

An Investment Newsletter For True Long-Term Investors: Q1 2025

The aim of this newsletter is to arm the Chair of Institutional Investors' Investment Committees and the Chief Investment Officer with possible agenda items to be addressed in the upcoming investment committee meeting. We assume this audience comprises mostly of true long-term investors and the topics for discussion are only those with long-term consequences, including near-term actions which could have long-term consequences.



Elephants in the Investment Committee Boardroom

Since our last quarterly newsletter, the wall of CIO worries has narrowed down from our typical list of 8-10 IC meeting agenda items, to just two.

- 1. The short and long-term investment implications of President Trump's likely policies including tariffs, immigration, taxes, spending cuts, oil prices, Ukraine and the Middle East.**
- 2. Technology Impact: AI's overall macro-economic impact and the implications of DeepSeek and the prospect of low barriers to entry impact on likely investment.**

With equity markets at all-time highs, including the MSCI World index up 3% since the US elections on the 5th of November 2024, there is modest IC level concern about current asset price levels in the context of uncertainty around the two issues above. A key measure of market risk, the VIX index, spiked up to 21% on the 27th February, up from its 13.5% just after the US election in early November. This is slightly above the 18.2% 10-year average VIX, so markets appear to be starting to show concern after President Trump's highly visible and action-packed first month.

Long-Term Performance

*As CIOs, we focus on optimizing asset allocation, which relies heavily on long-term return forecasts. **Exhibit 1** presents past and updated performance projections for each asset class, as of last week, by Partners Capital.*

The return expected from the representative allocation of the large US endowments (based on our nominated 12 endowments' allocation who have an average AUM of \$24B) is expected to average **8.7%** p.a. over the next 10 years by our maths as shown in Exhibit 1 below. Past performance of course is, to some extent, indicative of future returns. Forecasts from the likes of Partners Capital go deeper into the study of future risk-free rates, risk premia, illiquidity premia and other drivers. Partners Capital's estimates, as just published in their 2025 Insights macro report, are shown in the right-hand column in the table below and in the bar chart at the back of this letter which decomposes future returns into beta, illiquidity premia and security selection alpha. Partners Capital's forecast generally does not differ significantly from a

“consensus view” of the major forecasters such as JP Morgan, Investec, Schroders, KKR and others.

Exhibit 1: Historical and Forecast Performance of Asset Classes and Overall Portfolios

Calendar Years	Index Name	CY Ending Dec 24	3-Year Performance	5-Year Performance	10-Year Performance	10-Year Forecast (3)
		Jan 24 – Dec 24	Jan 22 – Dec 24	Jan 20 – Dec 24	Jan 15 – Dec 24	2024-2034
Endowment Avg Asset Allocation (1) (2)	3% Cash, 10% Fixed Income, 22% Equities, 23% PE, 10% VC, 20% Hedge Funds, 12% Real Assets index performance	9.7%	4.7%	10.2%	9.1%	8.7%
70/30 Equity/Bond Index	70% MSCI ACWI / 30% Barclays US Treasury 5-10 Year	12.5%	3.3%	7.4%	7.4%	6.5%
Asset Class Returns						
Fixed Income	Bloomberg U.S. Treasury 5-10 Y	0.2%	(3.0%)	(0.7%)	1.0%	4.5%
Liquid Credit	Bloomberg Global Aggregate Baa Total Return	4.7%	(0.6%)	1.0%	3.0%	6.8%
Private Credit	State Street Private Debt	16.0%	9.7%	10.6%	9.4%	9.3%
Public Equities	MSCI ACWI (unhedged)	18.0%	6.0%	10.6%	9.8%	7.4%
Leveraged Buyouts	State Street Leveraged Buyouts	12.8%	7.7%	15.0%	12.8%	10.9%
Venture Capital	State Street Venture Capital	8.6%	(3.4%)	15.3%	13.5%	12.5%
Hedge Funds	PivotalPath Multi-Strategy Hedge Fund Index	10.9%	6.2%	8.1%	6.3%	7.3%
Real Estate	Preqin Real Estate Opportunities (4)	(2.5%)	4.4%	7.1%	8.3%	10.7%

Notes: 1.The Top 12 Endowments covered include Brown, Columbia, Cornell, Dartmouth, Harvard, MIT, Notre Dame, UPenn, Princeton, Stanford, University of Virginia (UVIMCo) and Yale. 2.This assumed asset allocation approximates the average allocation of the Top 12 Endowments over the past five years. While it is more heavily weighted toward the current allocation, it assumes slightly lower allocations to Venture Capital and Private Equity than today. We consider this a representative estimate of how larger U.S. endowments may be allocated in the future. Past performance reflects actual historical returns for each asset class. 3.Partners Capital 10-Year forecast (see bar chart at back).4.Preqin Real Estate Opportunities data as at Q3 2024.

Top 12 US Endowment Performance Update for June 2024 Reports

Since our last letter, all of the US endowments have reported an average of 8.5% performance for the 12-months ending June 2024. The average absolute 10-year performance for the 12 endowments declined from 10% to 9.1% after dropping the year ending June 2014 and adding the year ending June 2024 performance. In Exhibit 2 below, we show the updated 1-, 3-, 5- and 10-year alpha calculations using the two investible equity-equivalent benchmark and the non-investible multi-asset class benchmark. The 10-year alpha figure, using the non-investible multi-asset class benchmark, dropped slightly from 120 bps to 90 bps. The 5-year alpha figure increased from 70 bps to 120 bps.

Exhibit 2: Updating the 12-US endowments performance for FYE June 2024 performance, we see 10-year average alpha dropping slightly from 1.2% average to 0.9%

Period	Absolute Return	Equivalent Net Equity Beta (ENEB) Investible Benchmark		Asset Allocation Benchmark (non-investible)		Period Ending June 2023 (Previously reported figures)
	Average Absolute Performance	ENEB Benchmark	Alpha vs ENEB Benchmark	Asset Allocation Benchmark	Alpha vs Asset Allocation Benchmark	Alpha vs Asset Allocation Benchmark
1-Year	8.5%	14.6%	(6.1%)	8.9%	(0.4%)	(3.5%)
3-Year	2.2%	15.6%	(13.5%)	4.1%	(1.9%)	0.1%
5-Year	10.4%	8.5%	1.9%	9.2%	1.2%	0.7%
10-Year	9.1%	8.8%	0.3%	8.1%	0.9%	1.2%

Source: True North Institute analysis of publicly available data for Brown, Columbia, Cornell, Dartmouth, Harvard, MIT, Notre Dame, U Penn, Princeton, Stanford, Univ of Virginia (UVIMCo) and Yale.

Macro Debates Worth Having Today

The IC Chair can usefully guide macro discussion with their committee members by establishing what macro topics are worth debating in the investment committee boardroom. Valuable airtime can be wasted on attempts to forecast the unpredictable and discuss events that may not have any material long-term impact on investment performance.

As we say above, there are only two “elephants” to wrestle to the ground today – the long-term investment implications of the President Trump policies and an update on AI investment opportunities. We discuss the first here and the second in the “Artificial Intelligence Corner” at the end.

What are the short and long-term investment implications of President Trump’s likely policies?

Is there a useful framework for translating President Trump’s Actions into Expectations?

Below, we quote Alpine Macro’s Dan Alamariu, Chief Geopolitical Strategist, on a useful articulation of Trump’s leadership style and we proceed to use this as a framework for translating what Trump says into what might actually happen. We paraphrase it below, taking some editorial freedom.

Trump’s policies are more pragmatic than they sound. He views his “madman reputation” as an asset. He practices what he preached in his book, *The Art of the Deal*. He will ask for an outcome grossly disproportionate to the circumstance (“ask for everything all at once”) but will negotiate pragmatically, forcing quick concessions on rather moderate demands. Trump rarely seeks total victory. His final deals are often far more moderate than the rhetoric suggests. However, this strategy and style carries risks. Playing “chicken” repeatedly can lead to miscalculations and potentially real clashes. Trade wars, once started, can spiral out of control. Domestically, constant narrative chaos fuels opposition and his rhetoric enables opponents to frame him as an existential threat. This mobilises resistance, hamstringing his policymaking. So, his style is a double-edged sword. If we understand this, we are more likely to react and anticipate outcomes that are a certain fraction of the initial “ask.” If we believe what Dan says about Trump, we should generally expect moderate, market-friendly policies to prevail.

Won’t these policies just be reversed soon anyway?

Trump’s likely actions—including tariffs, immigration, taxes, spending cuts, oil prices, Ukraine/Russia, and the Middle East—suggest that his foreign, economic, trade, and immigration policies will endure and shape U.S. government and corporate actions for years to come. The most enduring outcomes are likely to include a tougher stance on China, trade protectionism that bolsters domestic production, and an emphasis on border security, regardless of which party governs. However, with a 2028 Democratic win, significant reversals are likely in areas such as foreign alliances—shifting from Trump’s transactional approach to the Democrat’s multilateral style—environmental and business regulations, immigration pathways, and substantial government spending cuts. If Republicans maintain control, the “America First” approach is likely to persist. If Democrats prevail in 2028, expect a hybrid model with bipartisan economic nationalism and competition with China alongside partisan divides on other issues.

