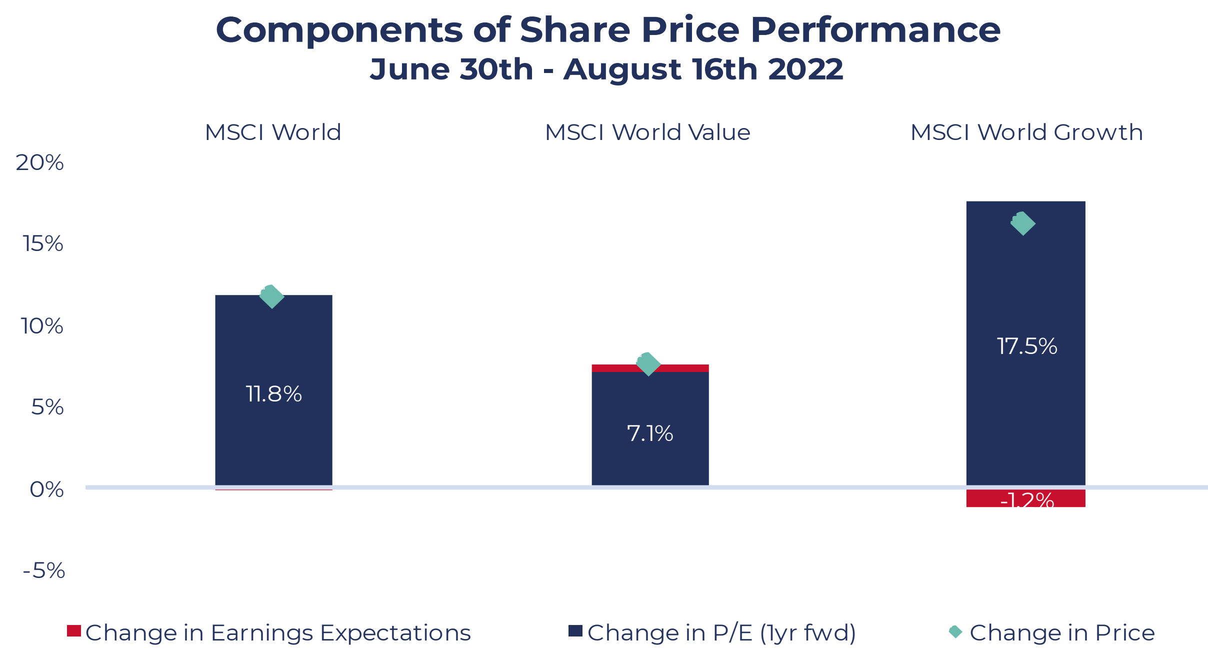
Guinness Atkinson
Global Innovators Fund
Managers Update – Q3 2022

Quarter in Review:

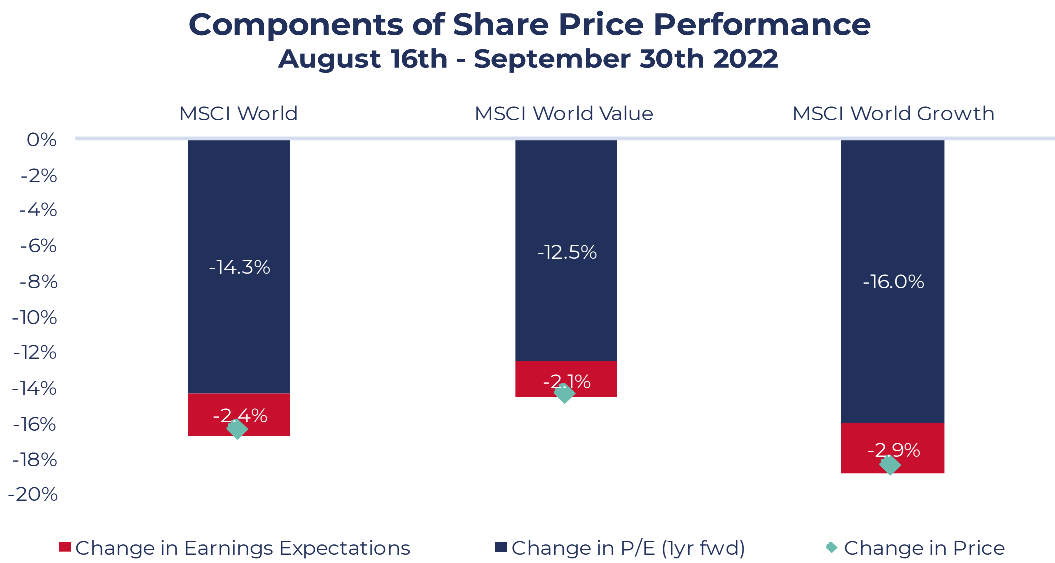
The broad rally across equity markets at the end of Q2 continued into much of Q3, as all regions posted gains in the first 6 weeks of the quarter, led by the US. Signs of a slowdown in economic growth were taken on the whole, as a positive by market, buoyed by the assumption that the Fed would start cutting rates sooner to stimulate the economy. The rally gained momentum as news of lower commodity and gas prices gave further cause for optimism.



Source: Bloomberg, Guinness Atkinson Asset Management

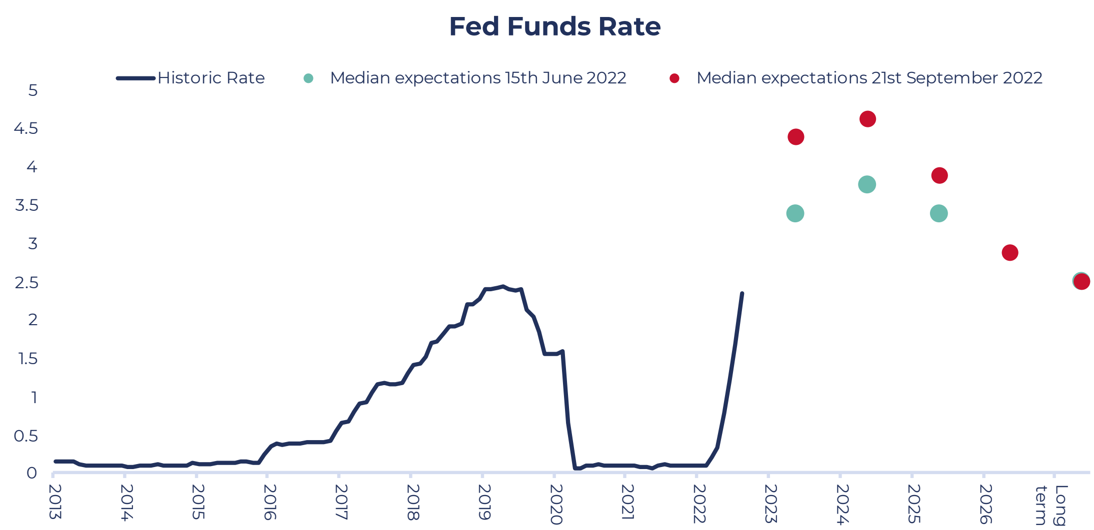
With expectations of easier money, multiples expanded to drive equity performance upwards, with growth stocks leading the pack. Despite a stronger than expected earnings season with multiple companies offering reasonably strong guidance, there was almost no change to analyst expectations of company earnings. In fact, growth stocks even experienced a small downgrade, on average.

This dislocation between share price performance and fundamental outlook led many to muse of a 'bear market rally.' These fears were all but confirmed in the subsequent half of the quarter, as a broad sell-off ensued across all major equity markets, again with growth stocks leading the way. However, unlike before, multiples were not the only driver of equity market performance, with analyst downgrades materially contributing to the equity market correction.



