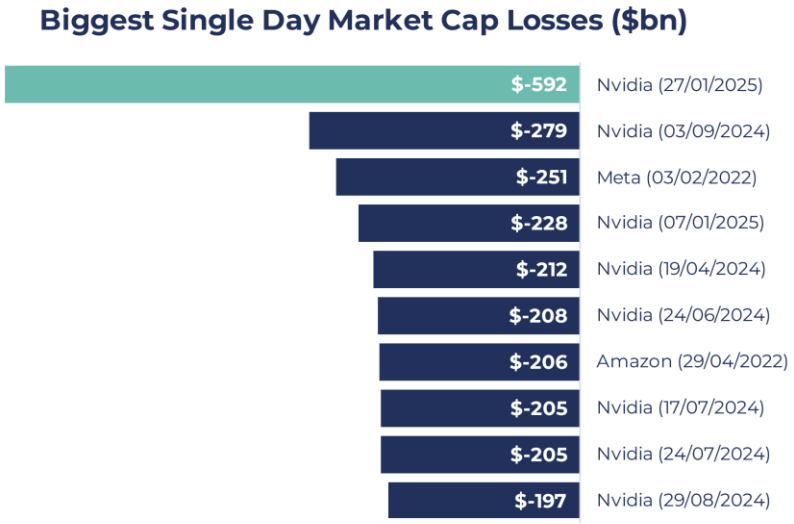
Guinness Atkinson
Global Innovators Fund
Managers Update – February 2025

GUINNESS ATKINSON FUNDS

January in Review

What actually happened? A DeepSeek Primer

DeepSeek is an artificial intelligence (AI) start-up founded in 2023 by Liang Wenfeng, employing just ~150 people and backed by 'High-Flyer', a Chinese quant hedge fund. DeepSeek previously released a base Large Language Model (called V3) in December 2024, but the big news that rocked markets in January came towards the end of the month when they published their latest 'R1' reasoning model. This model took a big step forward from a technical perspective, displaying performance on par with the cutting-edge US models, but (supposedly) costing just a fraction of the amount to train. This sent shockwaves through equity markets, wiping out nearly a trillion dollars in US technology value and Nvidia losing close to $600bn in market cap, the largest single day loss in history. While equities have since recouped some of these losses, this raised more enduring questions about the future trajectory of AI and caused investors to weigh up several potential investment implications.



Source: Bloomberg as of January 31st 2025

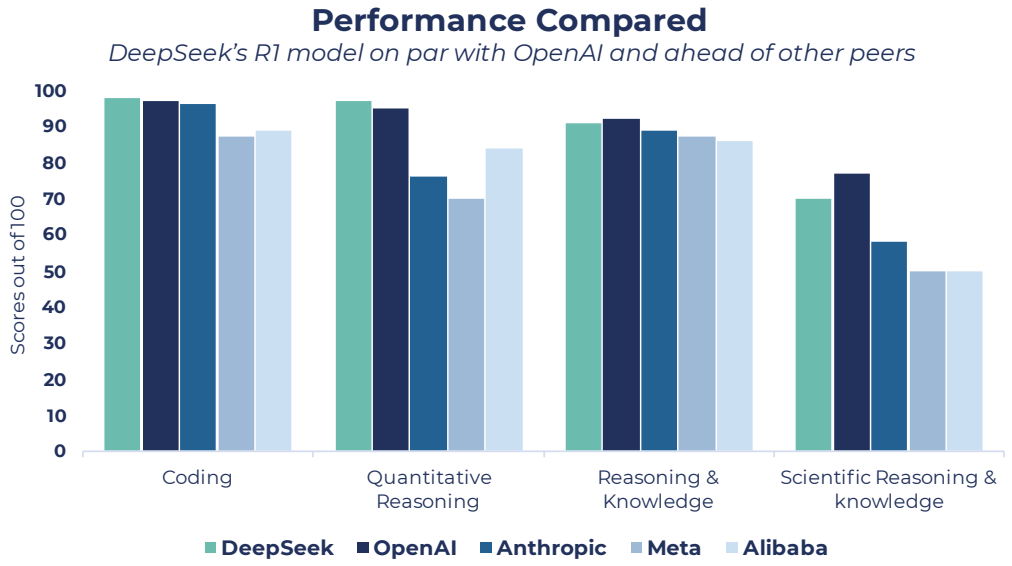
Model Specifics Matter: Base vs Reasoning

DeepSeek claim their base model (V3) was trained on a mere 2,000 H800 Nvidia chips (the H800 chip was specifically made for the Chinese market due to US export restrictions, a slightly slower version of the most cutting edge H100 Nvidia chip and with significantly reduced data transfer speeds, making traditional AI training processes far longer compared to the H100) at a cost of just $5.6mn, an order of magnitude less than current leading US models. DeepSeek achieved this by using efficient algorithms, optimized hardware, strategic GPU allocation, and an AI training technique called Mixture of Experts that substantially improves computational efficiency. Some speculation suggests DeepSeek used more compute than they claim, possibly even export-restricted H100s, but there is no empirical evidence to prove this. Nonetheless, it's important to stress that the $5.6mn figure has been slightly misunderstood, as this simply refers to the cost of the final model training run (and doesn't include the cost of buying the compute cluster, prior research costs, staff salaries, data processing, etc). Even so, the model was still far cheaper than the existing US competitors.

DeepSeek also released an updated R1 'reasoning model' in January — a distilled, more efficient version of their V3 base model. In this process, knowledge from the complex V3 is transferred to a smaller model that retains key functionality but lowers computational demands. While DeepSeek did not disclose R1's cost, it is also believed to be an order of magnitude cheaper than their counterpart's reasoning model (OpenAI's o1). Crucially, DeepSeek models are all open-sourced, granting developers and researchers free access to modify and use them. Currently, only Meta (Llama) and Alibaba (Qwen) offer open-source models, while most leading providers (OpenAI, Gemini, Anthropic, Perplexity AI) remain closed-source and behind a paywall.

What was the breakthrough?

DeepSeek addressed a significant AI challenge: enabling models to reason step-by-step. Traditionally, large language models (LLMs) have been trained on a very compute-intensive process called supervised learning, where models are fed immense quantities of labeled data and then match inputs to correctly labeled outputs. In contrast, DeepSeek's reasoning model was accomplished using a technique called reinforcement learning, where responses are fine-tuned by rewarding accurate outputs and penalizing mistakes. This approach mimics human reasoning by breaking tasks into intuitive, process-driven steps and giving feedback at each step of the way. In simplified terms, it's like teaching someone how to write intuitively via feedback instead of getting them to memorize every single word ever written. Although OpenAI introduced a reasoning model in September 2024, DeepSeek became only the 2nd firm to do so, matching OpenAI's performance (see chart below) at a fraction of the cost. It also surprised many that a Chinese competitor had made such a big leap forward in LLM technology, despite many believing that China was years behind the US.



