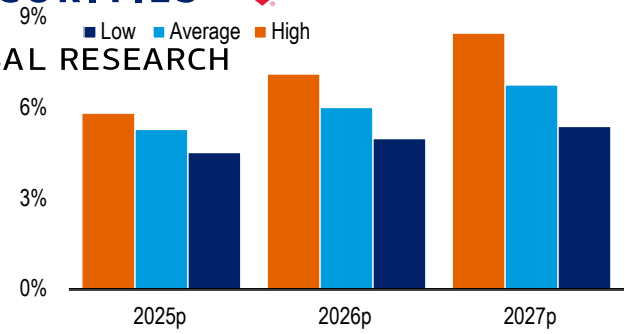
Indeed, Ross Fowler, head of North America Power & Regulated Utilities equity research, recently argued that AI contributed to rising US costs in certain regions. It has also been a factor in where data centers have been built: areas with excess generation and transmission capacity have seen more growth. Furthermore, state and local policymakers have grown increasingly concerned about data centers' electricity usage and the impact on households. This could lead to increased regulation and pose a significant risk to AI investment. But the key question for the investment outlook is whether energy supply is a binding constraint for AI investment.

We argue it is not, at least near-term. US electricity demand from data centers could more than double by 2027 to 8.5% (Exhibit 15). This, however, would still leave total electricity demand, as measured by electricity sales, reasonably below electricity supply (Exhibit 16).

Of course, this does not account for other sources of electricity demand growth like electric vehicle usage, reshoring or growth in the manufacturing base, or new household formation. Incremental demand from these sources on top of the growth in AI could place strain on the US grid and limit the ability for new data centers to come online. Data centers could also strain the grid during peak hours, resulting in blackouts. That said, this risk has been reduced through the implementation of a "Bridge-to-Grid" solution where data centers shift to backup power generation during these hours.



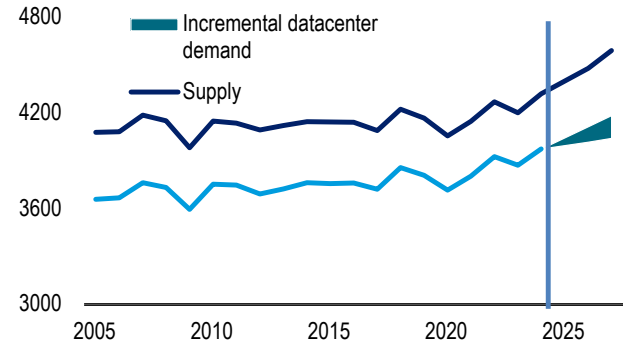
Data center electricity demand as a share of electricity supply



Source: Mytton & Ashtine, Schneider Energy Management Research Center, Berkeley Lab, McKinsey and Co.
Note: We divide the low, average, and high estimates for data center electricity demand by the Energy Information Agency's projection for electricity supply

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should not, on its own, run into electricity supply constraints
US electricity - demand vs supply (billion kilowatt hours)



Source: EIA, Mytton & Ashtine, Schneider Energy Management Research Center, Berkeley Lab, McKinsey

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Construction labor could become an issue or raise the costs of data centers

Labor is another potential issue in the US that could be exacerbated by recent changes in immigration policy. According to Bain and Co. a 1GW data center could require 6-7k workers at its peak. With predictions suggesting global supply could increase by 62GW by 2030, that could require a peak of hundreds of thousands of workers.

The good news in the US is that the vacancy-to-unemployed ratio in the construction sector is not near the highs seen in recent years or even in 2019. That said, if demand for construction workers picks up materially, then the industry could run into labor constraints resulting in higher wages and a slower pace of overall investment.

Financing needs are growing but do not appear problematic yet

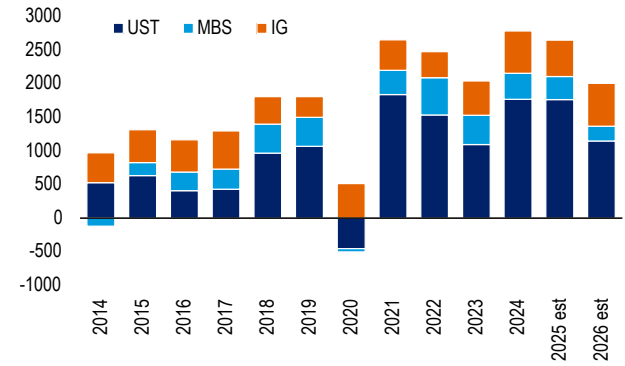
Financing needs could also slow the pace of investment as the market may provide a check on spending. That said, Yuri Seliger, head of IG credit research, notes that debt issuance by hyperscalers has so far been digested well by markets. Moreover, Meghan Swiber, senior rates strategist, notes that it comes at a time when net issuance of Treasuries (UST) and Mortgage-Backed Securities (MBS) is relatively low (Exhibit 17).

Still, spreads for hyperscalers have widened relative to the rest of IG credit as investors have appeared to question the viability of upward revisions to capex plans (Exhibit 18). This raises the cost of capital, but since these companies have significant operating cash flow, higher debt costs may not materially change the near-term investment picture.

