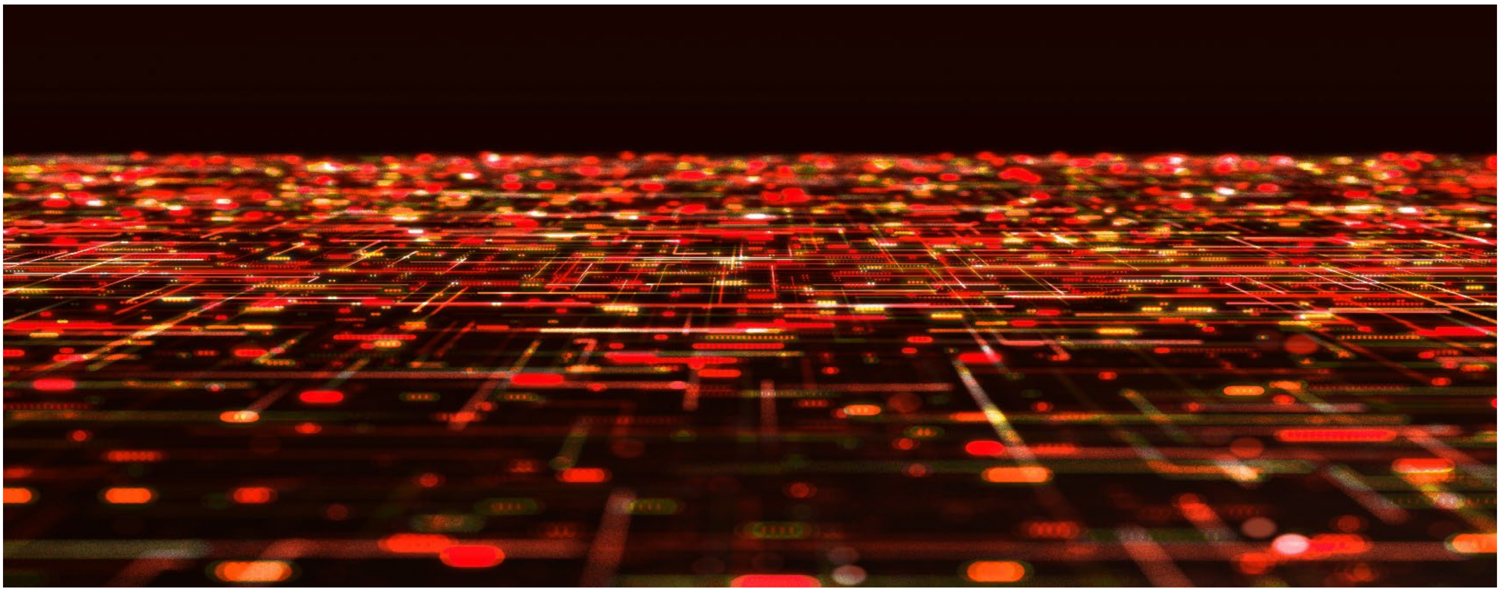
CIO Academy

The AI race has been thrown wide open, creating a very diverse opportunity set

19 March 2025



Written by:

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Highlights: AI-related stocks have experienced quite a bit of volatility recently, but the structural story remains very promising. That said, investors need to look at the entire AI ecosystem and not just the US large cap stocks: opportunities are global, across large and small caps, across industries and also in private markets. Our focus has moved from AI enablers towards AI adopters and into themes such as intelligent automation, digital infrastructure, cybersecurity and next gen medicines