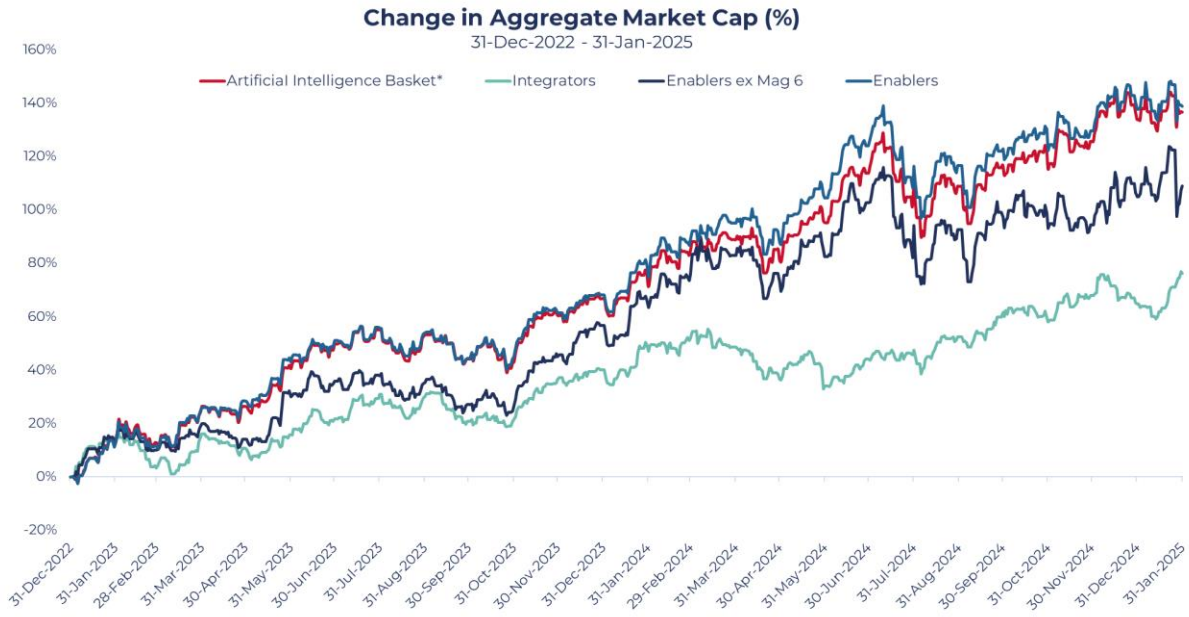
Source: Guinness Atkinson Asset Management, Artificial Analysis as of January 31st 2025

Note: Models used OpenAI (o1), Alibaba (Qwen 2.5 72B), Meta (Llama 3.1 405B), Anthropic (Claude 3.5). Tests used are HumanEval, MATH-500, MMLU, GPQA Diamond.

What are the implications: training vs inference?

Training is the process where an AI model learns by analyzing massive amounts of data and adjusting its internal parameters, while inferencing refers to the trained model applying that knowledge to make real-

time and real-world predictions on new, unseen data. If DeepSeek has pioneered a way to create lower cost models, increased training competition from upstarts could emerge. Given huge demand for the latest chips used in cutting-edge AI training (primarily Nvidia GPUs), the waitlist can often extend many months into the future. If LLMs can now be trained using fewer GPUs and at a lower cost, this may enable a wider range of market participants to access these chips, leading to greater model creation and perhaps even the commoditization of LLMs. This is especially the case if open-source models (like DeepSeek) can provide similar performance without sitting behind a closed-source paywall. It may be the case that companies will differentiate themselves at the application-layer (what is built on top of LLMs), instead of the pure LLM technology itself.



Source: MSCI, Bloomberg as of January 31st 2025

**Artificial Intelligence Basket is a selection of stocks that Guinness Atkinson Asset Management believe is most exposed to the AI theme.*

Lower training costs and more efficient models might accelerate the shift from training to inference, a process that is already underway. Inference is widely believed to have a far larger total addressable market over the long term as it includes a wider range of use cases. These include asking an LLM simple questions to getting autonomous vehicles to process live data in real time. LLMs that are less power-hungry will be able to operate on a greater number of so-called 'edge devices' (devices that process data near the source e.g your phone, your car, or your wearable accessory) and will aid the move to inference. As a result, we may see value creation shift away from the *AI Enablers* (those that provide the foundational AI infrastructure) towards the *AI Integrators* (those that provide software, applications and services built on top of that infrastructure). The chart above shows the January performance of these two baskets and note the particular sharp divergence after the DeepSeek announcement. While the initial market reaction suggests Integrators may emerge as a beneficiary of cheaper and more efficient models, there is clearly still a wide range of opportunities at many stages of the AI value chain.

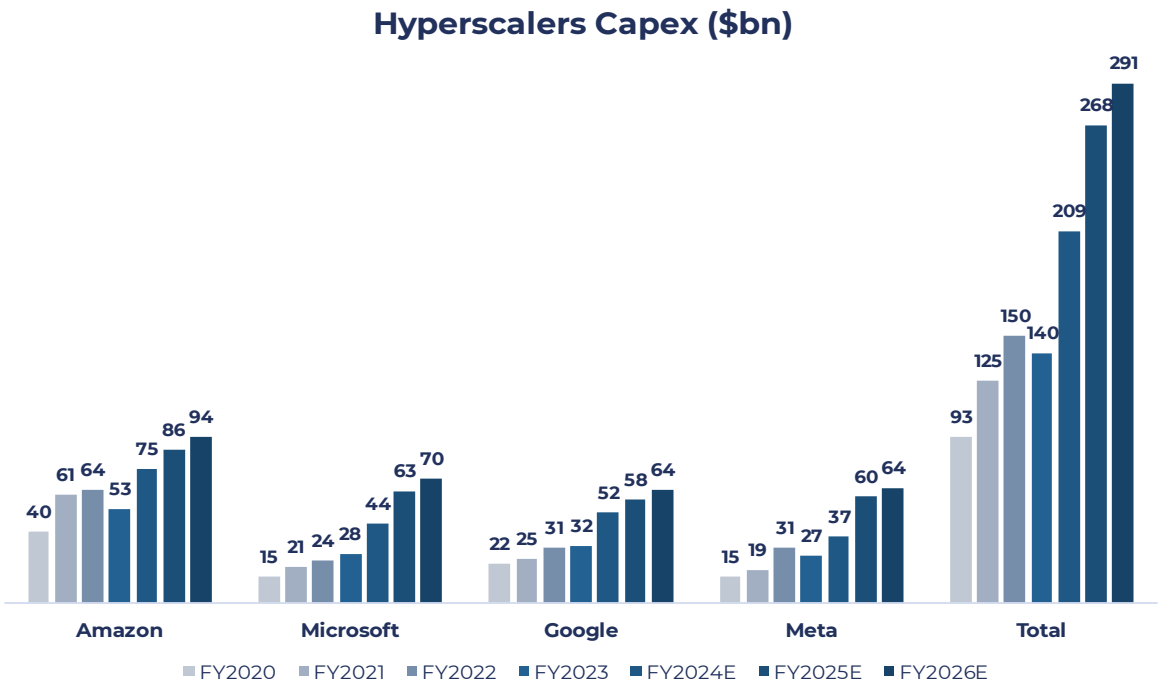
What does this mean for overall CapEx spend?