Additionally, there are some signs that investors are getting a little skittish on AI spending plans. In the latest Global Fund Manager survey, a net of 22% of respondents said that companies were investing too much. The capex plans of major US companies for this year have also reduced the cash buffer as the ratio of capex to operating cash flow is projected to climb from 70% to 90% this year. We'll be closely watching 2Q earnings season to see if there are further signs that sentiment on capex is turning more sour, which could lead to a pullback in plans or some other type of cost cutting.

Exhibit 17: Net* supply to private market (US\$bn)

Net supply will be lower driven by USTs & MBS while IG supply will be larger

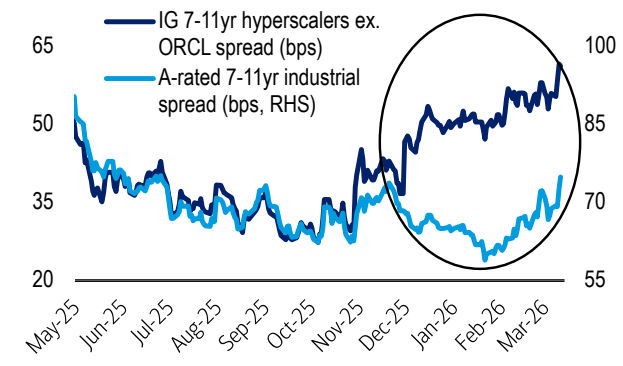


Source: BofA Global Research, *net supply to private market is ex-Fed & ex-GSE, i.e. QT adds net supply, QE & GSE purchases reduce net supply

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Exhibit 18: Hyperscalers are about 20bps cheap to HQ industrials

Hyperscalers ex. ORCL continue to be about 20bps cheap to industrials.



Source: BofA Global Research, ICE Data Indices, LLC

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Supply chain constraints and grid problems

Two other potential speed bumps are supply chain constraints of key materials and long queues to connect to the grid. Supply constraints could become particularly acute if geopolitical tensions with China flare up again since the US relies heavily on China for rare earths (Exhibit 22). Meanwhile, the queue to connect to the grid has already lengthened following the surge in green energy projects during the Biden administration. That will remain an issue for US data centers moving forward.

Macro implications of AI investment

In the short run, we think ongoing AI investment will remain a positive tailwind for growth, though a diminishing driver. We expect it to add a few tenths to growth in 2026 in the US and have a small positive impact on growth in China. The bigger beneficiaries in the near-term are likely to be the AI suppliers (Taiwan, Korea, and Mexico).

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The precise timing is impossible to pinpoint, but if we assume that AI investment grows at about 18% annualized per year, in line with our equity analysts' forecasts for data center investment, the investment cycle will eclipse all but the 1970s oil boom in size in just a few years. Any signs of a bust would likely first play out in financial markets. So, we recommend watching measures like credit spreads, data center vacancy rates, return on invested capital, and capex to operating cash flow ratios closely.

A key factor in determining how long the investment cycle lasts will be what the future of AI models looks like. When it comes to generative AI, at least, the US and China are the main players. Below we contrast the two global leaders, with the caveat that our comparison is limited by several factors, including a lack of transparency into Chinese data.

- US is the dominant leader in many areas, while China is the No. 2



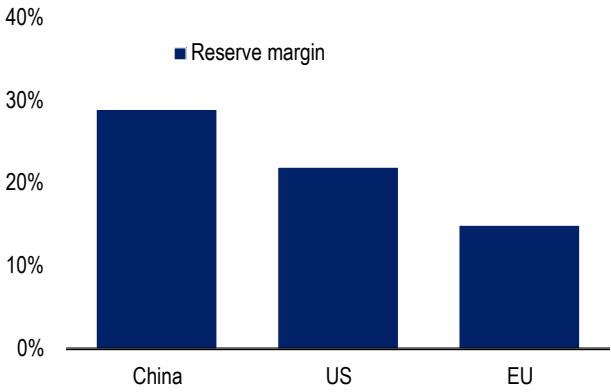
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- 4. US firms control more than half of the world's AI accelerators, and US hyperscalers anchor the world's most capable cloud infrastructure.** AI accelerators - a specialized semiconductor - determine who can train frontier-scale models, how fast those models improve, and which firms or nations have access to high-end compute. Export controls have further consolidated the US position in cutting-edge semiconductor technology. The US thus currently dominates cumulative AI supercomputer capacity, controlling an estimated 74% of global high-end AI compute, while China holds 14% and the EU 4.8%.
- 5. US holds robust position in overall AI-enabling infrastructure/fundamentals.** Cross-country comparisons show the US retains durable advantages in structural readiness for AI, with the exception of electricity-related infrastructure. Several widely cited indices of AI capacity and preparedness have the US consistently at or near the top, while China's ranking varies from just below the US on some indices (e.g. Stanford GVT, Tortoise Media's Global AI Index), to significantly lower on others (e.g. IMF AP Preparedness Index, Oxford's Government AI Readiness Index). We will elaborate more on this in our upcoming 'Leaderboard' part of this AI Matters series.
- 6. China has a strategic advantage in energy.** In the US, AI investment is likely to run into a power constraint sooner than in China. China's power supply growth has consistently outpaced demand, supported by vast coal and renewable resources, aggressive grid expansion, and strong policy backing for high-tech sectors. This is expected to drive reserve margins higher. In addition, China's industrial electricity price is almost 30-60% cheaper than that in the US and EU (Exhibit 21).
- 7. China dominates the global supply of critical commodities/equipment essential for AI infrastructure and the energy transition.** Modern AI - from AI accelerators and semiconductor fabrication to hyperscale data centers - relies on physical inputs, especially critical minerals. Currently the supply of critical minerals is largely concentrated in China - which brings a strong advantage for its AI scaling capabilities. For processed critical minerals like cobalt, lithium rare earth elements, China's share is north of 60% in total global supply by 2030 (Exhibit 22).
- 8. Private investment plays a bigger role in the US, while China embraces a state-run model.** The US AI ecosystem is primarily market-driven, powered by private innovation and venture capital, with relatively limited direct government funding. The private sector should be more efficient at resources allocation. But this also means the AI capex cycle is more sensitive to profit-driven decision making rather than long-term sovereign strategic planning.

