Guinness Atkinson
Global Innovators Fund eBrief
Manager's update; October 2015

In the third quarter of 2015 global equity markets 'corrected' by more than 10% from the high of the quarter in mid-July to the trough at the end of September. Over the quarter as a whole the Global Innovators Fund fell 9.64% compared to the MSCI World Index fall of 8.32%. The Fund therefore underperformed the benchmark by 1.32%.

In September the Fund was down 1.70%, versus the Index decline of 3.65%. The Fund therefore outperformed the benchmark by 1.95%. This outperformance coincided with the market moving away from small/mid-cap growth at any price and towards large-cap quality and value.

Performance

as of 9/30/15	1 YR (annualized)	3 YR (annualized)	5 YR (annualized)	10 YR (annualized)	Since inception annualized (12/15/98)
Global Innovators Fund	-7.20%	15.07%	13.28%	8.87%	6.43%
MSCI World Index	-4.51%	9.28%	8.99%	5.44%	4.77%

Source: Bloomberg, Guinness Atkinson Asset Management
Expense Ratio: 1.26%

Performance data quoted represent 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 http://www.gafunds.com/GIF_performance or call (800) 915-6566.

Given the general level of concern regarding economic growth in China (exacerbated by the small devaluation in the Renminbi) and the expectation of rising interest rates in the US, the main factor affecting performance of our holdings was their exposure to emerging markets. As a consequence, our positions in Lenovo and Applied Material (where over half their revenues come from emerging markets) were both a drag on performance. In contrast our position in H&R Block (where almost 100% of revenues come from the US) was one of our top performers. The continued fall in commodity prices has had a relatively minor effect on the portfolio as we do not own anything in the Materials sector and we have been underweight Energy. Traditionally defensive sectors such as Utilities and Consumer Staples were the best performing sectors over the quarter, but the lack of attractively valued growth opportunities in these sectors means we did not have any exposure to either of them.

August saw some extraordinary intraday market movements in individual equity prices. On the so-called "Black Monday" of 24th August, large cap. tech giants Twitter, Facebook, Apple and Google all fell sharply at the open only to recover later in the day. At their lowest points, Twitter was down 17.2%, Facebook 12.6%, Apple 11%, and Google 7.9%. While markets were already extremely jittery, this appears to have been down to some technical issues when a custody bank upgraded its ETF fund accounting software. The fact that this coincided with a weekend's build up of sell orders in these ETFs almost certainly augmented these intraday moves versus had they occurred in a more benign environment. It was considerably worse for some of the ETFs involved; one of them declined nearly 89% intraday before recovering to close down 2.9%.

Towards the end of the quarter, we were – thankfully – able to observe from afar the VW emissions scandal. We had no holdings in any of the auto manufacturers having sold our positions in Toyota and Honda back in 2013. We find ourselves shocked by the ethical bankruptcy of the company while at the same time being intrigued by the necessary skill to have created such a device in the first place. It has affected 11 million vehicles worldwide including VW's Audi and Skoda brands. Some have suggested that Audi's advertising slogan should be changed from Vorsprung durch Technik (Advancement through technology) to Vorsprung durch Taeuschung (Advancement through deception)!

We made a number of changes to the portfolio over the quarter, which collectively had the effect of improving the quality of the portfolio, improving the growth profile and improving the valuation discount to the broad market.

Before the sharp decline in equity markets in August, we decided to sell our position in TD Ameritrade (the online broker), after it had shown exceptionally strong performance over the last two and a half years. Consequently, it had become the most expensive company we owned in the portfolio, trading on a P/E of 25x 2015 earnings. This valuation was also the highest the company has traded at in the last ten years.

We replaced TD Ameritrade with Verifone. Verifone is the leading provider of card payment terminals and services. They provide the technology and infrastructure that allow merchants to offer a variety of payments options including chip and pin, contactless card payments and more recently the likes of Apple Pay and Google Wallet.

The company is benefitting from the rollout of chip and pin technology in the US; a shift in liability on card fraud to merchants is making those that don't yet have this technology vulnerable. Despite this liability shift occurring in October this year, currently the US is only around a third of the way through this process and the full rollout it likely to take a few more years.

Large retail chains have unsurprisingly been the first to adopt the technology, but this has been followed by merchants that sell high ticket items. Clearly a shop selling high-priced electrical goods is more prone to credit card fraud than a coffee shop.

The new terminals that are being rolled out are also capable of processing contactless payments including the Near Field Communication (NFC) chips being used by "mobile wallets" such as Apple Pay and Google Wallet. Rollout of digital wallets such as Apple Pay could intensify pace of demand for EMV (Europay, Mastercard, & Visa) terminals from customers.