Despite the DeepSeek news, hyperscalers continue to spend heavily on AI infrastructure (at least for the time being). Microsoft are leading the charge, forecasting for $80bn of CapEx in 2025, with Meta calling for $60-$65bn this year, and Oracle, Softbank, & OpenAI recently announcing long term investments of up to $500bn via the Stargate Project. This CapEx is generally split between compute (e.g buying Nvidia GPUs or Broadcom ASICs) and infrastructure (the physical data centers that store, process, and distribute the data). If training and inference are becoming more efficient, then some argue that hyperscalers will reduce their overall CapEx spend and right-size their infrastructure footprint. However, we believe it is more likely that a huge uptake in inferencing will more than offset any potential fall in training (see above). This view has been corroborated by recent earnings releases which indicate a continued commitment to large-scale CapEx spend:

Meta CEO, Mark Zuckerberg: "We continue to believe heavily investing in the company's AI infrastructure will be a strategic advantage… It's possible that we'll learn otherwise at some point, but I just think it's way too early to call that."

Microsoft CEO, Satya Nadella commented on their balanced approach to building infrastructure: "We are building a pretty fungible fleet … and making sure that there's the right balance between training and inference." He also noted that their CapEx spend will be enduring: "You don't want to buy too much of anything at one time… you want to continuously upgrade the fleet, modernize the fleet, age the fleet and, at the end of the day, have the right ratio (of CapEx) to demand".

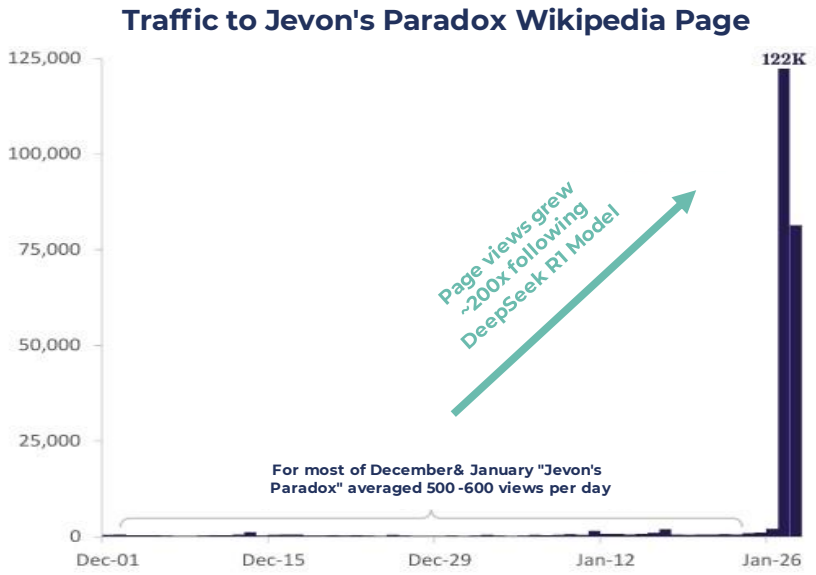
Let's not forget, while DeepSeek does point to a step change in the efficiency of models, there has been an ongoing optimization cycle within the world of LLMs. Initially, firms were in a rush to get models to market with no focus on cost. However, over the past year, OpenAI has refined its models and optimized training cost (GPT4 cost less than GPT3.5 which in turn cost less than GPT3). Some estimates suggest that algorithmic progress improves fourfold each year, meaning that with each passing year, achieving the same capabilities requires only a quarter of the compute previously needed. The market was already aware of this optimization cycle and yet the hyperscalers continue to up their CapEx (see chart below). This should give investors some solace (or concern) that large scale CapEx is likely to remain for the foreseeable future, even if there is some rationalization of spend at the margins.



Source: Bloomberg as of January 31st 2025

Note: Data takes consensus estimates until the end of January 2025. Expectations have shifted at time of writing given earnings reports in early February

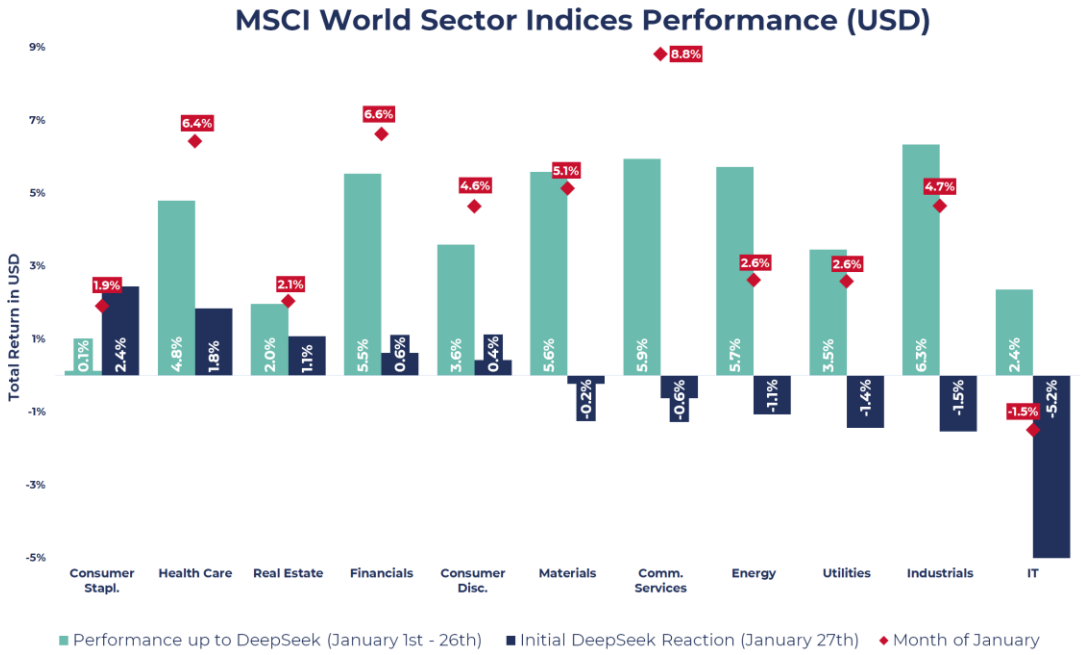
What does this mean for the long-term AI story?



