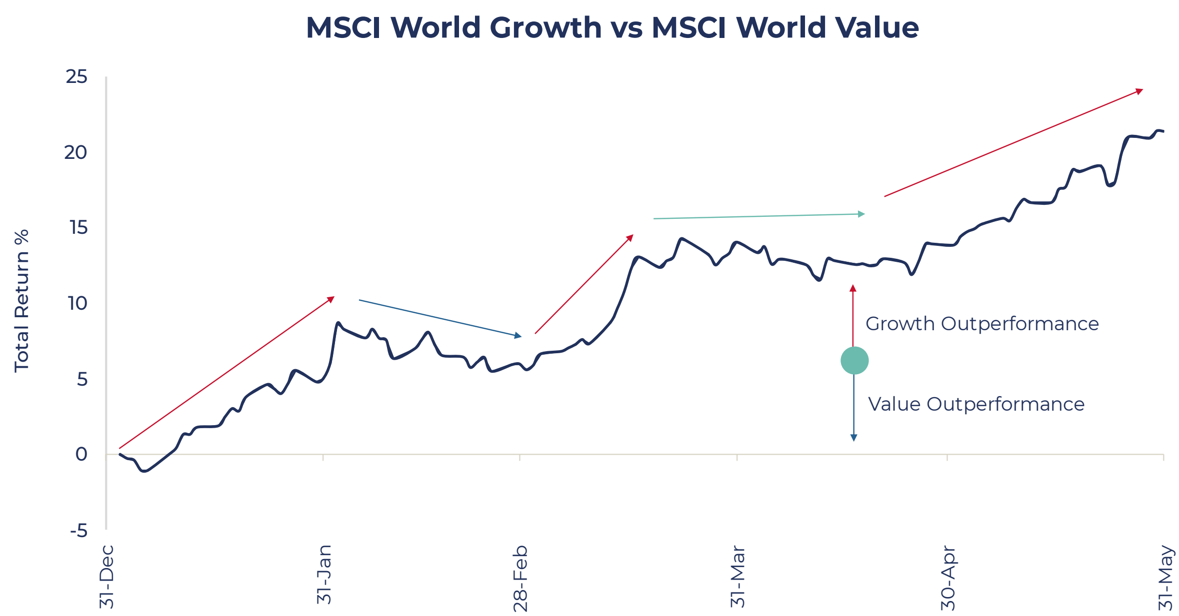
Guinness Atkinson
Global Innovators Fund
Managers Update – June 2023

May in review:

A different driver of "Growth"

The outperformance of growth versus value has been significant year to date, with the MSCI World Growth Index up +19.9% versus the MSCI World Value Index -1.5% since December 31st 2022. There has been three distinct periods of outperformance – highlighted by the red arrows in the chart below.