- **AI has seen two major catalysts that hugely accelerate the innovation and widen the applications.** The move from task-based models to reasoning models and agentification will make applications much more useful and versatile. Secondly, DeepSeek's model increases the competition and lowers the costs, which should speed up adoption.
- **AI is already helping companies increase efficiencies and launch new products and services.** And as machine intelligence moves closer to human intelligence (i.e. 'singularity'), the applications will become even more useful. We believe this will raise productivity and economic activity, while helping to keep inflation in check. In other words, while some people worry that tariffs are stagflationary, AI should have the opposite effects.
- **We take a broad-based approach to investing in AI.** From a geographical perspective, we see opportunities beyond the US, particularly in China, where internet leaders, ecommerce and AI-related tech are clear beneficiaries. Global data centre demand should continue to grow rapidly, and with it, the demand for diversified electricity sources, cooling, data security and communications services.
- **We see AI as a democratiser, helping SMEs and private sector companies to compete with larger rivals.**

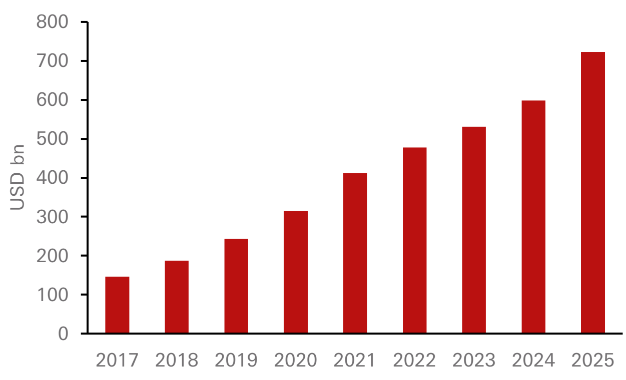
An acceleration of key milestones for AI

Our digital age has been evolving rapidly, from the time of the Turing Test in 1950 and as we make our way to the ultimate goal of 'Singularity' – i.e. machine intelligence that exceeds human intelligence. On that path, we believe we have just passed two notable milestones again.

- Firstly, AI is transforming from dealing with relatively specific and narrow task-based problems to reasoning models, allowing for 'agentification'. This is happening thanks to advancements in machine learning, natural language processing and computational power. Practically speaking, this shift allows for more complex problem solving, more autonomy, adaptability and human-like interaction. It enables AI to perform a much wider range of functions and to operate as autonomous agents capable of complex decision-making, learning and adaptation across diverse environments. It helps create AI-based solutions that are more flexible, scalable and intelligent – i.e. better adapted to real-world complexities. Clearly, this vastly broadens the potential applications and the usability in the real world.

- Secondly, DeepSeek's R1 (where 'R' stands for 'reasoning') is shaking up the competitive landscape and the economics of AI. In recent years, the biggest tech companies – mostly US-based – invested huge amounts of capex to show that they were serious about the AI race and to create a 'moat'. DeepSeek seems to have effectively broken that moat by re-working the LLM algorithm, resulting in much lower computational and power needs for both the model development and the model use. This is a common phenomenon with technological breakthroughs and next-generation inventions are often vastly more powerful. While DeepSeek broadens the competitive landscape, it doesn't necessarily mean it is bad for the large US tech firms. As the Jevons Paradox tells us, cheaper tech means that its use goes up sharply, which should still support strong demand for chips, data centres and related energy demand.

Worldwide end-user spending on cloud services



Source: Bloomberg, HSBC Global Private Banking as at 13 March 2025.

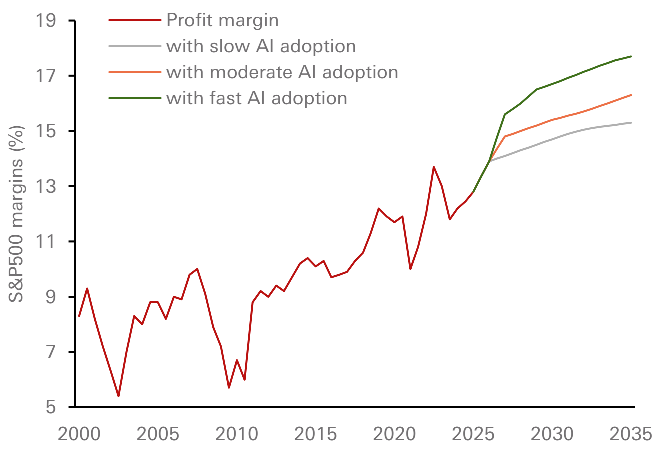
AI is here already – but where will it go?