Sources: Chartr, PageViews Analysis, SemiAnalysis as of January 31st 2025

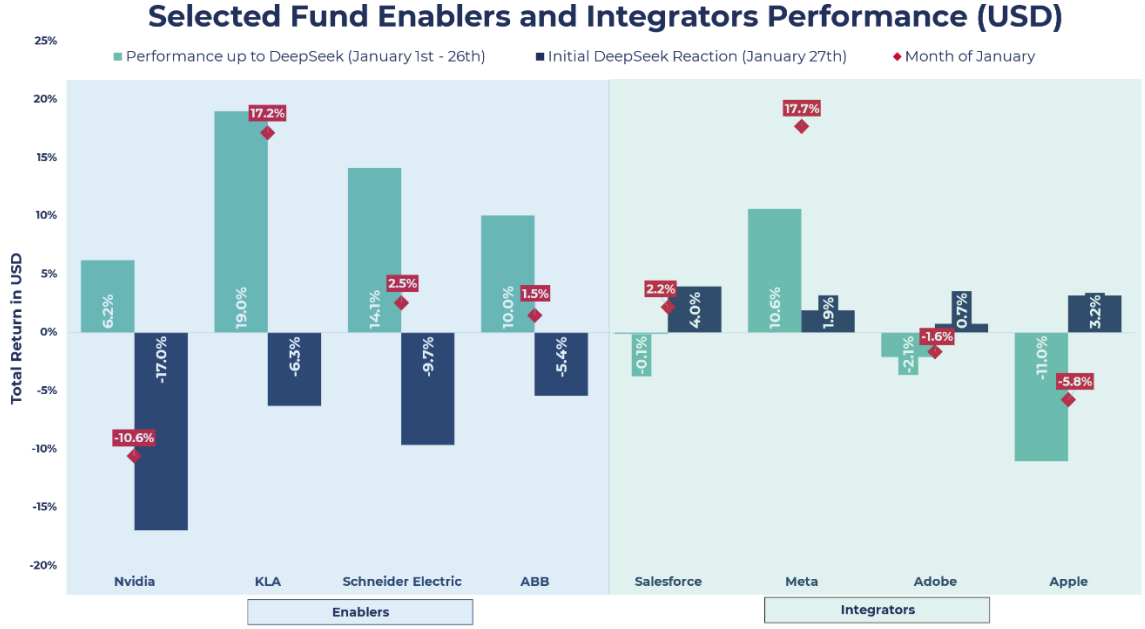
In many ways, the long-term implications of the DeepSeek model are far from certain and, given the pace of AI developments, will likely play out in ways that can't be foreseen. To that extent, the latest DeepSeek news may only serve to strengthen your existing outlook. If you previously thought that the AI theme was overhyped, the market news over January can reinforce this viewpoint. But, for more optimistic AI investors, many have turned to Jevon's Paradox to strengthen their bull case. This states that increased efficiency in resource use leads to higher overall consumption (not a reduction) because lower costs will drive more use cases and therefore greater overall demand. With regards to compute, the argument here is that more efficient AI models will lead to a cheaper cost of use, and therefore more organizations can run AI (largely through inferencing), which will lead to a steeper adoption curve. Looking back 50+ years, ever since the advent of the microprocessor, there has never been a lack of demand for compute. More powerful machines (and therefore more abundant compute) have always been used to innovate and benefit the end consumer across a wide range of use cases. The chart above shows the growing popularity in Jevon's Paradox, and this may yet continue to hold true.

Initial Market Reaction: who were the winners and losers?



Source: Bloomberg, MSCI, Guinness Atkinson Asset Management

The chart above outlines MSCI World performance over January up until the DeepSeek announcement (in green), the market reaction on the day of the R1 model release (in blue), and January performance in red. As the chart depicts, stocks generally performed well over January up until the release of DeepSeek R1, with broad-based gains and positive returns from all sectors. However, on the DeepSeek announcement, performance was much more varied. Sectors like IT, Industrials, Utilities and Energy, those that include many of the *AI Enablers*, were the most negatively impacted as investors weighed up the implications of lower training costs on companies involved in the data center build out.



Source: Guinness Atkinson Asset Management, Bloomberg

How did *Enablers* react?

Holdings	Exposure	Description
Semiconductors		
Infineon		Infineon produces power-efficient semiconductor solutions, such as microcontrollers and power management chips, which are increasingly used in AI applications
Applied Materials		Applied Materials delivers materials engineering solutions that support semiconductor manufacturing, enabling high-performance processors used in AI and data centres.
KLA Corp		KLA specializes in process control and yield management systems essential for the precision manufacturing of AI chips and semiconductor components.
LAM Research		Lam Research provides wafer fabrication equipment and services used in the production of semiconductors critical to AI hardware and data centre processing.
Nvidia Corp		NVIDIA develops GPUs and AI platforms that are foundational for training and running AI models. These products are heavily utilized in data centres for deep learning and high-performance computing.
TSMC		TSMC manufactures advanced chips essential for AI acceleration and data centre hardware. Their cutting-edge semiconductor technology supports high-performance computing needs.
Datacentre Infrastructure		
ABB Ltd		ABB supports AI data centres through its automation and energy management systems, ensuring reliable operation and optimized resource use.
Amphenol		Amphenol designs and manufactures high-performance connectors, cables, and interconnect systems used in data centre infrastructure. These components support critical operations by ensuring reliable connectivity for AI servers and networking equipment.
Schneider Electric		Schneider Electric delivers electrical infrastructure solutions, including power distribution and cooling systems, tailored to enhance AI data centre performance.
Hyperscaler		
Meta		Meta operates hyperscale data centres optimized for AI workloads, supporting its social platforms, virtual reality initiatives, and AI research.
Amazon		Amazon's AWS cloud platform supports scalable AI workloads, including machine learning and data analytics. AWS provides infrastructure-as-a-service (IaaS) solutions for data-intensive applications.
Google		Google's Cloud Platform (GCP) powers AI research and development with specialized tools like TensorFlow and custom AI hardware such as Tensor Processing Units (TPUs).
Microsoft		Microsoft operates hyperscale data centres that power its Azure cloud platform, a cornerstone for hosting AI workloads and providing scalable computing for machine learning models.

