Guinness Global Innovators Fund

Investment Commentary - May 2022

GUINNESS GLOBAL INVESTORS

This is a marketing communication. Please refer to the prospectus and KIID for the Fund before making any final investment decisions. Past performance does not predict future returns.

Innovation. Quality. Growth. Conviction.

ABOUT THE FUND

Fund/strategy size	£508m/£639m
Fund/strategy launch	31.10.2014/01.05.2003
Index	MSCI World
Sector	IA Global
Managers	Dr. Ian Mortimer, CFA Matthew Page, CFA
Analysts	Sagar Thanki, CFA Joseph Stephens, CFA Will van der Weyden

Aim

The Fund is a global growth fund designed to provide exposure to companies benefiting from innovations in technology, communication, globalisation or innovative management strategies. The Fund holds a concentrated portfolio of large and medium-sized companies in any industry and in any region. The Fund is actively managed and uses the MSCI World Index as a comparator benchmark only.

RISK

Lower Risk						Higher Risk
1	2	3	4	5	**6**	7

Typically lower rewards — Typically higher rewards

The risk and reward indicator shows where the Fund ranks in terms of its potential risk and return. The Fund has been classed as 6 because its volatility has been measured as above average to high. Historic data may not be a reliable indicator for the future. The Guinness Global Innovators Fund is an equity fund. Investors should be willing and able to assume the risks of equity investing. The value of an investment and the income from it can fall as well as rise as a result of market and currency movement, and you may not get back the amount originally invested.

PERFORMANCE

Past performance does not predict future returns

30/04/2022	1 Yr	3 Yrs	5 Yrs	10 Yrs
Strategy*	-3.8	48.0	82.7	349.4
Index	6.4	39.8	67.2	237.1
Sector	0.6	33.3	56.6	178.4

Discrete 12m performance is shown below. Source: FE fundinfo, bid to bid, total return in GBP. *Composite simulation of performance. Guinness Global Innovators Fund (UCITS) launched on 31.10.14. Performance data prior to this date is based on the actual returns of a US mutual fund managed by the same team using the same investment process. Investors should note that fees and expenses are charged to the capital of the Fund. This reduces the return on your investment by an amount equivalent to the Ongoing Charges Figure (OCF). The fund performance shown has been reduced by the current OCF of 0.84% per annum. Returns for share classes with different OCFs will vary accordingly. Performance returns do not reflect any initial charge; any such charge will also reduce the return.

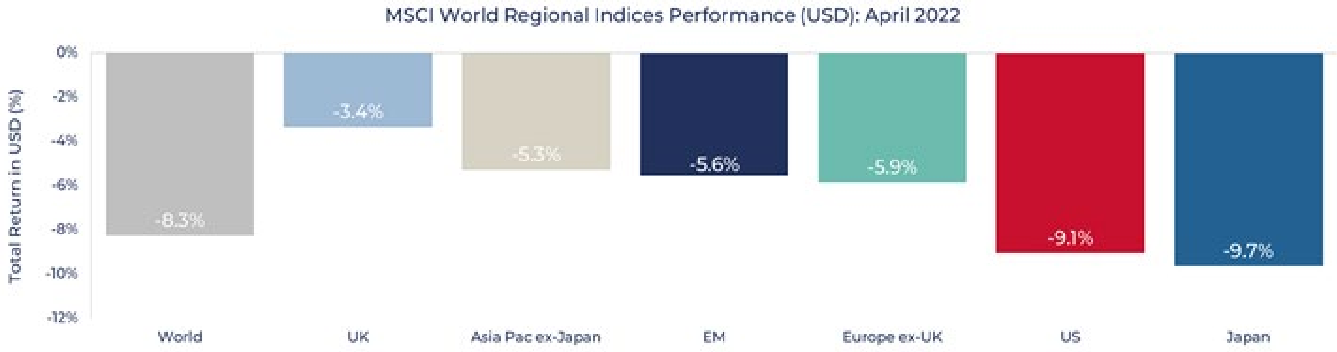
SUMMARY

For the month of April the Guinness Global Innovators Fund provided a total return of -6.32% (GBP) against the MSCI World Index net total return of -3.84% (GBP). Hence the Fund underperformed the benchmark by 2.48% (GBP). Year-to-date, the Fund has produced a total return of -14.73% (GBP) against the MSCI World's -6.18% (GBP).

In USD terms, a difficult macro environment translated into declines across all major markets during April. Many of the negative themes experienced by equities in the first quarter continued into the second, driving the S&P 500 to its worst month since March 2020 (and its worst April since World War II), and the tech-heavy Nasdaq to its worst month since May 2008. As supply chain pressures and rising commodity prices continued to drive inflationary pressures, expectations of tighter money drove US 10-year Treasury yields to within touching distance of 3% for the first time since 4Q18. A healthy corporate earnings season did little to slow the negative momentum, with management teams often warning of short-term impacts to 2022 earnings from supply-chain or inflationary pressures.

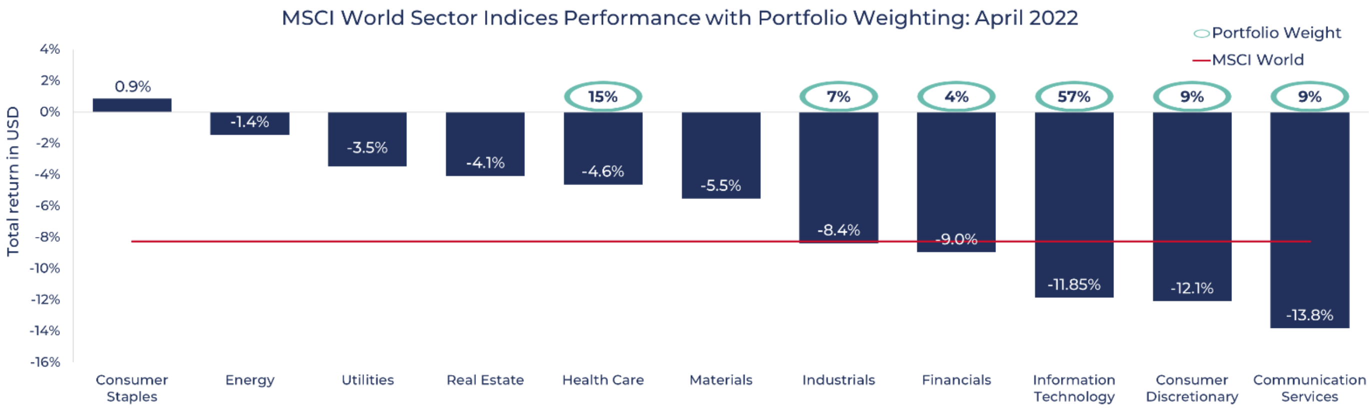
The UK's tilt towards defensive and value-orientated sectors, in particular high Consumer Staples and Energy exposure, made it a relative safe haven for equity investors during April – particularly in the context of soaring commodity prices and inflation. The region actually delivered positive performance in GBP terms (+0.95%), although a strengthened dollar led the index -3.4% lower in USD. In China, the zero-Covid policy led to a full lockdown in Shanghai for the duration of the month, and sentiment was dented further as Beijing also implemented stricter measures. The impact was often noted in corporate earnings across developed markets, as upstream manufacturers struggled to get products into Chinese factories, and downstream retailers dealt with disruption to inventories. In Europe, the EU's reliance on Russian fossil fuels continued to generate volatility in the energy markets, as state-owned Gazprom cut off Poland and Bulgaria's gas pipeline following a refusal to settle contracts in Russian roubles.

With little sign of an impending conclusion to the Ukraine war, consumer sentiment across the region tumbled. The more expensive, growth-tilted US market significantly underperformed its western counterparts following increased expectations of monetary tightening from the Federal Reserve, with the market now pricing in three consecutive 50bps rate hikes – the last 50bps rate hike occurred in May 2000.