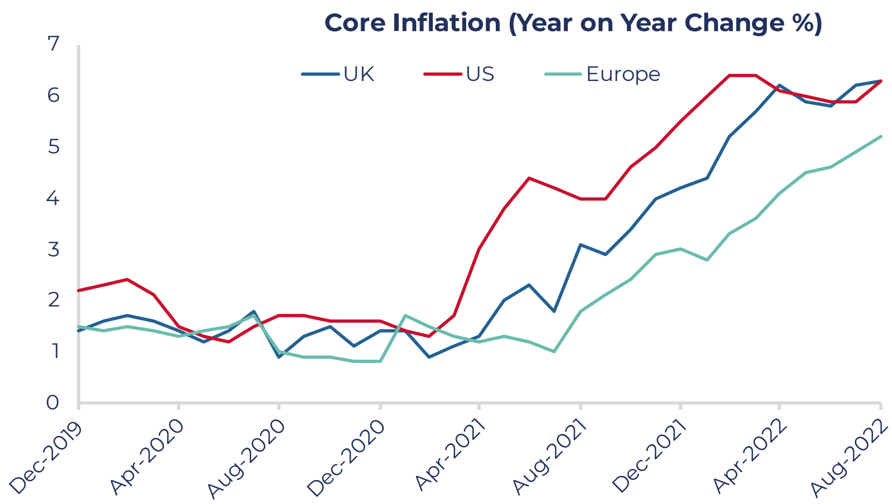
Source: Bloomberg, Guinness Atkinson Asset Management

Minutes released on the 17th of August from the Fed's July meeting proved to be a catalyst for the equity market correction, with officials discussing the need to keep interest rates at levels that will restrict the economy *"for some time".* Jay Powell later stated *"We are taking forceful and rapid steps to moderate demand so that it comes into better alignment with supply, and to keep inflation expectations anchored. We will keep at it until we are confident the job is done."* This was a clear signal that optimism of rate cuts in early 2023 were misplaced. By the end of Q3, Central Bank officials had implemented an unprecedented three consecutive rate hikes of 75 bps and were forecasting rates reaching 4.375% by year-end and peaking at 4.625% in 2023 – significantly ahead of their previous forecast.



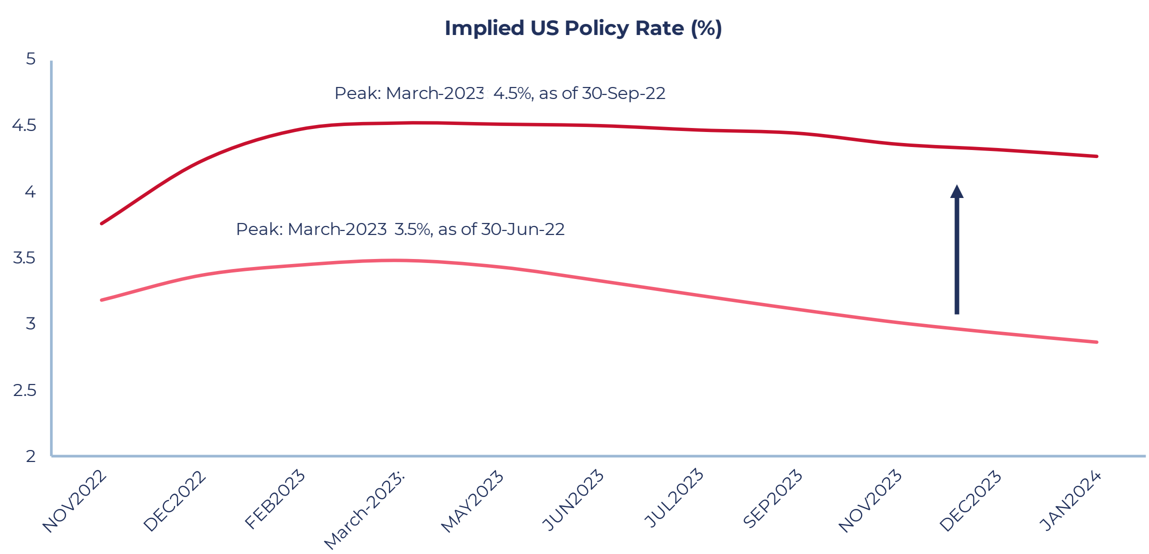
Source: Bloomberg, Guinness Atkinson Asset Management

The release of August's inflation numbers did little to appease investor concerns. US Headline Consumer Price Index (CPI) dropped to 9.9% year-on-year from 10.1% a month prior, yet investor focus was on the core reading, a 0.1% increase month-on-month (expected 0.1% decrease) and a reacceleration of year-on-year data to +0.6% (+0.2% a month prior), dashing investor hopes that peak inflation had already passed.



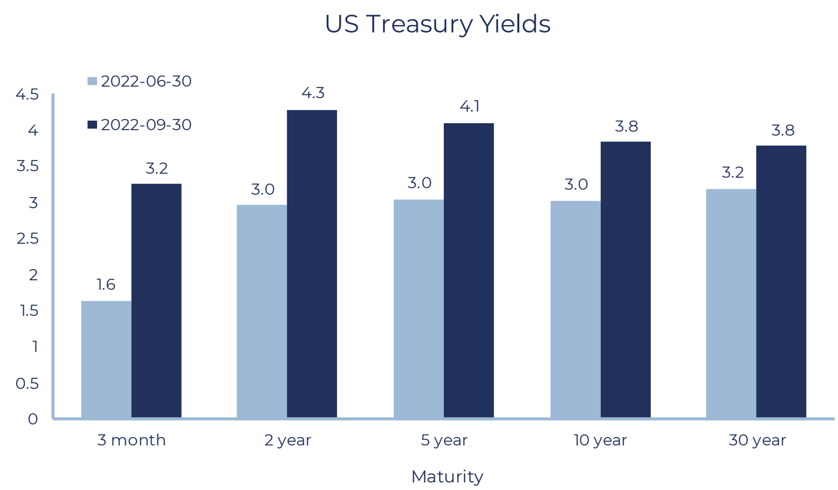
Source: Bloomberg, Guinness Atkinson Asset Management

There was a dramatic shift in the implied US policy rate, as investors who had forecast a lower and earlier peak than Fed officials at the beginning of the quarter quickly reversed to bring their own expectations in-line, with the market now pricing in rates to reach a peak of 4.5%, versus 3.5% at the beginning of the quarter. The curve also became materially flatter into 2024.



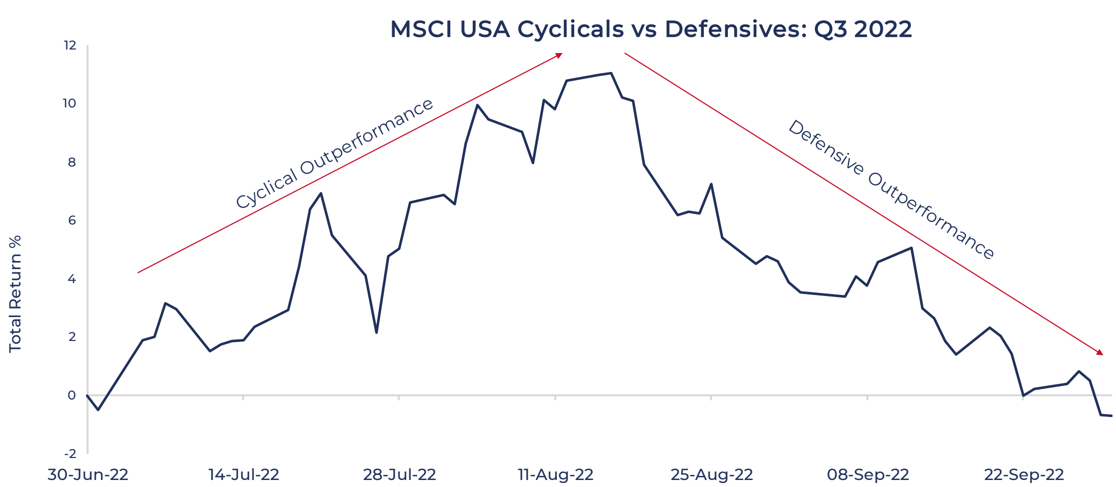
Source: Bloomberg, Guinness Atkinson Asset Management

The prospect of higher borrowing costs for longer drove yields higher across the maturity spectrum, particularly at the short end, leading to an inversion of the yield curve – a common leading indicator to recession. The spread between the 10 and 2 year, the most commonly used indicator, inverted by its largest amount since 2000.