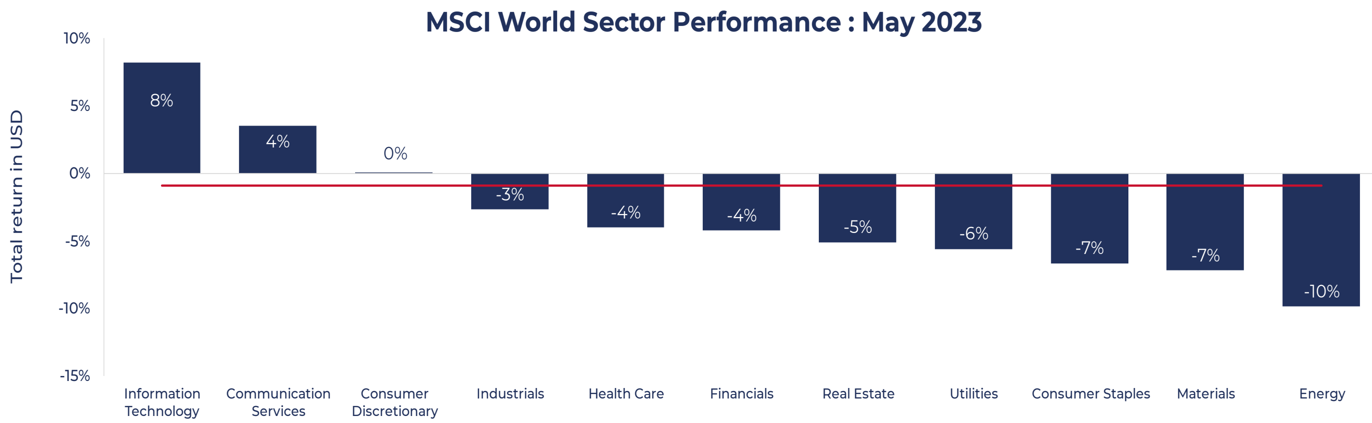


Source: MSCI, Guinness Atkinson Asset Management, as of May 31st 2023

The first period of outperformance was one in which equities on the whole were rallying hard. Many of the key market concerns over 2022 were somewhat abated (inflation, China unlocking, recessionary risks and an energy crises). Growth stocks outperformed as data points all aligned to suggest the same thing – that the Fed's efforts at bringing down inflation was making good progress, and the path towards the 2% target level seemed all the more clear. What resulted was a market view of an earlier pivot towards looser monetary policy.

The second period of growth outperformance was largely amidst a market correction, spurred by the SVB banking crises. While markets broadly fell, the resulting tightening of credit conditions offered an offsetting tailwind to growth stocks in particular – the reason being that the exogenous shock may play a part in bringing forward the timeline for looser monetary policy.

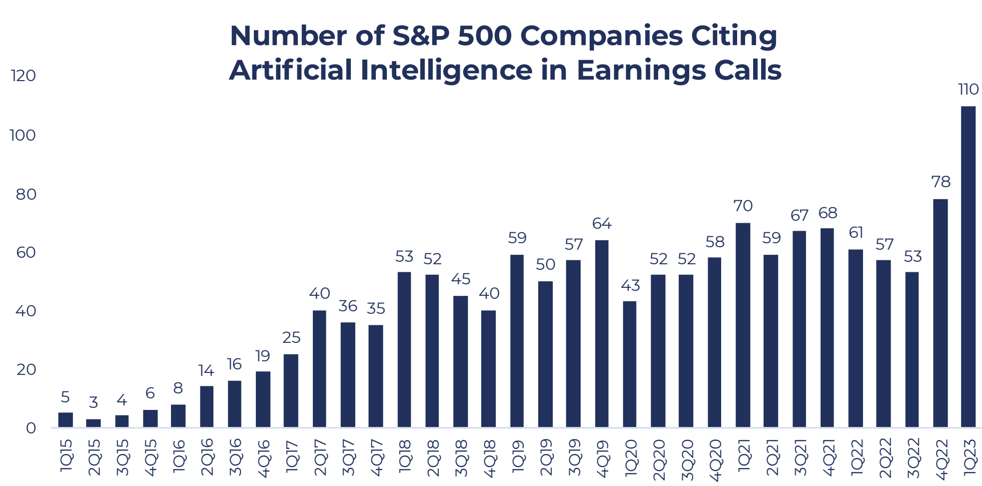
The third and most recent period differs from the prior two. The first two periods were largely two sides of the same coin in terms of the driver of growth outperformance: earlier expectations of when a pivot in monetary policy may occur. The latest period of outperformance was in the context of sideways moving equity markets, but more importantly, with almost no change in rate expectations. Between April 25th (when the latest growth rally gathered steam) and May 31st, the MSCI World returned 0.8%, while growth outperformed value by 8.7%. On a more granular level, there were very few positively performing sectors over the month, despite the index finishing flat – just 6 of 25 industries outperformed the MSCI World, of which only four are typically associated with growth.



Source: MSCI, Guinness Atkinson Asset Management, as of May 31st 2023

An AI driven rally….?

Many have mused that this narrowness in positive market performance to be driven by enthusiasm over Artificial Intelligence – and it is easy to see why. While AI is not a new phenomenon, the launch of Chat GPT earlier in the year has captured the imagination of consumers and businesses alike over 2023, and catalyzed businesses across sectors to investigate the best way to leverage and incorporate the technology into their business models and operations. As a result, the number of companies citing Artificial Intelligence in earnings calls surged to all time highs (110 S&P 500 companies), more than 40% higher than the previous record set just a quarter prior.