Low exposure to High exposure

Source: Guinness Atkinson Asset Management

On January 27th, **Nvidia** suffered the largest single-day market cap loss in history, wiping almost $600bn of value out of its market cap, as market participants assessed the potential impacts of lower training costs on future compute demand, and more specifically, GPU demand. Considering that in recent earnings calls by some of the hyperscalers we have seen a recommitment to previously guided 2025 CapEx numbers, a big cancellation of GPU Nvidia orders seems unlikely in the short term. In the medium term, a possible scenario is the emergence and shift towards sleeker, more efficient AI models that don't rely on AI GPU clusters of such massive scale. However, other industry experts argue a potential consequence of fewer entry barriers to training models could be more competition and use cases, and with that, more inference demand. Interestingly, Nvidia is not only extremely well positioned to serve the AI training market, but it is also the largest inference platform in the world, as roughly 40% of the company's revenue stem from inferencing. Nvidia CEO Jensen Huang mentioned during the Q3 2025 earnings call that "We're seeing inference really starting to scale up for our company." Therefore, we believe the release of DeepSeek R1 does not change our thesis in Nvidia, and we feel optimistic about its future performance despite its impressive rally over the last two years. Our flexible but disciplined portfolio management approach of '*letting our winners run*' past the ~3% position weight has allowed us to generate substantial gains on Nvidia and at the same time crystalize some of those gains by trimming the position 6 times since 2023.

Another *AI Enabler* company that saw a big drop on the 27th of Jan (-6.3% USD) is **KLA**, one of the largest semiconductor wafer fabrication equipment (WFE) manufacturers in the world, as investors weighed up the possibility of lower demand for advanced chips leading to reduced orders for the process and control equipment machines that KLA provides to the semiconductor manufacturers. Despite this share price drop, KLA still managed to secure a spot as the second-best performer of the Fund during the month (+17.2% USD), as a strong set of quarterly results and positive 2025 outlook, which matched peers Lam Research (also held in the Fund) and ASML (not held), helped dissipate investor fears about AI demand.

The ramifications of the DeepSeek R1 release also led to a sharp share price daily decline in some of the *AI Enablers* Industrials held the Fund, such as **Schneider Electric** (-9.7% USD) and **ABB** (-5.4% USD), although both finished the month in positive territory. Potentially, lower demand for compute could negatively affect both companies, as their data centre revenue is partly a function of compute demand, and the services and products required to ensure efficient functioning of data centres. For reference, Schneider Electric's revenue exposure to data center is 25%, whereas ABB's is 10% as of 2023. We remain optimistic that their exposure to the data center build out will continue to boost their top line growth while providing a diversified source of revenue to their high-quality business.

How did *Integrators* react?

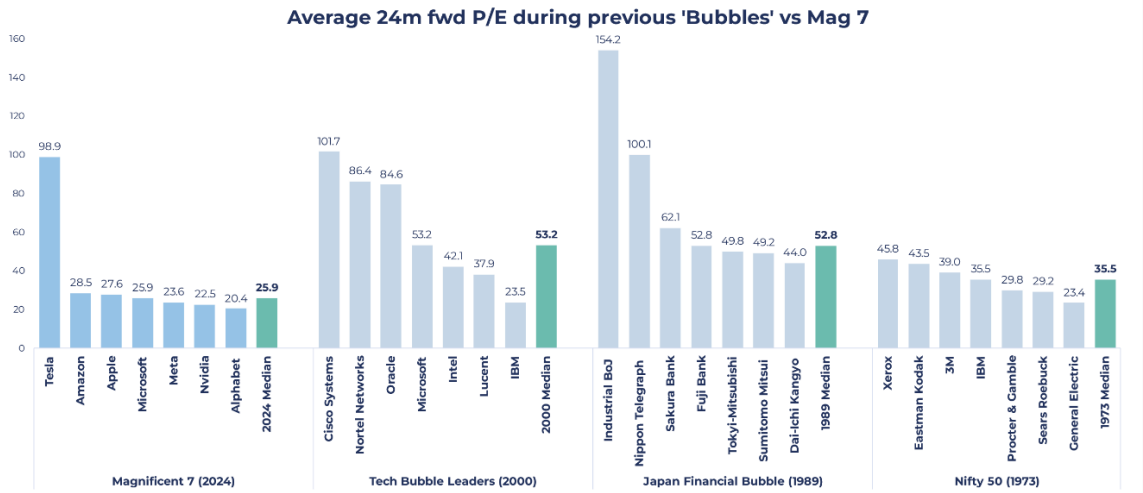
Holdings	Description
Apple	Apple integrates AI across its ecosystems with applications like Siri, image recognition in its Photos app and real-time insights through the Apple Watch. The 'Apple Intelligence' service embedded into its devices, uses AI and machine learning to enhance the customer experience.
Adobe	Adobe has embraced generative AI with its assistant Sensei, powering features like auto-masking in Photoshop and automated video editing in Premiere Pro. Its AI-driven tool, Firefly, enables generative AI-based content creation such as text-to-image for creative professionals.
Meta	Meta leverages AI for personalized ad targeting, content recommendations, and moderating content. Its AI application, Llama (a large language model), underpins advancements in generative AI and metaverse experiences.
Netflix	Netflix uses AI for personalized content recommendations and optimizing its streaming infrastructure. Newer capabilities have enhanced vieweing engagement and can prevent subscription abuses.
Salesforce	Salesforce integrates AI through its Einstein platform providing predictive analytics and automation for customer relationship management. Einstein's capabilities include predictive lead scoring, sentiment analysis, and sales
London Stock Exchange Group	LSE Group leverages AI to enhance trading platforms, risk management, and data analytics. Its Refinitiv platform has AI-embedded tools which offer real-time financial insights, alerts and analytics.

Source: Company Data, Guinness Atkinson Asset Management

As described above, many *AI Enablers'* share prices initially reacted negatively to the release of DeepSeek. On the other hand, we found that, broadly, *AI Integrators'* share prices reacted positively to the same event, including **Salesforce** (+4% USD), **Meta** (+1.9% USD), **Adobe** (+0.7% USD) and **Apple** (+3.2% USD). The likely explanation is that the market is factoring in declining AI training costs, which could drive the commoditization of LLMs and shift companies' focus toward the implementation layer built on top of them. By being closer to the end customers, these companies can embed AI into their data and products, potentially increasing monetization as the value proposition of their services and products rises. Note that while Meta is investing heavily to develop their own AI infrastructure, like many of the enablers, we view the firm as more of an 'Integrator' given that Meta is *integrating* AI to develop its core operations. For example, the firm is using AI to drive engagement in its Family of Apps and thus generate further advertising revenues.

While companies at various stages of the AI value chain reacted differently to the release of DeepSeek R1, their initial share price reaction is hardly a prediction of what the future might hold. We believe we are still at the early innings of the AI trend and remain optimistic about our holdings' potential to extract value across all parts of the AI value chain.

Are we in an AI bubble?



Source: Guinness Atkinson Asset Management, Goldman Sachs, Bloomberg

The chart above shows the average 24 months forward P/E ratio for some of the higher valued companies during previous *bubbles* and the current Mag7 as of end of 2024. Excluding Tesla, the only company out of the Mag 7 that is not a holding of the Fund, Mag7 valuations remain significantly lower compared to other *bubbles*, with the Mag7 median P/E ratio (24 months forward) at 25.9x, compared to the 35.5x from the Nifty 50, 52.8x from the Japan Financial Bubble and 53.2x from the 2000 Tech Bubble, showing the clear differences between past bubbles valuations and the current Mag7 valuations, which reflect profitable growth expectations.