Source: Guinness Global Investors, Bloomberg

From a factor perspective, value remained very much in favour during April, continuing the broad trend seen throughout much of 2022. Monetary tightening at an accelerated rate creates a sizeable headwind for growth, with the increase in the equity risk premium leading to depressed valuations for 'high-duration' firms – those for which a large proportion of today's value is based on expected future cash flows that are forecast to grow long into the future. As a result, we saw growth-tilted sectors, such as technology, underperform the broader market and particularly companies at more extreme valuations. Many of the 'stay-at-home' stocks that were bid up to very high valuations during the pandemic have retraced back to levels seen pre-pandemic. The defensive properties of Consumer Staples offered the desired sanctuary for many investors during the sell-off, buoyed by a stellar earnings season which saw firms such as P&G, PepsiCo and Danone increase prices to offset inflation, but also grow volumes simultaneously.



Source: Guinness Global Investors, Bloomberg

Over the month of April, fund performance can be attributed to the following:

- From an allocation perspective, the significant outperformance of value and defensive sectors negatively impacted Fund performance during April. Consumer Staples, Energy, Utilities, Real Estate and Materials were five of the six sectors that outperformed the MSCI World, and, as seen in the chart above, are all sectors in which the Fund has a zero weighting.

- On the other side, the Fund's overweight position to the Tech sector (57% of the portfolio vs 22% of the benchmark) contributed to a significant portion of fund underperformance during the month. This was partially offset, however, by good stock selection in names such as Mastercard, Visa and Roper Technologies, which outperformed the MSCI World Technology Index by 13.7%, 8.0% and 12.5% respectively in USD.

- At the industry level, the Fund's overweight allocation to semiconductor stocks acted as a significant headwind, with the MSCI World Semiconductor Index representing the worst-performing industry (-17.8% USD) in April. However, five of the Fund's six semiconductor stocks outperformed the MSCI World Semiconductor Index. Nvidia was the Fund's bottom-performing stock for April, at -32% USD.

- Whilst the rotation to growth has impacted the Fund in the short term, it is pleasing to see the Fund vs peers ranking in the top quartile versus its IA Global sector over the longer time frames of 3, 5, and 10-year periods.

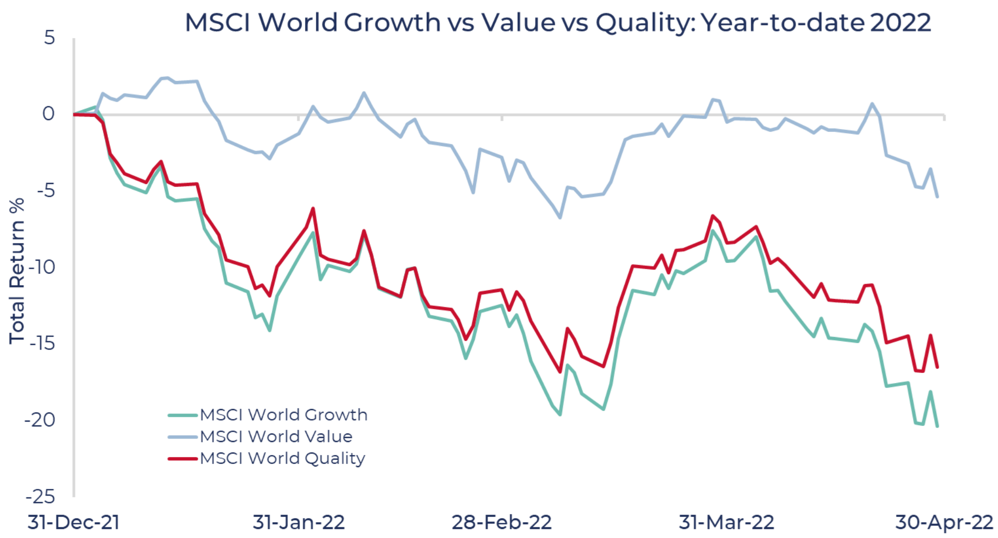
Cumulative % total return, in GBP, to 30/04/2022	YTD	1 year	3 years	5 years	10 years*	Launch*
Guinness Global Innovators	-14.73	-3.83	47.97	82.72	349.42	900.30
MSCI World Index	-6.18	6.40	39.76	67.21	237.05	534.09
MSCI AC World Index	-6.07	4.28	36.01	61.89	212.06	520.97
IA Global sector average	-8.03	0.62	33.28	56.56	178.35	435.44
IA Global sector ranking	n/a	338/464	39/391	35/326	7/218	7/99
IA Global sector quartile	n/a	3	1	1	1	1

Source: FE fundinfo.

** Simulated past performance. Performance prior to the launch of the Guinness Global Innovators Fund (31.10.14) reflects the Guinness Atkinson Global Innovators Fund (IWIRX), a US mutual fund with the same investment process since 01.05.2003.*

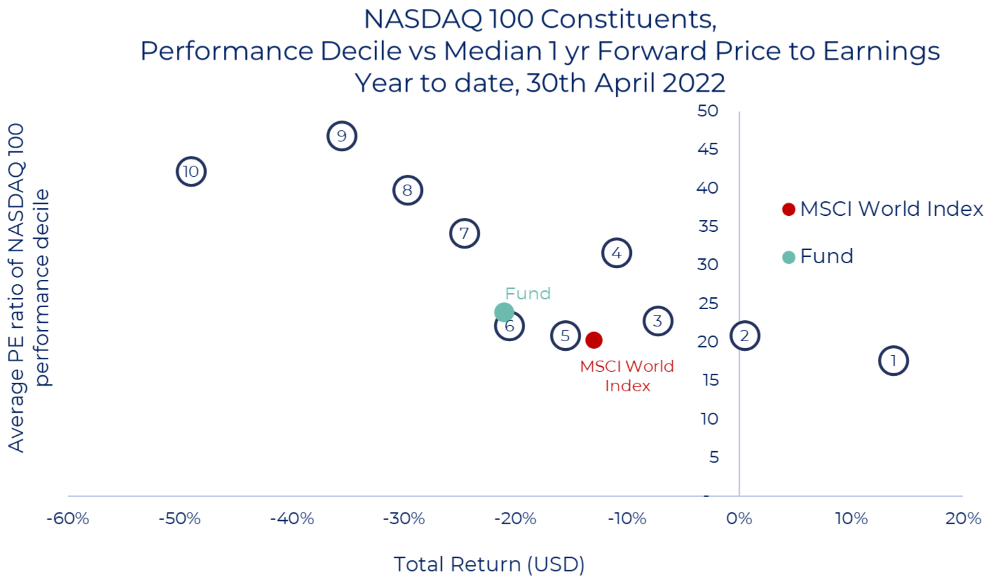
APRIL IN REVIEW

Since the turn of the year, there has been a significant divergence in performance between growth and value. The MSCI World Value Index has outperformed the MSCI World Growth Index by +7.9% USD, and the MSCI World by +3.5%. In the context of war in Europe, high inflationary pressures, disrupted supply chains and hawkish monetary policy, investors have sought the sanctuary of value-tilted names.



Source: Guinness Global Investors, Bloomberg

Growth-focused sectors such as Information Technology, to which the Fund has an overweight position, typically trade from higher multiples, and de-rated over the period. Yet even within the Technology sector, there has been a clear correlation between performance and level of valuation. This can be observed in the chart below, which compares the median 1-year-forward Price-to-Earnings ratio of each performance decile within the Nasdaq 100, a predominantly tech-focused index.



