Guinness Atkinson
Dividend Builder Fund
Managers Update – January 2019

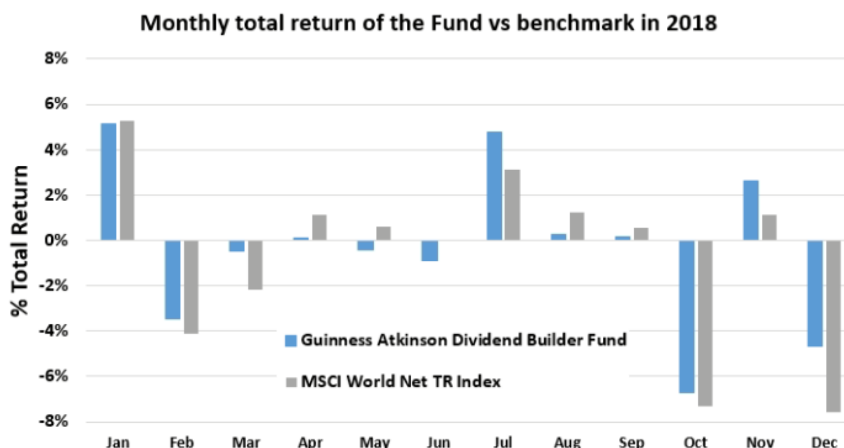
GUINNESS ATKINSON FUNDS

Review of 2018

The MSCI World Index closed at its record high of 2248.93 on January 26, 2018. Since then the index fell to a closing low of 1795.28 on December 25, 2018, a fall of 20.2% from its peak (Source: Bloomberg). Though the market recovered slightly subsequently, the fall of more than 20% from its peak technically means that the market entered bear territory. In turn, 2018 marked the worst year since 2008, and had a negative return of -8.2% (gross TR in USD).

Prior to the fall, stock markets were in the midst of their longest bull run in history, which began when the market troughed in March 2009. The MSCI World Index rose 227% from its low of 688.63 on March 9, 2009 as equity markets benefitted from quantitative easing and a loose monetary policy. As the global economy recovered, stock markets particularly profited and bond yields were suppressed. Companies could borrow cheaply to strengthen their balance sheet, and they also benefitted from a pick-up in consumer confidence and demand.

The Guinness Atkinson Dividend Builder Fund's focus on quality companies at attractive valuations results in the Fund tending to outperform in down markets and keep up with rising markets. Over the course of the year, expectedly, this is generally the outcome we saw, and the Fund outperformed the MSCI World Index (its benchmark) overall.

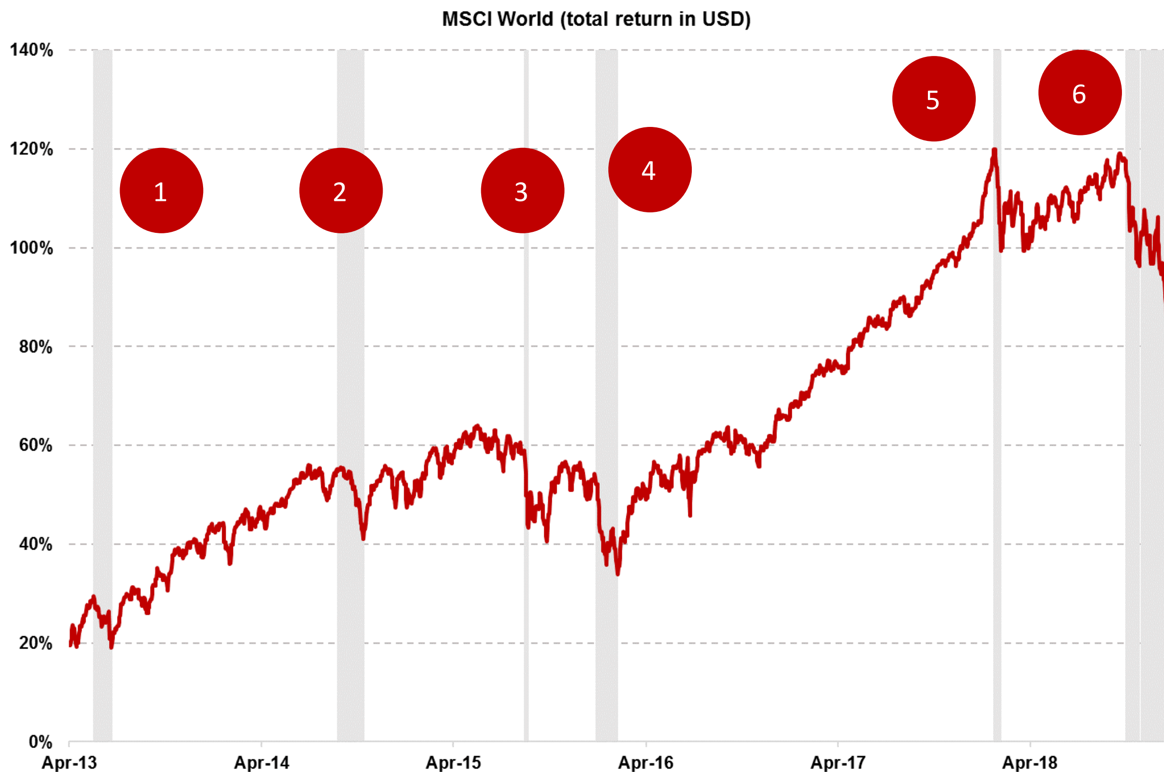


Monthly total return of fund vs benchmark in 2018, in USD. Source: Bloomberg
Past performance data quoted represents past performance and does not guarantee future results.

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, visit https://www.gafunds.com/our-funds/global-innovators-fund/#fund_performance or call (800) 915-6566.

Looking at the above performance chart, there were only two months which saw the MSCI World Index return greater than 3% (in USD): January and July. The Fund performed broadly in line with the market in January, and in fact outperformed in July due to particularly strong stock selection: 74% of stocks in the portfolio had positive absolute returns; 17% of the portfolio in fact had double digit total returns.

We also saw three months in which the Index fell more than -4% (in USD): February, October and December. In each of these, the Fund outperformed the market. In fact, if we look at the two figures below, we see that the Fund has outperformed in each of the largest drawdowns seen in the last 6 years, i.e. since the launch of the Fund's launch in 2012.



Largest drawdowns in global equity markets since 2012.
2012 represents when the fund was launched.
Source: Bloomberg

	Start date	End date	MSCI World Index	Guinness Global Equity Income	Fund relative performance	Reason for sell off
1	21/05/2013	24/06/2013	-7.7%	-5.2%	2.5%	"Taper tantrum"
2	27/08/2014	16/10/2014	-8.8%	-8.3%	0.5%	Oil price sell off
3	17/08/2015	25/08/2015	-9.4%	-8.5%	0.9%	Chinese stock market decline
4	31/12/2015	11/02/2016	-11.5%	-6.1%	5.4%	China growth concerns
5	26/01/2018	08/02/2018	-9.0%	-7.1%	2.0%	Volatility spike / inflation concerns
6	03/10/2018	25/12/2018	-17.5%	-12.0%	5.5%	Tech sell off / US-China trade issues

Performance of fund vs benchmark in the largest drawdowns since 2012.
2012 represents when the fund was launched.
Source: Bloomberg

