

## xAI COLOSSUS

### Quick comments:

- ❖ **China-US (tariff)** talks stalling with significant **tariff re-escalation risks**. Chip ban acceleration & International Chinese student ban reflects hardening Anti-China position.
- ❖ **US conflict mediation flaccid attempts** as political leverage favours Russia (EU paying 3x for Russian energy supply), Israel, Iran.

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### Recent corporate earning highlights:

- ❖ **JPM higher provisions & CEO's increasing concerns** on slowing & tight US credit market => reinforce US recession risks in 2H25
- ❖ **Nvidia's Earnings** => confirmation of long (& profitable) AI runway AI Factory vision in Taiwan ⇔ **xAI Colossus the reality**
- ❖ **TKO raising its FY25 guidance** – Vince McMahon to buyback WWE?

### Trump's own goals; Tariff escalation to result in weaker USD (vs EUR, Yen, SGD), further downside to S&P

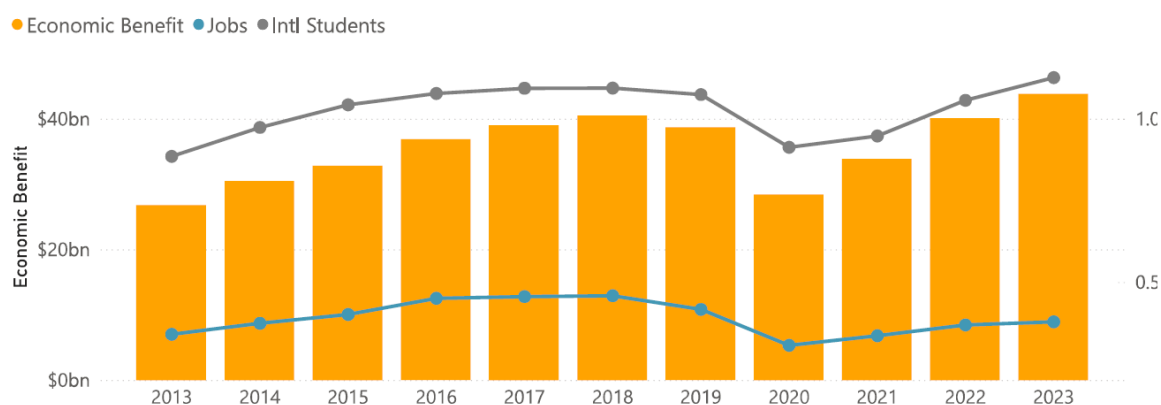
- The US is no longer exceptional. After almost a century, the US has lost its last AAA credit rating, leaving Germany and Canada as the only G7 countries rated AAA. US government debt at US\$36 tn is not sustainable, given rising interest costs and looming tax cuts from Trump's Big Beautiful Bill now in the US Senate. US treasuries may no longer be the global risk-free asset used by the world's central banks to park their reserves.
- Investors will rotate out of the overvalued US\$ and US\$ assets. The ECB's President Christine Lagarde said last week the ongoing changes in the US create an opening for the € to be a viable alternative to the US\$ in international trade. Currently the US\$ accounts for 58% of international reserves versus the euro's 20%. The EU, which is home to 5 AAA rated countries (Denmark, Germany, Luxembourg, Netherlands and Sweden), will have to deepen its capital markets for this to happen.
- Trump's almost daily tariff announcements make it impossible for global businesses to plan ahead. The US Court of International Trade's ruling that Trump's tariffs of 10% on nearly all of US' trading partners are illegal has led Trump to double down on US tariffs on steel and aluminium imports from 25% to 50% starting on June 2. These tariffs were untouched by the ruling which is being appealed by the Trump administration and stay in place for now.

- So far little progress has been achieved in trade talks between the US and the other countries. The exception being the very limited US-UK trade deal. Indeed, Trump has accused China of violating a truce on tariffs struck earlier in May which cut tariffs on goods imported from China from 145% to 30%. Bilateral trade talks usually takes years to conclude. A trade deal with the EU which is made up of 27 countries would require agreement from all 27 countries. To get a deal by July 9 is a big ask especially as the EU doesn't know what Trump wants. The EU also has it's own red lines on things like VAT and agricultural imports. If the talks fail a 50% tariff would shut off US imports from the EU.

### International student ban: impact on \$43bn market

- In 2023-24, about 6% of all college students were international. At [Harvard, about 25% of students are international](#) (source: MSNBC). 1.1mil foreign students enrolled for 2023/2024 year (+7% YoY), of which India enrolled 331k, followed by China at 277k (incl 123k graduate students). Figure 1 shows the International students contribution of \$43.8bn to US economy (supporting ~375k jobs: 51% for Education, 19% accommodation, 12% dining)

**Figure 1: Economic benefits of International student enrollment to US**



This graph displays the economic contributions, enrollment data, and jobs supported over a ten-year timeframe. Move the mouse arrow over a single graph point to view single year data. International student enrollment data is provided by [Open Doors](#), published by the [Institute of International Education](#) in partnership with the [Bureau of Educational and Cultural Affairs](#) U.S. Department of State. ⓘ

### Ukraine-Russia ceasefire gap at its widest since conflict initiation

- The success of Operation Spider Web may just signal the endgame for Trump's mediation efforts as it would harden Ukraine's resolve in the one-sided ceasefire proposals.
- A new summer offensive in the 3-year Russia-Ukraine war will soon be under way. Putin is not interested in peace. He still wants to take more territory i.e. the rest of the Donbas plus the parts of Kherson and Zaporizhia that Russia doesn't control. The

escalation threatens wheat and other key agricultural exports from Ukraine, which could lead to another round of global food inflation.