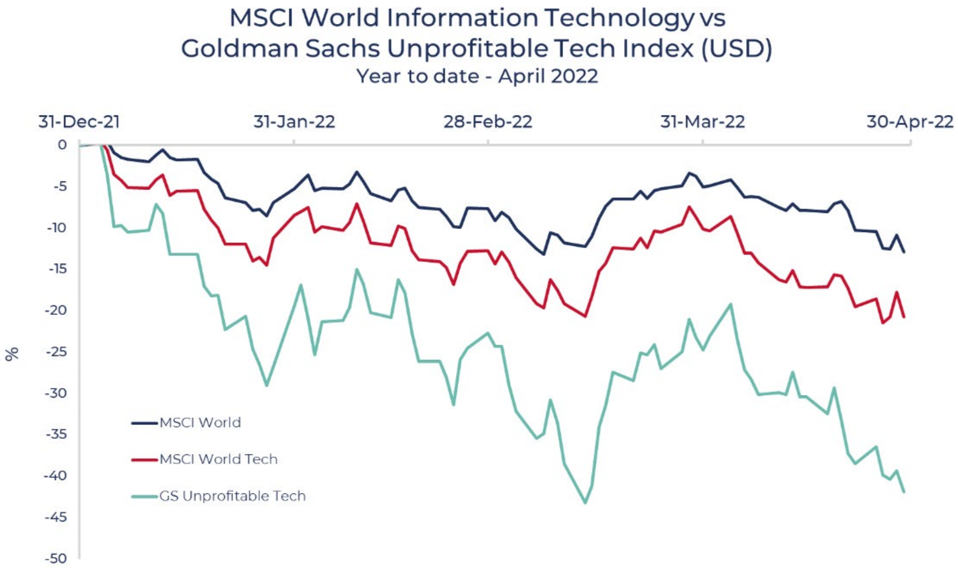
Source: Bloomberg, Guinness Global Investors

'Speculative' growth stocks are typified by high-multiples and are typically 'high-duration' in nature, with a significant portion of their cash flows forecast to materialise long into the future. Consequently, these companies are typically more sensitive to changes in interest rates, which make up an important element of the discount rate in which to measure the present values of future cash flows. As seen in the chart above, over a period in which 'risk-off' sentiment becomes prevalent, these stocks tend to underperform.

Over the course of the pandemic, a number of 'stay-at-home' speculative stocks were bid up to high valuations as demand accelerated for their products. During this period, the market often failed to distinguish accurately between stocks for which a permanent change in customer behaviour and habits would create superior cashflows for the underlying business, and those for which the tailwinds were temporary. Netflix is a prime example, at one point reaching 80x 1-year forward Price to Earnings. However, in 'stay-at-home' speculative stocks in which behaviour change tailwinds are now expected to be temporary, or even as the 'pull forward in demand' is given back, we have seen significant de-ratings alongside changing future rate expectations. Netflix, as of the end of April, was trading at 18x 1 year forward PE.

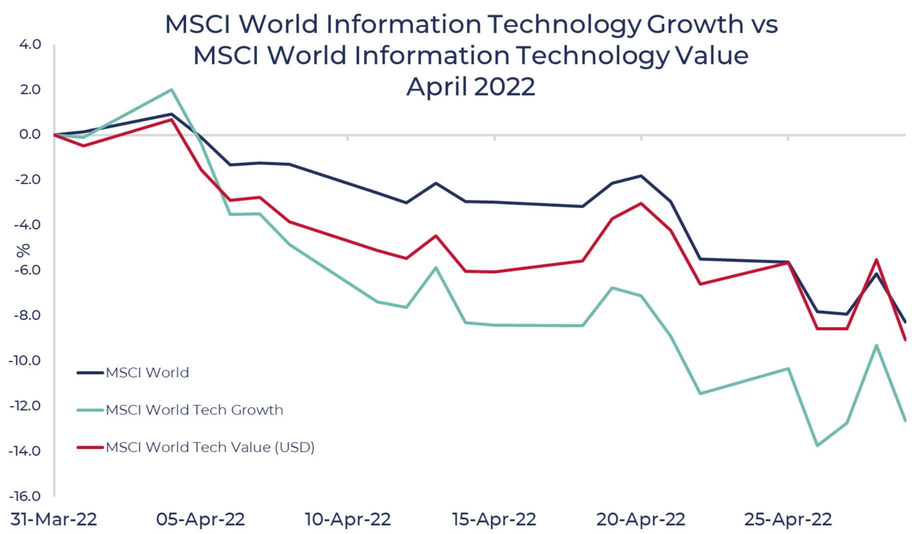
Stocks held in the Fund play instead to long-term, secular growth themes, such as cloud computing, artificial intelligence and big data. Whilst the pandemic may have been a catalyst for demand in products and services within this segment and therefore proved a boon for related stocks, these revenues are 'stickier' and more long-term in nature. As a result, the Fund has largely been isolated from the temporary behavioral changes that many speculative stocks at first benefitted from but are now paying for. Microsoft, held within the Fund, is a good example, as the shift to cloud accelerated during the pandemic, and continues to carry momentum into the long term. Whilst Microsoft peaked at 35x 1-year-forward PE over the pandemic, its continued strong earnings performance has allowed it to maintain a premium valuation of 30x (as at the end of April), despite the tech sell-off.

Alongside exposure to long-term secular trends, the Fund's quality tilt is particularly important in periods of volatility and weak equity performance. The returns year-to-date of the Goldman Sachs Unprofitable Tech Index (a basket of tech stocks with negative earnings) has sold off significantly this year, where concerns over supply chain disruption and rising yields have caused a rotation towards stocks which have positive earnings and can rely on the strength of their balance sheets, alongside high margins in which to absorb the shocks of rising costs. These are all factors typical of stocks within the Fund.



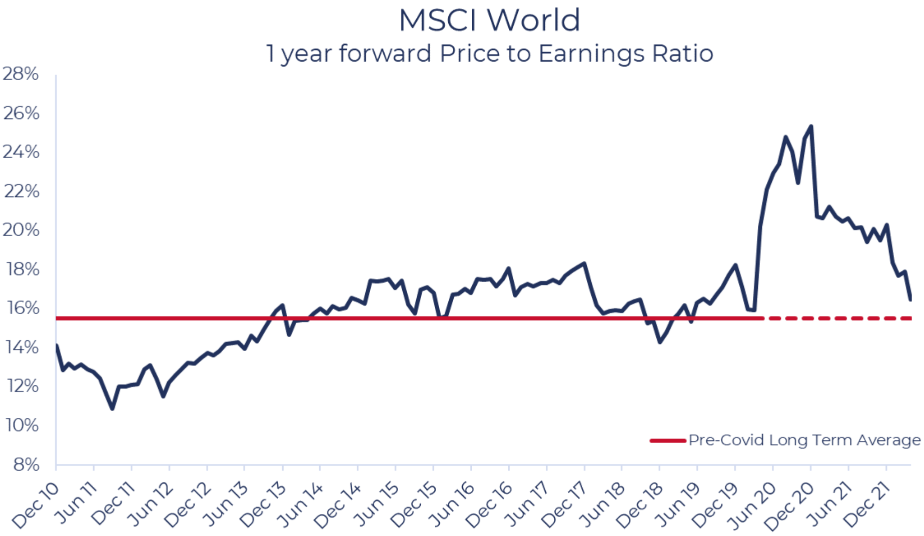
Source: Bloomberg, Guinness Global Investors

Similarly, being conscious of valuation has also been a tailwind. As seen below in MSCI World Information Technology Growth Index vs MSCI World Information Technology Value Index, technology stocks with a value tilt performed in line with the broader MSCI World Index, whereas higher valued 'growth' tech stocks have underperformed. Part of this is risk aversion – value-orientated stocks are typically more defensive, due to higher, more stable earnings, albeit less growth. With a weak economic outlook over the medium term, (inflation, war, interest rate hikes), investors have sought higher quality, safe havens with less downside valuation risk.