We continue to monitor the rapidly evolving AI landscape and the implications for both *enablers* and *integrators*. While the Fund has clearly benefited from exposure to AI, interestingly this exposure has not increased in the last two years, and AI is only our 3rd largest theme by weight. This approach allows us to have exposure to an attractive secular growth theme such as AI while keeping a diversified approach to other attractive themes in the market. Additionally, the portfolio's equally weighted structure ensures no single position becomes overly dominant, providing balance in a rapidly evolving market.

Changes to the Portfolio

In February, we made no switches to the portfolio.

Stock Specifics

We often focus on the top and bottom performing stocks within this section. In January, the Fund's second top performer was KLA, with strong performance also seen in our other semiconductor equipment manufacturers, Lam Research and Applied Materials. Nvidia ended the month as the Funds bottom performer. Given that we have discussed semiconductor stocks relatively extensively within the Market Commentary section, we have therefore focused on stocks outside of this industry.

Meta (+17.7% USD)

Meta's extraordinary run since the end of 2022 continued into 2025, with the stock ending the month as the Fund's top performer. Meta's outperformance relative to the market began soon after DeepSeek's announcement, with the market weighing up the implications for hyperscalers such as Meta, ultimately challenging the notion that significant CapEx spend is required in the development of cutting edge AI. Meta have committed more than $60bn to CapEx in 2025, a step-up of at least 60% from 2024, with the vast majority focused on AI related development. While Zuckerberg continued to commit to these continued heavy investments (requoting from before) – "*We continue to believe heavily investing in the company's AI infrastructure will be a strategic advantage… It's possible that we'll learn otherwise at some point (re DeepSeek), but I just think it's way too early to call that.*" - the market is now placing weight behind the notion that AI costs could eventually be tamed through alternative architectures/models (as DeepSeek have shown), and that the super-cycle in CapEx spend will not be infinitely long. At the very least, there are efficiency gains to be had. DeepSeek was not the only relevant Meta-related-news flow during the month, with the firm printing a strong set of Q4 2024 earnings, with continued strength in both the top and bottom-lines, alongside key performance indicators (KPIs). Revenues were able to grow +21% over the quarter, as the firm continues to drive engagement through Daily Active Users (+5% year-on-year, a reacceleration from Q3) and Average Revenue Per User growth of +16% - with both an increase in both ad 'impressions' (+6% year on year) and pricing (+14%), reflecting strong advertising backdrop. While the core of the business was particularly strong, investor enthusiasm is in part continuing to be driven by a healthy pipeline of innovations. To illustrate, Meta shared that Advantage+, their AI-powered advertising tool designed to automate and optimize ad campaigns across its platforms, hit a $20B revenue run-rate (+70% YoY) – what would represent approximately a tenth of 2024 sales. Meta is also growing uptake and engagement from Reels, WhatsApp, Threads, Business Ads on Messenger and more. While these projects started as 'side bets' they are increasingly contributing towards a healthy growth outlook. Meta is also delivering on the bottom-line with operating margin expansion up 7% year-on-year. The main question mark from investors will remain the firm's substantial investment spend, but for 2025 management has set a clear guideline on what to expect, and the DeepSeek news has at the very least, provided visibility towards a potentially reduced CapEx burden at some time in the future.

Thermo Fisher (+14.9% USD)

It was a strong start to the year for Thermo-Fisher, retrenching the vast majority of weakness seen in the stock over the last 6 months, and now in 'touching' distance of their 52-week-high. Thermo Fisher are the leading player in the provision of scientific solutions for healthcare purposes (>50% of the market), providing scientific tools and instruments, reagents and consumables for diagnostics, and software for pharma, biotech and other healthcare companies. The firm struggled in the second half of 2024, with the firm's Q3 results in-line with management commentary but below high market expectations, following flat top-line growth (actual and organic) below expectations, with continued pressure from COVID-19 headwinds (~3%). Thermo produced a strong 4Q 2024 earnings print in the final days of January, however, significantly beating expectations and driving a strong rebound in the

share price. Pleasingly, this was supported by a healthy guide for 2025. Three of the firm's four segments significantly beat organic growth expectations, such that firmwide organic growth of 4.0% was 140bps ahead of consensus, and a significant step-up from the 0% print just a quarter before. This strength filtered through to the bottom-line, with margins expanding 160bps driving an adjusted earnings per share (EPS) beat of 2.7%. The firm's guidance of 3-4% organic growth for 2025 (inclusive of a 1% COVID tailwind) was taken positively by the market, with management indicating continued market share gains and improving global demand leading to a potential reacceleration towards historical, normalized, high single digit growth levels by the end of 2025. While Thermo has faced numerous headwinds over the past couple of years, we believe the outlook for the company remains robust, with COVID-19 headwinds continuing to ease and an improving spending environment within the biotech end-market. We believe Thermo Fisher is well positioned for growth, with a leading position in a market with sticky, recurring revenues and a solid structural tailwinds in precision medicine and drug discovery tools. With organic growth trending towards management's long-term targets, the firm can continue to supplement the top-line with M&A. Thermo Fisher's diversified market position in markets with sustained growth drivers is an enviable one, in our view.

Apple (-5.8% USD)

Apple ended January as the Funds second bottom performer. The stock fell 11% in the first 3 weeks of the quarter (MSCI World +4.1% over the same period), before rebounding in the run up to earnings on the 30th of January. Shares had generally been under pressure in the lead up to earnings, with analysts questioning whether Apple's AI offering, 'Apple Intelligence', was facilitating enough of a boost to sales amidst a downturn in the iPhone cycle. News in the month that local Chinese makers Vivo and Huawei had leapfrogged Apple to become the top two sellers in China over 2024 also placed some question marks over Apple's competitiveness in the region. In the final week of the month, Apple remained relatively insulated from the broader tech market rout, with Nvidia's market cap fall of just under $600bn making Apple once again the world's most valuable company. The firm released their Q1 (Fiscal Year 2025) earnings at the end of January, in what was a relatively clean quarter for Apple, with most areas in-line with expectations and few negative surprises. iPhone sales (which account for 56% of sales) were mixed, with a miss driven by local competition and a destocking by distributors in China – although commentary around a strong end to the quarter reassured investors of an improvement in the region. There was also evidence that Apple Intelligence was positively impacting more than expected. Cycle-to-date, iPhone 16 sales are outpacing that of iPhone 15, and are stronger in markets where Apple Intelligence is already available. Apple are taking a staggered approach to rolling out Apple Intelligence, first launching in English speaking countries, before rolling out elsewhere. In April, Apple Intelligence will support several more languages including Chinese, a positive indicator for Q2 and a further reassurance to investors on the outlook within the region. Outside of iPhone, Apple performed very strongly. While Mac and iPad significantly beat expectations, the continued strength in Services was particularly pleasing to see. The segment is an incredibly sticky revenue stream with near double the gross margin of 'Products'. With double digit growth of +14%, a slight acceleration from last quarter, the segment is now at all time-highs with respect to contribution to earnings (~40%), with the segment also seeing strong Gross Margin expansion (75.0% vs 72.8% YoY). This segment is a key element of our thesis, as the increasing contribution reduces Apple's reliance on cyclical iPhone sales, and adds a significant level of stability to earnings. Given this segment is only 21% of sales, the fact it accounts for such a large proportion of earnings feels under looked, in our view, and as a result feels like a massively underappreciated story. While iPhone maybe in the bottom of a downcycle, the Apple

ecosystem is continuing to strengthen, with the installed base growing 7% YoY to 2.35 billion devices, leaving the firm positioned very well for when the upcycle in iPhone arrives.