How will US relations evolve with China, Russia, Canada, Mexico and Europe?

Over the next five years and beyond, the most probable trajectory for U.S. global relationships is a persistent U.S.-China rivalry, accompanied by a deepening Russia-China alliance in the absence of a U.S.-Russia détente. Recognising the strategic implications of this dynamic, **Trump appears to be actively pursuing détente with Russia, aiming to weaken Moscow’s ties with Beijing and pre-empt a scenario in which a coordinated Russian-Chinese military threat undermines U.S. hegemony.** Trump’s goal, clearly visible from the public berating of Volodymyr Zelenskyy on national television, is to be seen by Russia as working to bring peace in a way more respectful of Russia’s position.

Meanwhile, U.S. ties with Canada and Mexico are expected to remain stable and cooperative over the long-term, but only after some messy retaliatory measures against US exports, and iterations of negotiation to follow. But the complexity and cost of this to all businesses involved should see more efforts by Canadian and Mexican authorities to improve border controls and

to curb the drug trade which will ease tensions and moderate the tariff policies that have just been implemented.

In Europe, relations are expected to cool in response to recent developments in Ukraine. The U.S. appears to be shifting closer to Russia than Ukraine, while the EU remains firmly supportive of Kyiv. Over the long term, however, the U.S.-Europe alliance is likely to remain strong, even as NATO faces internal strains and the EU pursues greater strategic autonomy, led by France and Germany. Trade frictions between the U.S. and Europe are expected to persist, but both sides will remain natural allies in addressing external strategic challenges. While China has been a common adversary, Europe has taken a more measured approach than the U.S., largely due to its deeper trade ties with China and a lower degree of direct competition for technological dominance.

Broader global trends suggest the world will further divide into U.S.-led, China-led, and non-aligned economic blocs, with Europe maintaining its place in the U.S.-led block, but with Europe increasing defence spending and taking more responsibility for their own security.

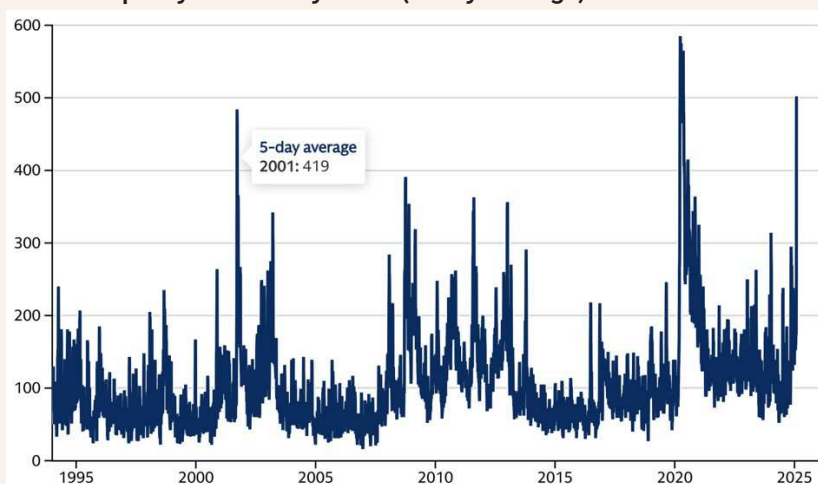
Tariffs are potentially the most dangerous of Trump's policies. How big and lasting will they be and what will be their impact on the economy and businesses?

Trump's tariff plans are based on his belief that the U.S. has been exploited in global trade due to its massive consumer market, using tariffs as a tool to force trading partners into renegotiating terms that are "fairer" to the U.S. The most likely long-term outcome is that both U.S. political parties will continue to favour some form of economic nationalism. This means ongoing strategic decoupling from China, while disputes with Canada, Mexico, and Europe are resolved through sector-specific negotiations designed to prevent a full-scale trade war. The investment implications of these tariffs include a potential global GDP reduction of roughly 0.6% over two years in a scenario of around 10% tariffs, a cumulative impact of about -0.7% on Europe, modest U.S. inflation increases (around +0.2%) that could lead the Fed to adjust interest rate policies, and an appreciated U.S. dollar that might hit the margins of U.S. manufacturing companies due to rising input costs.

David Kostin, Chief US Equity Strategist at Goldman Sachs Research, estimates that every 5% tariff increase reduces S&P 500 earnings per share by about 1-2%. Thus, the proposed tariffs—a 25% tariff on goods from Mexico and Canada (with an extra 10% on Canadian energy imports) and an additional 10% on imports from China—could lower S&P 500 EPS forecasts by roughly 2-3%. Moreover, tariffs heighten market uncertainty as you can see in Exhibit 3. The US Economic Policy Uncertainty Index, which tracks media coverage, CBO reports, and forecaster surveys, spiked to top-percentile levels just before the latest tariffs were announced.

Exhibit 3: Economic policy uncertainty has soared since Trump's election

Economic policy uncertainty index (5-day average)

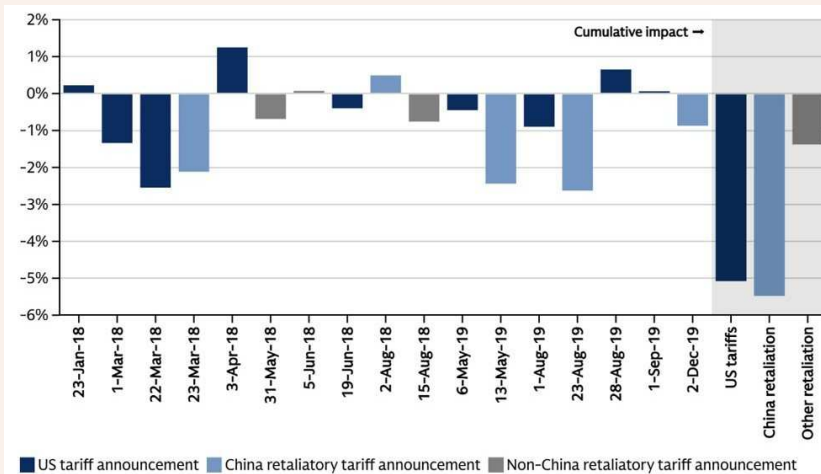


Source: PolicyUncertainty.com, Goldman Sachs Research

Looking back at the lessons from Trump's 2018-19 tariffs, these measures reduced US GDP growth by 0.3% in 2019 and pushed consumer prices up by 0.4%. According to the Tax Foundation, S&P 500 companies saw a \$40 billion profit hit in 2019 from higher input costs and lost export markets. As shown below in Exhibit 4, Goldman Sachs Research found that the S&P 500 fell cumulatively by 5% on days when the US announced tariffs in 2018-19, and by 7% on days when other countries announced retaliatory tariffs.

Exhibit 4: The market does not generally like tariffs

Historical S&P 500 reaction following tariff announcements

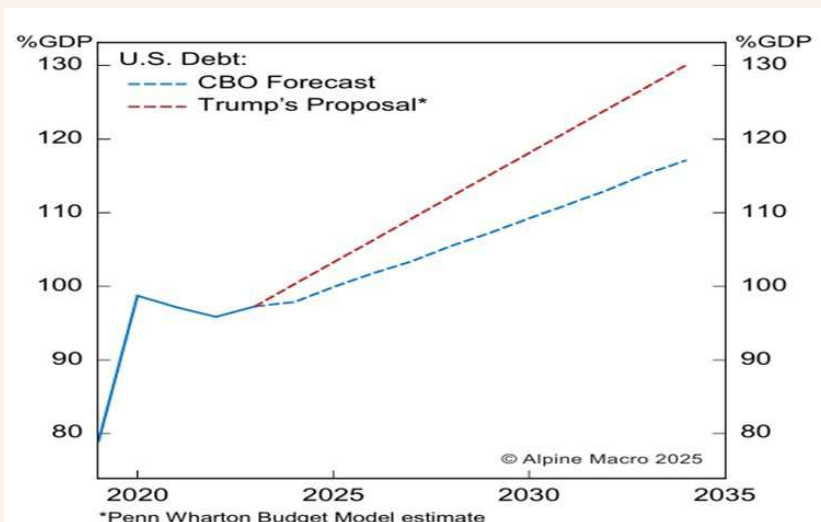


Source: Haver Analytics, Goldman Sachs Research

What will be the impact of Trump's Fiscal and Monetary policies?