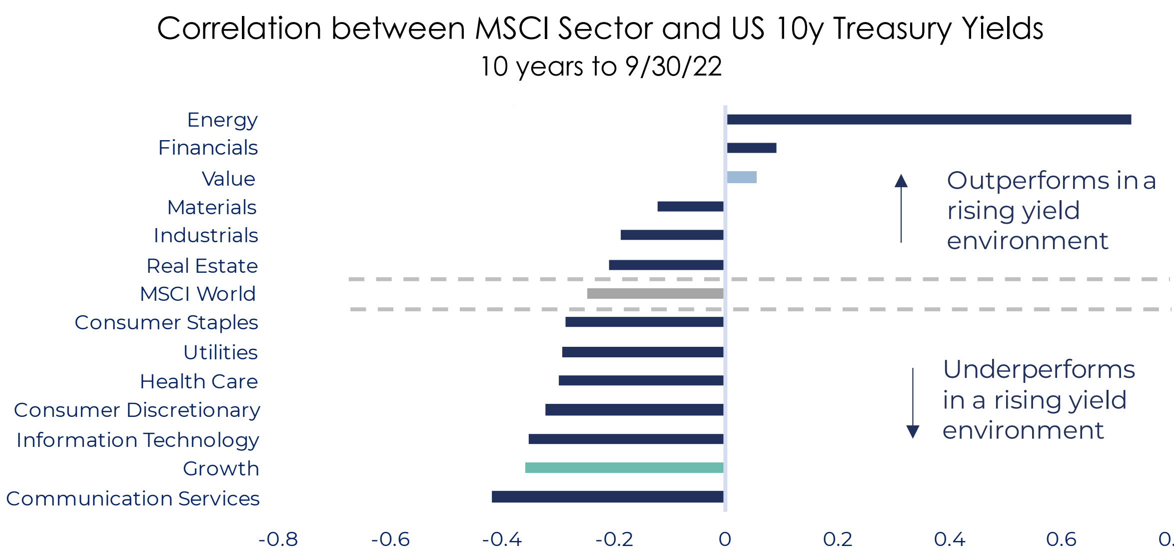
Source: Bloomberg, Guinness Atkinson Asset Management

Recessionary concerns grew over Q3, particularly following the news of two consecutive quarters of gross domestic product (GDP) decline – the definition of a technical recession for many. Composite purchasing managers' index (PMI's) fell below 50 across the US and Europe, consumer confidence dropped to 21st century lows and the Federal Reserve consistently stated their intentions of bringing inflation down regardless of the economic consequences - markets are now asking not whether recession can be avoided, but how deep it will be. A rotation into more defensive sectors ensued, reflecting risk-off sentiment. This proved to be a headwind for the Fund, which has a zero weighting to the defensive sectors of consumer staples and utilities, as well as high exposure to the highly cyclical Information Technology sector.



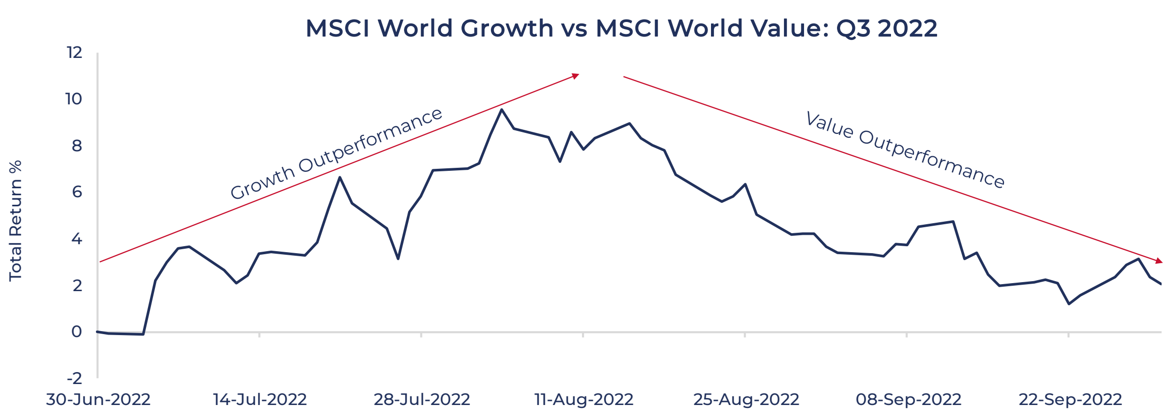
Past performance cannot predict future results. Source: Bloomberg, Guinness Atkinson Asset Management

The prospect of higher rates also triggered a rotation towards value stocks. Yields are an important element when determining the discount rate for which investors use to value a given stock's future cash flows. Growth stocks are typically 'higher duration' in nature (compared to value stocks), meaning cash flows are weighted further out into the future. Since distant cash flows are more sensitive to changes in discount rates, high-duration growth companies are too, relatively speaking. In the past 10 years, there has been a positive correlation between yields and value orientated stocks. When yields increase, value tends to outperform the index – as has been seen over the first half of 2022, and again in the latter half of Q3.



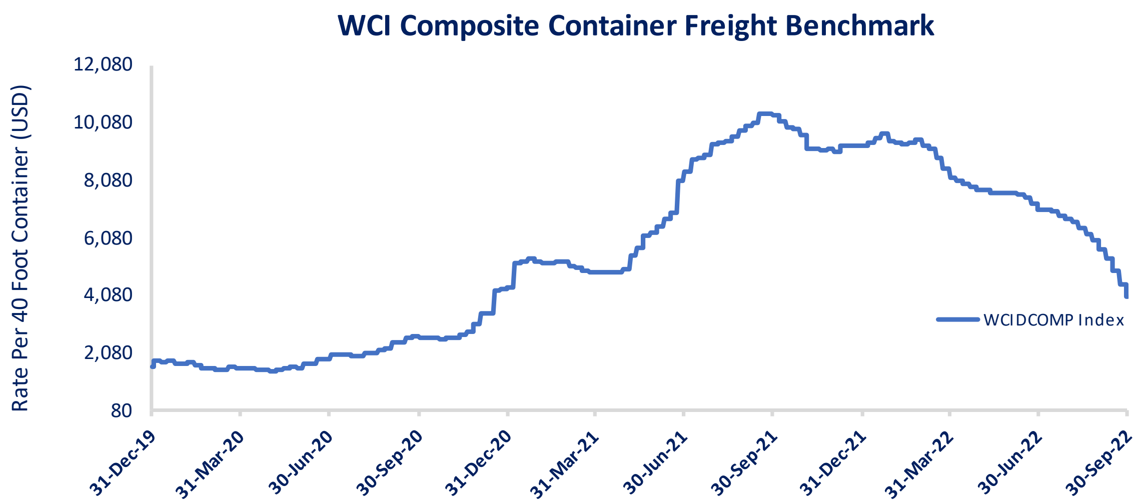
Source: Bloomberg, Guinness Atkinson Asset Management

Consequently, the rotation towards value wiped out nearly the entirety of the gains that growth had made in the initial weeks of Q3, again providing a headwind for the Fund.



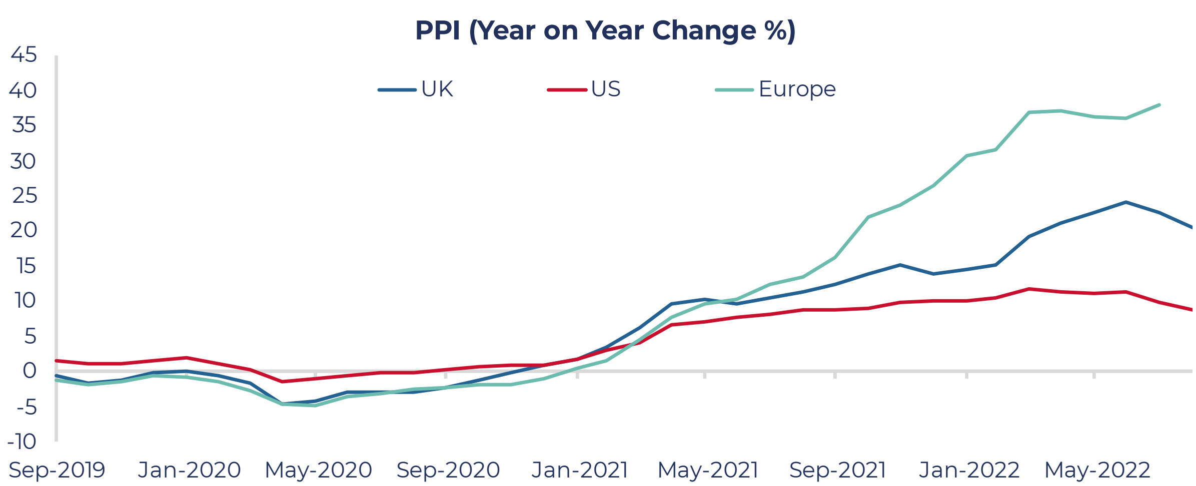
Source: Bloomberg, Guinness Atkinson Asset Management

While inflation is likely to remain elevated over the short-term, there are some initial signs that pressures are easing. Shipping costs have fallen significantly since peaks seen in September last year, with the World Container Index (WCI) Composite Container Freight Benchmark falling about 36% in Q3 2022 alone.