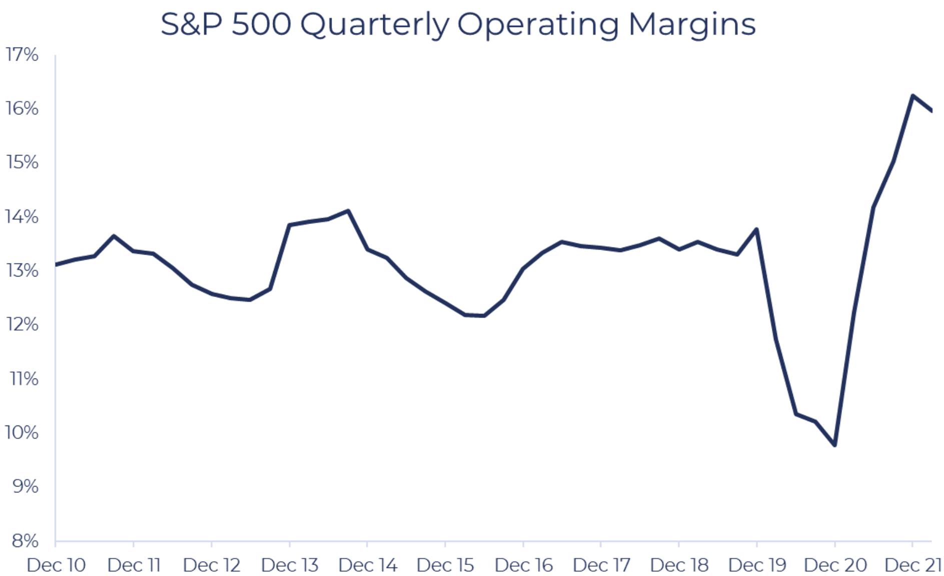
Source: Bloomberg, Guinness Global Investors

In the midst of this rotation towards value and away from growth and particularly the speculative end, this has resulted in valuations coming off since the beginning of the year. The S&P 500 is approaching valuation levels around the pre-pandemic long run average, as seen below. This may be indicative of a more rational and healthy market environment, where 'growth at any value' is no longer a sustainable strategy and long-term trends and quality aspects become more important.



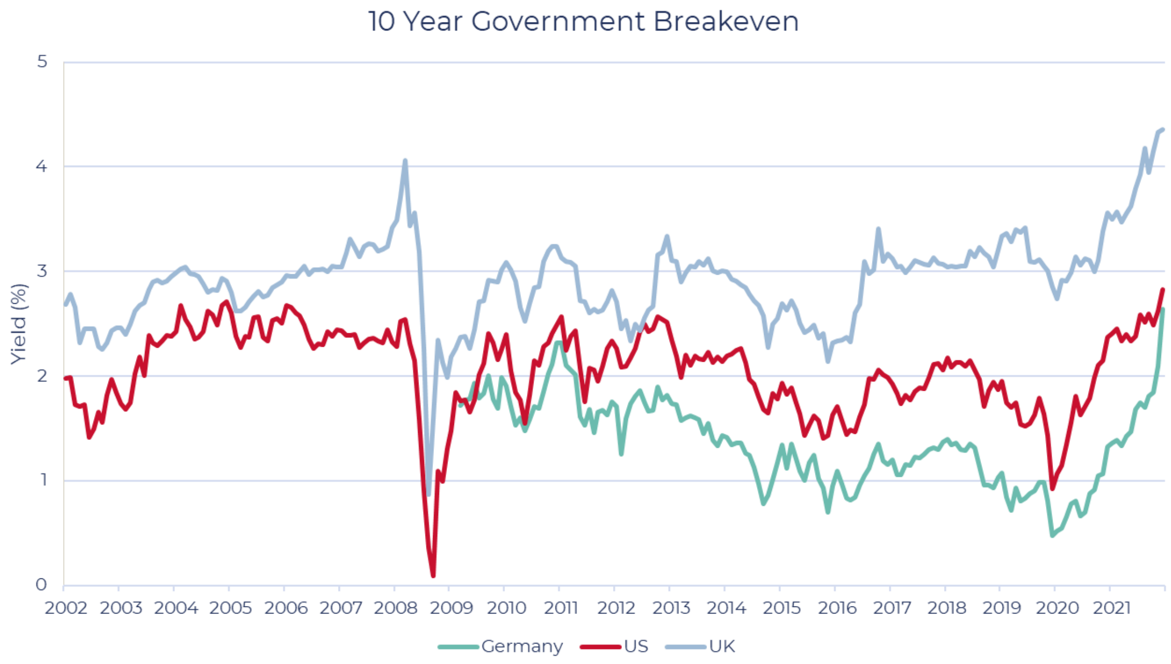
Source: Bloomberg, Guinness Global Investors

Whilst this long-term average Price to Earnings level could offer an attractive entry point for many, there are valid arguments for why this value rotation could still have room to run in the short term. Margins in the S&P 500 are currently running at an all-time high, with company's hiking prices to offset inflation and benefitting from operating efficiencies made during the pandemic. A fall in margins, which in an inflationary environment is certainly a possibility, could therefore cause earnings expectations to decline, and valuations to again increase, leaving room for further potential downgrades.



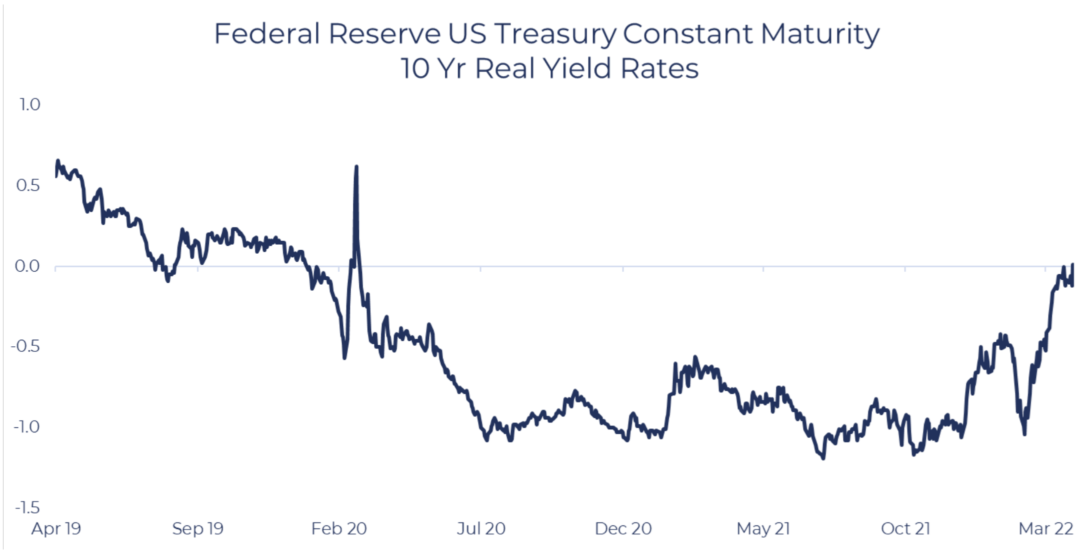
Source: Bloomberg, Guinness Global Investors

On top of this, the future path of inflation and interest rates has yet to fully play out. Inflation continues to run rampant. The US Consumer Price Index recorded inflation of 8.5% in April, a new 40-year high, and has shown little indication of slowing down in the short term. The story is similar elsewhere, with the UK reaching new 30-year highs (+6.2%) and the EU reaching all-time highs (+7.5%). The 10-year government breakeven, a common indicator of future inflation market expectations, rose sharply to new 10-year highs.