During the latest earnings season, several large companies outside of IT gave us some illustrations of how AI is already changing their businesses and having a real impact on their earnings: A major oil company said it cut maintenance costs by 20% using AI; a global consumer goods company saved USD 200m by optimising logistics; and an industrial company saved 20% in electricity costs.

More original applications are emerging too: AI is being used in precision agriculture to monitor crop health through satellite imagery and sensors, enabling farmers to maximise yields with fewer resources. In healthcare, AI-driven diagnostic tools are analysing medical images with unprecedented accuracy, aiding early detection of diseases.

As we move towards singularity, we think that AI will help us with the design of new medicines, digitalised smart cities, fraud detection in finance, increased efficiency in power systems and humanoid robots.

As AI supports new business models and raises productivity, it should support margin growth



Source: HSBC Global Research, HSBC Global Private Banking as at 13 March 2025.

Economic implications

From a macro-economic perspective, we think AI lifts economic growth while capping inflation, which is great news for investors who are currently fretting over the potentially stagflationary effects of trade tariffs.

From a growth perspective, AI is good news because it helps create new business models and it helps workers to complete tasks more quickly. Clearly, it is also giving a huge boost to investment spending, especially in infrastructure (data centres, IT hardware, electricity) and lifting R&D. As both governments and companies want to be at the forefront of AI-related growth industries, they are happy to borrow to finance this required investment.

Some people worry about the effect on the labour market, but while some jobs could be lost through automation, history tells us that in general, those losses tend to be offset by newly created jobs. A study by the IMF ranks jobs by their vulnerability to AI replacement, using two criteria: complementarity (will AI help the worker in their job or replace them), and exposure (is AI likely to be introduced in the sector). Judges and surgeons seem to be safe because people want a continued human presence; dancers are safe too as it is hard to see AI being introduced in their job category. We try not to be offended by the IMF's assessment that economists and teleworkers are most vulnerable, as AI is likely to be introduced in their industry (of course) and many of their tasks can just as well be done by AI (ouch).

From an inflation perspective, it is clear that AI is good news. While in the short term, higher borrowing by governments (for AI and other reasons, e.g. defence spending) could raise bond yields, automation, and increased productivity should lead to lower inflation in the medium term. The illustrations we quoted from the recent earnings season point to that direction.

Investment implications

We continue to see AI as a big new ecosystem and put the emphasis on diversification of AI-related investments beyond the chips sector, across sectors and geographies. This is particularly important as DeepSeek has triggered volatility in the Magnificent 7 stocks and illustrated that the AI race is wide open.

The AI ecosystem includes applications in the automation and robotics area, and healthcare innovation area, which we highlight in our thematic investment ideas.

Data centres are at the epicentre of this technology, and investment is picking up very rapidly. Insufficient data centres could be a bottleneck for economic growth, and recent announcements of government support for the build-out of data centres by the US, UAE, France and other countries highlight that governments have realised this. We would even say that governments have recognised that AI and the related infrastructure are a matter of national economic security.

That includes energy security too, and we think that the rapidly growing demand for electricity (which is not just AI-related) means that the energy mix will continue to broaden. Nuclear energy is key here, with demand for small modular reactors rising rapidly. And even though the US administration is de-emphasising renewable energy, it plays a role in tackling the intermittence problem through diversification of energy sources. Interestingly, some readers may be surprised that Texas recently overtook California in large-scale solar generation as renewable energy can be quick to install and helps address its rapidly growing energy needs.