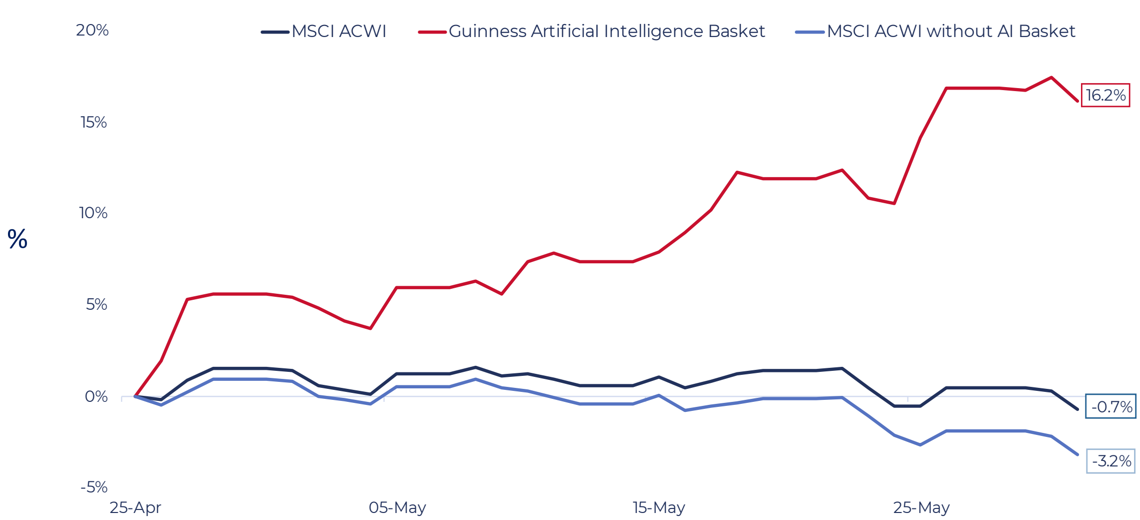
Source: Factset

Investment into Artificial Intelligence was not just evident in company rhetoric and carefully marketed press releases, but in company fundamentals too. Nvidia added an astonishing $184bn to their market capitalization following their quarterly earnings, more than the entire market cap of close-peer Intel, with the stock surging +24% on the day of results. The company, which ended the month as the Fund's top performer and will be discussed in more detail in the below sections, guided for revenues of $11bn in the next quarter, over 50% higher than the $7bn estimated by analysts. Soaring demand for chips required for generative AI purposes was clearly much greater than the market expected, creating a tailwind for AI-exposed stocks.

"Artificial Intelligence and Big Data" is one of the nine key innovation themes that the Global Innovators strategy focuses on.

As part of our analysis into the theme, we have designated a basket of stocks that we believe to be most aligned to Artificial Intelligence and Big Data (these stocks are a conceptual basket, and are not necessarily held within the Fund). These include stocks from both developed and emerging markets, including the likes of Nvidia, Microsoft, Adobe and TSMC. Observing the change in market cap of these stocks over the recent period of growth outperformance (April 25th –May 31st), it appears that the market was only held "flat" through strong performance from these stocks. While the market cap of the MSCI All World (developed and emerging markets, to reflect the AI basket) fell -0.7% over the period, removing the companies in the AI Basket from the index would have resulted in the market cap of the index to contract -3.2%. The designated AI basket itself grew +16%.

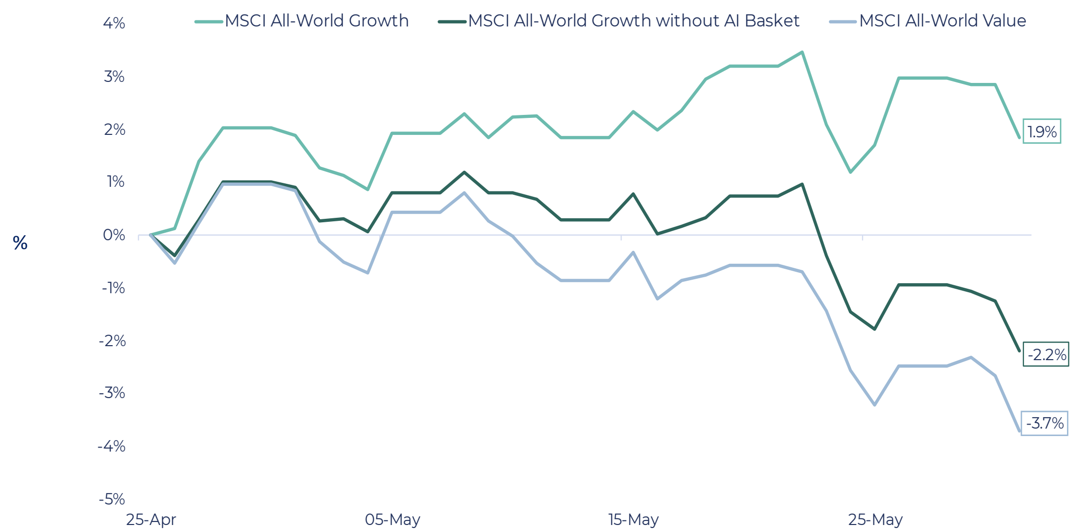
Market Cap Percentage Change
April 25, 2023 – May 31, 2023