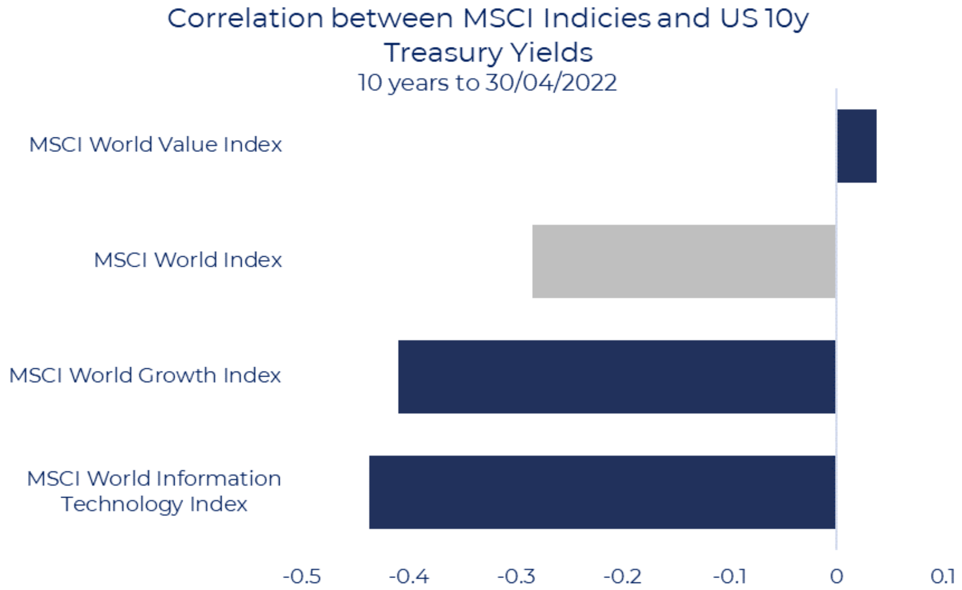
Source: Bloomberg, Guinness Global Investors

Only at the end of November last year did the Fed "retire" the word "transitory" from its description of inflation. At the turn of the year, the tone became markedly more hawkish, as US Fed Chair Jay Powell failed to rule out potential rate hikes at every subsequent FOMC meeting from March until the end of 2022. By the end of April, markets were pricing in three 50bps rate hikes in the following three FOMC meetings. This is in stark contrast to the market's position in June last year, where the consensus estimate was for no interest rate rises in the US during 2022, and just one by the end of 2023. This rapid change in expectations has acted as a significant headwind to equities, and growth stocks in particular. With inflation still prevalent, this causes concern that rate hikes could come at an even greater pace. As a result, we have seen bond yields driven sharply higher. In particular, real yields, as calculated by the Federal Reserve, turned positive for the first time since March 2020, exiting their longest-ever period in negative territory.



Source: Bloomberg, Guinness Global Investors

In the past 10 years, there has been a positive correlation between yields and value-orientated stocks. When yields increase, value tends to outperform – and April was no different.

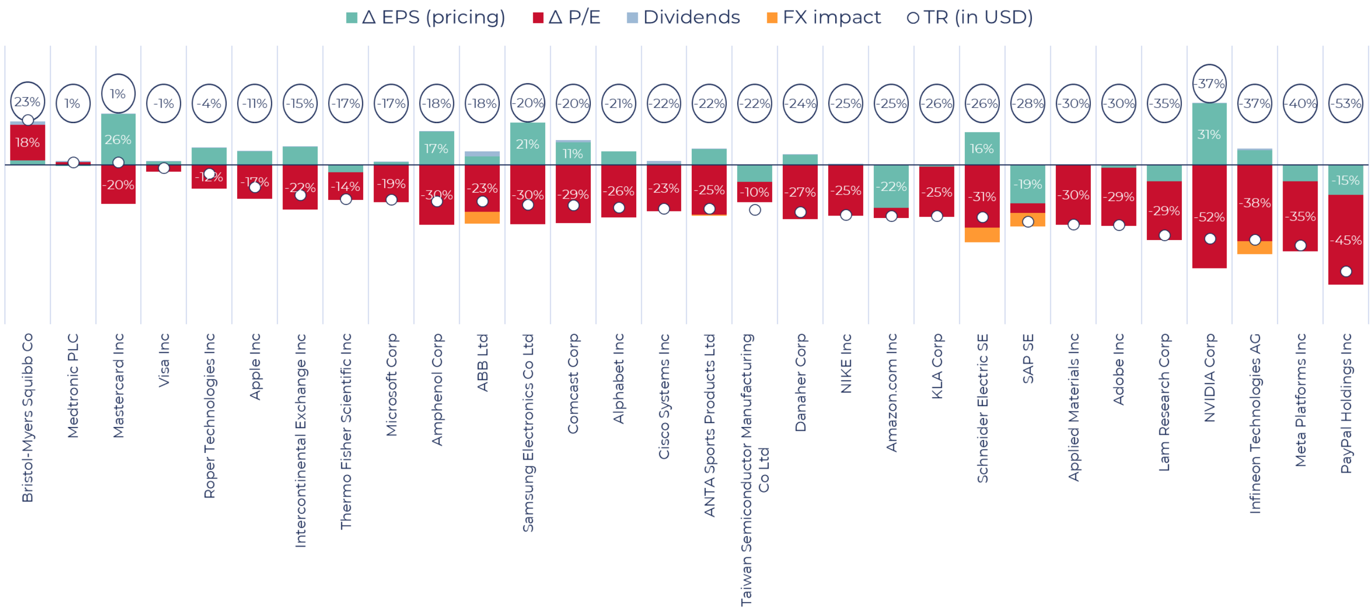


Source: Bloomberg, Guinness Global Investors

First-quarter company earnings offered a relative bright spot amidst war, China's Covid lockdowns, rampant inflation and hawkish monetary policy. Among the 55% of S&P 500 companies that had reported by the end of April, 72% reported a 'beat' to top-line revenues (5-year avg 69%, FactSet), with an average beat of 2.2% (5 yr avg 1.7%) and average growth of +14%. More companies than average also reported a beat to the bottom line (80% vs 77% 5 yr avg), although the beat of +3.4% was below the historical average (8.9%) and it was the first time average earnings growth was in single digits (+7.1%) since Q4 2020. In what has been a difficult year for equity performance, fundamental numbers are proving to be more resilient than market expectations.

Despite the uncertain outlook, we are confident in the long-term positioning of the portfolio. Strong quality metrics, in particular strong balance sheets with low debt servicing requirements, high margins and solid return metrics, should serve the stocks well in periods of volatility and market concern. Recent earnings announcements resulted in earnings upgrades across a vast portion of portfolio holdings, highlighting the strength in the underlying business models despite the inflationary environment. Yet even with fundamentals being in check and outlooks upgraded, multiples contracted, with portfolio stocks largely being caught up in the general tech/growth sell-off rather than any underlying concern about fundamentals and earnings.

Fund Stock Performance: Total Return Drivers YTD



Source: Bloomberg, Guinness Global Investors

Indeed, we believe there is a good argument for high-quality, secular growth stocks in the current market environment, especially in a recessionary or slower-growth environment, as these companies should continue to be able to grow despite the market headwinds and have better fundamental characteristics in terms of margins and balance sheets. The recent and significant de-rating of many of these companies provides a better opportunity in terms of valuation today, but we note this does not preclude the potential for further market de-rating in the near term, as the future path for the global economy and broader geopolitical situation remains uncertain.

EARNINGS REVIEW

In a difficult year for equity performance, fundamentals are proving to be more resilient than market expectations. During the month, a number of positive themes emerged.

Strength in consumer spending – Mastercard & Visa

Both Mastercard and Visa, two of the Fund's three top-performing stocks over the period, highlighted the strength in consumer spending across their payments networks, driving adjusted net revenues up +27% each (year-on-year), despite exiting their Russian businesses during the period (Russia accounting for c.4% of sales for both firms). In terms of where money is being spent, sectors that were impacted by lockdowns are now accounting for a larger portion of consumer wallets with travel, retail goods, and restaurants all showing broad-based growth. The earnings releases highlighted two key points, above all else:

1.) **Neither payment network has seen a negative impact as a result of inflationary pressures and macro volatility**, with payment volumes holding up and limited change in consumer spending habits.