Many economists forecast that the Trump administration's policies, driven by a combination of tax cuts, increased spending, and high interest payments on existing debt, will result in an annual deficit of roughly 7% of GDP. This significant fiscal imbalance poses long-term challenges for monetary policy and overall economic stability. The Penn Wharton Budget Model as shown in Exhibit 5 below, suggests that Trump's campaign policy proposals would add an additional 14 percentage points to the debt-to-GDP ratio over the next decade compared to the CBO's baseline projections.

Exhibit 5: Trump's policies are expected to increase U.S. Debt slightly more than what the Central Budget Office forecast prior to his election, primarily due to his planned tax cuts



Should we be over or under-weighting investments in the US in response to the theme of “American Exceptionalism”?

While the U.S. continues to demonstrate strength through technological leadership and innovation, several emerging challenges are undermining the notion of American Exceptionalism. Fiscal instability, rising interest rates, political turbulence, and increased competition from China are all factors that weaken the narrative of sustained U.S. economic superiority. As a result, the case for global diversification remains robust, suggesting that over-weights to U.S. equities may be risky, particularly if recent relative gains are reversed by these underlying macroeconomic pressures.

Where does all this balance out? Summary of Investment Implications

In Exhibit 6 below, we have attempted to capture the mix of offsetting impacts of the various major macroeconomic events coming out of the Trump administration overlaid with the potential impact of AI on five macro drivers of asset class returns. We very judgementslly scored impacts from -5 to +5 for each cell with negative numbers reflecting bad for asset prices and positive numbers good for asset prices. So, for example, rising inflation from tariffs is scored as -5.

Trump’s policies on tariffs, immigration, deregulation, and government efficiency (DOGE) will have significant implications for both inflation and interest rates over the next four years, which may be offset by the deflationary impact of deregulation and technological developments; AI in particular.

Exhibit 6: Trump’s trade and immigration policies are inflationary and will elevate interest rates, but other policies, combined with AI’s positive impact, point to a relatively stable financial market outcome over the next four years

Q1 2025 TNI Newsletter Macro - Long-term Investment Implications Matrix

Major Macroeconomic or Financial Market Events	Global Economic Growth	Corp Profits	Inflation	Interest Rates or Yield Curve	US Dollar
Trump Tariffs / Trade Strategy	-3	-3	-5	-3	3
Trump immigration curtailment	-3	-3	-4	-2	3
Trump Tax Cuts	3	4	-2	2	0
Trump Deficit Spending Cuts	-2	-2	2	3	-1
Energy Price Reduction (drilling and Ukraine)	3	3	3	2	2
Russia/Ukraine Peace - Moldova next?	0	0	3	2	-1
US-China Relationship worsens	-2	-2	-3	-3	2
Middle East Peace	1	0	3	2	-2
European - US Relations worsen	3	-2	0	-2	-1
Deregulation /Smaller government	2	2	2	2	1
Artificial Intelligence	5	5	4	4	4
Simple Sum / 11 events	0.6	0.2	0.3	0.6	0.9

Source: TNI estimated impacts from -5 (negative) to +5 (positive)

This implies that the positive effects of energy prices, fiscal stimulus and artificial intelligence offset the negative impact of tariffs, immigration and worsening relations of US with Europe and China. We do not expect these events to drive the global economy into recession or to have a material effect on longer-term inflation and interest rates after the one-time effects of tariffs and immigration. Exhibit 7 shows that markets have moved very little on most dimensions since Trump took office.

Exhibit 7: Markets have already responded to some extent in the direction expected from Trump's current and planned policies (but not a lot)

Changes since 5 Nov Trump Election (to 24 Feb)

WTI Oil Price	MSCI World Equities	Change in US 10 year inflation breakeven	US 10 year Treasury Yield	US\$ moves vs basket of FX (DXY)	US vs EAFE Stocks
-1.8%	3.7%	2.30% to 2.43%	4.27% to 4.40%	3.1%	-0.6%

Source: Bloomberg

Sectors that will likely benefit from Trump policies include industrials, tech, aerospace & defence, and fossil energy. Small caps and financials should gain from the deregulatory tailwinds.

Conclusion

We have entered a period of heightened uncertainty and volatility given the difficulty of predicting exactly where various Trump negotiations will settle. There are few guardrails on Trump in many arenas such as trade and geopolitics. One unusual presidential guardrail is the US stock market as Trump appears to use that as one of his primary report cards, and it will certainly respond negatively if we were to head in the direction of a full-on trade war. Where markets reacted negatively in the past to his policies, Trump often softened or delayed policies (e.g., tariffs on Canada and Mexico). In our opinion, there is little investible insight from the above macro narrative that would suggest any particular change to long-term asset allocation or to justify any specific shorter-term tactical asset allocation moves. The event to monitor most closely is the prospect of a retaliatory trade war which can spiral into a financial crisis which will have investible implications for allocating more to safety net assets and to sectors least affected by foreign sourcing, trade and interest rates.

Institutions Doing Interesting Big Things

Increasingly, institutional investors (including endowment investors) are shaping portfolios around overarching investment themes that may influence asset allocation and manager selection. We all have our favourite sources for investment themes each year. Mine was always the late Byron Wein's "Top 10 Surprises." But now we don't have to wait, with ChatGPT offering the following themes for 2025 citing Morgan Stanley, JP Morgan, Capgemini, Manning & Napier, Reuters and Blackstone as sources.

1. Deglobalisation
2. Artificial Intelligence (AI) Evolution
3. Longevity and Healthcare Innovation
4. Energy Transition and Security
5. Infrastructure Development
6. **Technological Advancements**
7. Supply Chain Transformation
8. Sustainability and ESG Integration
9. Alternative Investments
10. Regional Market Shifts

Our growing view is that technology advancements steal the show and have the greatest potential impact on overall portfolio thematic investing. Our teams should be reasonably well versed on **themes like AI Chip competition, AI implementation leaders, AI agents, cloud computing, cyber security, and robotics** in order to have meaningful conversations with asset managers on their AI investing strategies which could arm our long-term allocation decisions. An excellent annual read on tech advancements comes from the Chief Futurist, Brett Winton, from ARK each year. He points to 5 innovative platforms that will most catalyse accelerated economic growth in the future:

1. Artificial Intelligence
2. Public Blockchains
3. Multiomics (digital biologic data including DNA, RNA, proteins, etc)
4. Robotics
5. Energy storage (advanced battery technology)

Asset Allocation Trends

Update on Private Equity Allocations

Institutions are still most uncertain about their private equity and venture capital allocations going forward, staying on the lookout (mostly from within their own portfolios) for evidence that the historical 15% returns will return. In Exhibit 8 below, we show MSCI and Bloomberg data across asset classes for the past 3 and 10 years to show that VC has been the most challenged over the last 3 years (2022-24) but recall that 2021 was the most extraordinary year in recent history with 45% private equity returns and 60% venture capital returns. Cambridge Associates shows 16% 5-year private equity returns (5-years ending 30 June 2024) vs 15% for venture.

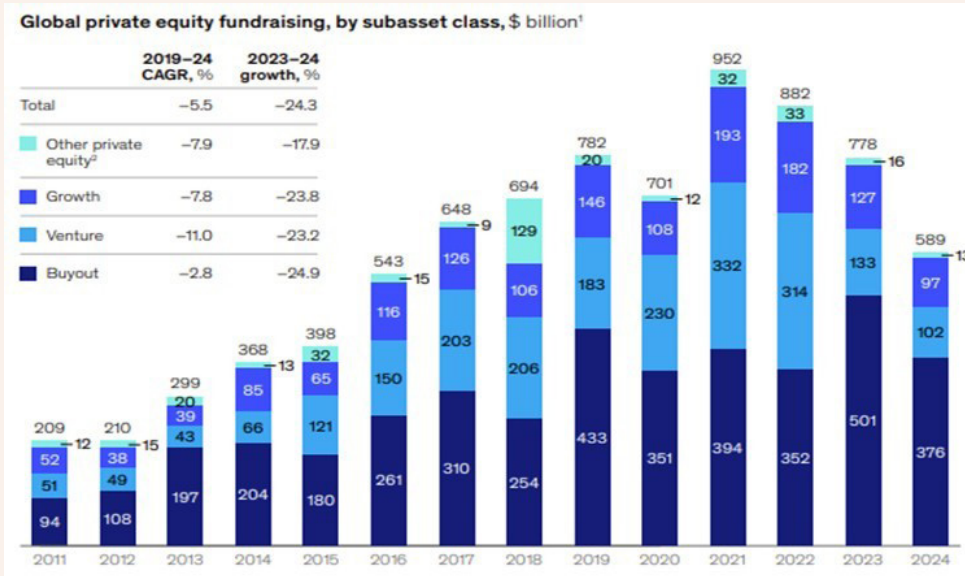
Exhibit 8: Net Performance of Private Capital Strategies vs Public Markets, Pooled Trailing 10 year and 3-year Net Returns Long-Term Return Forecasts



Source: MSCI & Bloomberg valuations as of 30/9/24

All private equity fundraising remains subdued as shown in Exhibit 9.