Source: MSCI, Bloomberg, Guinness Atkinson

When performing similar analysis with the MSCI All-World Growth and Value indices, removing the AI basket from the MSCI All-World Growth wiped out the majority of this outperformance. While the MSCI All-World Growth Indices was up +1.9% over the period, the index with the AI basket stocks removed was down -2.2%. It follows that outside of Artificial Intelligence linked stocks, equity markets as a whole have been suffering a period of weakness, despite finishing reasonably flat on the whole.

Market Cap Percentage Change
April 25, 2023 – May 31, 2023

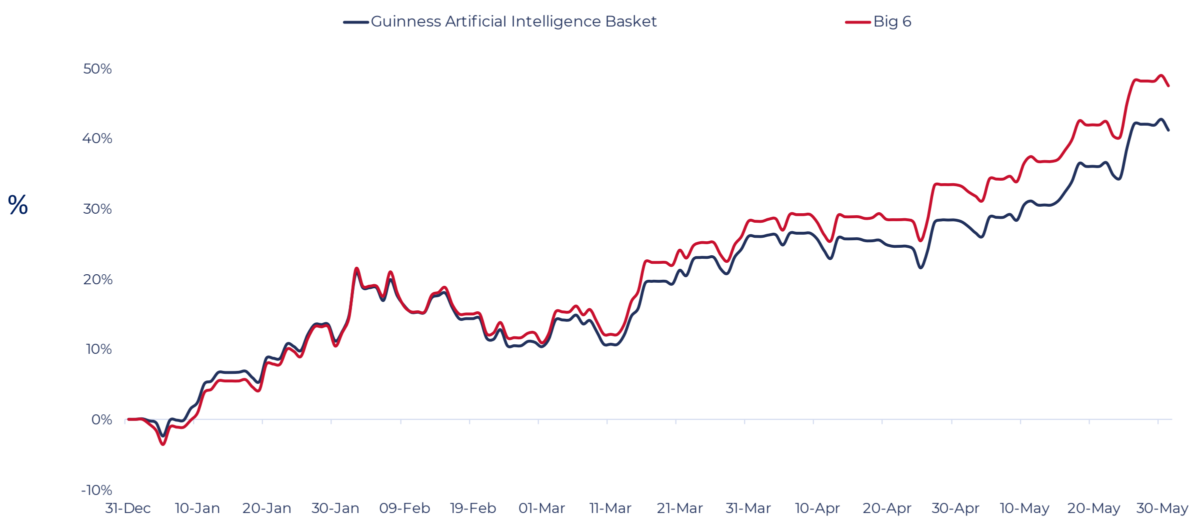


Source: MSCI, Bloomberg, Guinness Atkinson

…Or a preference for Big Tech?

While Artificial Intelligence is by no doubt a tailwind, we believe there are other factors at play. Another argument is that the market is being driven in part by investor preference for Big Tech firms due to their high quality, and arguably defensive, attributes. It is difficult to disaggregate the two factors from each other, especially considering the fact that all of the "Big 6" (Apple, Alphabet, Amazon, Meta, Microsoft and Nvidia) tech firms feature within our Artificial Intelligence Basket. One indication, although far from perfect, is to look at how the "Big 6" tech firms have performed relative to the AI Basket. Clearly the two are going to be highly correlated, and it is impossible to disaggregate the two factors completely, but the slight outperformance of the "Big 6" suggests there could be another factor other than artificial intelligence in play.