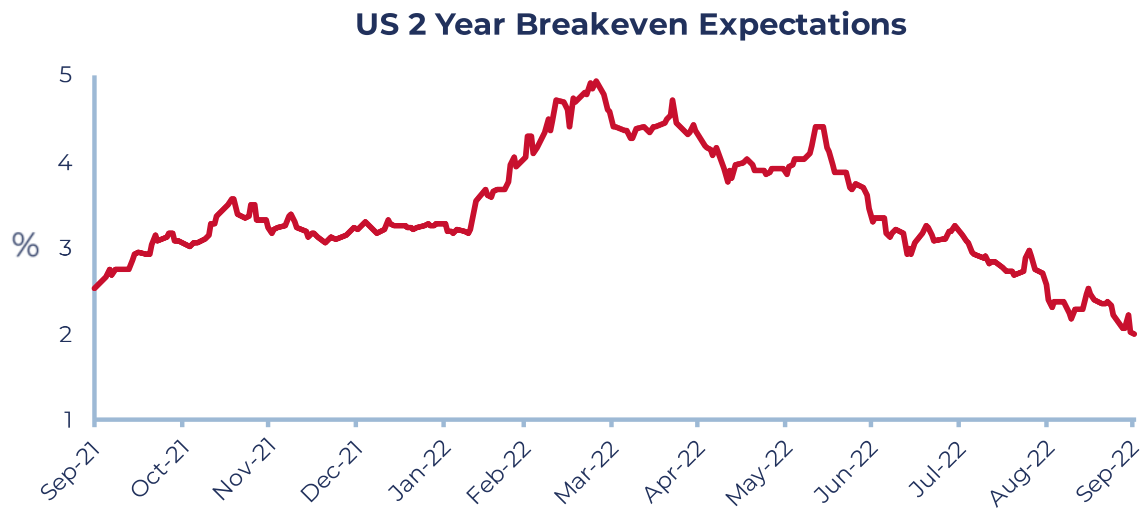
Source: Bloomberg, Guinness Atkinson Asset Management

The Producers Price Index, often viewed as a leading indicator for the Consumer's Price Index, has been falling since June in the US, driven by easing energy prices (Final Demand Energy -6.0% year-on-year).



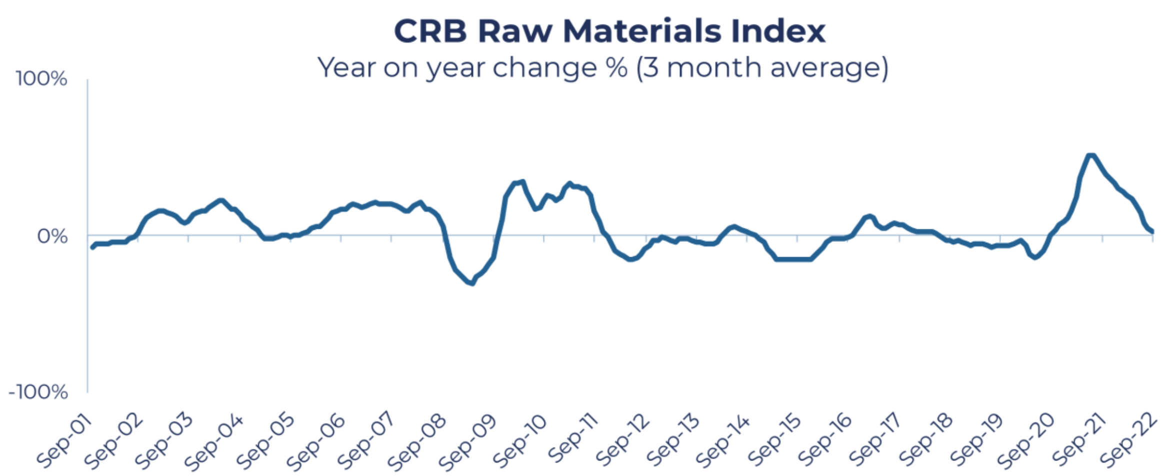
Source: Bloomberg, Guinness Atkinson Asset Management

The 2-year US Government Breakeven, which gives an indication of market expectations of average inflation over a 2-year time horizon, continued to fall.



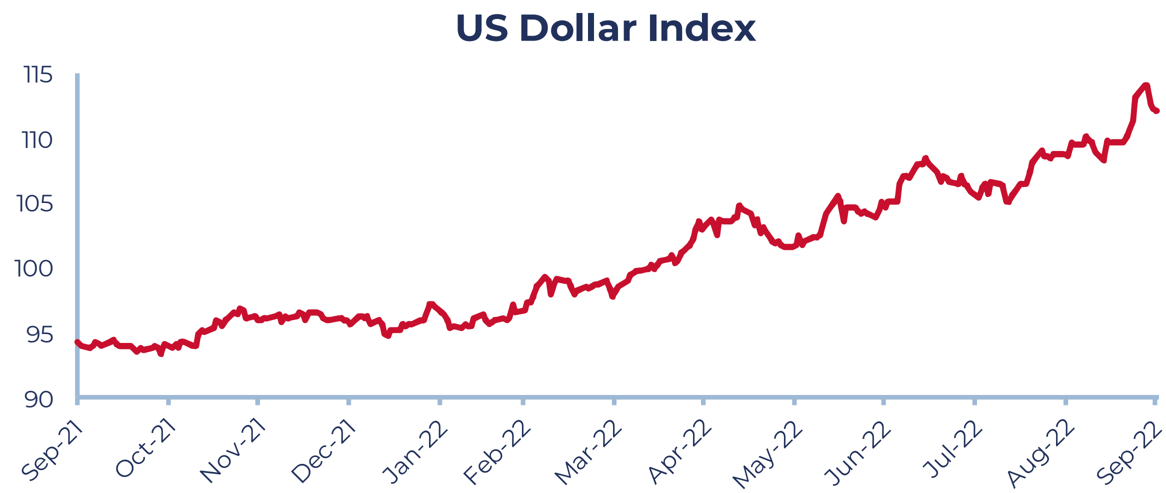
Source: Bloomberg, Guinness Atkinson Asset Management

The Commodity Research Bureau (CRB) Raw Materials Index is a measure of the price movements of 22 basic commodities and are *"presumed to be among the first to be influenced by changes in economic conditions*". Here, we can see a dramatic decline over the past year, such that these commodities, on average, are no longer sssinflationary.



Source: Bloomberg, Guinness Atkinson Asset Management

It is also important to note the strength seen in the dollar over the quarter. This can act as a deflationary force within the US, as US exports become more expensive for importing countries, decreasing demand for US goods, while also making US imports cheaper.



Source: Bloomberg, Guinness Atkinson Asset Management

We believe the secular growth trends and innovation themes that our companies are exposed to, matched with a quality focus and a valuation tilt, deliver a strong fundamental outlook for our companies. Indeed, we believe there is a good argument for high quality, secular growth stocks in the current market environment, especially in a recessionary and/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 provide 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.