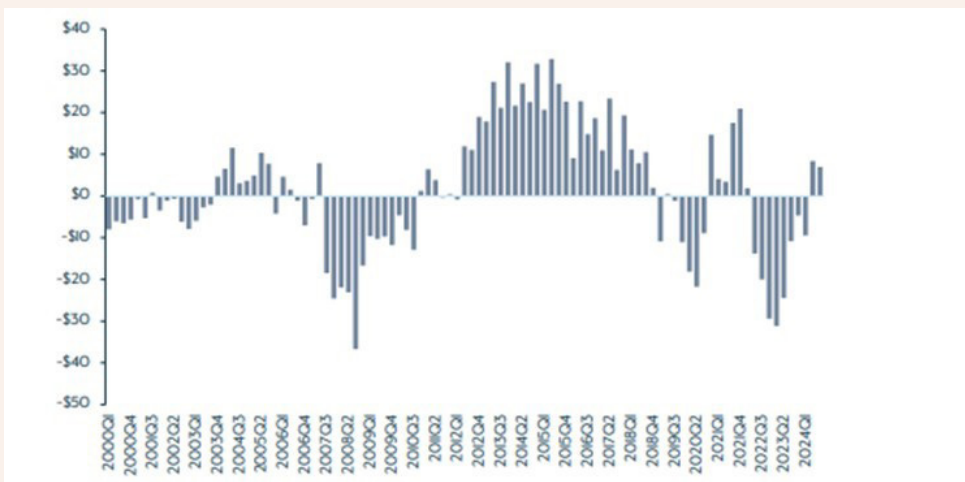
Exhibit 9: Buyout, venture and growth equity fundraising fell 24% in 2024 after a 12% drop in 2023



Notes Figures may not sum to totals, because of rounding. **1.** Excludes secondaries, funds of funds, and co-investment vehicles. **2.** Includes turnaround equity, private investment in private equity, balanced funds, hybrid funds, and funds with unspecified strategy. **Source:** Preqin

Tiny positive signs for the asset class are that, in 2024, private equity deal value increased 14% after two years of decline. Additionally, global net distributions of buyout funds turned positive in the last two quarters for the first time since Q4 2021 as shown below in Exhibit 10. Venture capital and other illiquid asset classes are still calling more capital than they are distributing.

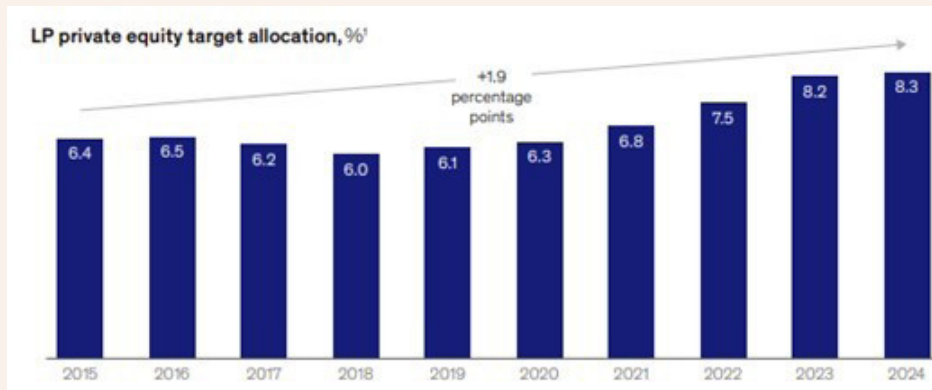
Exhibit 10: Global net distributions of buyout funds (\$B) turned positive in Q2 and Q3 of 2024



Source: MSCI, assessed 12/30/24. For illustrative purposes only. There is no assurance that any trends depicted or described with continue

Despite the slow fundraising and disappointing recent returns, LPs have continued to increase allocations to private equity, albeit only marginally.

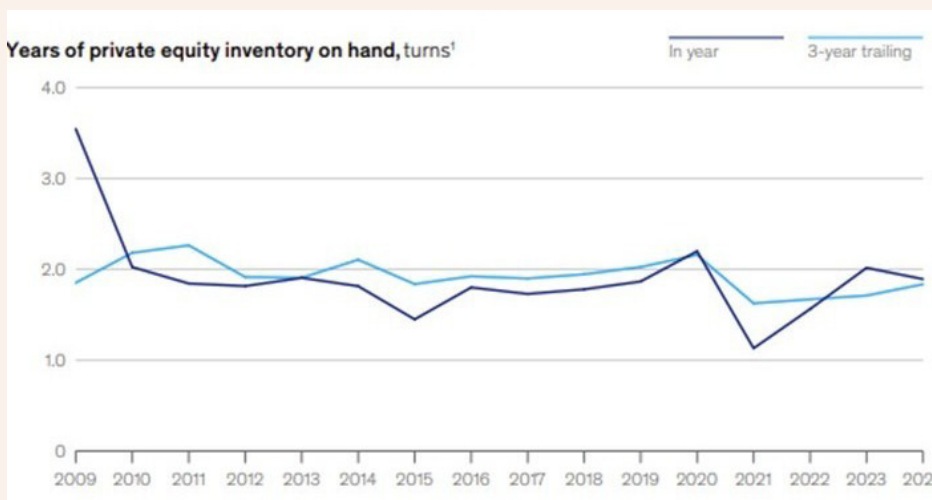
Exhibit 11: LPs have increased their target allocations to private equity since 2019, but marginally in 2024



Notes: 1. All Private equity, including growth and venture capital. Data as of beginning of each year.
Source: CEM Benchmarking

While less capital being raised in the market is generally a good thing for future returns, deployment has also been slow until recently. Dealmaking rebounded in 2024, with North American deal value growing 34% and Europe growing 54%, both on a 9% increase in deal count. Asia-Pacific deal value grew 11% on slightly fewer deals. Despite this revival of deal value, global private equity dry powder remains at 2 years of deployment, in line with the last 14 years.

Exhibit 12: Global private equity dry powder remains at around 2 years of deployment which is roughly the same level it has been since 2010



Notes: 1 turn of private equity inventory equivalent to 1 year of deployment based on historical deal value. Capital committed but not deployed divided by equity deal value. Equity deal value estimated using transaction value and leverage figures for full year. Dry powder for 2024 based on figures as of June 30 2024.
Source: PitchBook; Preqin

The Bain & Company Global Private Equity Report 2025 was just released yesterday. Its conclusions mirror this summary. A one sentence summary of Bain’s commentary on the market is that “After two years of exit declines, 2024’s uptick (increase in exits – largely PE firm to PE firm) across channels is certainly a welcome relief. But it continues to be overshadowed by the towering \$3.6 trillion of unrealized value represented by 29,000 unsold companies.”

Sustainable (Energy Transition) Investing Corner

Is the Energy Transition over, on hold, or carrying on? A focus on Europe in light of recent geopolitical developments with the US and Russia

Since President Trump was re-elected, he has withdrawn the US from the Paris Climate Agreement again, declared a state of national emergency allowing the suspension of environmental regulations to boost fossil fuel extraction, froze funds allocated to clean energy projects, paused federal permits and leasing for both onshore and offshore wind projects, attempted to stop EPA grants for energy efficient housing projects and threatened to cut tax credits under the IRA 45Q for hydrogen, carbon capture and other clean energy projects. Many US companies have started to back off from emissions targets and commitments. Six prominent US banks (JPM, BofA, Citigroup, WFB, MS and GS) have withdrawn from net-zero pledges in January 2025. In 2024, the Science Based Targets Initiative (SBTi) removed the commitments of 239 major global companies including Unilever, Walmart & Microsoft for failing to set near-term or net zero targets, but generally due to Scope 3 measurement challenges rather than a change in commitment. Most US companies have not wavered in their commitments and are carrying on with their decarbonisation programmes. But certainly, inertia behind decarbonisation in the US has escalated since Trump was elected.

Europe's progressive policies—including the EU Emissions Trading System (ETS), aggressive EV targets, subsidies for clean hydrogen, and more—have long supported a robust energy transition in Europe. However, today the current developments with Russia, Ukraine, NATO and the US (regarding tariff threats) may change this level of commitment to the energy transition. Such progressive policies may be taking a back seat relative to Europe's other strategic priorities for national security and defence against a Russian aggressor and economic resilience against US tariff threats.

To what extent will Europe enlarge their investment and commitment to defence and national security?

European countries are significantly increasing their defence spending commitments in response to growing security concerns. As of 2024, European NATO countries' average defence spending rose to 2.2% of GDP, exceeding the long-standing NATO target of 2%. Estonia and Latvia have announced plans to allocate 5% of their GDP to defence, while Poland aims to reach 5% by 2025. Germany has seen substantial growth in its defence budget, with a 23% real increase between 2023 and 2024, whilst the UK announced on February 25 their increase in defence spending from 2.3% to 2.5% of GDP. This surge in spending is part of a broader trend across Europe. In 2024, EU defence spending is projected to reach €326B, marking a 17% increase from the previous year.