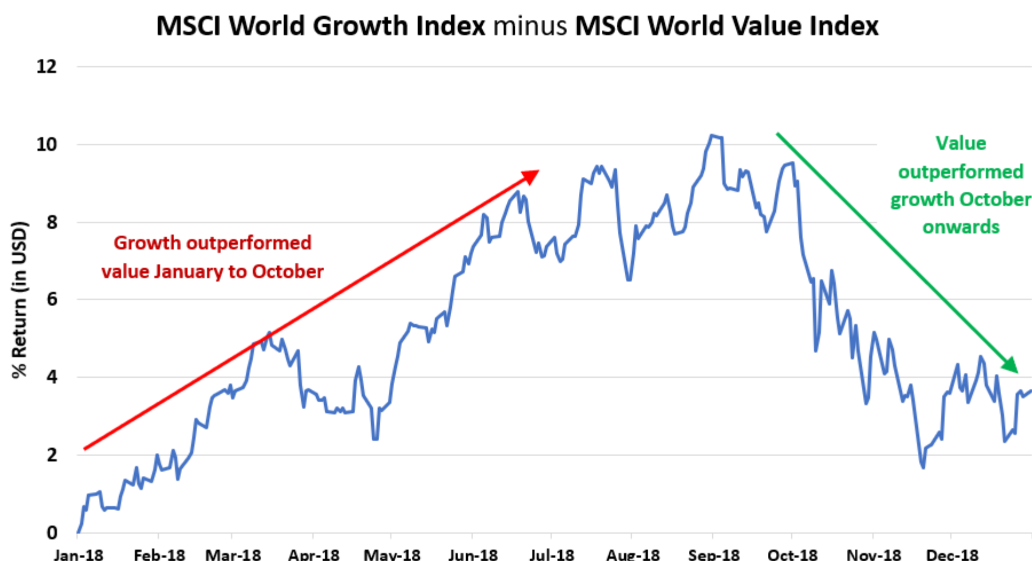
Looking at the figure on page 2, at the start of 2018, global equity markets surged ever higher on optimism over the strength of the world economy, big US tax cuts, and upbeat corporate earnings releases. The MSCI World Index enjoyed its best January since 1994 and global growth forecasts for 2018 and 2019 were raised by 0.2%, to 3.9% in both years. This was, however, followed by the largest ever one-day spike in the CBOE Volatility (VIX) Index; the first 10% market correction since early 2016; and a subsequent 8% rebound (all in USD).

February's sell-off was triggered not by weaker economic data but by an acceleration in wage growth in the US. Average hourly earnings increased 2.5% year-on-year in December 2017 after a similarly strong November number; data released in early February 2018 confirmed an unexpected further pick-up in wage growth during January (2.9%). The updates strengthened the prospect of more aggressive rate hikes and prompted investors to consider the implications for bond markets; 10-year US treasury yields rose to a high of 2.95% in February, raising speculation that the long-term downward trend in yields had been broken.

This was all before March, a month in which the year's early optimism faced increasingly strong headwinds from rising inflationary pressures, Federal Reserve (FED) rate hikes, and protectionist threats. These headwinds would go on to dominate the rhetoric for much of the year that followed. As many anticipated, the FED did indeed raise rates by 25 basis points in March, June, September and December – ending the year at a range of 2.25-2.5%. This had severe knock-on effects on equity markets, particularly in the third quarter, after FED chair Jay Powell contributed to a sharp sell-off by saying interest rates were "a long way

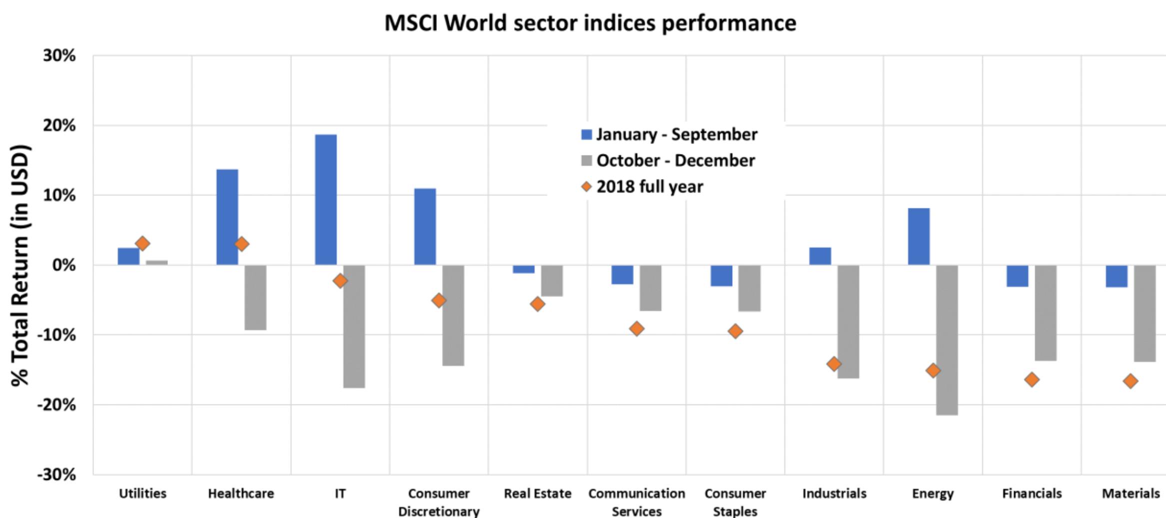
from neutral". This hinted that the central bank could well continue monetary tightening despite inadvertently slowing economic growth. That triggered a stock market tremor that grew in intensity and culminated in a sell-off dubbed "Red October".

October in fact became the pivotal month when the outperformance of growth companies shifted to outperformance of value.



MSCI World style performance in 2018 (TR in USD).
As of December 31, 2018. Source: Bloomberg

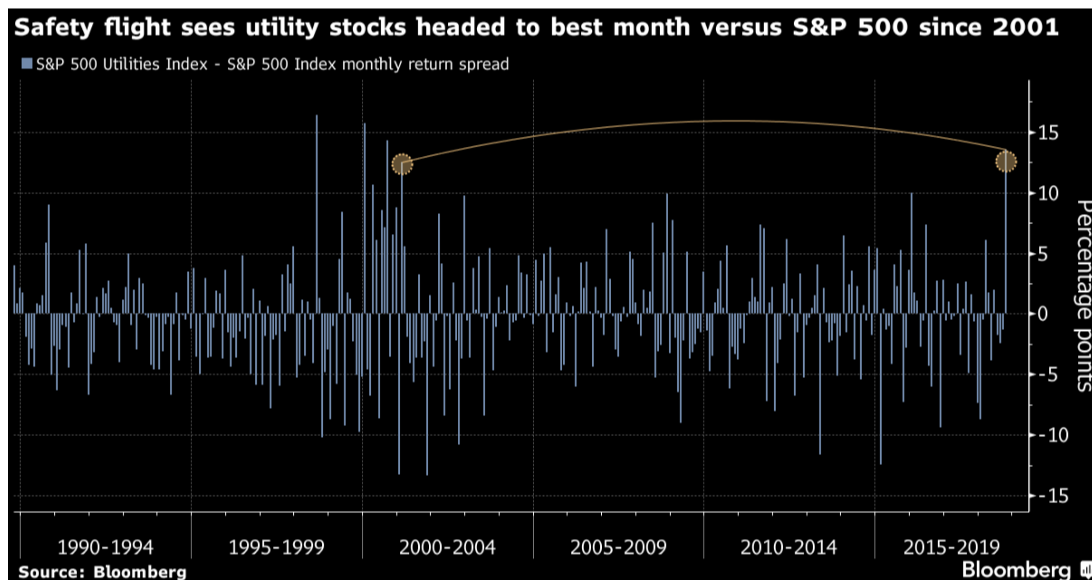
This bias towards "value" contributes to explaining the Fund's outperformance in each of the last 3 months of the year. We also saw a shift in the market, with investors switching from Cyclical sectors to Defensive ones. Strong performance seen in the first three quarters of the year from sectors such as IT and Consumer Discretionary, experienced some of the largest reversals during the final quarter of the year.



MSCI World sector performance in 2018 (TR in USD).
As of December 31, 2018. Source: Bloomberg

By the end of the year, utilities and healthcare were the only two sectors in positive territory. Healthcare stocks have had a persistently strong run in 2018 after many stocks surpassed analyst's earnings and revenue growth expectations. Being overweight here benefitted the Fund's performance.

In a rare occurrence, Utilities were the best performing over the year. Power companies surged in the sell-offs in the year, particularly in October when they had their best month relative to the market since 2001 – the sector rallied more than 3% in October and beat the S&P 500 by 12%. Such an outperformance has occurred only four times previously, all surrounding market crashes (chart on next page). Although the fund has zero exposure to the sector, the drag on active performance was minimal considering that Utilities make up only 3% of the MSCI World Index.



As of October 31, 2018. Source: Bloomberg.

Among the worst performing sectors were Materials and Financials. These are traditionally referred to as "cyclical" sectors as demand for the goods and services they supply is typically dependent on the health of the economy: the better the outlook, the better they should perform. The Fund holds no positions in Materials, which benefited performance, and also holds no banks.