Stock performances over Q2 2022 (all total return in USD):

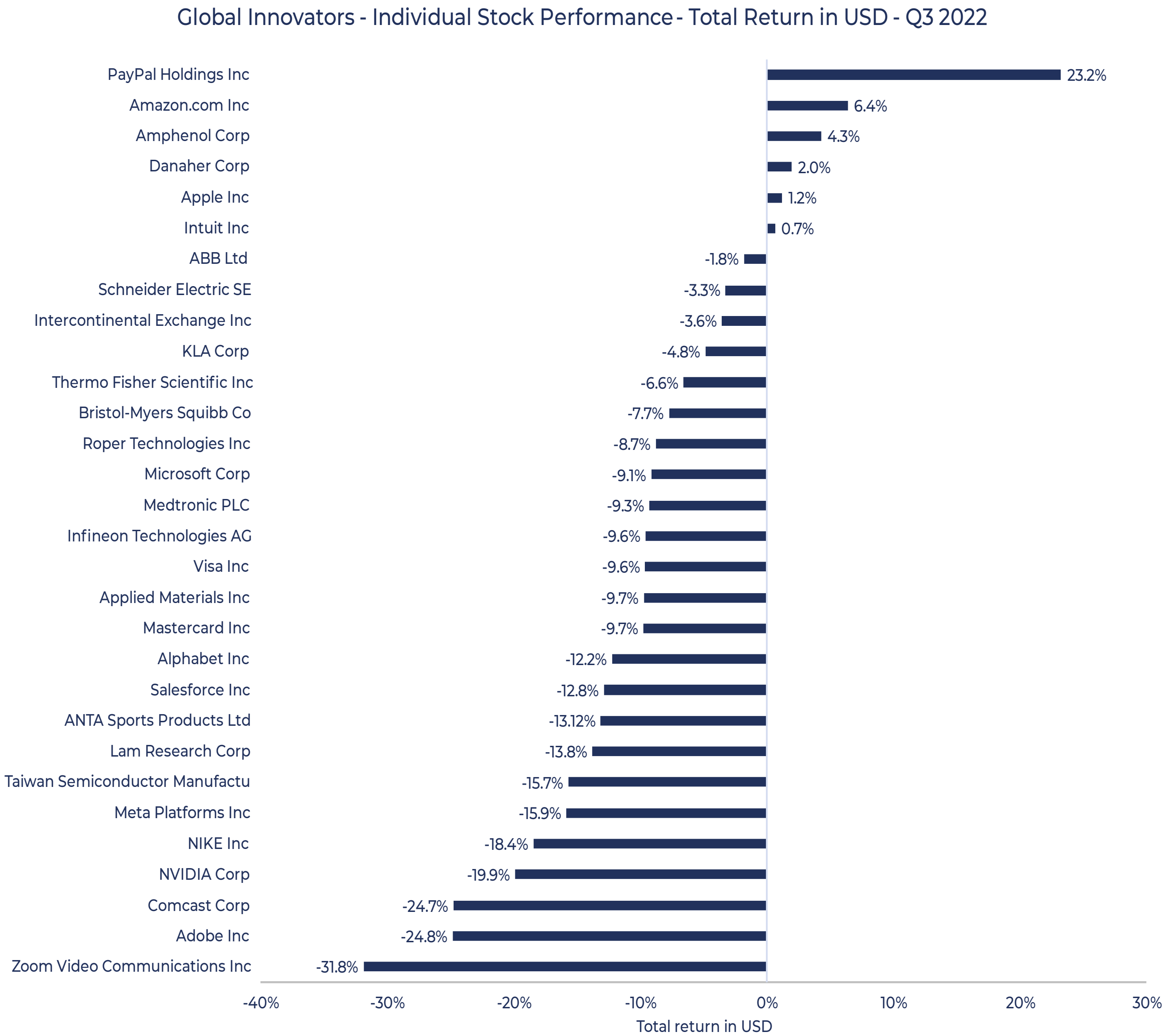


Figure 1: Performances of fund constituents. Guinness Atkinson Asset Management, Bloomberg, (total return USD)

PayPal (+23.2% USD)

After ending Q2 as the Fund's bottom performer, PayPal recovered to end Q3 as the top performer. PayPal struggled over the first half of 2022, with a mix of negative momentum from 2021, a weak earnings release in the first quarter, and the outperformance of 'value' stocks in general. In Q3, positive price momentum returned to the stock. In July, there were reports that activist investor Elliott was building a stake in the company, causing a one-day jump of 12%. The company announced 2Q22 earnings in early August, somewhat ahead of estimates and guidance, leading to a strong positive market reaction. Net revenue increased 10% year-over-year, and 14% excluding eBay headwinds. The firm's recent shift in strategy towards higher quality users (rather than focusing on new user numbers) is helping to improve the quality of their cash flows, and it was reassuring to see that 'transactions per active account,' a key indicator, was up +12% year-on-year. The firm also saw Total Payments Volume up 9% 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 this strong outlook paired with solid fundamentals, we continue to view PayPal as an attractive opportunity.

Apple Inc (+0.7% USD)

Apple had a broadly positive quarter, outperforming during the growth rally, and trending broadly in line in with the market over much of the value rotation. Q3 results in July offered the firm's stock price an additional dose of momentum to complement the growth rally. Despite a challenging macro-environment with inflation causing a moderation in consumer spending, significant FX headwinds and a disrupted supply chain, the firm posted solid earnings. Revenues grew 2% to $83bn alongside gross margin expansion of 45bps to 43.3%. Particularly promising was the growth in the services segment (+12% Y-o-Y) and a record number of service subscribers (860mn people) offering a high quality, recurring revenue stream with significant 'stickiness'. This was facilitated by all-time highs for the "installed base of devices," with Tim Cook noting that Services continued to be a "strategic growth priority for the firm" going forward. In terms of outlook, the firm guided to an acceleration in year-on-year growth in Q4, stating that "the situation on supply is improving". The firm's launch event in September was well received, with incremental improvements to iPhone, Watch and Airpods. Despite the rotation into value, the firm tracked broadly in-line with the index over the latter half of Q3. However, a downgrade to neutral by Bank of America in the closing days saw the stock plunge 5% on the news, despite the analyst's positive long-term outlook on the stock. We continue to view Apple as a very high-quality company, with strong growth prospects and positive market trends. The firm's services segment is a significant source of growth, is accretive to margins (70% gross margin vs 42% for firm), helps diversify away from iPhone and creates 'stickier' revenues. iPhone continues to offer an attractive growth runway too, with the segment gaining share on rivals Samsung and achieving strong Emerging Market penetration.

Zoom (-31.8% USD)

Zoom ended the quarter as the Fund's bottom performer. The stock experienced a strong negative price reaction following the firm's earning release. While top-line figures missed expectations (revenue -1.6% to consensus, +7.6% YoY), we found the negative market reaction to be overdone. In our view, the most important segments showed broad based strength (enterprise, upmarket, nascent product lines). Enterprise exposure increased to 54% of sales, up from 41% last year, with strong top-line growth (+27% YoY). The Enterprise segment is a key strategic focus for Zoom, with higher quality revenues stemming from greater pricing power, multi-contract solutions, cross-selling opportunity, longer term contracts, and stickiness from organizational inertia. Zoom also had success in the upmarket segment, with revenues from customers contributing more than $100,000 (T12M) growing by +37%. In addition, net dollar expansion of 120% highlighted strong growth in spending by existing enterprise customers. Zoom also demonstrated strength in their nascent product lines. Zoom Phone is continuing to rapidly acquire new customers, reaching nearly 4 million seats in 2Q23 - annual growth of over 100% and approximately double the amount of seats of close peer Ringcentral. While there was some weakness in the international segment where the firm is aiming to drive growth, we do not feel that these results justified such a severe negative reaction, with the market perhaps placing too much emphasis on the retail segment, which is facing headwinds as we exit the pandemic. Overall, the firm's nascent product lines and growing TAM (total addressable market) offer strong growth potential, and paired with the firm's brand-equity, solid balance sheet and focused strategy, this give us confidence in the long-term outlook for Zoom.