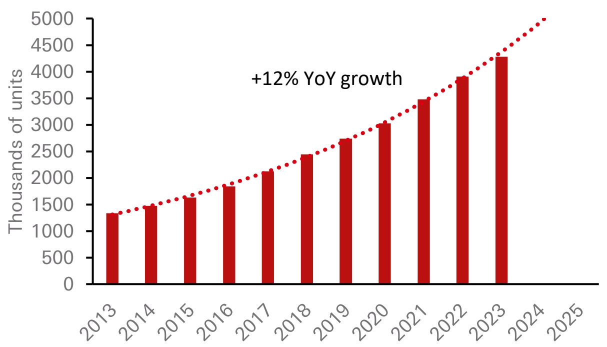
To finance everything, private capital will be needed, and many infrastructure funds are increasing their allocation to data centres and related activities. In the public markets too, companies involved in the supply of high and low voltage power, building automation, security systems, server cabinets and cooling will all have increased opportunities.

We think the beneficiaries of AI stretch even further. We see AI as a 'democratiser' as small companies across the world will be able to use new applications to more effectively compete with large ones. That may also mean that there are a lot of beneficiaries in the private markets, where younger and smaller companies can benefit from AI innovation. Of course, there will be a lot of startups too, in software in particular, as they build out new applications, which private equity investors will likely find attractive.

The limitation to full competition is the access to data. Some companies with a rich data set that is not publicly available may be able to monetise it to their advantage. This could include big ecommerce leaders, financial firms or leaders in the pharmaceutical industry.

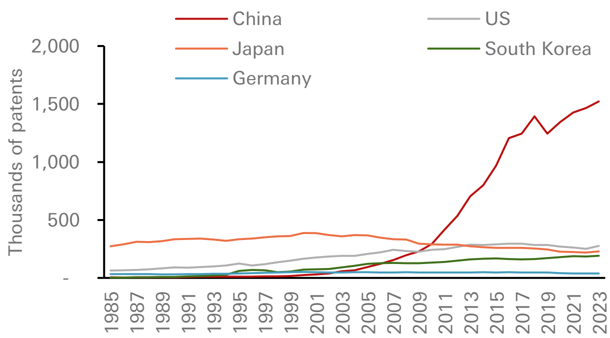
In short, the potential beneficiaries can be found around the world, across sectors, in large and small caps, and in public as well as private markets.

AI makes automation and robotics much more versatile and powerful, which should lead to further acceleration



Source: World Robotics Report, HSBC Global Private Banking as at 13 March 2025.

China's technological progress is supported by a huge jump in R&D and patents



Source: World Intellectual Property Organization, HSBC Global Private Banking as at 13 March 2025.

Abbreviation

AI – Artificial Intelligence
IMF – International Monetary Fund
LLM – Large language model
R&D – Research and development
SMEs – Small and medium enterprises
UAE – United Arab Emirates
US – United States
USD – US Dollar

Risk Disclosures

Risks of investment in fixed income
There are several key issues that one should consider before making an investment into fixed income. The risk specific to this type of investment may include, but are not limited to:

Credit risk
Investor is subject to the credit risk of the issuer. Investor is also subject to the credit risk of the government and/or the appointed trustee for debts that are guaranteed by the government.

Risks associated with high yield fixed income instruments
High yield fixed income instruments are typically rated below investment grade or are unrated and as such are often subject to a higher risk of issuer default. The net asset value of a high-yield bond fund may decline or be negatively affected if there is a default of any of the high yield bonds that it invests in or if interest rates change. The special features and risks of high-yield bond funds may also include the following:

- Capital growth risk - some high-yield bond funds may have fees and/ or dividends paid out of capital. As a result, the capital that the fund has available for investment in the future and capital growth may be reduced; and
- Dividend distributions - some high-yield bond funds may not distribute dividends, but instead reinvest the dividends into the fund or alternatively, the investment manager may have discretion on whether or not to make any distribution out of income and/ or capital of the fund. Also, a high distribution yield does not imply a positive or high return on the total investment.
- Vulnerability to economic cycles - during economic downturns such instruments may typically fall more in value than investment grade bonds as (i) investors become more risk averse and (ii) default risk rises.