Market Cap Percentage Change of Indices
Dec 31, 2023 – May 31, 2023



Source: Guinness Atkinson, Bloomberg

In reality, it is probably a mixture of both AI tailwinds and a preference for the sanctuary of Big Tech, especially considering that artificial intelligence is behind one of the core reasons why Big Tech retains both quality and defensive attributes: long term secular growth themes. Interestingly, the outperformance of the market's "Big 6" tech stocks (Apple, Alphabet, Amazon, Meta, Microsoft and Nvidia) during the year is comparable to the outperformance delivered in the early days of the pandemic – a time when the economic outlook was also highly uncertain.

The "Big 6" vs MSCI World ex "Big 6"
Dec 31, 2019 – May 31, 2023

Source: MSCI, Bloomberg, Guinness Atkinson
Past performance cannot predict future results.

Performing similar analysis to before over the year to date, we can see the outperformance of Big Tech has delivered the vast majority of capital appreciation for the MSCI World. In fact, the market cap of the MSCI World without the Big 6 would have only grown +1.2% year-to-date, compared to the +6.7% of the broader index.

In the context of tightening monetary conditions, debt ceiling concerns, and a risk of recession, big tech is clearly seen as an attractive place to have exposure to. Long term secular growth trends support strong free cash flow, helping firms to continue supporting investment in growth and innovation. But these firms also possess high barriers to entry to protect market shares, and stickier revenue models to increase the visibility of revenues. The cash generative and quality properties of these companies encourages a market preference for more assured long-term growth. Big tech companies continue, in our view, to offer an attractive combination of quality and growth (and reasonable valuations) and are being rewarded for these attributes in particular when the economic outlook appears uncertain.

Markets have often got caught up in the excitement of new technologies that are touted to be the next big thing. But while many of these technologies may have their time and place, much of this excitement often dwindles over time. In the case of Artificial Intelligence, we do believe that it is more than just a "fad", but note that it will be important to differentiate between the long term winners and losers, and that there is heightened risk when investing in unproven businesses or business models. Artificial Intelligence and Big Data is one of the nine key innovation themes from which we create the starting point for our investible universe.

Fund exposure to Artificial Intelligence

Through analysis of company data, we estimate that around 18 of our 30 holdings have at least some exposure to Artificial Intelligence and Big Data.

Stocks exposed to artificial intelligence can typically be classified as either "enablers" of the technology, or "integrators" – companies who leverage their technology meaningfully within their businesses. Below, we take a brief look at a few Fund case studies, both enablers and integrators

Enablers of AI

NVIDIA.

Nvidia – The firm are the predominant chip designer for graphics processing units (GPUs) used in generative AI systems, as well as selling related software to customers.

"Generative AI is driving exponential growth in compute requirements and a fast transition to NVIDIA accelerated computing, which is the most versatile, most energy-efficient and the lowest TCO approach to train and deploy AI. Generative AI drove significant upside in demand for our products, creating opportunities and broad-based global growth across our markets."

– Colette M. Kress, Nvidia CFO – 1Q24 Earnings Call

tsmc

TSMC – Semi manufacturer with 60% of the foundry market and leading capabilities in chip manufacturing, and likely beneficiary of increased demand for high-end semiconductors for AI purposes.

"We certainly, we have observed an incremental increase in AI-related demand. It will also help the ongoing inventory digestion. The trend is very positive for TSMC."

- C. C. Wei, TSMC CEO – 1Q23 Earnings Call

Alphabet

Alphabet – Have introduced a range of AI-powered ad tools, and launched an upgraded AI powered search engine during May that would offer a feature that would deliver answers similar to that of Chat GPT (initially only available in the US).

"In our last call, I outlined 3 areas of opportunity [with respect to AI]: continuing to develop state-of-the-art large language models and make significant improvements across our products to be more helpful to our users; empowering developers, creators and partners with our tools; and enabling organizations of all sizes to utilize and benefit from our AI advances."

- Sundar Pichai, Alphabet CEO – 1Q23 Earnings Call

Microsoft

Microsoft – The firm have incorporated generative AI into a broad selection of services, including flagship products Azure and Bing. They launched a suite of generative AI tools for developers during May, such that AI can be integrated into business software. The firm is also an investor in OpenAI's Chat GPT.