> *"We are monitoring a number of factors, including inflationary pressures, supply chain constraints, geopolitical uncertainties and COVID infection rates. At this stage, we have not seen any significant impact of these in consumer spending."* – Sachin Mehra, CFO, Mastercard

2.) **Cross-border travel is in the midst of an ongoing and sharp recovery**, with payment volumes above 2019 levels for the first time since the pandemic (+110% for Mastercard, +112% for Visa), with continued pentup demand offering a strong outlook.

> *"Overall, Payments Volume were 135% versus 3 years ago [pre-pandemic]. Cross-border volumes, excluding intra-Europe [where margins are in-line with domestic transactions], were 112% versus 3 years ago. And it's important to note that travel-related cross-border rose to 82% versus 3 years ago, up 5 points from Q1"* – Alfred Francis Kelly, CEO, Visa

<u>Business demand for tech remains robust</u> – Roper & Microsoft

Strong business demand was evident in a number of earnings announcements, particularly within the tech sector. Roper Technologies, a tech company for niche industrial use-cases, felt broad-based organic revenue growth across both software and product segments of +11%. The firm highlighted an important characteristic typical amongst many software companies – high quality, sticky revenues. Of the firm's software revenues (around two-thirds of sales), approximately 75-80% are recurring (up from 65%-75% last year), helping to protect the downside in times of macro-volatility.

> *"Not only did we grow nicely in the quarter, but the quality of the underlying business also improved as we saw double-digit organic increases in our recurring revenue base."* – Laurence Neill Hunn, CEO, Roper Technologies

This sentiment was largely echoed across big tech. Revenues of Microsoft, Amazon and Alphabet's cloud divisions (which make up 62% of the market) grew +42% year-on-year collectively, as businesses continue to accelerate their digital transformation. Microsoft CEO Satya Nadella highlighted succinctly how technology is often the place businesses turn to when attempting to counter inflation, by investing in systems and processes to improve automation and efficiency.

> *"In an inflationary environment, the only deflationary thing is software… I don't hear of businesses looking to their IT budgets or digital transformation projects as the place for cuts… If anything, some of these projects are the way they're going to accelerate their transformation…. I have not seen this level of demand for automation technology to improve productivity."* – Satya Nadella, CEO, Microsoft

Yet despite a broadly positive set of results (all sectors delivered, on average, a positive revenue surprise during Q1), investors took caution from the subdued outlook offered by many high-profile names such as Apple and Amazon. Three key themes that were particularly relevant to the Fund include the following:

<u>Supply-chain headwinds are expected to persist over the short-term</u> – Apple

Despite earnings announcements often coming in ahead of analyst expectations and management guidance, many companies warned that supply chain woes were expected to continue into the medium term. Apple warned of a potential $8bn (c. 2% of sales) hit over the next quarter, "*which is substantially larger than what we experienced during the March quarter",* with factory shutdowns and supply chain shortages in China being the key driver, alongside silicon semiconductor shortages. At one point during the month, half of Apple's top 200 suppliers were subject to Covid-19 lockdowns in China. Market concerns surround the fact that if Apple is struggling, so too will smaller competitors within the supply chain with less bargaining power. Taking a long-term view, whilst supply chain issues may persist in the short term, relatively speaking, this will likely benefit companies with strong, entrenched market positions over the long term, relative to smaller competitors with less power over suppliers. Demand continues to remain hot, and supply issues will likely just delay revenues rather than be forgone altogether.

<u>Cost Pressures are starting to bite</u> – Amazon

Input cost inflation was another key topic in earnings announcements, with rising energy prices, worker shortages, freight challenges and raw material inflation affecting companies across industries. Amazon, which rapidly increased capacity to keep up with pandemic-related demand, is now suffering with excess capacity and overstaffing. The firm also noticed a slowdown in discretionary spending, which is seemingly in contrast to the statements made by Visa and Mastercard. This discrepancy may simply be reflective of a shift in consumer spending habits towards services that Amazon does not offer – restaurants, hotels and travel, for example – which are now more available than during the pandemic.

> *"We continue to face a variety of cost pressures in our Consumer business. We'll break these into two buckets: externally driven costs, primarily inflation; and internally controllable costs, primarily productivity and fixed cost deleverage…. Line haul air and ocean shipping rates continue to be at or above the rates in the second half of last year…. Some of this is due to the impact of the Omicron variant in China and labor shortages at point of origin, and the start of the war in the Ukraine has contributed to high fuel prices….The next bucket of costs related to productivity and fixed cost leverage, which we consider to be more within our control and are working to reduce."* – Brian T. Osavsky, CFO, Amazon

Despite this, we recognise the risk that increased costs are likely to pose to margins, and ultimately, the end customer. While many companies have so far successfully passed on cost increases to the consumer without impacting demand, partially a result of consumers being flush with cash post-pandemic, 'consumer fatigue' over price increases could set in eventually.

Online Advertising momentum stumbling – Meta, Alphabet, Amazon

As the global economy emerged from lockdowns during 2021, business spend on advertising soared. Now up against a tough comparable, and with consumers re-assessing spending habits in the midst of inflation, growth in advertising spend has slowed. Alphabet's advertising revenues slowed to +22% year-on-year, down from +32% a year earlier, Amazon's to +25%, down from +75%, and Meta's advertising growth slowed to +6%, its lowest growth in a decade. Macroeconomic uncertainty, including inflation and the war in Ukraine, have encouraged some to cut advertising budgets.

> *"The war did have an outsized impact on YouTube ads relative to the rest of Google… That was both from suspending the vast majority of our commercial activities in Russia as well as… the related reduction in spend primarily by brand advertisers in Europe."* – Ruth Porat, CFO, Alphabet

Although Meta had managed to increase the number of ad impressions made across its suite of apps during the quarter by +15%, prices per ad fell 8%. Recent privacy changes by Apple in particular caused an estimated $10bn of revenues to be forgone during the second half of 2021, with Meta COO Sheryl Sandberg stating at the time that *"the accuracy of our ads targeting decreased, which increased the cost of driving outcomes for our advertisers. And… measuring those outcomes became more difficult."* This quarter, Sandberg said global regulatory risks are *"a real challenge for our industry"* as *"the rules that are governing the internet are being rethought and rewritten"*. Whilst advertisers are up against both a difficult comparable, macro uncertainty and regulatory challenges, these firms continue to be the best placed in the industry to overcome these challenges in the long run.

STOCK-SPECIFIC NEWS

Mastercard (+1.8% USD), Visa (-3.9% USD)

Relatively speaking, April was a strong month for Mastercard and Visa, which featured in the Fund's three top-performing stocks, outperforming the MSCI World by +10.1% USD and by 4.4% USD respectively.

As mentioned above, there was strength in consumer spending across their payments networks, driving adjusted net revenues up +27% each (year-on-year). This was despite both firms exiting their Russian businesses during the period (c.4% of sales each). In terms of revenue, both firms have revenue run-rates trending approximately where they would have expected to have been at this point pre-pandemic.

For both firms, high-margin cross-border transactions have been the largest challenge over the course of the pandemic, yet a sharp and sustained recovery appears to be underway across regions, with volumes now ahead of pre-pandemic levels. Cross-border *travel* volumes continue to offer upside however, at just 82% of 2019 levels, with management expecting US inbound and Europe to be core drivers with a material runway for a continued recovery. Asia represents the biggest opportunity, at just c.40% of 2019 levels. The firm expect cross-border travel activity to reach 100% of 2019 levels by the end of September.