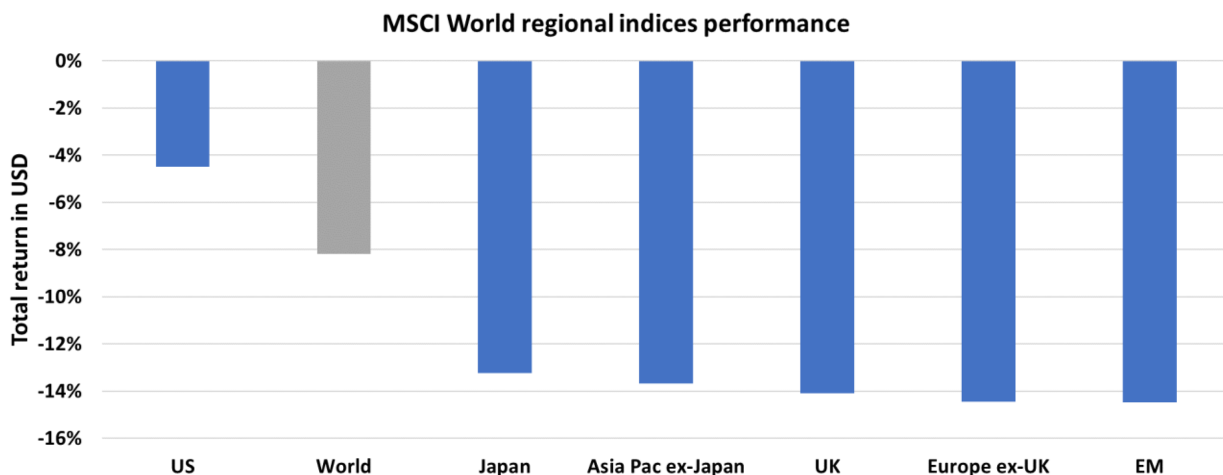
Banks and asset managers notably underperformed due to cyclical concerns and contagion from rising bond yields. Our Financials' exposure comes from security exchanges (NEX Group, CME Group, Deutsche Boerse) and insurance (Arthur Gallagher, Aflac), which all performed well overall. In fact, NEX Group (UK domicile, Financials sector) was the best performer in the fund over the year after it was bid for CME Group at the of Q1 2018. NEX share price had an initial increase of ~50% and with the probability of another bid decreasing, we saw an opportunity to take profits from our position in NEX. The valuation at time of sale stood at ~30x on a 1-year forward price-to-earnings basis, compared to a 10-year average of 12x.

Energy also underperformed this year, and the Fund was somewhat immune given it only holds one position in the sector. The price of oil peaked in October at around US$85 a barrel and then started its rather rapid decline in November, tumbling to 15-month lows mid-December. The weakness was driven by concerns over demand not meeting expectations as global growth concerns increased. Furthermore, investors fretted over increases in supply as shale oil production in the US continued to grow rapidly, and OPEC seemed unwilling to cut production, all of which had a negative impact on the sector's performance.

The Fund's largest overweight is to Consumer Staples (~16% vs the MSCI World Index) and this did not meaningfully add nor subtract from Fund performance relative to the benchmark over the year. There was outperformance in shorter periods such as the sell-off in October, which was led by technology stocks and higher growth companies, though there was some underperformance when the market rallied from mid-February onwards.

IT – the star performer of 2017 – started the year strongest before tailing off. Though the Fund is underweight, stock selection in the sector contributed positively. Some technology stocks were priced for significant growth at the start of the year and were vulnerable to bad news. The first of this came in March as investors were confronted by a threat to the handful of tech behemoths known as the FAANGs, which in recent years powered US stocks higher. Claims in March that analysis group Cambridge Analytica had mined the personal data of 50 million Facebook users for use in the US presidential election, crystallized fears that big tech risked tougher regulation. The fund did not have exposure to the 'high flying' FAANG-type stocks and therefore did not suffer in the sell-offs. Long term holdings Microsoft and Cisco continued to perform well, CA was subject to a bid (from Broadcom) and was subsequently sold. Following the bid, Broadcom fell ~20% (as the market saw a bid for a software company as tangential to Broadcom's core semi-conductor business) and the Fund took advantage by initiating a new position in the stock. Broadcom subsequently rallied and has added to fund performance over the short term.

Looking at the year from a geographical standpoint, performance was influenced heavily by political drama and global equities were particularly rocked by fears of a global trade war. The US administration initially announced tariffs on steel and aluminum imports, followed by a 25% tariff on $50bn worth of Chinese imports, followed by a further 10% on $200bn. The Chinese, in response, announced initial tariffs on $3bn, raised that to $50bn, and then again by an additional $60bn. As it stands, there is a "truce" until March 2019 in order for both sides to negotiate. The outcome of the discussions – if any – remains one of the biggest uncertainties going into the new year. Amid the tensions, Chinese growth has disappointed throughout the year and left the region as one of the worst performing in 2018 (MSCI China Index returned -18.7% in USD in 2018). In contrast the US was the best performer (MSCI US Index returned -4.5% in USD in 2018).

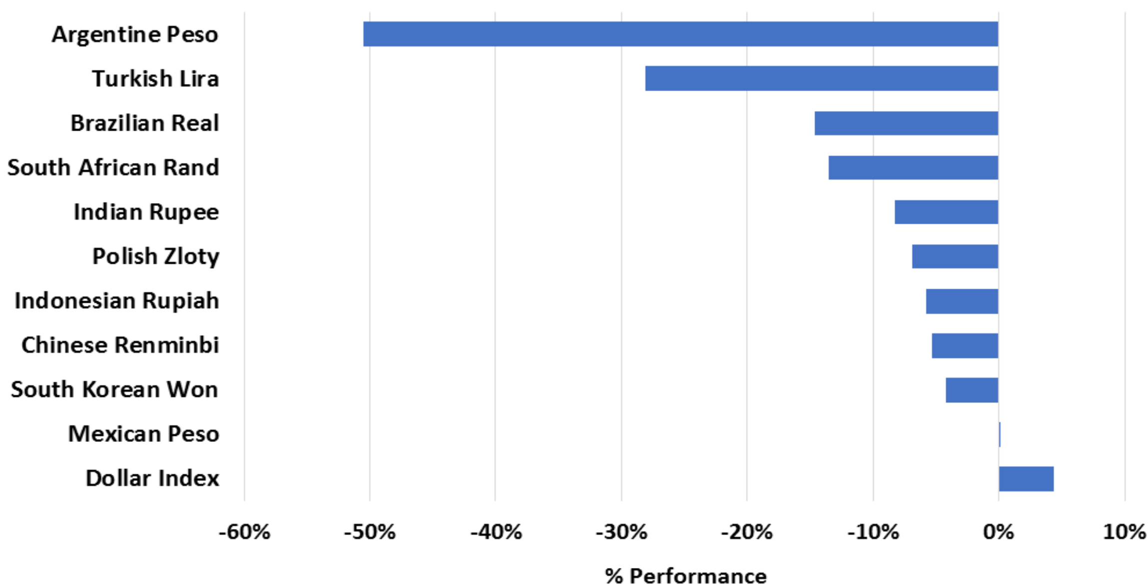


Regional Performance (TR in USD).
As of December 31, 2018. Source: Bloomberg

The US was supported by robust corporate profitability leading on from the initial tax cuts, as well as strong economic growth numbers. Also, closer to home for the US, there were significant advancements regarding trade with Mexico and Canada. The United States–Mexico–Canada Agreement (USMCA), or NAFTA 2.0 as it is also referred to, gives the US more access to Canada's dairy market, incentivizes more domestic production of cars and trucks, increases environmental and labor regulations, and introduces updated intellectual property protections. This was a significant victory for President Trump just before the November, US mid-term elections. Results here came in broadly as markets expected with the Democrats taking control of the House of Representatives and the Republicans increasing their majority in the Senate. With the Democrats unlikely to back further tax cuts, one of the key implications of the election was reduced fiscal support for the US economy. However, the market also saw a Republican Senate and President as pro-growth.

Though the Fund is currently around 20% underweight the US, there was not any meaningful effect on performance. Any drag on the allocation effect was somewhat offset by good stock selection. In fact, out of the top 10 performing stocks in the fund, 8 were US domiciled.