Danaher (-3.0% USD)

Danaher had a relatively weak month, as the firm's 2025 outlook disappointed investors. Danaher is a US conglomerate that specializes in life sciences, owning a portfolio of med-tech and scientific companies that provides tools for healthcare and research applications. While COVID-19 was initially a boost to the firm's business, a result of high demand for testing, vaccines and bioprocessing tools, these tailwinds eventually turned to headwinds for Danaher, resulting in a multi-year reset of growth expectations. Post-pandemic, the firm has struggled to reinvigorate the top-line, with the firm's bioprocessing segment continuing to suffer from a prolonged correction phase, as pharma companies have cut back on spending and destocked on existing inventories. The biotech industry more generally has also been amidst a downturn in spending, given the backdrop of tighter financing conditions. The firm reported results at the end of the month, driving a 9.7% sell-off in the stock on the day. While results were relatively strong, investors were disappointed that a rebound towards more normalized growth trends, following what has been deemed a multi-year post pandemic reset period, looks set to be delayed further. The company beat expectations on the top-line (+1.6%) and was ahead of expectations for organic growth across all three segments. But while management expressed confidence in the company's ability to return to long term high single-digit-growth on the top-line, alongside double-digit EPS growth, markets were ultimately disappointed with the 3% growth outlook for 2025, at roughly half the rate of expectations, driven by materially higher headwinds in the Chinese market than expected. Many sell-side analysts are questioning whether this truly is a slower recovery, or simply conservatism from management, given question marks over new policy implications from a new US administration with Robert F Kennedy Jr at the helm. Ultimately, while the short term guidance is disappointing, we retain a positive long-term outlook on the stock given continued dissipation of headwinds, the fact that the firm is a best-in-class operator within the core bioprocessing end-market, the firm has exposure to end-markets that are supported by a number of long term growth drivers (portfolio management allows the firm to focus on markets with the most growth potential), and a high-quality recurring revenue stream (80% of sales). We continue to see a good opportunity for a re-rating should the expected return to normalized growth trends emerge.

We thank you for your continued support.

Portfolio Managers

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Summary Performance

While global equities finished higher during January, it was a volatile start to the year as markets contended with a relatively heavy month of news flow. Donald Trump's second term as POTUS was a core catalyst, where despite a blitz of 'day-one' executive orders, clarity on highly anticipated trade tariffs with key trade partners failed to materialize immediately, with markets weighing up further threats on key trade partners, including Mexico, Canada and later the EU, with the lack of any immediate action on China – a key focus of his campaign. And while markets were buoyed by a lower than expected inflation print, the Federal Reserve defied Trump's wishes to cut borrowing costs further, stating that there no "need to be in a hurry" in adjusting their policy rate. The biggest source of volatility, however, came in the final week of the month, off the back of a potentially significant development in the world of Artificial intelligence. Chinese AI firm DeepSeek delivered a shock to markets, after developing a model supposedly on par with the cutting edge models in the US, at a fraction of the cost. Nvidia's market cap fell almost $600bn in one day, as markets posited this would result in reduced demand for the firm's high-end chips. However, it was not all bad news for tech stocks, as the implications of a significant leap forward in efficiency lead to 'integrators' of AI potentially benefiting from the reduced cost of implementation. As markets grappled over whether this was good or bad news, the resulting volatility lead to a shift towards defensive areas of the market. Sector performance was varied but mostly positive, driven predominantly by valuation expansion, with Communication Services the top performing sector as a result of expectations of lower AI related costs. Only Information Technology ended in negative territory, in part driven by the significant sell-off from Nvidia.

Over the month, relative performance of the Fund was driven by the following:

- The Funds largest overweight sector position to the benchmark's only negatively performing sector during the month, Information Technology, was the largest detractor to relative Fund performance. However, strong stock selection within the sector more than offset this impact, with the Fund's semiconductor names in particular - KLA, Lam Research, Applied Materials, TSMC and Infineon - all contributing to outperformance, alongside the Funds slight underweight position in Nvidia.

- The Fund benefited from an overweight position to the benchmark's top performing sector, Communication Services. This was supported by good stock selection within the sector, with Meta ending the month as the Funds top performer, with recent purchase Netflix (Q3 2024) also aiding Fund outperformance.

- The Fund benefited from a zero-weight allocation to the Consumer Staples, Real Estate, Energy and Utilities sectors, which all underperformed the benchmark, in part offset by a zero weighting to Materials, which outperformed.

as of 01.31.2025 (in USD)	1 year	3 years annualized	5 years annualized	10 years annualized
Global Innovators, Investor Class[1]	22.49%	9.87%	15.34%	13.08%
Global Innovators, Institutional Class[2]	22.80%	10.15%	15.63%	13.34%
MSCI World Index NR	21.40%	9.53%	12.06%	10.52%

as of 12.31.2024 (in USD)	1 year	3 years annualized	5 years annualized	10 years annualized
Global Innovators, Investor Class[1]	19.54%	5.42%	14.15%	12.20%
Global Innovators, Institutional Class[2]	19.83%	5.67%	14.43%	12.45%
MSCI World Index NR	18.67%	6.33%	11.15%	9.94%

All returns after 1 year annualized.

[1] Investor class (IWIRX) Inception 12.15.1998 Expense ratio* 1.24% (net); 1.28% (gross)
[2] Institutional class (GINNX) Inception 12.31.2015 Expense ratio* 0.99% (net); 1.13% (gross)

[2] Performance data shown for Global Innovators, Institutional Class (GINNX), prior to its launch date on 12/31/15, uses performance data from the Global Innovators, Investor Class (IWIRX).

Performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance of the Fund may be lower or higher than the performance quoted. For most recent month-end and quarter-end performance, https://www.gafunds.com/our-funds/global-innovators-fund/#fund_performance or call (800) 915-6566.