Management teams sounded upbeat on the macro picture, despite having to suspend Russian operations following the Ukraine conflict, providing a 4% headwind in terms of both. Near-term uncertainty remains, with the potential rise of inflation and further lockdowns, but the acceleration of cash to electronic payments and further upside yet from the re-opening of economies offers a bright long-term growth outlook.

Roper
TECHNOLOGIES

Roper Technologies (-0.4% USD)

Roper performed strongly over the month, outperforming the MSCI World by +7.91%. Following a set of results which saw top-line growth of +3.6% and organic revenue growth of +11%, management upgraded guidance for both organic top-line and EPS. Roper has been repositioning their portfolio towards higher-quality, predictable revenue streams over recent years, with 75-80% of revenues from software segments (two-thirds of revenues) classified as recurring, up from 65-75% last year. Growth in recurring revenues is occurring at double digits, driven by strong customer retention, migration to 'software as a service' delivery models and cross-selling activity. This 'stickiness' is helping to protect the downside, as demonstrated in the most recent quarter. Alongside the software business, the 'Products' business is also performing very well, with very high levels of demand and a record backlog. The business will increase prices in order to offset commodity costs throughout the year, helping to support margins, having seen limited levels of customer elasticity previously. The firm has been suffering with some minor supply chain troubles, predominantly in its smallest 'Process Technologies' segment. This is not expected to impact growth substantially, with growth expected to remain in the high teens. The firm has tough comparator periods for Q1 and Q2, but with strong organic growth of +11% to start the year, the full year outlook now looks moderately easier to achieve – a potential source of upside. Whilst this period has highlighted Roper's resilience in difficult market conditions, we are equally optimistic about the growth outlook of the firm. Following the sale of Transcore (transportation service provider), the firm has "reloaded" its balance sheet with c.$5bn of M&A firepower (with $3.2bn in cash, $2bn in borrowing capacity). This sale "enhances the quality and durability of the portfolio", but also makes way for capacity in M&A, with the firm possessing a large pipeline of high-quality candidates.

NVIDIA

Nvidia (-34% USD)

With the rotation away from growth and into value, it was a difficult month for most of the Fund's

semiconductor companies, leaving Nvidia as the bottom performer during April. The industry was the MSCI's worst-performing, underperforming the MSCI World by 9.5% over the month. However, it was pleasing to see that out of the six semiconductor stocks with the Fund, only Nvidia underperformed the MSCI World Semiconductor industry (-17.8% USD). The industry as a whole underwent significant multiple expansion over the pandemic, taking 1-year forward Price Earnings from c.20x to more than 26x pre-value-rotation (MSCI World went from c.18x to c.20x). This multiple expansion can be explained by the global supply/demand imbalance of chips, with a surge in demand from consumer electronics and the auto industry, paired with pandemic-related supply chain disruptions and capacity constraints, combining to cause chip prices to rise dramatically and global semiconductor revenues to rise by 26% over 2021 (S&P Global). Nvidia performed particularly well over that period, delivering +122% USD in 2020, and +126% in 2021. However, in a month where real yields rose sharply higher, being one of the Fund's most expensive stocks at 31x Price to Earnings, (1 year forward) this was inevitably going to prove to be a significant headwind.

Despite this sell-off, we believe the investment thesis remains strongly intact not just for Nvidia but all of our semiconductor holdings. Whilst supply chain constraints will persist into the medium term, the outlook for the industry remains strong. For chip equipment manufacturers LAM Research, Applied Materials and KLA, large-scale capacity expansion across the US, Europe and Asia offers significant visibility to future revenues. TSMC provided a prime example during February, announcing a year-on-year increase to expected capex spend of $44bn during 2022 in order to expand capacity, up from $30bn last year and over triple the spend from 2019. Intel announced a $28bn package (up from $25bn) for two new fabs in the US. The 'innovation race' between the US and China is expected to bring large fiscal packages (c.$54bn in the US) for domestic chip production, helping to alleviate the reliance each country has on the other. A capex spend in the hundreds of billions per year across the industry is a clear tailwind for capital equipment vendors such as Lam Research, Applied Materials and KLA. Designers such as Nvidia will be key in servicing this strong demand outlook into the long term as themes such as autonomous driving, automation and digital transformation continue to generate growth in the industry.

PayPal

Paypal (-24.0%USD)

Paypal also featured in the Fund's bottom performers, falling (-24.0% USD) over the month. Following the outbreak of the global pandemic in 2020, the share price surged as an accelerated shift from cash to digital payments took place, supported by a significant upswing in ecommerce. Year-on-year revenue growth topped out at +30.6% in Q1 2021. However, the firm has struggled ever since a weak 2Q22 earnings release in July last year. The firm's failed $45bn bid for Pinterest was met with investor pushback, and a second miss to consensus in a row during its 3Q22 catalysed further downgrades. In the previous quarter (4Q21), it was management guidance that concerned the market the most, with the firm having to abandon its target set just last year of reaching 750m users after finding that many of the 120m new customers added over the two years of the pandemic were no longer 'active'.

Over April, the stock slid a further -24% USD, battling a mix of both negative stock momentum from the previous quarter and being caught up in the general technology sell-off/value rotation. Other than a solid set of results during the month, which saw the stock bounce +11% on the day, there was very little news flow elsewhere, perhaps suggesting an overreaction from the market. Revenue, which was expected to come in at +6% for 1Q22, grew by +7.5% year-on-year. The quarter, which was up against a difficult comparable, is largely expected by the markets to be the 'bottom' of revenue growth, before accelerating in subsequent quarters to reach +11% for the full year. Analyst estimates expect revenue growth of +16% in FY23, in line with pre-pandemic levels. Whilst management cut guidance for the full year, citing a few increasing headwinds (Russia, supply chain and inflation), these problems are expected to be transitory, and this was likely a necessary reset of expectations required in order to stem the negative stock momentum. The firm's recent shift in strategy towards higher-quality users (rather than simply driving new user numbers) makes the metric "transactions per active account" a key indicator, which for this quarter was up +11% year-on-year. The headwind from the eBay disposal (c. 2% of revenues) is diminishing, and growth avenues such as Buy Now Pay Later and Venmo are carrying strong momentum. Expansion into new product areas such as credit cards and cryptocurrency offer further visibility to growth catalysts down the road. With a strong outlook and solid fundamentals, paired with a 1-yr forward PE ratio at all-time lows (20.4x), a 44% discount to its all-time average (since 2015), we continue to view Paypal as an attractive opportunity.

We thank you for your continued support.

Portfolio Managers

Matthew Page, CFA

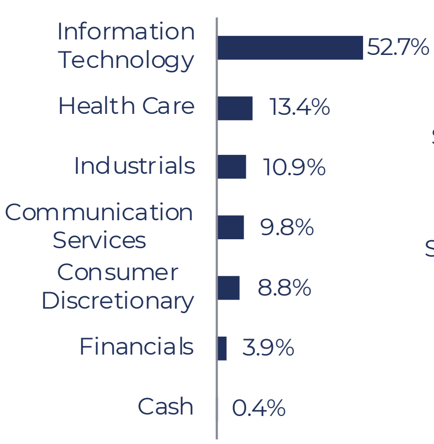
Dr Ian Mortimer, CFA

PORTFOLIO

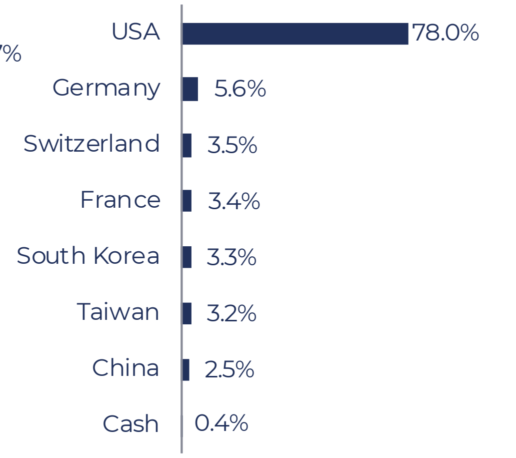
Fund top 10 holdings (%)