Asia and Emerging Markets performed particularly poorly due to the uncertainty surrounding trade tariffs and the persistently strong US Dollar that characterized much of the year. The Dollar index, a broad measure of the currency, jumped more than 8% between mid-April and mid-August. This made commodities and foreign debt more expensive and hurt EM currencies. The Turkish Lira was one of the hardest hit; it plunged due to a combination of higher inflation, doubts over the central bank's resolve to raise rates, as well as political dramas. Argentina also suffered and was forced to ask the IMF to speed up the disbursement of much-needed cash; the central bank in late August lifted interest rates from 45% to 60% and the Peso dropped 12% on the day.



% performance of emerging market currencies (based against the US Dollar) in 2018. As of December 31, 2018. Source: Bloomberg

Europe also faced its fair share of issues. The European Central Bank began to unwind its Quantitative Easing program and markets have been treading sluggishly due to the various political events. The most notable surrounded Italy. Elections in March saw populist parties Five Star and the League come out on top, and subsequently form a joint government. Italian bond yields spiraled higher as investors scrutinized the new government's spending plans, estimated to be over €100bn. In fact, when the budget was announced in October, the EU was prompted to begin disciplinary measures against Italy for breaking the bloc's fiscal rules. Eventually an agreement was reached at the end of December, allowing Italy to dodge painful sanctions, and leading to more normalized bond yields after a rocky year. In Germany, pressure on Angela Merkel mounted following election results in Hesse where each of the CDU and Socialists lost around 11% of the vote, prompting her to say that she will stand down as chairman of the CDU in December, and not seek re-election in 2021. France also had its own problems with social unrest stemming from rising fuel prices, higher costs of living and claims that a disproportionate burden of government's tax reforms were falling on the working and middle classes.

In the UK, the year has been characterized by Brexit developments. A withdrawal pact was agreed between the UK and the EU, however amid considerable criticism from both the Conservative and Labour parties, Prime Minister Theresa May was forced to defer a meaningful Parliamentary vote on the agreement. Many protests and senior resignations eventually sparked a no confidence vote in the PM's leadership of the Conservative Party, which she eventually won. The uncertainty surrounding the Brexit strategy continues to negatively impact the UK market, and it remains to be seen what will actually be achieved before the looming March 29th deadline.

As we enter 2019, analysts are cutting their forecasts for corporate earnings, economic data is showing slower growth, trade tensions are still looming, interest rate uncertainty remains, Brexit worries continue, and the slope of the US yield curve, commonly measured by looking at the difference between two- and 10-year Treasury yields, stands at its lowest level since 2007. Historically, an inversion of the yield curve — when short-term yields rise above those on longer-dated ones — has proved an accurate precursor to a recession. While no economists are predicting that for 2019, uncertainties remain and 2019 brings with it a nervousness not seen for many years.

The big question going into 2019 is whether many of the approaching headwinds prove to be as strong as expectations have factored in. As ever, rather than trying to pick which way the macro or political winds will blow in the near term, we maintain our focus on companies that can deliver a sustainable, rising income stream alongside capital growth over the long term. Holding good quality companies, that have persistently generated high levels of return on capital gives us confidence that the fund is well placed to weather different market conditions. It has been pleasing to see over the last year that stock selection has been a major contributor to the Fund's outperformance versus the benchmark.

Individual Stock Performance

When we look at how individual companies within the portfolio performed in 2018, we see that out of the top five, we have two IT, two financial, and one healthcare stock (page 11). This is testament to the bottom-up philosophy of the Guinness Atkinson Dividend Builder Fund focusing on quality companies at attractive valuations. It is also worth noting that the fund is benchmark and sector agnostic – positions are based on high conviction, bottom-up fundamental analysis.

-60% -40% -20% 0% 20% 40% 60% 80%

NEX Group (Sold in Q3)
Merck & Co
CA (Sold in Q3)
CME Group
Microsoft Corp
Arthur J Gallagher
Cisco Systems
Broadcom (Bought in Q3)
ANTA Sports
Aflac
Deutsche Boerse
Procter & Gamble
Roche Holding
Eaton Corp
Nestle (Bought in Q3)
AbbVie
Paychex (Bought in Q4)
VF Corp
Unilever
Johnson & Johnson
Walmart (Sold in Q4)
General Dynamics (Sold in Q2)
Royal Dutch Shell
Taiwan Semiconductor (Bought in Q2)
Sonic Healthcare
Novo Nordisk
Danone
United Technologies
Reckitt Benckiser
Vodacom Group
Schneider Electric
Randstad
BAE Systems
Illinois Tool Works
Japan Tobacco
Imperial Brands
Hengan International
WPP
British American Tobacco

Individual stock performance over holding period during 2018 (TR in USD).
As of December 31, 2018. Source: Bloomberg
Holdings are subject to change.

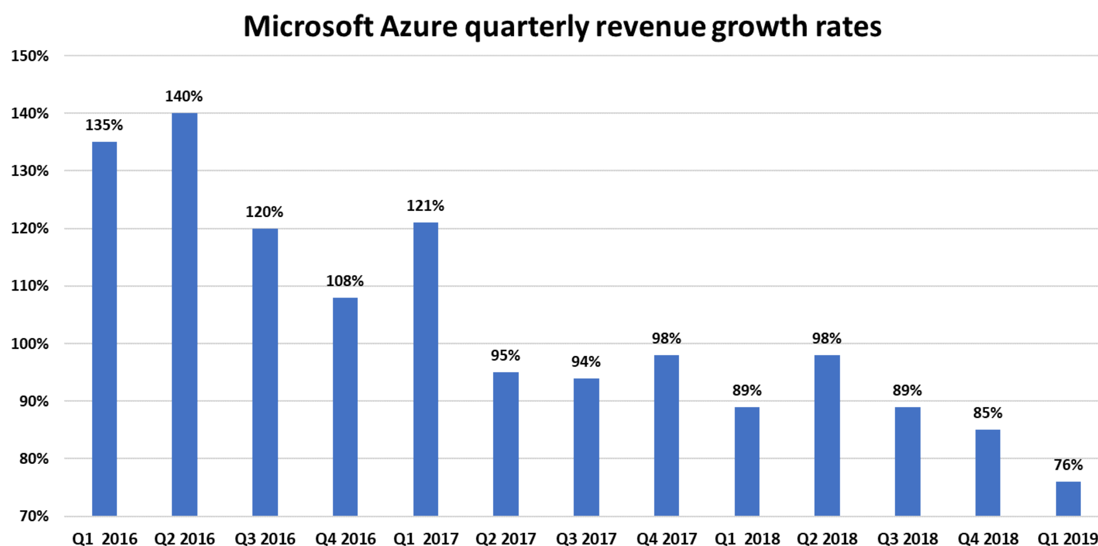
NEX Group, CA Inc, CME Group and Broadcom (all amongst the top performers) were all involved with M&A activity, and we detail our thoughts on these below when referring to the changes made to the portfolio.

The other two stocks that had stand out performance were Merck (+40% in USD) and Microsoft (+21% in USD).

Merck, the global healthcare company, was the second-best performer in the year. Best-selling drugs in the Pharmaceutical segment include type 2 diabetes drug Januvia, which brings in about $4 billion in revenues annually. Other products earning more than $2 billion include diabetes drug Janumet, HPV vaccine Gardasil, and cholesterol medication Zetia. Meanwhile, $1 billion top sellers include cholesterol medication Vytorin, skin antibiotic treatment Cubicin, HIV therapy Isentress, inflammatory treatment Remicade, cancer drug Keytruda, and chickenpox vaccine ProQuad. Strong performance in the year came after Merck's lung cancer drug, Keytruda, won a string of clinical trials and place it in the top spot for treating lung cancer. Estimates suggest that Keytruda could bring in $12.5 billion by 2022; the clinical trials proved a huge positive for Merck, as it continues to expand its drug portfolio with its R&D efforts.

Microsoft also performed very well in the year; it was the software maker's cloud transformation that has seen buoyant demand. Azure cloud services, used to store and run customers' applications in Microsoft's data centers, is number two in the cloud sector behind Amazon Web Services, though the market is growing fast enough to lift both companies' revenue. Windows and Office subscribers are likely to give Microsoft an edge, as corporate users shift newer workloads to the cloud for greater agility. Margins should also continue to improve – as they have been doing – as cloud-based applications and infrastructure products gain scale. The company's cloud-computing platform, Azure, continues to expand phenomenally, helping commercial cloud revenue surpass $29 billion in the past 12 months. With greater hybrid-cloud adoption, its server segment should also show strength. We have held Microsoft in the Fund since launch in 2012.