"We're also bringing next-generation AI to power platforms, so anyone can automate workflows, create apps or web pages, build virtual agents and analyze data using only

natural language. More than 36,000 organizations have already used existing AI-powered capabilities in Power Platform."

- Satya Nadella, Microsoft CEO – 3Q23 Earnings Call

Integrators of AI

Meta – The firm have already integrated AI into their core products and processes, ad-targeting for example. The firm are set to continue pouring investment into the technology to deploy AI tools that make the platform more engaging and ads more effective.

"Since we launched Reels, AI recommendations have driven a more than 24% increase in time spent on Instagram. Our AI work is also improving monetization. Reels monetization efficiency is up over 30% on Instagram and over 40% on Facebook quarter-over-quarter."

– Mark Zuckerberg, Meta CEO – 1Q23 Earnings Call

Adobe – The firm has leveraged AI in such a way that its features can help users boost their productivity and idea generation. For example through Adobe's Sensei offering, the firm helps creators with their editing and organization, as well as producing real-time insights and predictive analysis.

"So that's why I would say AI is this platform shift because it really changes the nature of how we use all of these products. But for us, it's value expansion in the sense that people are going to get more value out of the tools we're giving them. They're going to be able to explore more possibilities, try more things, convert to more formats and more languages and they're going to be able to pay for that."

- Scott Belsky, Adobe Chief Strategy Officer - SVB Moffett Nathanson's TMT Conference

Intuit – Software company focused on financial products such as accounting software and payroll, with AI incorporated into many AI-driven consumer facing products such as a tool to fill out forms using natural language.

"Wrapping up, with our durable AI-driven expert platform strategy, we're innovating at a high velocity, using the power of our platform, modern technology capabilities, data sets and artificial intelligence to deliver new offerings at scale. This is helping us put more money in our customers' pockets, saving them time and ensuring complete confidence in every financial decision they make."

- Sasan Goodarzi, Intuit CEO – 3Q23 Earnings Call

Salesforce – The firm is leveraging their wealth of customer data to train generative AI on real information that can boost the efficiency of the firm's CRM tools.

"For low-code trailblazers, Einstein GPT will provide a tool set to design generative AI apps, built on reasonable prompts. For pro code trailblazers, Einstein GPT will offer an extensible ecosystem of LLM providers with configurable grounding. And Einstein GPT is the culmination of tremendous research and engineering by our world-class AI team"

- Marc Benioff – Salesforce Co-Founder & Chairman – 1Q24 Earnings Call

We note, however, that the Fund, aims to be diversified across a number of long term secular themes, as we note the concentration risk and potential pitfalls of the "hype cycle" which can affect sectors of the market which attract the most short term attention, and often high, but difficult to meet, expectations and associated valuations.

Stock Specific Performance

Nvidia (+36.3% USD), Applied Materials (+18.2%), Lam Research (+17.7%), TSMC (+17.0%), KLA (15.0%)

The Fund's semiconductor stocks rode the AI wave during May, with the Fund's top 5 performers' all members of the semi industry. The MSCI World Semiconductor Index outperformed the broader MSCI World Index by 21.8% USD during the month of May, nearly reaching the all-time heights seen by the index at the end of 2021. The majority of this outperformance was spurred at the end of the month following Nvidia's blowout earnings release, where guidance of $11bn for the next quarter was $4bn ahead of expectations. The chip designer's unique position in supplying GPU chips that can handle the computing power required for Generative AI drove the stock breach the $1trn market-cap threshold for the first time on the 30th of May. The chip in question, the H100, was released last year and costs around $40,000 each, promising higher performance and reduced training costs for AI learning systems. Excitement over the technology demonstrated by Chat GPT led to a rush in tech firms across sectors attempting to purchase the chip, driving a positive read-across for Semiconductor Equipment manufacturers Applied Materials, Lam Research and KLA, as well as foundries such as TSMC who are working with Nvidia in order to scale up production. The Fund's overweight position to the semiconductor industry is based on the view that these stocks have significant exposure to a number of the Fund's long term secular growth themes, not just Artificial Intelligence and Big Data, but themes such as Cloud Computing, Internet of Things, and Internet, Media and Entertainment which are likely to drive long-term growth in the industry.