Despite these increases, European defence spending remains significantly lower than that of the United States. Exhibit 13 below shows the 64-year history of defence spending by the two regions with the US spending 3.4% of its GDP on defence in 2024 vs 1.9% for the EU, indicating a 1.5% spending gap. The US continues to be the largest spender in NATO. This disparity implies an ongoing reliance of European countries on US military capabilities, despite their efforts to expand their own military resources.

Exhibit 13: US Military Expenditure as a % of GDP continues to dwarf that of Europe



Source: World Bank

Closing this gap would require Europe to add \$270B to their \$342B current defence spend, or an 80% increase. This would raise the EU's annual government deficit from 3.5% of GDP to 5.0%, a level still well below that of the US. However, nations like France and Germany are expected to opt for more moderate increases, perhaps around 0.5% of GDP, or around \$100B increase, which we suspect could well meet US hopes and provide Europe with the level of security in light of growing tensions.

Exhibit 14: EU's defence spending is 1.5% behind that of the US, as a % of GDP

	2024 GDP \$T	2024 Total Defence Spending \$B	Total Defence Spending % of GDP	Difference in total spending as a % of GDP (vs US)	2024 Total Govt Deficit % of GDP
US	29.0	910	3.40%		6.40%
EU	18.0	342	1.90%	1.50%	3.50%
Germany	4.5	90.4	2.00%	1.40%	2.60%
France	3.1	64.4	2.11%	1.29%	6.10%

Increased defence spending raises concerns about potential reductions in discretionary funds allocated to the energy transition. While the EU's overall 2025 budget is set to increase by 1.8%, reaching €199 billion, the reallocation of resources toward defence priorities could result in adjustments to the scale or pacing of certain green initiatives. Carbon tax revenues via the European ETS are expected to be nearly €400B between 2024-27, or €100B per annum. Postponing the free allowance removal schedule would deepen government deficits. However, as these revenues are earmarked for energy transition projects, they will not be available to finance defence. The primary motivation for delaying carbon taxation would be primarily focused on controlling inflation from taxes being passed through to consumers, and not economically handicapping European companies during periods of trade-related economic headwinds.

The EU may implement a more nuanced policy approach, such as focusing on "green affordability" through targeted subsidies and incentives, thereby balancing environmental goals with economic stability and public support. This approach aims to ensure that the energy transition does not place excessive burdens on consumers or compromise industrial competitiveness.

Will the EU enter a trade war vs the US and what will be its economic impact?

The prospect of a trade war between the EU and the US has become increasingly likely, with significant potential economic impacts for both sides. Donald Trump has explicitly threatened to impose tariffs on the European Union, echoing his actions from his first term when he imposed tariffs on steel and aluminium imports. Trump's recent statements leave little doubt about his intentions. In a cabinet meeting this week, President Trump spoke starkly about the E.U. The bloc, he said, "was formed in order to screw the U.S." Then he said he was preparing to hit Europe with 25% tariffs.

In response to these trade pressures and broader geopolitical shifts, the EU is likely to pursue a multifaceted approach. The European Commission President, Ursula von der Leyen, has vowed "firm and proportionate countermeasures". The EU's options include imposing retaliatory tariffs on US goods, seeking closer ties with other countries to counterbalance the US's new approach, and accelerating efforts to enhance economic resilience through reshoring of critical industries and supply chain diversification.

The most discussed scenario involves a 10% universal tariff on EU exports to the US. Such a move could have severe consequences for the European economy. As described above, Goldman Sachs forecasts eurozone GDP growth at just 0.7% in 2025, well below the ECB's projection of 1.1%. A 10% tariff, if met with full retaliation, could wipe out one percentage point of euro area growth. Other estimates suggest it could shave 0.1 percentage points off EU GDP in 2025 and 0.3 percentage points in 2026, with Germany and Italy potentially facing the most significant impacts.

How will the EU's drive for energy security affect their commitment to the energy transition?

The EU's drive for energy security has significantly reinforced its commitment to the energy transition, rather than slowing it down. The ongoing Ukraine crisis has indeed forced Europe to pivot away from Russian fossil fuels, leading to an acceleration of investments in renewables and clean energy technologies. The EU has launched its Clean Industrial Deal, which aims to cut tens of billions of euros from fossil fuel import bills in 2025 and support renewable energy sources within the EU.

This commitment is exemplified by the EU's increased 2030 renewable energy target, now set at 45% of the energy mix, up from 40%, with plans to deploy over 320 GW of new solar photovoltaic by 2025 and almost 600 GW by 2030. Further underscoring this priority, the EU has raised its 2030 binding energy savings target to 13%, recognising energy efficiency as a key pillar of its security strategy. The EU estimates that its clean energy initiatives will save the bloc €45 billion in import costs by 2025, rising to €130 billion annually by 2030. This cost reduction is further emphasised by the expected savings for EU electricity consumers, estimated at €100 billion during 2021-2023, thanks to additional electricity generation from newly installed solar PV and wind capacity.

These actions, taken in the wake of President Trump's return to office and the ongoing disruption caused by the Ukraine war, demonstrate the EU's firm resolve to accelerate its energy transition despite heightened geopolitical and economic pressures.

In conclusion, rather than slowing down the energy transition, the EU's pursuit of energy security has acted as a catalyst, accelerating its commitment to cheap renewables and clean technologies. The Ukraine crisis underscored the intrinsic link between long-term energy independence and economic competitiveness, solidifying the EU's resolve to intensify its focus on a sustainable energy future. While adjustments to the pace and implementation of specific green policies are possible, a full-scale reversal of the EU's commitment to a low-carbon economy remains highly unlikely.

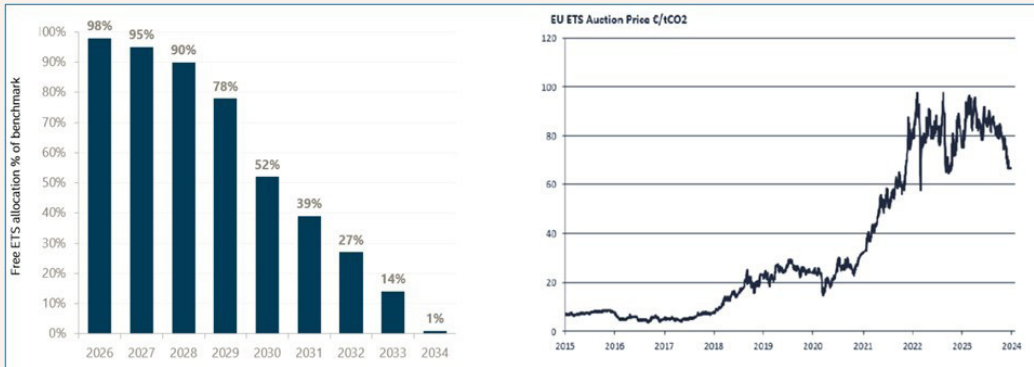
How will the EU economy be affected by these changes in policy priorities? What are the implications for EU climate goals?

The EU economy is likely to face significant challenges and transformations as it navigates policy priorities related to energy transition, defence, and economic stability. Inflation pressures are expected to persist, and interest rates are likely to remain elevated in the near term as the ECB continues to combat inflation, potentially exacerbated by trade friction with the US, and the plans for reshoring. This could impact investment in renewable energy projects, as higher financing costs may reduce their appeal. For instance, the cost of financing solar assets could increase by up to 25% if interest rates rise from 2% to 6%.

The EU's commitment to its climate goals, including the target of reducing emissions by 55% by 2030, will continue to shape economic policies. However, the pace of implementation may be moderated by economic and political pressures. The phased reduction of free allocations, as illustrated in Exhibit 15 below for the cement industry, in the Emissions Trading System (ETS) might indeed be postponed or adjusted to balance environmental objectives with economic stability and competitiveness concerns, especially sectors like automotive, chemicals, and heavy manufacturing.

Exhibit 15: Will the phased reduction of free allocations (effectively imposing carbon taxes on companies) be postponed due to EU defence and economic priorities?

Cement industry free allowance phasing schedule and expected carbon credit prices.



Source: Nordex

Conclusion

Expect to see adjustments in policy but not abandonment. While Europe's energy transition may face recalibration amid increased defence spending, trade tensions, and inflationary risks, the commitment to sustainability is not likely to be abandoned. However, long-term funding mechanisms, including the ETS, NextGeneration EU, and national recovery plans, are already in place to support clean technology and infrastructure. While some costlier green regulations might be delayed, Europe is unlikely to abandon its sustainability goals. Instead, Europe is expected to evolve its policy approach—balancing national security and economic competitiveness with its long-term green agenda—ensuring continued investment in clean technologies and infrastructure while adapting to the new strategic and fiscal realities. Europe's deep regulatory commitments and strong public and corporate support for sustainability make a full-scale rollback of energy policies unlikely.