Azure is the company's main revenue growth driver:



Quarters Follow Company's Fiscal Year.
Source: Bloomberg Intelligence

The worst performing stocks in the year included the 3 tobacco names we own: **British American Tobacco** (-50% in USD), **Imperial Brands** (-24% in USD) and **Japan Tobacco** (-22% in USD). The market's confidence in the tobacco industry was dented by news that the US Food and Drug Administration plans to pursue a ban on menthol cigarettes. The US is the industry's largest and most profitable market, and increased regulation would be expected to impact sales in the country.

Our selection process is bottom-up, focusing on the fundamentals of a company. We look to identify company characteristics and trends that we believe support the philosophy of the fund: quality, value, dividend. The Tobacco industry's enviable cash generation, high barriers to entry and committed approach to returning income to shareholders has therefore attracted our Fund's attention.

- If we look at "quality", each of the 3 companies has a high cashflow return on investment, consistently ~20% and above for the last 10 years. This is significantly higher than the real cost of capital and has contributed to significant outperformance of the industry over the long run.
- "Value": 2-year forward PE multiplies currently stand at 8x, 8.6x and 11.6x respectively for British American Tobacco, Imperial Brands and Japan Tobacco. For each, this is below the historical 10-year average.

- We believe that these companies are attractively valued given that each of them is expected to grow earnings in the high single digits for the next 2 years and have been increasing their dividends every year for at least the last 20 years, and that too at an annualized rate of close to 10%.
- The current trailing dividend yields are market leading; they stand at 7.8%, 7.7%, 5.7% for British American Tobacco, Imperial Brands and Japan Tobacco respectively.
- We also find the valuation compelling given that these companies have been able to sustain very high gross margins and grow year-on-year revenues for the last 3 years. This is despite the numerous concerns outlined in depth below, which we believe have been overplayed in the market.

Regulatory Pressure

- Having faced an increasingly hostile regulatory environment over the past few decades, tobacco companies have survived negative headlines, advertising restrictions and even smoking bans - proving their model for profit and cash generation to be resilient under extreme pressure. More recent threats from the US FDA have taken aim at reducing nicotine levels in traditional cigarettes, and the banning of menthols – we believe this can take many years to implement and the impact could well be limited by the considerable investment in new technology already taking place.

Government Pressure/Activism

- 2017 and 2018 witnessed a higher than average increase in excise duties across several developed markets prompting concerns regarding sales and consumption of tobacco. However, history demonstrates that tobacco majors can re-coup lost revenues through above inflation price hikes, and industry consolidation adds to pricing powers.
- Government tax revenues also stand to counter significant policy change: in the UK, in 2017, revenue from levies on tobacco sales was £9.5 billion (source: HM Revenue and Customs). Any meaningful measures taken to price consumers out of cigarettes would squeeze government revenue.

Rising Interest Rates

- As FED rates rise steadily, there is a concern on the impact of high yielding consumer staples such as tobacco stocks, which are often seen as being more receptive to the bond market. However, we believe the notion of “bond proxies” lacks substance; a crucial differentiator lies in the fact that bond coupons are fixed whereas tobacco dividend payments can grow and have been growing substantially in the last few years. Further, sentiment has priced in much of the negativity of interest rate changes, and the companies we hold have a long history of performing well against a variety of bond market scenarios.

Competition from substitute tobacco products

- Consolidation in the industry (e.g. BATS’s $64.5bn acquisition of Reynolds American in 2017 being the most recent high-profile example) alongside the high barriers to entry means competition is limited, and that these large players are the best placed to drive R&D into new products. Recent underperformance stemmed from slower-than-expected adoption of alternative tobacco products in Japan which caused concerns over adoption of the product worldwide. The slower adoption has not however affected the long-term growth forecasts.

We note that the market is worried about the long-term structural issues affecting the companies in the tobacco industry, however we believe that this has led to over-discounted valuations for these stocks. Hence, we continue to find them compelling holdings in the Fund.

Another company held in the Fund that has faced a difficult 2018 is WPP (-37% in USD). We have held a position since Q3 2015. After 18 months of good performance (+47% in USD til Q1 2017), the company has over the last year faced both internal and external challenges. The group, which until October 2018 was the world's largest advertising group (by market cap), has seen its stock market value fall after losses of large global clients, with the most recent including Ford, American Express and United Airlines. This forced management to announce lower sales guidance from -0.5% decline to -1.0% decline. WPP's CEO, Mark Read, who was confirmed in charge in September, faces an uphill task in trying to steady the ship after the abrupt departure of founder and former CEO, Sir Martin Sorrell, earlier this year. Not only did the departure sour sentiment for WPP, it also shed light on the significant uncertainty regarding the outlook of the advertising industry, at a time when competitive forces were rife.

New strategies underway at WPP seem to focus on merging advertising networks and selling lower growth parts of the business to become more streamlined overall. Further, the return on capital profile is high and stable, operating margins are around 20%, the company has historically had positive sales growth every year since 2002 (including 2009), the dividend is well covered and growing, and the balance sheet is strong. We are therefore minded to maintain our holding in the company at this stage, particularly given that market pessimism seems overdone: the company's shares trade on a 1-year forward price-to-earnings multiple of 7.9x – almost 2 standard deviations below its 10-year average – and the current dividend yield is close to 7%. Looking at peers, the general advertising environment seems more positive than at the start of 2018, and the December analyst day provided further comfort that management is implementing extensive restructuring plans to achieve better profitability and growth.

Changes to the Portfolio

In 2018 we sold four positions and bought four new positions, leaving the portfolio with 35 positions at the end of the year. This was less change than in 2017, and slightly less than the historical average.

	2013	2014	2015	2016	2017	2018
Buys	7	2	7	4	5	4
Sales	8	3	6	4	5	4
Total holdings	35	34	35	35	35	35

Number of changes to the portfolio

In the <u>first quarter</u>, we made no changes to the portfolio.

In the <u>second quarter</u>, we made one change, where we replaced General Dynamics Corporation with Taiwan Semiconductor Manufacturing Company (TSMC).

General Dynamics (GD), the diversified military defense company, has been held in the fund since launch and been a stand-out performer. GD is a prime military contractor to the Pentagon (the US government accounts for about 60% of sales). The company's military operations include information systems, marine systems, combat equipment and an aerospace unit. Recently, GD acquired CRSA, a provider of information technology services to the federal government, for about $9.7 billion in cash and the assumption of debt. We decided to take profits on GD after strong performance led to a 1-year forward price-earnings (P/E) Ratio of 16.7 (much higher than its historical 10-year average) and dividend yield fell to 1.9%.

TSMC is a pure-play foundry business and manufactures integrated circuits which are used in computers, communication equipment, consumer electronics, and automotive and industrial equipment. At the time of purchase, we were fond of the company's very low debt to equity ratio of 12%, its attractive dividend yield of 3% and double digit earnings and profit growth estimates. Bought with a 2-year forward P/E Ratio of 14.5, we saw the company as attractively valued given its above-market-average growth forecasts. Revenues and gross margins have increased every year for the last eight years and returns on capital have been consistently high for the last 10 years. The company's recent rally points to optimism regarding future sales and profit growth which are expected to rise as the use of artificial intelligence applications and the emerging adoption of 5G communication standards boost demand for high-end semiconductors. The company's leadership in manufacturing technology, along with Globalfoundries' decision to suspend its 7-nanometer product development, may allow TSMC to solidify its market share in high-performance computing chips and to maintain its industry-leading profit margin.

In the <u>third quarter</u>, we made two changes to the portfolio. We bought new positions in Broadcom and Nestle, and sold our holdings in CA Technologies and NEX Group.