Adobe (-24.8% USD)

Adobe was trending broadly in-line with the MSCI World up until mid-September, when a merger agreement with Figma caused a sharp sell-off in the stock. Adobe was more than 10% ahead of the MSCI World at the halfway point of the quarter, following a positive set of earnings and the broader growth rally. Adobe's Q2 results beat consensus on both the top and bottom line (revenues of $4.39 billion and EPS of $3.35 came in 1.1% and 1.2% ahead of consensus). The firm also announced a $464 million net increase in 'new digital media' annually recurring revenue stemming from better-than-expected performance in the Creative Cloud and Document Cloud segments. Management reiterated their previous bullish guidance and explained that the full year outlook of a $1.9 billion increase in Annual Recurring Revenue is still on track. However, the rotation towards value removed any positive momentum, and the announcement of the firm's Figma acquisition in mid-September caused the stock to tumble nearly 17% in one day. Figma facilitates collaboration between remote working software developers and designers, also offering a new class of browser-based design tools for millions of non-designers – a potential threat to Adobe's core business, the traditional leader in design software. The $20bn valuation is what concerned the market, a multiple of 5x Annual Recurring Revenue. While expensive, we view the acquisition as a strong strategic move, exposing the firm to an additional $16.5bn in TAM with the potential to grow, with significant synergies and collaborative opportunities for Adobe, particularly in imaging, photography, illustration, and video.

Changes to the portfolio:

During the quarter, we made no changes to the portfolio.

Portfolio characteristics

The two charts below show how the exposure of the fund has evolved since we launched the strategy back in 2003. We continue to hold no exposure to Real Estate, Energy, Materials, Consumer Staples, and Utilities. Information Technology remains our largest exposure, split between the three sub-sectors of semiconductors; software and services; and technology hardware. On a regional basis, North America continues to be the largest exposure (80%), followed by Europe (12%) and Asia Pacific (6%).

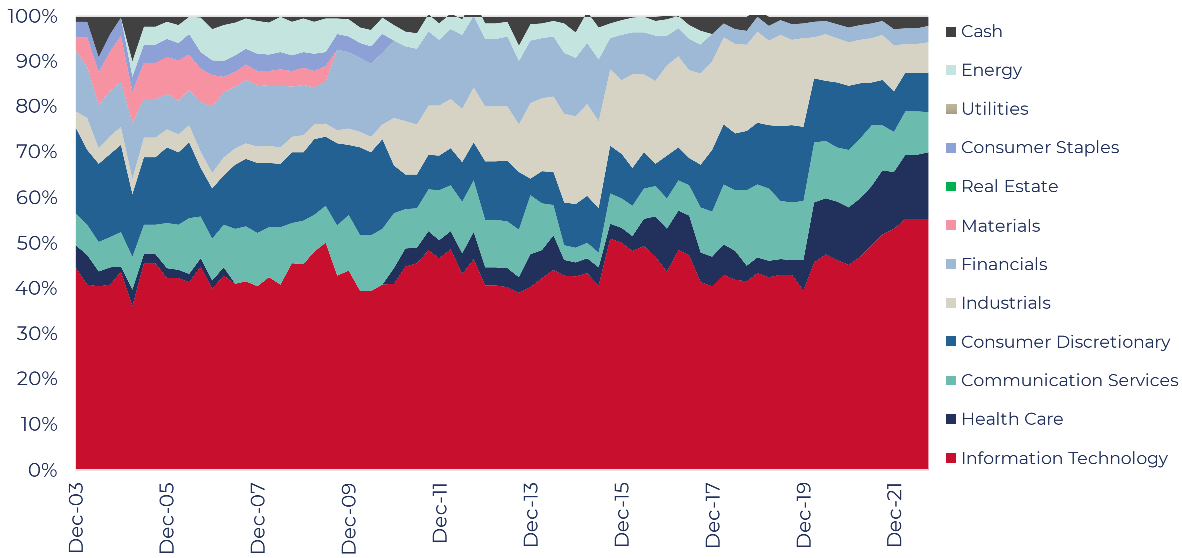


Figure 3: Portfolio sector breakdown. Guinness Atkinson Asset Management, Bloomberg (09.30.2022)

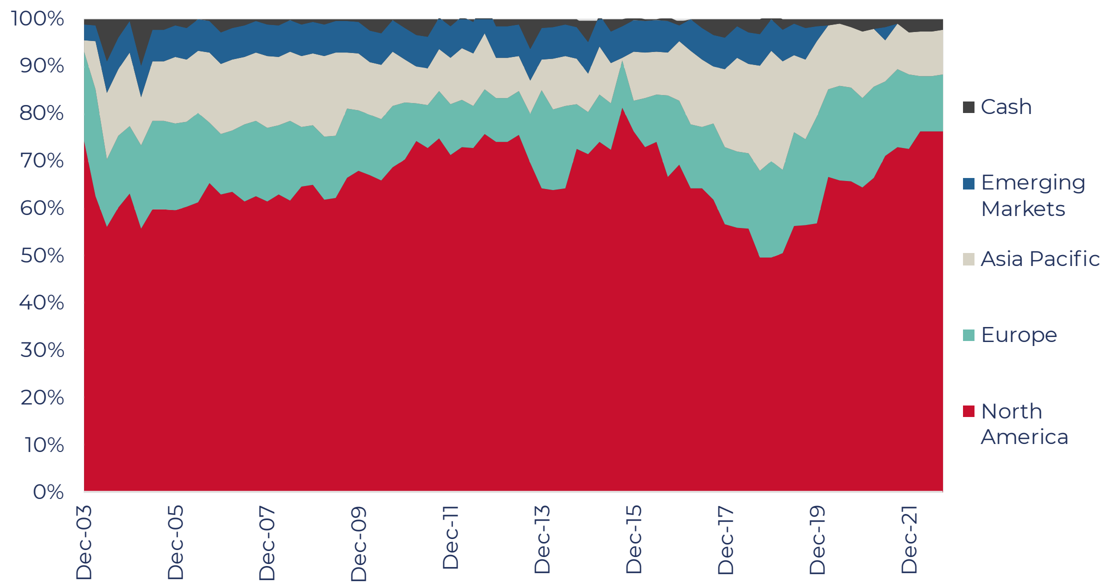


Figure 4: Portfolio geographic breakdown. Guinness Atkinson Asset Management, Bloomberg (09.30.2022)

On a regional level, at the end of the quarter the fund held a small overweight position to North America, and small underweight positions to Europe and Asia Pacific, relative to the benchmark.

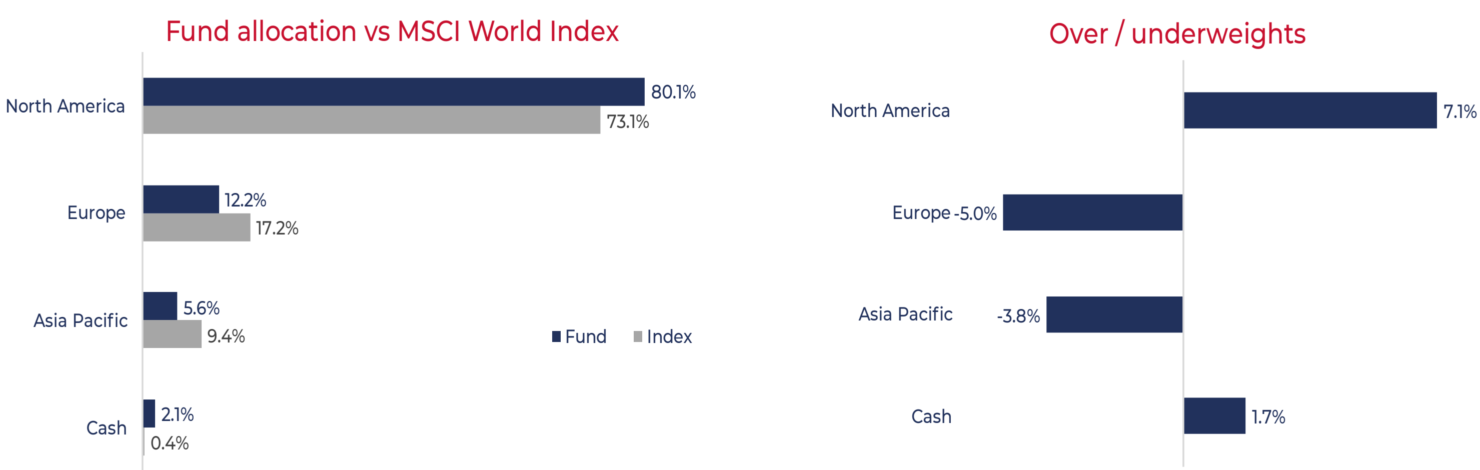
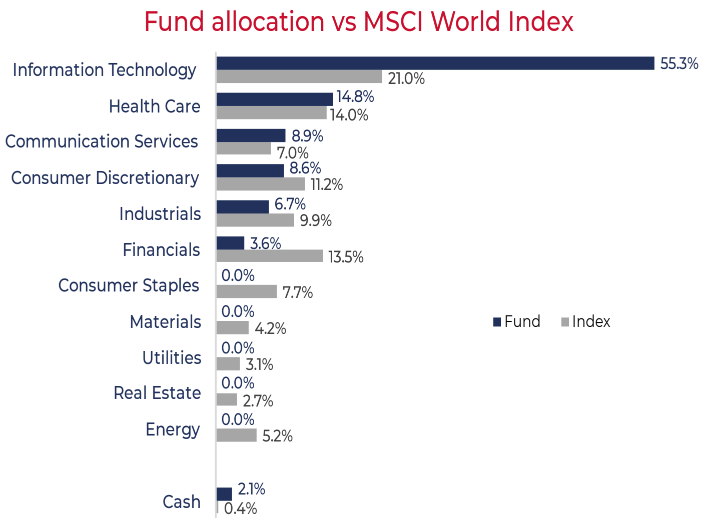