Roper Industries Inc	4.0%
Mastercard Inc	4.0%
Intercontinental Exchang	3.9%
Microsoft	3.8%
Thermo Fisher Scientific	3.7%
Facebook	3.7%
Amphenol Corp	3.7%
Visa	3.7%
KLA-Tencor	3.6%
ABB	3.5%
% of Fund in top 10	37.7%
Total number of stocks	30

Sector analysis (%)



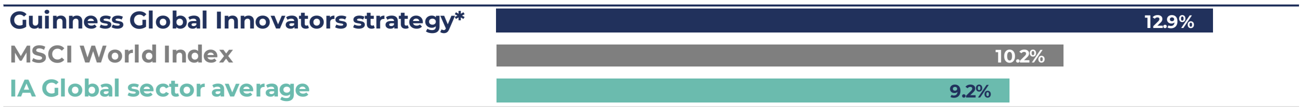
Geographic allocation (%)



PERFORMANCE*

Past performance does not predict future returns.

Annualised % total return from strategy inception (GBP) **30/04/2022**



Discrete years % total return (GBP)	Apr '22	Apr '21	Apr '20	Apr '19	Apr '18
Guinness Global Innovators Fund	-3.8	45.0	6.1	9.8	12.5
MSCI World Index	6.4	32.4	-0.8	12.5	6.4
IA Global sector average	0.6	33.5	-0.8	8.9	7.9
IA Global sector ranking	338/464	69/426	78/391	196/367	57/326
IA Global sector quartile	3rd	1st	1st	4th	1st

Cumulative % total return (GBP)	1 Yr	3 Yrs	5 Yrs	Launch*
Guinness Global Innovators strategy	-3.8	48.0	82.7	900.3
MSCI World Index	6.4	39.8	67.2	534.1
IA Global sector average	0.6	33.3	56.6	435.4

RISK ANALYSIS **30/04/2022**

Annualised, weekly, 5 years, in GBP	Index	Sector	Fund
Alpha	0	0.46	2.20
Beta	1	0.83	1.07
Information ratio	0	-0.21	0.36
Maximum drawdown	-24.58	-21.61	-22.25
R squared	1	0.85	0.84
Sharpe ratio	0.47	0.43	0.60
Tracking error	0	5.90	7.22
Volatility	15.04	13.57	17.61

*Simulated past performance. Performance prior to the launch of the Guinness Global Innovators Fund (31.10.14) reflects the Guinness Atkinson Global Innovators Fund (IWIRX), a US mutual fund with the same investment process since 01.05.2003. Discrete 12m performance is shown below.

Source: FE fundinfo, bid to bid, total return. Fund Y GBP class (0.84% OCF): Fund returns are for share classes with a current Ongoing Charges Figure (OCF) stated above; returns for share classes with a different OCF will vary accordingly.

DISCRETE 12-MONTH PERFORMANCE*

Past performance does not predict future returns.

Discrete years % total return (GBP)	Apr '22	Apr '21	Apr '20	Apr '19	Apr '18	Apr '17	Apr '16	Apr '15	Apr '14	Apr '13
Guinness Global Innovators Strategy	-3.8	45.0	6.1	9.8	12.5	39.1	-3.3	21.2	20.7	25.1
MSCI World Index	6.4	32.4	-0.8	12.5	6.4	29.8	0.5	18.0	7.5	21.8
IA Global sector average	0.6	33.5	-0.8	8.9	7.9	26.8	-2.4	15.5	6.2	17.1

	Apr '12	Apr '11	Apr '10	Apr '09	Apr '08	Apr '07	Apr '06	Apr '05	Apr '04	Apr '03
Guinness Global Innovators Strategy	0.9	7.8	38.8	-13.0	5.7	3.6	43.0	-4.3	12.2	-
MSCI World Index	-2.0	8.5	32.6	-18.9	-1.5	6.3	30.6	2.5	16.7	-
IA Global sector average	-4.8	8.4	33.3	-21.2	-1.6	6.2	36.6	3.1	20.2	-

Source FE fundinfo. *Composite simulation of performance. Guinness Global Innovators Fund (UCITS) launched on 31.10.14. Performance data prior to this date is based on the actual returns of a US mutual fund managed by the same team using the same investment process as applied to the UCITS version.

IMPORTANT INFORMATION

Issued by Guinness Global Investors. Guinness Global Investors is a trading name of Guinness Asset Management Limited which is authorised and regulated by the Financial Conduct Authority.

This report is primarily designed to inform you about Guinness Global Innovators Fund. It may provide information about the Fund's portfolio, including recent activity and performance. It contains facts relating to the equity markets and our own interpretation. Any investment decision should take account of the subjectivity of the comments contained in the report.

This document is provided for information only and all the information contained in it is believed to be reliable but may be inaccurate or incomplete; any opinions stated are honestly held at the time of writing but are not guaranteed. The contents of the document should not therefore be relied upon. It should not be taken as a recommendation to make an investment in the Fund or to buy or sell individual securities, nor does it constitute an offer for sale.

Risk
The Guinness Global Innovators Fund is an equity fund. Investors should be willing and able to assume the risks of equity investing. The value of an investment and the income from it can fall as well as rise as a result of market and currency movement, and you may not get back the amount originally invested. Details on the risk factors are included in the Fund's documentation, available on our website.

Documentation
The documentation needed to make an investment, including the Prospectus, the Key Investor Information Document (KIID) and the Application Form, is available in English from www.guinnessgi.com or free of charge from:-

- the Manager: Link Fund Manager Solutions (Ireland) Ltd (LFMSI), 2 Grand Canal Square, Grand Canal Harbour, Dublin 2, Ireland; or, the Promoter and Investment Manager: Guinness Asset Management Ltd, 18 Smith Square, London SW1P 3HZ.

LFMSI, as UCITS Man Co, has the right to terminate the arrangements made for the marketing of funds in accordance with the UCITS Directive.

Investor Rights
A summary of investor rights in English is available here: https://www.linkgroup.eu/policy-statements/irish-management-company/

Residency
In countries where the Fund is not registered for sale or in any other circumstances where its distribution is not authorised or is unlawful, the Fund should not be distributed to resident Retail Clients. **NOTE: THIS INVESTMENT IS NOT FOR SALE TO U.S. PERSONS.**

Structure & regulation
The Fund is a sub-fund of Guinness Asset Management Funds PLC (the "Company"), an open-ended umbrella-type investment company, incorporated in Ireland and authorised and supervised by the Central Bank of Ireland, which operates under EU legislation. If you are in any doubt about the suitability of investing in this Fund, please consult your investment or other professional adviser.

Switzerland
This is an advertising document. The prospectus and KIID for Switzerland, the articles of association, and the annual and semi-annual reports can be obtained free of charge from the representative in Switzerland, Carnegie Fund Services S.A., 11, rue du Général-Dufour, 1204 Geneva, Switzerland, Tel. +41 22 705 11 77, www.carnegie-fund-services.ch. The paying agent is Banque Cantonale de Genève, 17 Quai de l'Ile, 1204 Geneva, Switzerland.

Singapore
The Fund is not authorised or recognised by the Monetary Authority of Singapore ("MAS") and shares are not allowed to be offered to the retail public. The Fund is registered with the MAS as a Restricted Foreign Scheme. Shares of the Fund may only be offered to institutional and accredited investors (as defined in the Securities and Futures Act (Cap.289)) ('SFA') and this material is limited to the investors in those categories.

Telephone calls will be recorded and monitored