2025-30, and the National AI Fund - sized at approximately US\$8.3bn - targets investments across computing power, algorithms, data resources, and applications. While this does not mean the government will foot the whole bill for AI development with budget funding, state support is usually a good indicator of such projects. It means they are then more likely to receive funding from commercial banks and state-backed funds, implying a more stable, committed pipeline of AI capex.

Exhibit 21: China has better power adequacy compared to US

Reserve margin on power = total capacity-max load

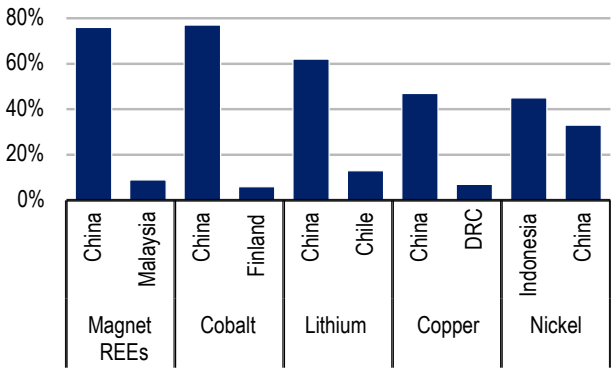


Source: NEA, Ember, BofA Global Research estimate

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Exhibit 22: China is the world's largest supplier of critical minerals

Top two suppliers of processed critical mineral by 2030



Source: BofA Global Research, IEA critical mineral outlook 2025

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China's state-led vs US's market-led model

Both approaches deliver advantages and carry risks across different time horizons. Given the profound implications of AI, spanning the economy and national security, it is not clear which will be the ultimate winner.

On the productivity side, it could be the case that China's model can accelerate economy-wide diffusion and coordinated deployment in the near to medium term. China may thus have greater potential for an earlier economy-wide productivity impact. Longer-term, the US model's innovation engine, deep capital markets, and standards leadership support frontier advances, as long as bottlenecks, e.g. in energy, supply chains, are managed. If innovation is the key differentiating factor for productivity dividends - as we will discuss in more details in the 'Productivity' part of our AI Matters series - then the US might have some advantage.

US's market-led approach promotes AI ecosystem, global diffusion in question

The US policy mix - standards-first (NIST), targeted industrial policy (CHIPS, NAIIR), active competition policy, and tightening export controls - prioritizes innovation at scale with risk management through guardrails.

The approach's strengths are ecosystem dynamism and standard-setting power. But the trade-offs are policy variability and reliance on a patchwork of instruments rather than a single statute. This means companies need to plan for continued updates to governance, procurement, and export rules as political leadership changes.

China's state-led model offers structural advantages, but also drawbacks

China's approach to AI development reflects the broader characteristics of its economic model. The elevation of AI to a national strategic priority has unfolded gradually over the years and in March 2024, the Government Work Report formally introduced the "AI+" initiative. This was subsequently followed by a more comprehensive policy document, namely "The State Council Opinions on Deepening the 'Artificial Intelligence+' Action", which laid out clear milestones for 2027, 2030, and 2035.

China's approach enables strategic resource allocation and can accelerate the mass adoption of AI applications across sectors, while strong central oversight can create consistent and stable governance frameworks, lowering systemic risks. The risk of a state-led model is over-rigidity that could inhibit innovation, as well as policy misjudgements that can result in investment in areas that do not ultimately generate optimal returns.

ⁱ Brandsaas, Eirik Eylands, Daniel Garcia, Robert Kurtzman, Joseph Nichols, and Adelia Zyte (2025). "Estimating Aggregate Data Center Investment with Project-level Data," Finance and Economics Discussion Series 2025-109. Washington: Board of Governors of the Federal Reserve System, <https://doi.org/10.17016/FEDS.2025.109>

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