Broadcom announced that it would buy CA Technologies for US$18.9bn, the chipmaker's first major takeover since it was blocked by President Trump from pursuing a bid for rival Qualcomm earlier this year. Broadcom manufactures digital and analog semiconductors, and serves four primary markets: wired infrastructure, wireless communications, enterprise storage, and industrial & others. With a history of successfully integrating acquisitions, Broadcom has been able to grow revenues and gross profits every year consistently. At time of purchase, the stock was trading on a 1-year forward price-to-earnings ratio of 10.6x, which is significantly cheaper compared to

history and versus the market. We found this particularly attractive given the strong growth profile of Broadcom and the semiconductor industry in general.

Upon announcement of the CA acquisition, Broadcom sold off due to market pessimism; CA's legacy software assets were seen as highly tangential to Broadcom's core business. This provided an attractive entry point. For the transaction to be deemed successful in the future, Broadcom will need to quickly divest pieces it deems non-core while integrating elements that are synergistic. Substantial SG&A cuts are likely: CA's SG&A intensity stood at 36% of sales, while Broadcom operates at below 6%. While the full gap cannot be bridged given the industries each company operates in, it can be narrowed. Broadcom has a history of dramatically improving operating and gross margins through scale and cost-cuts of its target companies.

CA Technologies was one of the best performers in the year (+34% in USD in our holding period in 2018) after the takeover bid from Broadcom led to a strong share price rally in July. This presented a good profit-taking opportunity. We initiated a position in CA at the end of 2015 and it since returned 63% (in USD). The software company provides tools for managing networks, databases, applications, storage, security, and other systems. Primarily serving large enterprises, its applications work across both mainframes and cloud computing environments. Revenues and gross profit have been falling in recent years mainly due to a lack of organic growth and a decrease in software subscriptions. Cashflows returns on investment have also been gradually falling year-on-year, and although acquisitions have added to inorganic sales growth, they have also added to net debt. The bid from Broadcom led to a 18% rise in CA's share price and this provided an attractive sell opportunity.

We also bought a position in **Nestlé.** Measured by revenue, the Swiss multi-national is the largest food company in the world and active in almost every country. Twenty-nine of Nestlé's brands have annual sales of over 1 billion USD, including Nespresso & Nescafé coffee, Kit-Kat chocolates, Nesquik drinking chocolate, Stouffer's frozen food, Vittel and Perrier water, Haagen-Dazs ice cream, Purina pet food, DiGiorno pizza, and Maggi noodles.

In recent years Nestlé has struggled to lift its revenues due to sluggish consumer spending in Europe and the US as well as changes in consumer tastes. In fiscal 2017 sales growth was close to zero, however last year the company made significant strides by investing in high-growth businesses like bottled water, coffee, infant nutrition, and pet care. It recently paid more than $7 billion for rights to sell Starbucks packaged coffees and teas worldwide, and also acquired Atrium, a Canadian manufacturer of over-the-counter (OTC) health supplements, for $2.3 billion. Further, 2018 strategy has consisted of many divestitures including the $2.8 billion sale of its famous candy business (9% of net revenue which includes brands such as Butterfinger, Crunch, Wonka, and Smarties, among others) to Ferrero, the maker of Nutella and Ferrero Rocher. The move comes amid declining sales in the unit and a general repositioning towards healthier and faster-growing categories. We therefore believed that market pessimism allowed us an attractive entry point into a business that is highly cash-generative, has a very strong balance sheet, and has provided an attractive 3% dividend yield.

As part of our one-in-out policy, we sold a position in **NEX Group** (our best performing stock of the year, up 62% in USD in our holding period in 2018). The financial technology firm, which provides electronic trading platforms, will be CME Group's largest overseas acquisition and its largest since it bought Nymex for $11bn in 2008. CME Group, which we also own in the fund, owns and operates both the Chicago Board of Trade and the Chicago Mercantile Exchange; it will pay 500 pence and 0.0444 in new CME shares for each NEX Group share. The market has seen the latest wave of consolidation in global exchange markets as positive for both companies, with annual expense synergies expected to reach $200m per year by 2021.

"At a time when market participants are seeking ways to lower trading costs and manage risk more effectively, this acquisition will create significant value and efficiencies for clients globally," said CME Group's CEO, Terry Duffy. "As one organization, we will be able to employ the complementary strengths of each company to serve a wider client base while diversifying our combined businesses across futures, cash and OTC products, and post-trade services."

After the CME bid was announced at the end of Q1 2018, NEX share price had an initial increase of ~50%. The new price level was sustained and with the probability of another bid decreasing, we saw an opportunity to take profits from our position in NEX. The valuation at time of sale stood at ~30x on a 1-year forward price-to-earnings basis, compared to a 10-year average of 12x.

CME Group (+32% in USD) was also rewarded by the market over its NEX bid and after seeing an increase in average daily trading volumes in the year. The acquisition would allow the exchange to offer clients significant margin savings, as well as provide access to a large base of bank clients to whom it could market its core futures, options and data products. The deal should also support CME's international expansion plans, as 50% of NEX's revenue is generated outside of the U.S. Data and analytics are a key focus area for the company in 2019, with an outlook to expand recurring revenue. CME is also particularly well-placed to benefit from increased interest-rate hedging around FED rate hikes and rising U.S. oil exports thanks to its dominant FED Funds and WTI futures contracts. The company has largely opted to pursue an organic growth strategy, and this has meant low debt-to-equity at 10% with returns on capital increasing every year for the last five.

In the <u>fourth quarter</u> of the year, we made one additional change. We sold Walmart and bought Paychex.

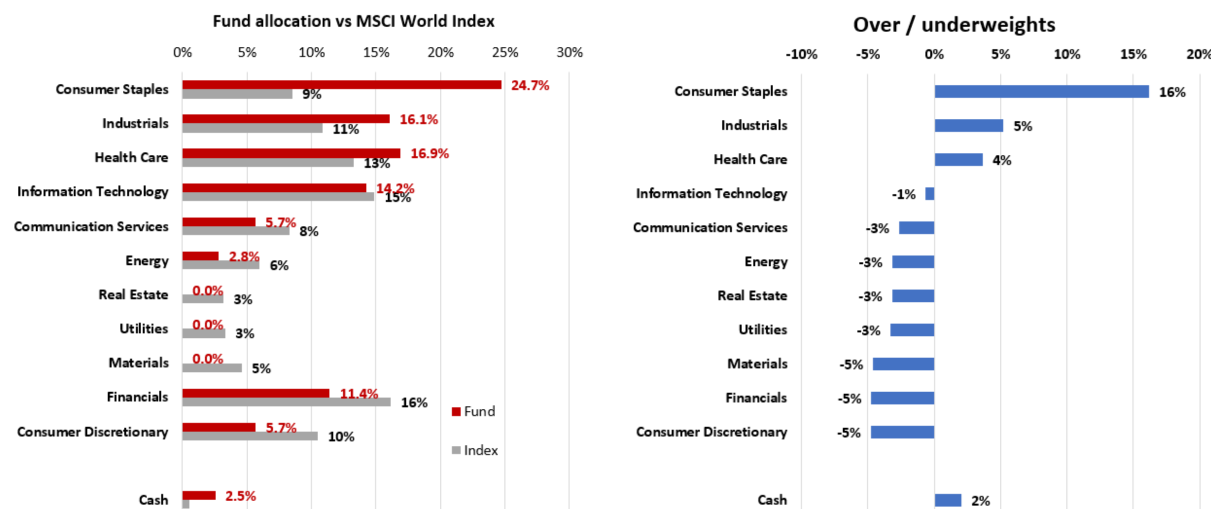
Walmart – the world's largest retailer – has been held in the fund since the beginning of 2016 and is the second time we have held a position over the life of the Fund. At purchase in 2016 the company was trading at its highest ever dividend yield (>3.2%) and market was very pessimistic about the growth opportunity. However, the company has returned over 50% (in USD) over the holding period and has been seen making the right moves to further its online competitiveness against Amazon by expanding its web marketplace, acquiring several internet-based retailers, and expanding its online grocery business. Though it has been rewarded for recognizing the threat of e-commerce to its

traditional retail operations, the company has seen falling cashflow returns on investment and the desirable "quality" characteristics we seek in all of our holdings have deteriorated for Walmart. Competitive pressures have led to slower sales growth and narrower margins and led us to replace the holding for a more compelling idea in the form of Paychex.