Risks associated with subordinated debentures, perpetual debentures, and contingent convertible or bail-in debentures

- Subordinated debentures - subordinated debentures will bear higher risks than holders of senior debentures of the issuer due to a lower priority of claim in the event of the issuer's liquidation.
- Perpetual debentures - perpetual debentures often are callable, do not have maturity dates and are subordinated. Investors may incur reinvestment and subordination risks. Investors may lose all their invested principal in certain circumstances. Interest payments may be variable, deferred or cancelled. Investors may face uncertainties over when and how much they can receive such payments.
- Contingent convertible or bail-in debentures - Contingent convertible and bail-in debentures are hybrid debt-equity instruments that may be written off or converted to common stock on the occurrence of a trigger event. Contingent convertible debentures refer to debentures that contain a clause requiring them to be written off or converted to common stock on the occurrence of a trigger event. These debentures generally absorb losses while the issuer remains a going concern (i.e. in advance of the point of non-viability). "Bail-in" generally refers to (a) contractual mechanisms (i.e. cotractual bail-in) under which debentures contain a clause requiring them to be written off or converted to common stock on the occurrence of a trigger event, or (b) statutory mechanisms (i.e. statutory bail-in) whereby a national resolution authority writes down or converts debentures under specified conditions to common stock. Bail-in debentures generally absorb losses at the point of non viability. These features can introduce notable risks to investors who may lose all their invested principal.

Contingent convertible securities (CoCos) or bail-in debentures are highly complex, high risk hybrid capital instruments with unusual loss-absorbency features written into their contractual terms.
Investors should note that their capital is at risk and they may lose some or all of their capital.

Changes in legislation and/or regulation
Changes in legislation and/or regulation could affect the performance, prices and mark-to-market valuation on the investment.

Nationalisation risk
The uncertainty as to the coupons and principal will be paid on schedule and/or that the risk on the ranking of the bond seniority would be compromised following nationalisation.

Reinvestment risk
A decline in interest rate would affect investors as coupons received and any return of principal may be reinvested at a lower rate. Changes in interest rate, volatility, credit spread, rating agencies actions, liquidity and market conditions may have a negative effect on the prices, mark-to-market valuations and your overall investment.

Risk disclosure on Dim Sum Bonds
Although sovereign bonds may be guaranteed by the China Central Government, investors should note that unless otherwise specified, other renminbi bonds will not be guaranteed by the China Central Government.
Renminbi bonds are settled in renminbi, changes in exchange rates may have an adverse effect on the value of that investment. You may not get back the same amount of Hong Kong Dollars upon maturity of the bond.
There may not be active secondary market available even if a renminbi bond is listed. Therefore, you need to face a certain degree of liquidity risk.
Renminbi is subject to foreign exchange control. Renminbi is not freely convertible in Hong Kong. Should the China Central Government tighten the control, the liquidity of renminbi or even renminbi bonds in Hong Kong will be affected and you may be

exposed to higher liquidity risks. Investors should be prepared that you may need to hold a renminbi bond until maturity.

Alternative Investments

Hedge Fund - Please note Hedge Funds often engage in leveraging and other speculative investment practices that may increase the risk of investment loss. They can also be highly illiquid, are not required to provide periodic pricing or valuation information to investors, and may involve complex tax structures and delays in distributing important information. Alternative investments are often not subject to the same regulatory requirements as, say, mutual funds, and often charge high fees that may potentially offset trading profits when they occur.

Private Equity - Please note Private Equity is generally illiquid, involving long term investments that do not display the liquid or transparency characteristics often found in other investments (e.g. Listed securities). It can take time for money to be invested (cash drag) and for investments to produce returns after initial losses.