Artificial Intelligence Corner

Here, we add to our thinking on AI investing on the back of our previous newsletter (and whitepaper) which focused on two aspects of AI investing: 1) how artificial intelligence is transforming the processes around institutional investing and 2) how asset managers are using AI in their investment processes. Below we summarise the views expressed in our first whitepaper covering these two questions on AI which were debated in our 6 November 2024 CIO Forum in Boston with our group of 16 CIOs.

We have a second AI whitepaper in progress that is going to focus on how the technology is expected to develop and what specific types of investments may be among the most attractive across private and public equities in particular. This whitepaper will be debated in our next CIO workshop in Boston on the 3rd of April 2025 with the same group of CIOs with a few additional joiners. Below, we provide a preliminary view of where our answers are likely to come out. We have two external asset managers speaking on that day including one from the PE world and one from the public equities' world.

How will institutional investors generate more alpha with the use of AI?

AI enhances alpha generation through improved investment analysis (including asset manager due diligence), portfolio construction, and risk management. AI's analytical capabilities allow for the examination of extensive datasets from diverse sources, aiding in asset allocation based on market trends, economic indicators, and historical performance. Natural language processing bolsters analysis by extracting insights from unstructured data like earnings call transcripts, while

sentiment analysis anticipates market reactions. To maintain a competitive edge, institutional investors will seek ever more unique and relevant data sources, as AI levels the playing field in data access and analysis. The bar will continuously go up on what is unique and relevant data to the existing investment process and decisions of large institutional investors. But most important capability for institutional investors will be to be able to assess how third-party asset managers should be making use of AI as we summarise below.

How will asset managers generate more alpha from the use of AI?

In the manager due diligence process, the institutional investor's research team will be tasked with assessing each asset manager's "AI-lens," looking for the following attributes of the fully "AI-integrated" asset manager:

1. Asset managers can generate additional alpha through a deep understanding of the over-arching technological advancements driving AI across industries. This expertise not only aids in evaluating a company's competitive edge within its industry but also arms the manager to assess which companies stand to benefit most from AI trends.
2. Is the manager making the most effective delineation of tasks between the human team members and machines? Public LLMs don't go behind research paywalls. Forward leaning asset managers are building hybrid LLMs accessing unique research behind paywalls that they pay for. But AI may never replace higher-order skills such as evaluating management quality, aligning incentives, and identifying unique data sources that provide deeper insights.
3. Managers who integrate AI most successfully will be investing significant research effort to identify and access the highest quality and potentially unique third-party data sources that are enriched with AI-generated insights. And then, by enhancing these insights with their own proprietary data, they create a more robust and differentiated view of individual companies.
4. Finally, the application of machine learning for asset allocation and rebalancing plays a crucial role. By employing reinforcement learning algorithms, asset managers can generate dynamic buy and sell signals and adjust portfolios in real time to respond to varying market conditions, thereby continuously optimising performance.

The following two questions are being addressed in our second AI whitepaper and debated in Boston on the 3rd of April.

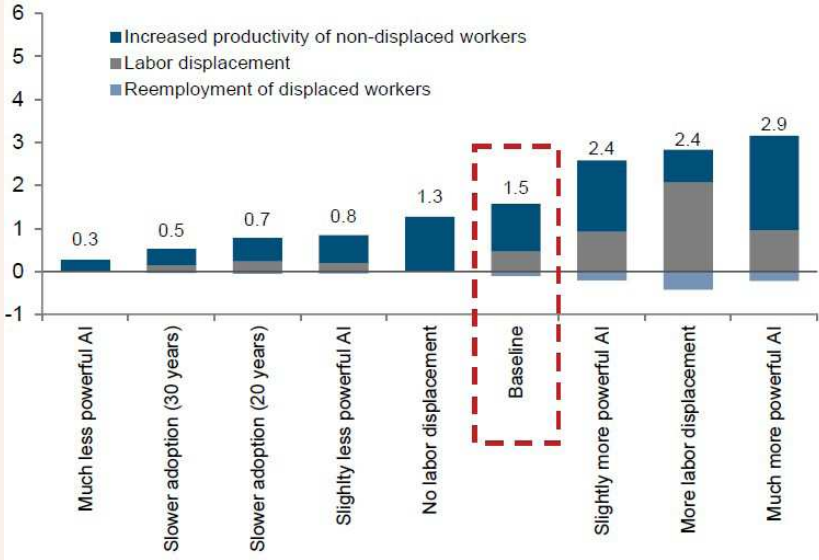
How will Artificial Intelligence technology evolve over the next 5 years?

Any good AI investment strategy should start with a sound understanding of the range of scenarios for how far the underlying technology will develop over the long term. However, experts have vastly different views on how far AI can go. One proxy measure used to quantify the AI potential is the impact on global GDP growth over the next 10 years. The consensus view is bullish to the extent that the ten largest AI-focused firms have seen their market capitalisation surge by over \$8.7 trillion since the debut of OpenAI's ChatGPT in late 2022.

Goldman Sachs published an excellent report on 25 June 2024 entitled "Gen AI: too much spend, too little benefit?", contrasting the long-term views of multiple AI experts. The essence of the AI value creation is delivered in the form of productivity gains. A simple investment thesis around AI would be that whatever AI investment delivers the greatest productivity enhancement at the lowest cost, should deliver the highest returns. At the macro level, Goldman Sachs show a range of annual productivity growth percentages after a 10-year adoption period that range from 0.3% to 3% with a base case of 1.5% a year. The assumption on labour displacement – i.e., automated jobs are lost, and those individuals are reskilled.

Exhibit 16: Generative AI is expected to boost US labour productivity by 1.5% p.a. with a wide range of possible outcomes

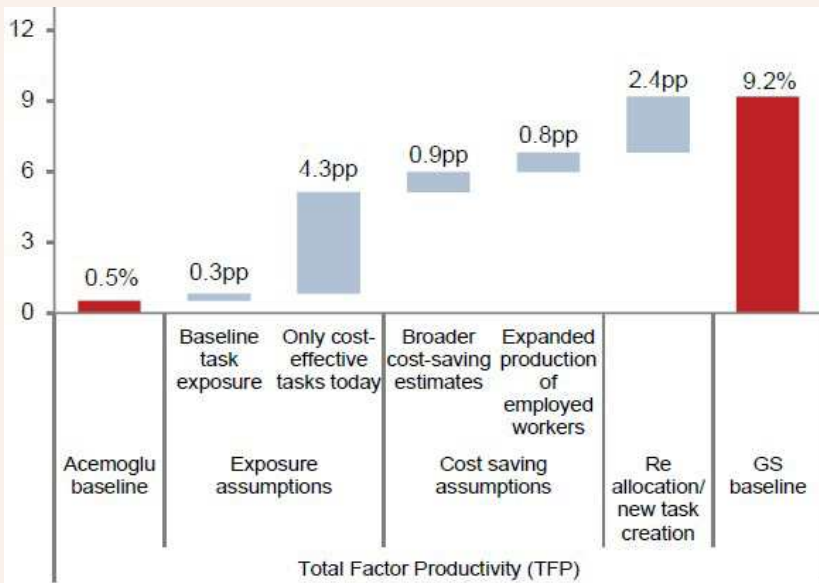
Effect of AI adoption on annual % US labor productivity growth, 10-year adoption period



Source: Goldman Sachs (June 2024)

One formula for predicting GDP growth is labour force growth + productivity growth. A 1.5% improvement in productivity over and above normal productivity improvements will of course translate into significant GDP growth as shown in Exhibit 15. Goldman start with the lowest estimate from their group of experts, MITs Acemoglu, of 0.5% cumulative 10 year growth from AI productivity gains, and explain that Acemoglu failed to apply AI to a fuller range of tasks and calculate the impact of displacement and redeployment of labour. Goldman lands on a base case estimate of 9% cumulative growth over the next 10 years, which translated into 90bps p.a. of global GDP growth. For a global economy that typically grows at 3% a year, this is of course a meaningful boost. The net present value of this value creation appears to have accreted to just a handful of companies (referring to the \$8.7 trillion of market value gain of the 10 companies most impacted by AI).

Exhibit 17: Estimates for the 10-year impact of AI on GDP growth range from near zero by MIT Institute professor, Daron Acemoglu, and Goldman Sachs at 9.2% (90bps p.a.)



Source: Goldman Sachs (June 2024)

The essence of any Gen AI investment theme is that the investor has superior insights into knowing how AI technology will evolve, where and how large the productivity gains will be, and to which provider of that AI-driven productivity enhancing technology the value creation will accrue. At the same time, this prescient investor needs to see where value creation is exaggerated.