Figure 5: Guinness Atkinson Asset Management, Bloomberg (data as at 09.30.22)

On a sector level, the fund continues to have a large overweight to IT (34.3%), while the fund's 0% exposure to Real Estate, Energy, Materials, Consumer Staples, and Utilities leaves these areas underweight relative to the benchmark.



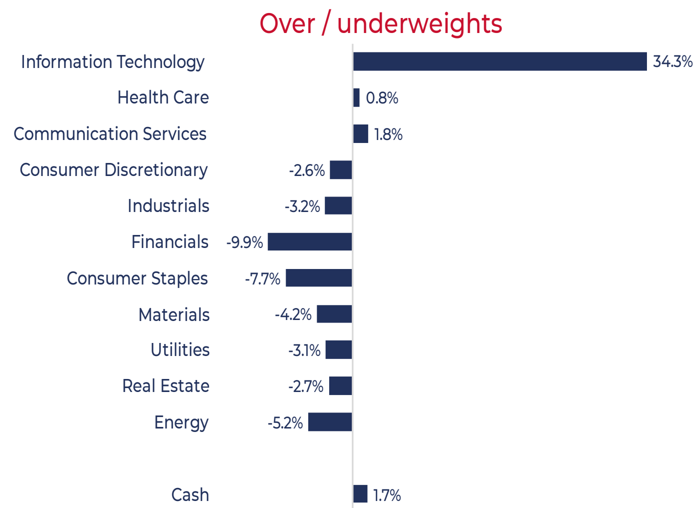


Figure 6: Guinness Atkinson Asset Management, Bloomberg (data as at 09.30.22)

Key fund metrics today

Innovation: We seek companies that are exposed to secular growth themes, which should therefore be more insulated to cyclical cycles.

Quality: We only invest in companies with good (and ideally growing) returns on capital and strong balance sheets.

Growth and Valuation: We look to buy good growth companies at reasonable valuations and specifically we try to avoid paying too high a premium for expected future growth – as this is inherently less predictable.

Conviction: We run a concentrated portfolio of 30 stocks, equally weighted.

The table below illustrates these four key tenets of our approach in the portfolio today.

		Fund	MSCI World Index
Innovation	R&D / Sales	8.9%	6.3%
	CAPEX / Sales	6.2%	8.4%
Quality	Return-on-Capital	20.2%	7.2%
	Weighted average net debt / equity	26.0%	67.3%
Growth (& valuation)	Trailing 5-year sales growth (annualized)	14.8%	3.5%
	Estimated earnings growth (2023 vs 2022)	9.4%	6.5%
	PE (2022e)	17.7	14.3
Conviction	Number of stocks	30	1630
	Active share	83%	-

Figure 7: Guinness Atkinson Asset Management, Bloomberg (data as at 09.30.2022)

We thank you for your continued support.

Portfolio Managers

Matthew Page, CFA

Dr Ian Mortimer, CFA

Summary performance

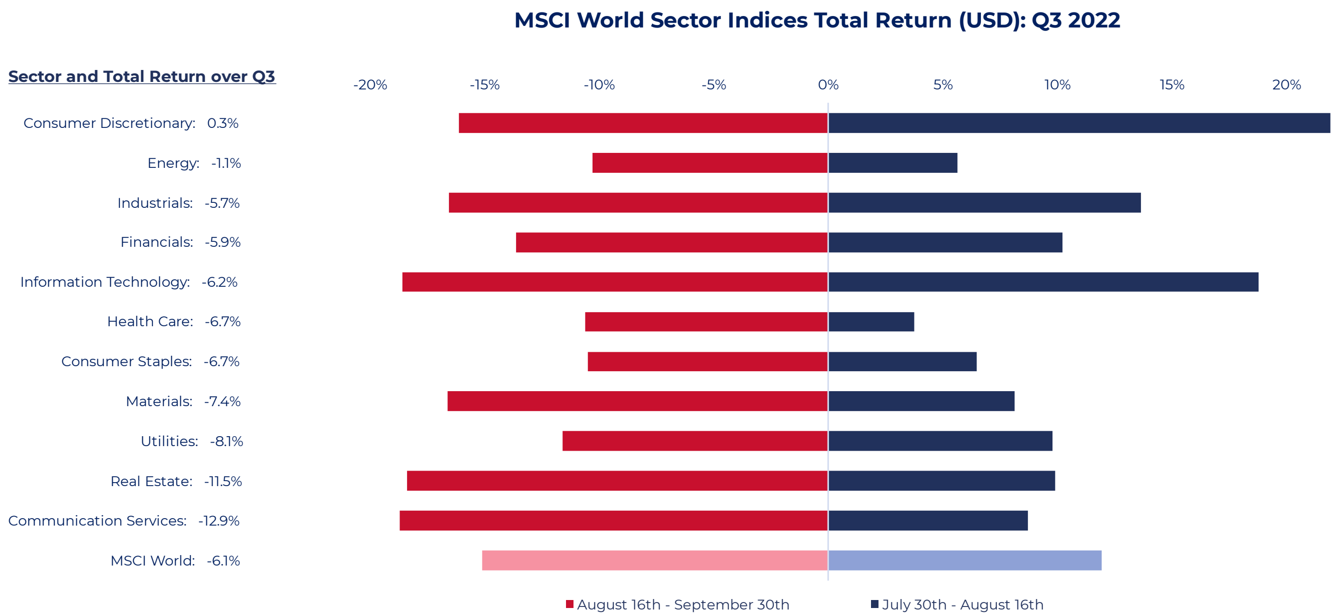
In the third quarter of 2022, the Fund returned -8.70% (in USD) and the MSCI World Index returned -6.19%. The Fund therefore underperformed the Index by 2.51% over the period.

Over the year-to-date, the Fund returned -35.38% (in USD) and the MSCI World Index returned -25.42%. The Fund therefore underperformed the Index by 9.96% over period.

Global equity markets ended Q3 in negative territories, despite a strong rally in the first 6 weeks of the period. In July, developed equity markets delivered their best monthly returns since November 2020, despite indications of a recessionary environment. A GDP print of -0.9% for Q2 (annualized, quarter-on-quarter) meant two consecutive quarters of economic decline in the US, the 10–2-year yield curve for US treasuries inverted to their largest spread since 2000, and the US composite flash PMI fell to 47.5 - a number below 50 indicating a contractionary environment. However, markets were focused on the commentary of Fed Chair Jerome Powell who stated that interest rates could be near a “neutral level,” following a second consecutive 75bps rate hike. Many interpreted these comments as the Central Bank ‘tapping the brakes,’ with investors scaling back expectations of how far the Fed will in fact tighten. With markets anticipating a lower peak policy rate and earlier rate cuts, equity markets, and growth stocks in particular, rallied.