PayPal

PayPal (-18.4% USD)

PayPal ended the month of May as the Fund's bottom performer, despite an earnings release that offered a beat to the top-line and a raise of bottom-line guidance. Revenues were up +10% at constant currency, with the firm's core transaction segment up +6% (vs +5% consensus) and other value-added services such as interest from customer deposits and credit products delivering +39% year-on-year growth. But while Total Payment Volumes grew +12% at constant currency, the negative price reaction was driven by weaker transaction margins (+47.1% vs the prior quarter's 49.7%). These weaker margins were driven by the firm's unbranded suite of products, PCP and Braintree, an unbranded checkout alternative to the firm's traditional payment button. The product is aimed at small businesses, and allows them to accept cards, digital wallets, and even Apple Pay. While currently lower margin, the product is a "strategic imperative" for the firm since it is growing faster than the overall market and allowing the firm to enter a market with approximately $750 million in Total addressable market (TAM). More importantly, the unbranded suite offer a "significantly enhanced margin structure compared with the largest enterprise customers", an area that should allow the firm to demonstrate margin expansion over the long term. We therefore view the negative price movement as unjustified, particularly as operating margin actually came in ahead of estimates. While transaction margin may be pressured over FY23, we expect long term benefits to the margin profile. Outside of transaction margin, the firm has performed very well. The branded portion of the business continues to grow and even accelerate (+6.5% vs +4% the quarter prior), with core PayPal transactions per user increasing by 4% year on year, with the newer cohort of customers offering average revenues per account +40% higher than the prior year. Management guided to +100bps full year margin expansion, a downgrade from their previous +125bps estimate driven by the lower margin unbranded business. However, solid revenue trends paired with efficiency gains in the OpEx line (management expects a 10% decline YoY) led to an incremental improvement in EPS guidance for the full year (+20% vs +18% prior).

We thank you for your continued support.

Portfolio Managers

Matthew Page, CFA

Dr Ian Mortimer, CFA

Summary performance

While there were pockets of strength in equity markets during May, it was a difficult month for most major regions with only the US finishing in positive territory (in USD terms). Strength was similarly narrow across sectors, with just 6 of the 25 GICS industries outperforming the MSCI World. Artificial Intelligence was the theme of the month, gripping investor exuberance for technology stocks and pushing 'growth' stocks to extend their 2023 run of outperformance. This was driven by 'Big Tech' in particular, lifted not just by AI exposures but by a rotation towards stocks with higher quality attributes. While a deal on the US debt ceiling was made at the end of the month, risks of default weighed on the majority of equities throughout the month, hence investor preference for quality stocks with strong balance sheets and cash flow.

While Services Purchasing Manager's Index (PMI) remained robust across regions, with the US, UK and Euro-zone all remaining in expansionary territory, manufacturing PMIs all remained contractionary, suggesting a continued headwind to economic growth. With Germany falling into recession, China offering slowing economic growth figures, and continued interest rate hikes globally, equity markets were left searching for the most resilient businesses which could continue to grow over such conditions. This was a positive for Fund performance, with exposures to a number of long term secular growth themes and high quality companies.

Fund performance over May can be attributed to the following:

- The Fund's high relative exposure to the MSCI's best performing sector, Information Technology, and in particular the MSCI's best performing industry, Semiconductors, was a key source of outperformance over the month of May. The top 5 performers within the Fund were all Semiconductor stocks: Nvidia (+36.3% USD), Applied Materials (+18.2%), Lam Research (+17.7%), TSMC (+17.0%), KLA (15.0%).
- From a stock selection perspective, Fund outperformance was in part driven by some of the Fund's software names, including Salesforce (+12.6%), Adobe (+10.7%) and Zoom (+9.3%) which all outperformed the MSCI World Software industry. The Fund's Media and Entertainment names also performed well, with Meta (+10.2%) and Alphabet (+14.0%) providing double digit returns.
- The Fund suffered a slight headwind from the Fund's Apparel names, with Nike (-16.7%) and Anta Sports (-16.6%) making up two of the bottom three performers.

Weakness in PayPal (-18.4%) also acted as a headwind, as the bottom performing stock over the period.