DeepSeek's ability to create highly efficient, open-source AI models at a fraction of the cost of its Western counterparts has caused a reassessment of AI investment strategies. The company's innovative approach, which leverages techniques like Mixture-of-Experts (MoE) and optimised hardware utilisation, challenges the long-held assumption that AI performance solely improves with increasing parameters and computing power. This efficiency-first methodology has not only disrupted the market but also sparked investors to focus more on intelligent optimisation rather than brute-force scaling.

As we step back and think about Gen AI's potential, we cannot help but agree that huge value will be created through productivity enhancement across many large sectors of the global economy. AI will transform mobility, healthcare, medicine, robotics, and agriculture, fundamentally altering how we interact with the physical world.

In **mobility**, self-driving technology will likely move from experimental to mainstream, with AI managing real-time navigation, traffic optimisation, and vehicle coordination, reducing accidents and congestion. AI-driven smart cities will integrate autonomous public transport, dynamic traffic systems, and AI-optimised logistics for smoother urban movement.

In **healthcare and medicine**, AI will revolutionise disease detection, drug discovery, and personalised treatments, analysing vast datasets to provide early diagnoses and tailor treatments to individual genetic profiles. AI-powered robotic assistants will assist in surgeries, elderly care, and rehabilitation, offering precision and efficiency beyond human capabilities.

Robotics, in all its forms, will become deeply integrated into everyday life, industry, and defence. Humanoid robots, powered by AI, will handle tasks in service industries, from customer support to elderly care, while industrial robots will enhance manufacturing, logistics, and construction through greater autonomy and adaptability.

AI-powered drones will be used for infrastructure inspection, search and rescue, and even last-mile delivery, making operations more efficient and scalable. In agriculture, AI-driven robotics will automate harvesting, monitor crop health, and optimise resource use, increasing food production with minimal waste. Whether in homes, hospitals, factories, or cities, AI-driven robotics will reshape industries by making physical tasks smarter, safer, and more efficient. Some experts predict that 2025 will be the "Year of the Robots," highlighted by advancements in humanoid robotics and self-driving technology, which is already functional and moving towards mainstream adoption.

AI is expected to dramatically enhance human cognitive capabilities, potentially boosting human IQs, regardless of where they started. And in this very fact, we see risks. The increasing prevalence of AI introduces significant security risks, including the emergence of sophisticated AI-powered cyber-attacks that could potentially target critical infrastructure and the financial sector. No doubt there will be appropriate "regulatory brakes" that could curb the growth in AI applications.

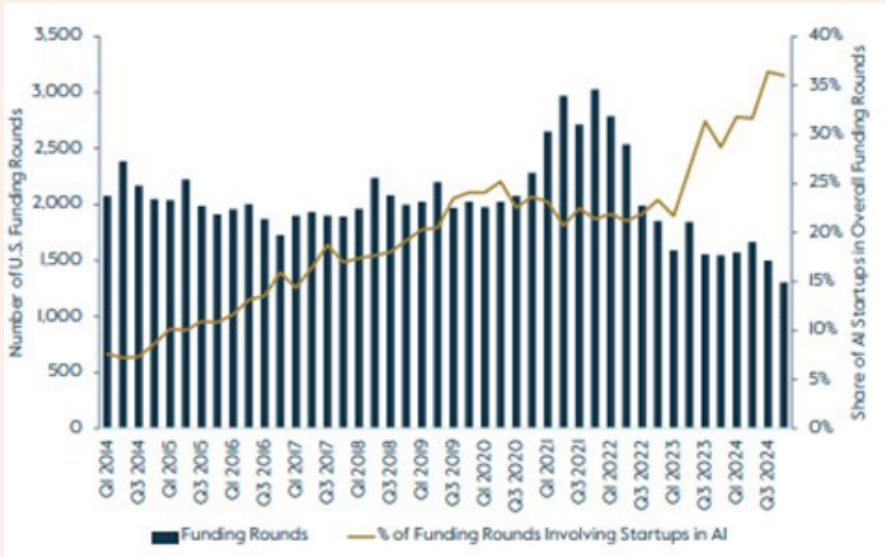
Where should we invest in AI? What is our AI investment strategy?

At this stage in AI's development, it would appear to us that the vast majority of the value creation will accrue to the largest developers of generative AI models to build the data centres and to train and run the models. While AI is the largest category at 37% of all AI VC deals today, this amounts to approximately \$165 billion, of which two-thirds was funded by the 6 large public tech firms. Infrastructure dominates the public and private equity AI opportunity set with tools and applications investments accounting for the remaining investment opportunities.

In 2023, it is estimated that approximately \$90B per year was invested by companies in AI including six leading firms in AI: Amazon, Meta, Alphabet, NVIDIA, Apple, and Microsoft. We do not know the cumulative investment, but we would expect it to be in the range of \$200B to \$300B through to 2024. \$2 trillion is expected to be invested in data centres between now and 2030 according to Goldman Sachs.

The venture capital world has been propelled by AI. 10 years ago, AI investments accounted for 7% of total VC investments, while today AI accounts for 37% of all VC investments by deal count.

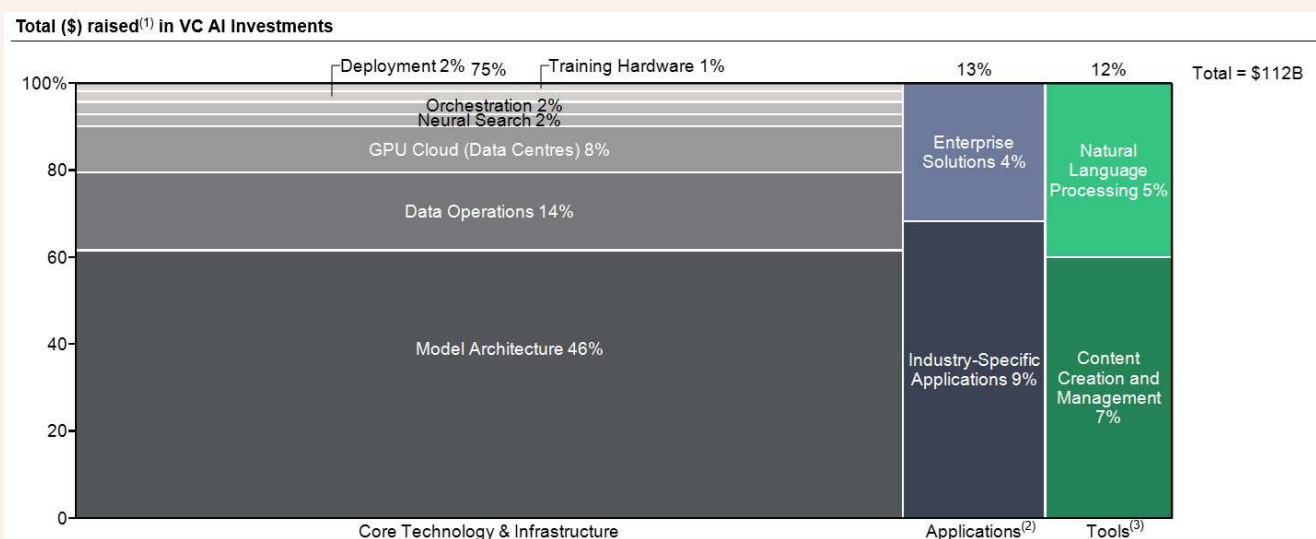
Exhibit 18: In the US, the share of all startups in funding rounds has risen from 7% to 37% over the past 10 years



Source: Preqin. Accessed January 3rd, 2025.

Pitchbook shows total funds raised by private equity and VC owned AI companies from inception to date at \$165B; \$112B by VC firms and \$53B by PE firms. 95% of PE firm AI investments have been into data centres. The VC AI investments have been heavily weighted towards Core Technology Infrastructure, specifically model architecture. OpenAI, Anthropic and x-AI account for ~37% of total AI capital raised and ~50% of total model architecture capital raised.