- Going forward Europe will take charge of ending the war in Ukraine. Trump has shown himself to be an unreliable partner of Europe and Nato. Trump was never going to stop the war in 24 hrs. He's Putin's friend. Trump is full of bluster but no action.
- Germany has finally given Ukraine permission to use German long range missiles to hit deep inside Russia, bringing it in line with the UK and France. Europe is not a military superpower like the US but neither is it an economic minnow. Europe knows that much is at stake and that it has to step up its own defences because if Ukraine falls the Baltic states and Poland are probably next.
- The EU has reset relations with the UK, almost a decade after Brexit. The reset includes both trade and defence. The UK can now participate in the EU's new military fund. Increased spending on military/defence will be a new driver of EU and UK growth as defence spending rises from under 2% of GDP to 5% for some EU countries.
- Pete Hegseth (US Defence industry) feeble sales pitch for Asian countries to splurge on US weapons at the Shangri-la Dialogue may inadvertently cast spotlight on the relative attractiveness of Chinese arms deals (superior cost/effectiveness, no issue on rare earth supplies) given recent real-time demonstration in deployment of superior Chinese Aircrafts in the recent Pakistan-India conflict.

#### Slowing US & global economy:

- JPM 1Q25: in light of the significantly elevated risks and uncertainties at the time ... weighted-average unemployment rate embedded in our allowance is 5.8%, up from 5.5% last quarter, driving the \$973 million increase in the allowance.
- Worryingly headline inflation did jump to 3.5% in UK in April, moving away from the 2% target. This is likely to put a break on the Bank of England from cutting interest rates. Higher inflation has also been seen in Japan, with core inflation at 3.5% led by surging rice prices. The global environment remains more inflationary than since the pandemic.
- Trump met Fed Chairman Powell for the first time since taking office with Trump pushing for lower rates. However, the Fed is likely to adopt a wait and see attitude at the June FOMC as the threat of stagflation in the US economy is real. The big uncertainty cited by Powell is tariffs. July 9 is the deadline of the 90 day pause. It's unlikely reciprocal tariffs will remain at 10% as Treasury Sec Bessent said this is the floor.
- Latest estimates of US Q2 GDP growth are for a recovery from a revised -0.3% in Q1. However, growth in consumer spending was a lacklustre 1.2% in Q1. US growth is likely to remain below potential due to the ongoing US trade war as businesses postpone capex and consumers reduce spending on cars. The rebound in the US\$ is therefore likely to be temporary.

Nvidia results highlights:

- Scaling up their AI product architecture (& expanding TAM).
- Announced AI factory setup in Taiwan, xAI’s Colossus showed what it could look like:

**Figure 2: Colossus the largest AI training platform in the world**



Source: <https://x.ai/colossus>

xAI's investment in Nvidia GPUs: initial phase of Colossus utilized 100,000 Nvidia H100 GPUs. Subsequently, xAI expanded the supercomputer to 200,000 GPUs, incorporating H100 and H200 models.

**xAI's plans to scale Colossus to one million GPUs** with Elon Musk expressing intentions to acquire 300,000 of Nvidia's latest Blackwell B200 GPUs to further enhance Colossus. *A separate data center in Atlanta, developed in partnership with X (formerly Twitter), involved a \$700 million investment for approximately 12,448 Nvidia GPUs.*

**Figure 3: Comparative performance overview**

Metric	Colossus (xAI)	Selene (Nvidia)	Frontier (ORNL)	Aurora (ANL)
GPU Type	Nvidia H100	Nvidia A100	AMD Instinct MI250X	Intel Max Series
Compute Performance	497.9 exaFLOPS (theoretical)	63.46 petaFLOPS (Rmax)	1.102 exaFLOPS (Rmax)	1.012 exaFLOPS (Rmax)
Power Consumption	~250 MW	~7 MW	~21 MW	~38.7 MW
Primary Use Case	AI model training (e.g., Grok)	AI research and development	Scientific research	Scientific research
Deployment Year	2024	2020	2022	2023
Primary Use Case	AI model training (Grok)	Nuclear stockpile stewardship, simulations	Scientific research and development	Scientific research and development

Source: 6Σ GenAI estimates

Note that Colossus is tailored for AI workloads, leveraging Nvidia's H100 and H200 GPUs optimized for mixed-precision computations common in AI training. In contrast, systems like El Capitan and Frontier are designed for a broader range of scientific applications, necessitating different architectural considerations.

### Energy Consumption and Environmental Impact

At its current scale of 200,000 GPUs, the supercomputer consumes approximately 300 megawatts (MW) of power (~ 250,000 households). To meet these requirements, xAI has deployed 35 methane gas turbines (422 MW) which has since been replaced with 168 Tesla's Megapacks (~655MW, lithium-ion powered utility scale battery energy storage unit, each unit capable of storing more than 3.9MWh of energy).

### TKO – Vince McMahon to buyback WWE?

- Currently WWE accounts for circa 1/3 TKO portfolio. With current mkt cap at \$31bn, we think it might be easier just to invite Vince McMahon back to the board (he resigned post IPO due to sexual assault litigation).
- TKO is one of the few stocks raising FY2025 guidance post Tariffs. We like its business model (tariff proof, brand premium/consumer loyalty) and positioning for large events like World Cup 2026.