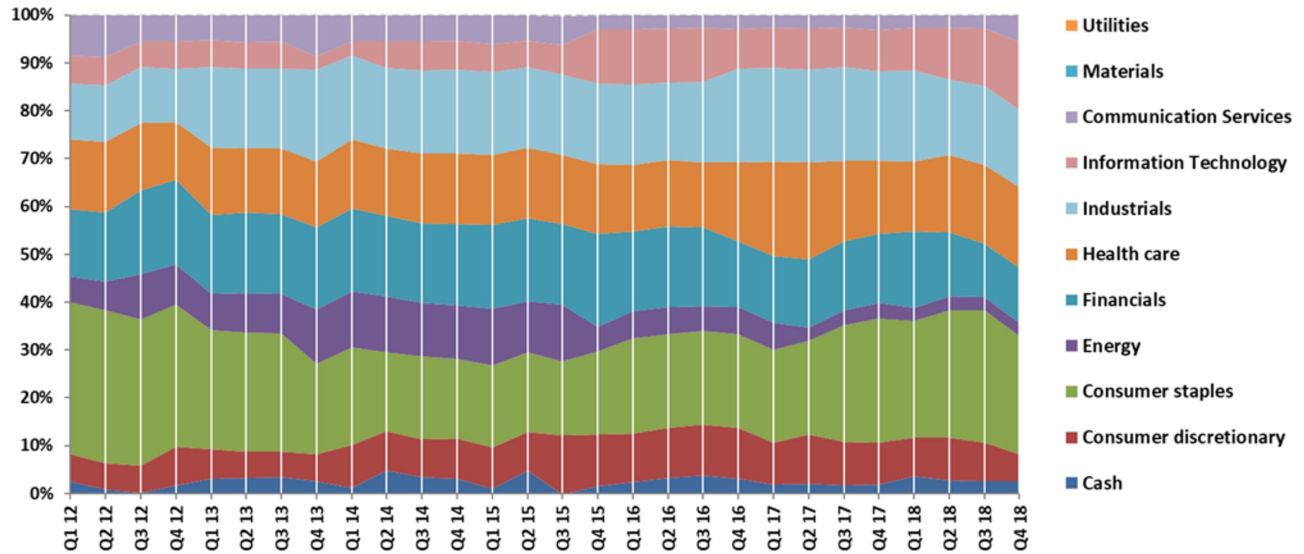
Paychex is a leading US provider of payroll processing and related HR services to small and medium-sized businesses. Over 50% of revenues come from payroll outsourcing – a task for which smaller firms are very willing to use a specialist. Once integrated into a client's business, renewal rates are extremely high, and so the cashflows that back the 3.1% dividend yield are very stable as a result. Paychex is an asset light business that requires minimal capital expenditure, it has no long-term debt and has consecutively grown its revenues and earnings for the past 3 years at an average rate of 7% and 10% respectively. Along with high returns on capital and wide profit margins, we find Paychex to be a very high-quality business. The recent market sell-offs, particularly concerning the IT sector, gave us an attractive entry point where the stock was trading on par with peers and at its historical 10-year average. This is despite deserving a premium based on a superior return on equity and free cash flow. The company also continues to acquire in order to expand services and gain market share, as well as return capital to shareholders in the form of buybacks and growing dividends.

Portfolio Positioning

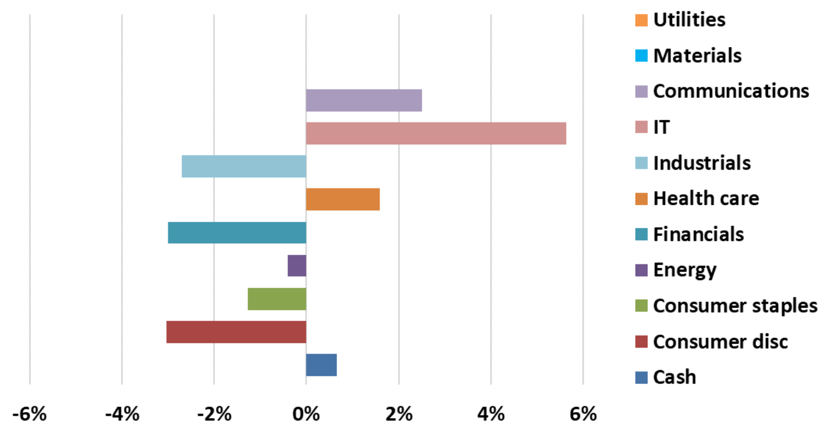
The charts below show the sector and geographic breakdown of the portfolio both currently and over the last eight years. The major effect of the changes we made to the portfolio in 2018 was to increase our exposure to IT, after market sell-offs provided us attractive entry opportunities. In terms of sector weightings, the fund continues to have a zero weighting to utilities, materials, and real estate. The largest overweight positions are to consumer staples, industrials and healthcare.



Portfolio sector breakdown versus the MSCI World Index.
As of December 31, 2018. Source: Guinness Atkinson Asset Management, Bloomberg.
Holdings are subject to change.



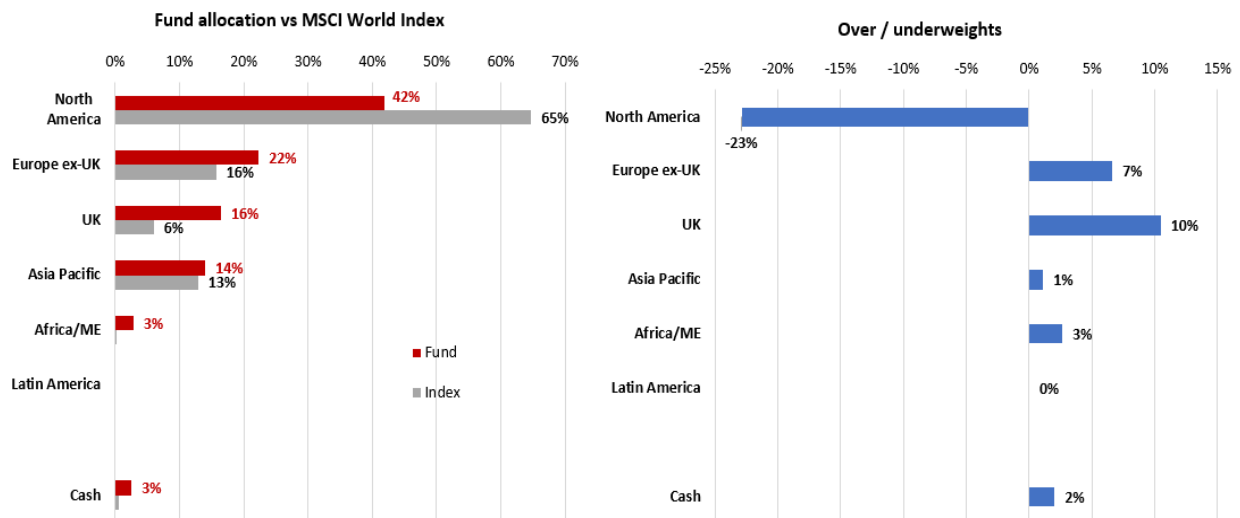
Portfolio sector breakdown
As of December 31, 2018. Source: Guinness Atkinson Asset Management.
Holdings are subject to change.