Exhibit 19: VC investments in AI are dominated by infrastructure investments (75%), followed by applications (13%) and tools (12%)



Notes: (1) Total raised is defined by Pitchbook as the “sum of known capital injected since the last majority transaction of recapitalisation”
 (2) Applications include E-Commerce, Sales & Marketing, Customer Support, Information Security, Corporate Strategy, Human Resources, Testing, Documentation, Data Analytics, Edtech, Robotics, Biotechnology, Legal, Healthtech, Industrial, Proptech, Fintech and Gaming
 (3) Tools include Content Suite, Video, Writing & Editing, Summarization, search & analysis, Synthetic Voice, 3D Models, Music Generation, 2D Images, Application Development, Chatbots & Assistants, Coding Assistants, Translation and Voice Recognition & Transcription
 (4) Businesses only include venture capital-backed companies as categorised by “Company Financing Status” by Pitchbook

Source: Pitchbook

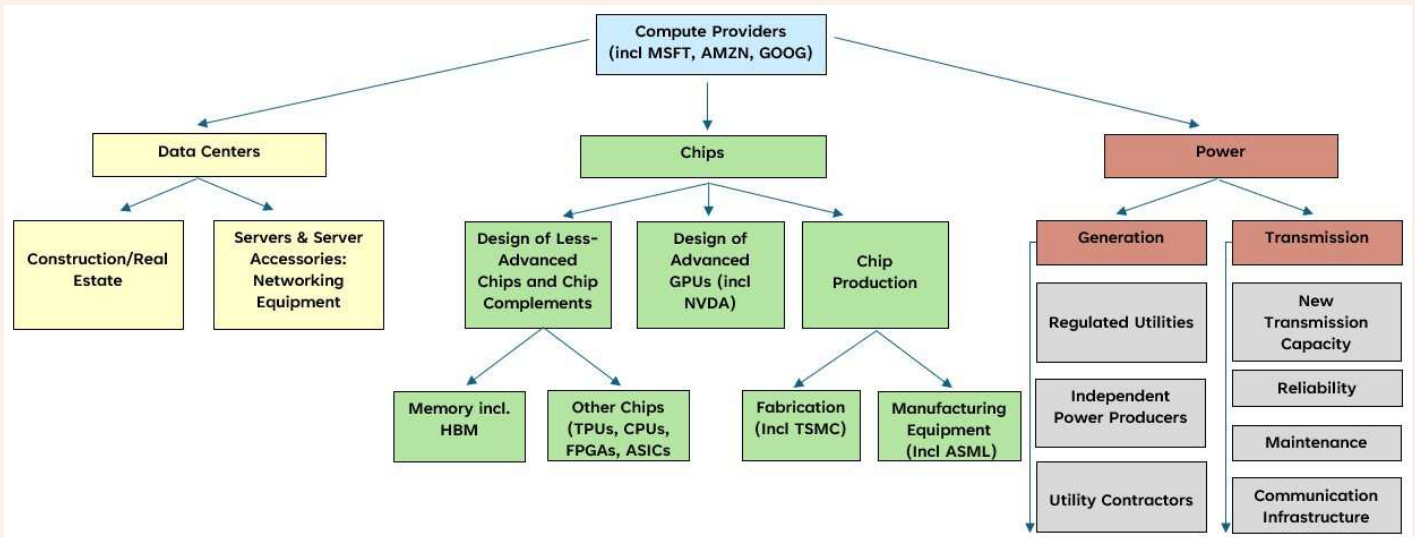
In 2023, tech giants invested two-thirds of the \$27B raised by emerging AI companies. The five tech companies that have invested the most in AI startups in 2023 are Amazon, Google, Microsoft, NVIDIA, and Salesforce, in many cases via their in-house VC divisions.

AI infrastructure efficiency is the single most critical factor for successful model companies. As AI models grow larger and more complex, efficient infrastructure becomes crucial for managing computational demands and costs, best positioning those with superior AI infrastructure to train and deploy models faster and more cost-effectively.

Gavin Baker, the founder and PM of tech-focused hedge fund Atreides, underscored the importance of AI efficiency as a key driver of an AI infrastructure investment's attractiveness. As a guide to AI investors, Gavin proposes a unified AI efficiency equation that integrates 1) model design, 2) hardware utilisation and 3) system-level optimisation. Gavin suggests that the best investment opportunities lie with companies that improve this efficiency equation most, notably those developing next-generation networking, advanced storage and improved memory technologies capable of supporting large GPU clusters.

As we work hard to develop our own AI investment strategy, we need to dive deeper into where the largest returns have historically been made between private and public investments, and in which subsectors of each. The \$8.7 trillion of market gains estimated from public companies like Nvidia gives us a pretty clear clue. This number will likely dwarf the expected gains on the \$164B total venture and PE investments, but that jury is out. Clearly the largest dollar opportunity set has been in infrastructure which dominates both public and private AI investments. According to Blackstone, over the next five years, the U.S. is expected to see over \$1 trillion invested in data centres, with an additional \$1 trillion anticipated outside of the US. In Exhibit 20, we lay out our menu of AI infrastructure investments previously introduced in our Q2 2024 newsletter.

Exhibit 20: AI investment opportunity set includes compute model builders, the vast array of chips supporting AI, data centre servers and construction and supporting power infrastructure



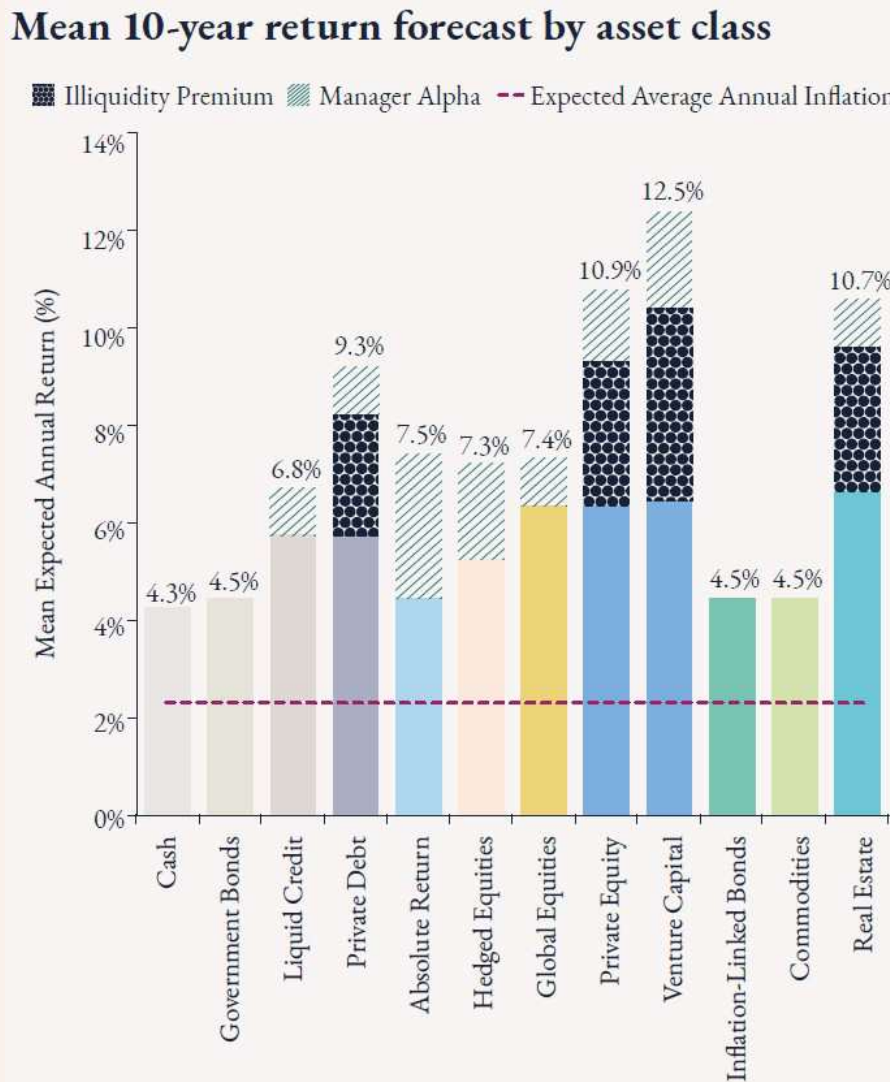
This highlights where the public companies that provide exposure to AI are but not where the most value will accrue to or where the largest alpha opportunities might be. Specialist tech equity managers like Atreides, Sequoia (public equities fund), and Coatue are the homes of some of the deepest thinkers on AI and managers like them can educate us on where the best opportunities lie.

Presently, our own simple AI investment strategy has us investing in data centre real asset managers who are starting with the power source, given that is the gating factor on data centre buildout. Additionally, we allocate to leading generalist VCs who have deep vertical teams in AI, and we are investing in one specialist VC focused on semiconductors supporting data centre power efficiency. We gain public equity exposure to AI via our diversified equity managers who presently are underweight the Mag-7 reflecting a rebalancing on the back of their spectacular rise over the last two years.

Long-Term Return Forecasts

Partners Capital has just this week published their Insights 2025 macroeconomic report updating their 10-year return forecasts for each major asset class. Partners Capital arrive at their estimates including a pure beta estimate and adding any illiquidity premium and expected manager alpha.

Exhibit 21: Mean 10-year return forecasts by asset class breaking out beta, illiquidity premium and manager alpha



Source: Partners Capital Insights 2025

The only significant changes are a reduction in expected annual public equities returns from 8% to 7.4%. This flows through to other equity asset classes including venture capital, which dropped from 13.5% to 12.5%, and private equity reduced from 11.5% to 10.9%. All other asset classes changed by small amounts.

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