Risk disclosure on Emerging Markets

Investment in emerging markets may involve certain, additional risks which may not be typically associated with investing in more established economies and/or securities markets. Such risks include (a) the risk of nationalisation or expropriation of assets; (b) economic and political uncertainty; (c) less liquidity in so far of securities markets; (d) fluctuations in currency exchange rate; (c) higher rates of inflation; (f) less oversight by a regulator of local securities market; (g) longer settlement periods in so far as securities transactions and (h) less stringent laws in so far the duties of company officers and protection of Investors.

Risk disclosure on FX Margin

The price fluctuation of FX could be substantial under certain market conditions and/or occurrence of certain events, news or developments and this could pose significant risk to the Customer.

Leveraged FX trading carry a high degree of risk and the Customer may suffer losses exceeding their initial margin funds. Market conditions may make it impossible to square/close-out FX contracts/options. Customers could face substantial margin calls and therefore liquidity problems if the relevant price of the currency goes against them.

The leverage of a product can work against you and losses can exceed those of a direct investment. If the market value of a portfolio falls by a certain amount, this could result in a situation where the value of collateral no longer covers all outstanding loan amounts. This means that investors might have to respond promptly to margin calls. If a portfolio's return is lower than its financing cost then leverage would reduce a portfolio's overall performance and even generate a negative return.

Currency risk – where product relates to other currencies

When an investment is denominated in a currency other than your local or reporting currency, changes in exchange rates may have a negative effect on your investment.

Chinese Yuan ("CNY") risks

There is a liquidity risk associated with CNY products, especially if such investments do not have an active secondary market and their prices have large bid/offer spreads.

CNY is currently not freely convertible and conversion of CNY through banks in Hong Kong and Singapore is subject to certain restrictions. CNY products are denominated and settled in CNY deliverable in Hong Kong and Singapore, which represents a market which is different from that of CNY deliverable in Mainland China.

There is a possibility of not receiving the full amount in CNY upon settlement, if the Bank is not able to obtain sufficient amount of CNY in a timely manner due to the exchange controls and restrictions applicable to the currency.

Illiquid markets/products

In the case of investments for which there is no recognised market, it may be difficult for investors to sell their investments or to obtain reliable information about their value or the extent of the risk to which they are exposed.

Environmental, Social and Governance ("ESG") Customer Disclosure

In broad terms "ESG and sustainable investing" products include investment approaches or instruments which consider environmental, social, governance and/or other sustainability factors to varying degrees. Certain instruments we classify as ESG or sustainable investing products may be in the process of changing to deliver sustainability outcomes. There is no guarantee that ESG and Sustainable investing products will produce returns similar to those which don't have any ESG or sustainable characteristics. ESG and Sustainable investing products may diverge from traditional market benchmarks. In addition, there is no standard definition of, or measurement criteria for, ESG and Sustainable investing or the effect of ESG and Sustainable investing products. ESG and Sustainable investing and related measurement criteria are (a) highly subjective and (b) may vary significantly across and within sectors.

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An investment which is considered to fulfil sustainable criteria today may not meet those criteria at some point in the future. When we allocate an HSBC ESG and Sustainable Investing (SI) classification: HSBC ESG Enhanced, HSBC Thematic or HSBC Impact (this is known as HSBC Purpose in the UK) to an investment product, this does not mean that all individual underlying holdings in the investment product or portfolio individually qualify for the classification. Similarly, when we classify an equity or fixed income under an HSBC ESG Enhanced, HSBC Thematic or HSBC Impact (this is known as HSBC Purpose in the UK) category, this does not mean that the underlying issuer's activities are fully aligned with the relevant ESG or sustainable characteristics attributable to the classification. Not all investments, portfolios or services are eligible to be classified under our ESG and SI classifications. This may be because there is insufficient information available or because a particular investment product does not meet HSBC's SI classifications criteria.

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