- From an allocation perspective, having a zero exposure to Consumer Staples, Energy, Materials, Real Estate and Utilities all acted as a positive for the Fund, with these sectors the biggest detractors from the MSCI World.

as of 05.31.2023 (in USD)	1 year	3 years annualized	5 years annualized	10 years annualized
Global Innovators, Investor Class[1]	6.02%	11.05%	9.02%	12.04%
Global Innovators, Institutional Class[2]	6.29%	11.33%	9.30%	12.25%
MSCI World Index NR	2.07%	10.94%	7.78%	8.59%

as of 03.31.2023 (in USD)	1 year	3 years annualized	5 years annualized	10 years annualized
Global Innovators, Investor Class[1]	-7.72%	17.11%	8.71%	12.36%
Global Innovators, Institutional Class[2]	-7.49%	17.41%	8.98%	12.56%
MSCI World Index NR	-7.02%	16.40%	8.00%	8.84%

All returns after 1 year annualized.

[1] Investor class (IWIRX) Inception 12.15.1998 Expense ratio* 1.24% (net); 1.27% (gross)
[2] Institutional class (GINNX) Inception 12.31.2015 Expense ratio* 0.99% (net) ; 1.10% (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, 2026. 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 5/31/2023:

1.	NVIDIA Corp	4.95%
2.	Meta Platforms Inc. - Class A	4.45%
3.	Microsoft Corp	4.23%
4.	ABB Ltd	3.97%
5.	Salesforce.com Inc	3.90%
6.	Lam Research Corp	3.85%
7.	Mastercard Inc	3.80%
8.	Schneider Electric SE	3.76%
9.	KLA-Tencor Corp	3.71%
10.	Roper Technologies Inc	3.67%

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.

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 **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** 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.

Market capitalization, or market cap, is one measurement of a company's size. It's the total value of a company's outstanding shares of stock, which include publicly traded shares plus restricted shares held by company officers and insiders

Free cash flow (FCF) represents the cash that a company generates after accounting for cash outflows to support operations and maintain its capital assets.

Standard deviation is a statistic that measures the dispersion of a dataset relative to its mean and is calculated as the square root of the variance. If the data points are further from the mean, there is a higher deviation within the data set. A volatile stock has a high standard deviation, while the deviation of a stable blue-chip stock is usually rather low.
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.

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.

Total cost of ownership (TCO) is an estimate of all the direct and indirect costs involved in acquiring and operating a product or system over its lifetime.

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.

An **operating expense** is an expense that a business incurs through its normal business operations. **Often abbreviated as OpEx,** operating expenses include rent, equipment, inventory costs, marketing, payroll, insurance, step costs, and funds allocated for research and development.

The **multiples approach** is a valuation theory based on the idea that similar assets sell at similar prices. It assumes that the type of ratio used in comparing firms, such as operating margins or cash flows, is the same across similar firms.

Multiple expansion is when a stock's valuation multiple (for example, their Price to Earnings ratio, or EV to EBITDA ratio) increases, meaning that the stock is now more expensive than before.

Correlation is the interdependence of variable quantities. It is a statistical measure that expresses the extent to which two variables are related i.e. how much one variable changes when another variable changes. The relationship does not need to indicate causation.

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.

EBITDA, or earnings before interest, taxes, depreciation, and amortization, is an alternate measure of profitability to net income

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 **Goldman Sachs Non-Profitable Technology Index** consists of non-profitable US listed companies in innovative industries. Tech is defined quite broadly to include new economy companies across Global Industry Classification Standard (GICS) industry groupings. The basket of tech stocks is optimized for liquidity with no name initially weighted greater than 4.65%

The **MSCI USA Index** is designed to measure the performance of the large and mid cap segments of the US market. With 625 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the US.

A **large language model (LLM**) is a computerized language model consisting of an artificial neural network with many parameters (tens of millions to billions), trained on large quantities of unlabeled text using self-supervised learning or semi-supervised learning.

Forex (FX) refers to the global electronic marketplace for trading international currencies and currency derivatives. Most of the trading is done through banks, brokers, and financial institutions.

Total addressable market (TAM) is the overall revenue opportunity available or foreseen for a specific product or service, taking into account the future expansion scenarios.

One cannot invest directly in an index.

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