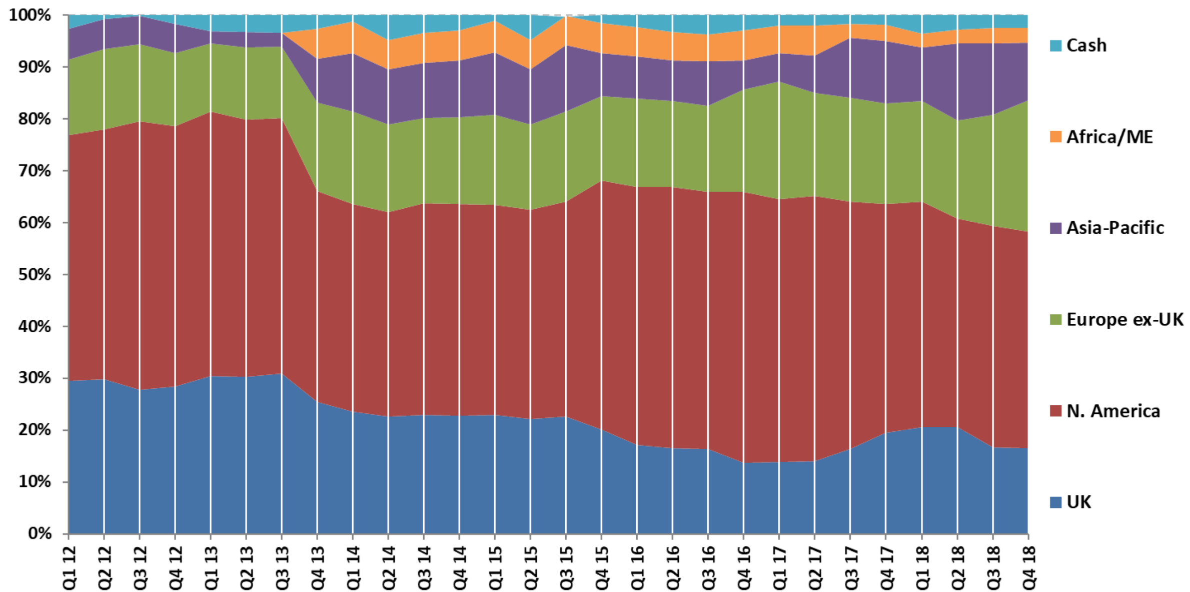
Year on year change in sector breakdown
December 31, 2017 to December 31, 2018. Source: Guinness Atkinson Asset Management.
Holdings are subject to change.

Under the new GICS Sector Reclassification, effective October 1, 2018, the Telecommunication Services sector was renamed as Communication Services. As part of the changes, WPP has been reclassified from 'Consumer Discretionary' to 'Communication Services'. We therefore have 2 positions in the new Communications Sector: WPP and Vodacom.

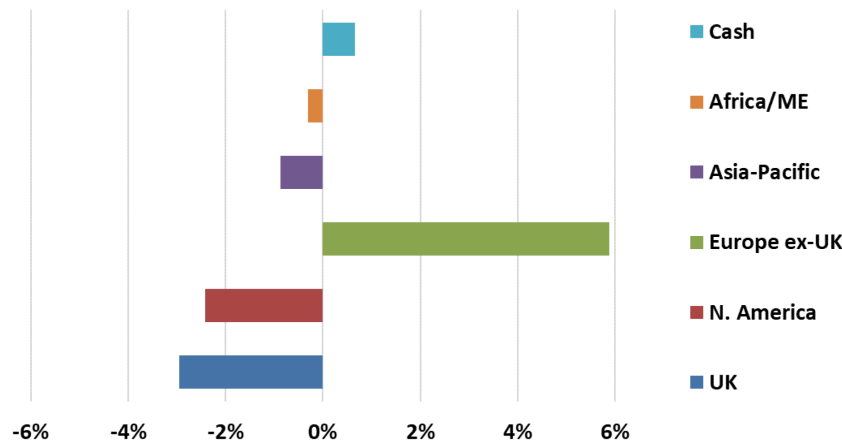
In terms of geographic allocation, we reduced our UK and North America weighting, while increasing our exposure to Europe ex-UK. This is based on bottom-up, fundamental stock analysis, rather than regional bets.



Portfolio geographic breakdown versus the MSCI World Index.
As of December 31, 2018. Source: Guinness Atkinson Asset Management, Bloomberg.
Holdings are subject to change.



Portfolio geographic breakdown
As of December 31, 2018. Source: Guinness Atkinson Asset Management.



Year on year change in geographic breakdown
December 31, 2017 to December 31, 2018. Source: Guinness Atkinson Asset Management.
Holdings are subject to change.

Outlook

The four key tenets to our approach are: quality, value, dividend, and conviction. We follow these metrics at the portfolio level to make sure we are providing what we say we will. Based on the measures, holistically, the high-conviction fund has companies which are on average better quality at better value verses the index.

At the year end, we are pleased to report that the portfolio continued to deliver on all four of these measures relative to the benchmark MSCI World Index.

		Fund	MSCI World Index
Quality	Average 10 year Cashflow Return on Investment	17%	8%
	Weighted average net debt / equity	40%	67%
Value	PE (2019e)	13.7	14.3
	FCF Yield (LTM)	6.6%	5.5%
Dividend	Dividend Yield (LTM)	2.7%	2.7%
	Weighted average payout ratio	53%	47%
Conviction	Number of stocks	35	1650
	Active share	94%	-

Portfolio metrics versus index
As of December 31, 2018.
Source: Guinness Atkinson Asset Management, Credit Suisse HOLT, Bloomberg.

The fund at the end of the year was trading on 13.7x 2019 expected price to earnings; a discount of 4.4% to the broad market. Additionally, on a free cashflow basis, the fund trades at a 20% discount to the market. This is impressive given that the expected growth rate of the fund is higher than the benchmark, based on earnings expectations at the turn of the year.

As 2019 brings with it more sensitive markets and many uncertainties – interest rates, trade tariffs, Government shutdowns, Brexit, elections, recessions, and many more unknown-unknowns. These risks should be considered in the context that global equities now trade below their 10-year average price-to-earnings multiple, and our Fund is at a discount to the market despite holding higher quality companies. Our perpetual approach of focusing on the quality of the underlying companies we own should stand us in good stead in our search for rising income streams and long-term capital growth.

As ever we would like to thank you for your continued support, and we wish you all a prosperous 2019.

<u>Portfolio Managers</u>
Matthew Page, Ian Mortimer

Performance

In 2018 the Guinness Atkinson Dividend Builder Fund produced a total return of -4.14% (TR in USD), compared to the MSCI World Net TR Index return of -8.71%. The fund therefore outperformed the Index by 4.57%.

Standardized Performance

as of 12/31/18	YTD	1 YR	3 YR Annualized	5 YR Annualized	Since inception Annualized (3/30/12)
Dividend Builder Fund	-4.14%	-4.14%	7.50%	4.69%	8.29%
MSCI World Net TR Index	-8.71%	-8.71%	6.30%	4.56%	7.63%

All returns over 1 year annualized. Source: Bloomberg, Guinness Atkinson Asset Management
Expense Ratio: 0.68% (net); 2.06% (gross)

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, visit https://www.gafunds.com/our-funds/dividend-builder-fund/#fund_performance or call (800) 915-6566. Total returns reflect a fee waiver in effect and in the absence of this waiver, the total returns would be lower.

The Advisor has contractually agreed to reimburse Fund 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 0.68% through June 30, 2019. 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 the waiver. The expense limitation agreement may be terminated by the Board of the Fund at any time without penalty upon 60 days' notice.

Opinions expressed are subject to change, are not guaranteed and should not be considered investment advice.

This information is authorized for use when preceded or accompanied by a prospectus for the Guinness Atkinson Funds.
Mutual fund investing involves risk and loss of principal is possible. The Fund's strategy of investing in dividend-paying stocks involves the risk that such stocks may fall out of favor with investors and could

reduce or eliminate the payment of dividends in the future or the anticipated acceleration of dividends could not occur. The Fund invests in foreign securities which will involve greater volatility and political, economic and currency risks and differences in accounting methods. This risk is greater in emerging markets. Medium- and small-capitalization companies tend to have limited liquidity and greater price volatility than large-capitalization companies.

Top Fund Holdings as of 12/31/2018:

1. Vodacom Group Ltd	3.42%
2. ANTA Sports Products Ltd	3.23%
3. Arthur J Gallagher & Co	3.09%
4. Taiwan Semiconductor Manufacturing Co Ltd	3.02%
5. Reckitt Benckiser Group PLC	2.99%
6. AbbVie Inc	2.96%
7. Imperial Brands PLC	2.91%
8. Randstad Holding NV	2.90%
9. Danone SA	2.89%
10. Merck & Co Inc	2.89%

Current and future fund holdings and sector allocations are subject to change and risk and are not recommendations to buy or sell any security.

Growth stocks typically are more volatile than value stocks; however, value stocks have a lower expected growth rate in earnings and sales.

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.

Standard deviation is a statistical measure of the volatility of the fund's returns. In general, the higher the standard deviation, the greater the volatility of the return.

Dividend yield is calculated by annualizing the last quarterly dividend paid and dividing it by the current share price.

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

A cash flow return on investment (*CFROI*) is a valuation metric that acts as a proxy for a company's economic return.

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

One cannot invest directly in an index.

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