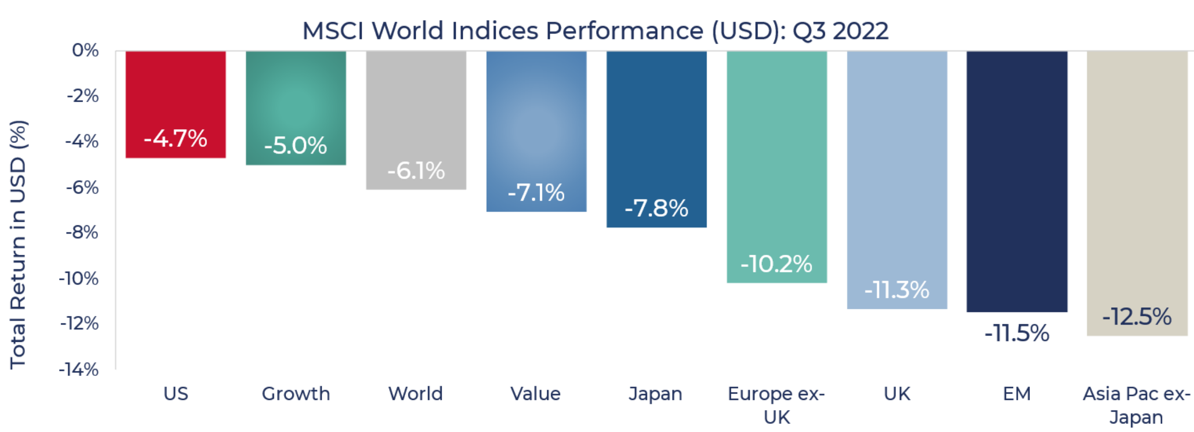
Equity market sentiment pivoted in mid-August, affirming concerns that prior equity gains were in fact just a ‘bear market rally.’ Minutes from the Fed’s meeting in July suggested a prolonged period of restrictive rates, with Fed Chair Jerome Powell reaffirming this view at Jackson Hole a couple of weeks later. Here, Powell stated that a successful reduction in inflation would probably lead to lower economic growth for a “sustained period,” sparking concerns of a potentially deeper recession than first feared. August’s inflation numbers delivered an additional surprise, with a core inflation print (all items less food and energy) that reaccelerated to +0.6% month-on-month (up from +0.2% the previous month). The Fed revised their ‘dot-plot’ forecast, highlighting committee expectations of a higher and longer rate hike cycle. Data points showing the economy remaining in reasonable shape, such as strong jobs data, an improvement in consumer confidence, resilient consumer spending, were now taken as evidence that the Fed would be emboldened to continue on its tightening path.

While all sectors gained in the first half of the quarter, all sectors declined in the second half. Scaled back expectations of tight monetary policy acted as a tailwind for equities (and growth stocks in particular) in the first half of the quarter, with Information Technology and Consumer Discretionary outperforming. Increased optimism of a ‘soft landing’ gave a tailwind to more cyclical stocks. Yet these gains all but reversed over the remainder of the quarter, as expectations shifted to a protracted tightening cycle once more. Defensive orientated stocks returned to favour as investors weighed up a potentially deeper recessionary environment, with sectors such as Consumer Staples, Health Care and Utilities outperforming the broader market, as well as the value orientated financials and energy sectors.



Source: Guinness Atkinson Asset Management, Bloomberg

Currency movements had a significant impact on regional equity markets over the quarter. While the UK was the worst performing major market in USD terms, in local currency terms the market outperformed the US (-3.0% GBP vs -4.7% USD). Safe haven demand over the period has led the dollar index to a two-decade high, aided by faster rate hikes that have led the dollar being the highest yielding reserve currency. Weakness outside of the US has also been a significant driver. In September, new UK Prime Minister Liz Truss and Chancellor Kwasi Kwarteng launched a fiscal stimulus that spurred a sharp sell-off in government bonds and equities and plunged the pound to near 40-year lows. In Europe, the Euro fell below dollar parity as recession fears mounted.



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

Guinness Atkinson
Global Innovators Fund
Managers Update – Q3 2022

GUINNESS ATKINSON FUNDS

During the third quarter, relative portfolio performance can be attributed to the following:

- The outperformance of value in the latter half of the quarter was a headwind for the Fund, offsetting strong performance in the first six weeks of the period. Additionally, the rotation towards defensive sectors, which are under-indexed in the Fund, led to underperformance.
- The Fund's software names struggled, as Zoom (-31.8% USD) and Adobe (-24.8%) finished the period as the Fund's bottom performers. A strong rebound from the Fund's top performer, PayPal (+23.2%), offered a partial offset. Stock selection within Technology and Hardware, in which we hold a neutral position relative to the benchmark, was strong, with Apple (+1.2% USD) and Amphenol (+4.3%) offering returns significantly ahead of the benchmark.
- The Fund has a slight underweight position to the Consumer Discretionary sector, with a zero allocation to two of the top four performing industries (Autos and Consumer Services) – a negative for Fund performance. However, very strong performance from the Fund's sole Retailing holding Amazon (+6.4%) helped offset this impact.
- Having a zero exposure to the Materials and Real-Estate sectors, which underperformed the MSCI World in both halves of the quarter, acted as a positive for relative Fund performance. However, a zero exposure to the defensively positioned consumer staples sector, the best performing sector in the second half of the quarter, offset much of this impact.

as of 09.30.2022 (in USD)	1 year	3 years annualized	5 years annualized	10 years annualized
Global Innovators, Investor Class[1]	-29.80%	5.88%	5.30%	11.41%
Global Innovators, Institutional Class[2]	-29.63%	6.14%	5.56%	11.60%
MSCI World Index NR	-19.63%	4.55%	5.30%	8.10%

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.

All returns after 1 year annualized.

[1] Investor class (IWIRX) Inception 12.15.1998 Expense ratio* 1.24% (net); 1.17% (gross)

[2] Institutional class (GINNX) Inception 12.31.2015 Expense ratio* 0.99% (net)

[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).

*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, 2025. 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 09/30/2022:

1. Amphenol Corp	4.21%
2. Thermo Fisher Scientific Inc	4.18%
3. PayPal Holdings Inc	4.18%
4. Danaher Corp	4.03%
5. Microsoft Corp	3.90%
6. Intuit Inc	3.85%
7. Mastercard Inc	3.85%
8. Roper Technologies Inc	3.78%
9. Bristol-Myers Squibb Co	3.76%
10. Visa Inc	3.74%

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.

Basis points (BPS) refers to a common unit of measure for interest rates and other percentages in finance. 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 **CRB Raw Materials Index** is a measure of the price movements of 22 basic commodities selected for their sensitivity to economic conditions.

The **Consumer Price Index (CPI)** is an index of the variation in prices paid by typical consumers for retail goods and other items.

The **Purchasing Managers' Index (PMI)** is an index of the prevailing direction of economic trends in the manufacturing and service sectors. The PMI is based on a monthly survey of supply chain managers across 19 industries, covering both upstream and downstream activity.

The **World Container Index (WCI)** is the premium resource for frequent, independent container market data. The WCI provides weekly assessments of container freight rates, daily forward price estimates and a bank of historical price movements.

The **European Central Bank (ECB)** is the central bank of the 19 European Union countries which have adopted the euro.

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.

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.

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.

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

The **Implied Rate** is an interest rate equal to the difference between the spot rate and the forward or futures rate. The implied rate gives investors a way to compare returns across investments. An implied rate can be calculated for any type of security that also has an option or futures contract.

The **Nasdaq 100 Index** is a basket of the 100 largest, most actively traded U.S companies listed on the Nasdaq stock exchange.

The **price-to-earnings ratio (P/E ratio)** is the ratio for valuing a company that measures its current share price relative to its earnings per share (EPS).

S&P Global is the world's foremost provider of transparent and independent ratings, benchmarks, analytics, data, research, and commentary

Capital Expenditure (CAPEX) Funds used by a company to acquire or upgrade physical assets such as property, industrial buildings, or equipment.

The **S&P 500 Index** features 500 leading U.S. publicly traded companies, with a primary emphasis on market capitalization. It is a float-weighted index, meaning the market capitalizations of the companies in the index are adjusted by the number of shares available for public trading.

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.

One cannot invest directly in an index.

Distributed by Foreside Fund Services, LLC