*The Advisor has contractually agreed to reimburse expenses (excluding Acquired Fund Fees and Expenses, interest, taxes, dividends on short positions and extraordinary expenses) in order to limit the Fund's Total Annual Operating Expenses to 1.24% for the Investor class and 0.99% for the Institutional class through June 30, 2027. To the extent that the Advisor absorbs expenses to satisfy this cap, it may recoup a portion or all of such amounts absorbed at any time within three fiscal years after the fiscal year in which such amounts were absorbed, subject to the expense cap in place at the time recoupment is sought, which cannot exceed the expense cap at the time of waiver. The expense limitation agreement may be terminated by the Board of the Fund at any time without penalty upon 60 days' notice.

Mutual fund investing involves risk and loss of principal is possible. Investments in foreign securities involve greater volatility, political, economic and currency risks and differences in accounting methods. These risks are greater for emerging markets countries. The Fund also invests in medium and smaller companies, which will involve additional risks such as limited liquidity and greater volatility. The Fund's focus on the technology, internet and communications sectors are extremely competitive and subject to rapid rates of change.

Securities mentioned are not recommendations to buy or sell any security.

Current and future portfolio holdings are subject to risk.

Top 10 holdings for Global Innovators Fund, as of 1/31/2025:

1.	Amazon.com Inc	3.85%
2.	Mastercard Inc	3.85%
3.	Taiwan Semiconductor Manufacturing Co Ltd	3.83%
4.	London Stock Exchange Group PL	3.78%
5.	Meta Platforms Inc. - Class A	3.78%
6	Visa Inc	3.68%
7.	Alphabet Inc - A Shares	3.66%
8.	Netflix Inc	3.63%
9.	ANTA Sports Products Ltd	3.59%
10.	AMETEK Inc	3.50%

For a complete list of holdings for the Global Innovators Fund, please visit: https://www.gafunds.com/our-funds/global-innovators-fund/

The Fund's investment objectives, risks, charges and expenses must be considered carefully before investing. The statutory and summary prospectuses contain this and other important information and can be obtained by calling 800- 915-6565 or visiting www.gafunds.com. Read and consider it carefully before investing.

Earnings growth is not representative of the Fund's future performance.

LLM stands for large language model, a type of artificial intelligence (AI) that can process and generate human language. LLMs are trained on large amounts of data, such as text from the internet.

MSCI World Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets.

MSCI World Value Index captures large and mid-cap securities exhibiting overall value style characteristics across 23 Developed Markets countries. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield.

MSCI World Growth Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of large and mid-cap securities exhibiting overall growth style characteristics across developed markets.

The MSCI World Equal Weighted Index represents an alternative weighting scheme to its market cap weighted parent index, the MSCI World Index. The index includes the same constituents as its parent. However, at each quarterly rebalance date, all index constituents are weighted equally, effectively removing the influence of each constituent's current price (high or low).

The Consumer Price Index (CPI) is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services. Indexes are available for the U.S. and various geographic areas.

The Purchasing Managers' Index (PMI) is an index of the prevailing direction of economic trends in the manufacturing and service sectors.

One basis point (bp) is equal to 1/100th of 1%, or 0.01%, or 0.0001, and is used to denote the percentage change in a financial instrument. The relationship between percentage changes and basis points can be summarized as follows: 1% change = 100 basis points and 0.01% = 1 basis point.

The Federal Open Market Committee (FOMC) consists of twelve members--the seven members of the Board of Governors of the Federal Reserve System; the president of the Federal Reserve Bank of New York; and four of the remaining eleven Reserve Bank presidents, who serve one-year terms on a rotating basis.

The Nasdaq-100 (NDX) is a large-cap growth index. It includes 100 of the largest domestic and international non-financial companies listed on the Nasdaq Stock Market based on market capitalization.

The MSCI Cyclical and Defensive Sectors Indexes are designed to track the performance of the opportunity set of global cyclical and defensive companies across various Global Industry Classification Standard (GICS®) sectors. Cyclical sectors include Communication Services, Consumer Discretionary, Financials, Industrials, Information Technology, Materials, Real Estate. Defensive sectors include Consumer Staples, Energy, Healthcare, Utilities.

Beta is a measure of a stock's volatility in relation to the overall market.

R-squared (R^2) explains to what extent the variance of one variable explains the variance of the second variable. R-squared is a statistical measure that represents the proportion of the variance for a dependent variable that's explained by an independent variable or variables in a regression model.

Gross domestic product (GDP) is the total monetary or market value of all the finished goods and services produced within a country's borders in a specific time period.

Earnings per share *(*EPS*)* is calculated as a company's profit divided by the outstanding shares of its common stock.

Price-Earnings (P/E) ratio is a valuation ratio of a company's current share price compared to its per-share earnings. Forward earnings differ from trailing earnings, which is the figure quoted more often, as they are a projection and not a fact.

Forward price-to-earnings (forward P/E) is a version of the ratio of price-to-earnings (P/E) that use forecasted earnings for the P/E calculation. While the earnings used in this formula are just an estimate and not as reliable as current or historical earnings data, there are still benefits to estimated P/E analysis

Cash Flow is the total amount of money, in cash, being transferred into and out of a business.

The MSCI World Information Technology Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of large and mid-cap equities across 23 developed markets, all classified within the Information Technology sector.

The S&P 500 Index features 500 leading U.S. publicly traded companies, with a primary emphasis on market capitalization.

Capital expenditures (CapEx) are funds used by a company to acquire, upgrade, and maintain physical assets such as property, technology, or equipment. CapEx is often used to undertake new projects or investments by a company.

The MSCI World Semiconductors and Semiconductor Equipment Index is composed of large and mid-cap stocks across 23 Developed Markets (DM) countries*. All securities in the index are classified in the Semiconductors and Semiconductor Equipment Industry Group (within the Information Technology sector)

The MSCI World Quality Index is based on MSCI World, its parent index, which includes large and mid cap stocks across 23 Developed Market (DM) countries. The index aims to capture the performance of

quality growth stocks by identifying stocks with high quality scores based on three main fundamental variables: high return on equity (ROE), stable year-over-year earnings growth and low financial leverage.

The MSCI World Consumer Discretionary Index is designed to capture the large and mid cap segments across 23 Developed Markets (DM) around the world. All securities in the index are classified in the Consumer Discretionary sector as per the Global Industry Classification Standard (GICS®).

Year-over-year (YoY) sometimes referred to as year-on-year, is a frequently used financial comparison for looking at two or more measurable events on an annualized basis.

Magnificent 6 refers to an elite group of high-performing U.S. technology companies, minus Tesla, which was part of the original Mag 7. This group includes Apple (AAPL), Meta Platforms (META) (formerly Facebook), Amazon (AMZN), Microsoft (MSFT), Nvidia (NVDA), Alphabet (GOOGL),

One cannot invest directly in an index.

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