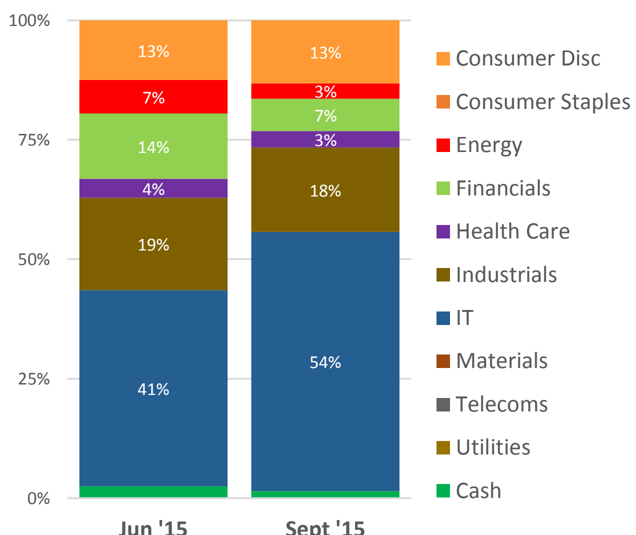
We felt there was an attractive combination of a quality, high return-on-capital business, with a number one position in many of its markets, in a secular growth trend, with a number of catalysts for margin expansion, trading on what we consider to be a very reasonable multiple of 18x going to 15x. While the valuation multiple leaves some potential for multiple expansion, we would expect the majority of the total return to come from earnings growth.

In early July our longstanding holding in eBay spun off its PayPal business into a separate entity. The PayPal business more closely met the criteria we look for in this Fund, so we sold our remaining positon in eBay and reinvested it in PayPal. PayPal has a very strong competitive position in the mobile payments space with an early mover and scale advantage, while at the same time being what we think to be very well positioned to continue to grow at up to 20% per year.

Later in the quarter we sold our position in Capital One Financial and replaced it with Cognizant, the IT consultant and service provider. Capital One's valuation had rerated substantially over the last four years, driven by their ability to generate growing revenues and earnings from a very profitable book of credit card debt with historically low delinquency rates. However, in the last quarter these delinquency rates went up, which we felt was an opportune time to bank a profit.

We were attracted to Cognizant by its ability to generate consistently high return-on-capital with double digit growth in revenues. The company has been very good at allocating capital, making numerous successful small bolt-on acquisitions. Cognizant is also managing to take market share from its competitors. The company's growth is somewhat dependent on global IT spending, but its competitive positioning and reasonable valuation made it an attractive alternative to holding Capital One.

The overall effect of these third quarter changes was to reduce our exposure to Financials and increase our exposure to IT, mainly in software and services as opposed to hardware or semiconductors. We still have no holdings in Consumer Staples, Materials, Telcos or Utilities.



When we consider the growth profile of the portfolio we find it useful to consider the long-term growth potential of the companies we own. The table below groups companies in the portfolio by their long-term growth rate as 0-10%, 10-20%, and 20%+. Historically our value discipline means that we have tended to own fewer companies in the 20%+ group than we have in the other two. Indeed today we own only one company which we would place in that group: PTC. Gilead would have been in that bucket 18 months ago, but we now feel more comfortable placing it in the 10-20% group. In contrast we have PayPal in the 10-20% group as we prefer to make a prudent rather than optimistic estimate, but it may well turn out it that it would have been more appropriate to include it in the 20%+ group.

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Long-term growth rate	Holdings	Portfolio weight	
		Current	10 year range
0 – 10% p.a.	Cisco, Eaton, Qualcomm, Intel, NVIDIA, Samsung Electronics, Li & Fung, Oracle, State Street	36%	20 – 50%
10 – 20% p.a.	Applied Materials, Danaher, Lenovo, Schneider Electric, Boeing, Google, PayPal, Tegna, Check Point Software Technologies Ltd., Gilead, Roper, tsmc, Cognizant, H&R Block, SAP, Verifone, Comcast, ICE, Schlumberger	60%	30 – 60%
20% + p.a.	PTC	4%	0 – 20%

Source: Guinness Atkinson estimates; p.a. = per annum

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

As we've written in previous updates, the divergence in 2015 between the MSCI World Value and MSCI World Growth indices has been striking, with the MSCI World Growth Index substantially outperforming the MSCI World Value until the middle of September when this trend sharply reversed. We have also seen a divergence between small and large cap. companies, with small cap. outperforming large cap. year-to-date. Our preference for companies on reasonable valuations and our determination to avoid hyped-up companies means our portfolio tends to follow more closely the value index rather than the growth index, and large cap. rather than small cap. Of course we are looking for companies that can grow, but not growth for growth's sake. We want to invest in profitable companies that can grow profitably and in a measured way. We want to avoid fads and bursting bubbles, and identify innovative companies that are generating economic profits.

A good example of a hyped-up industry to which we have no exposure is 3D printing. Since around 2010-11, 3D printing has been touted as a game changer for the balance of industrial production between developed and emerging markets. It was going to herald a "decentralized industrial revolution". It was going to bring industrial production back from low cost emerging market manufacturers to Western shores, create jobs, and boost the developed world's economic growth. Unfortunately this has not happened. Instead the industry has just continued to grow in relatively specialized applications.

It is a great technology, but it is not a new technology. 3D printing has been around since the mid-1980s, and even though applications for its use have been growing, it remains a somewhat limited technology. It has always been used for niche, low volume, precision items where speed of production has been important and cost therefore less of an issue, for example prototyping, aircraft components, or medical needs such as printing replacement joints. Indeed, Airbus and Boeing are now 3D printing thousands of parts for their aircraft. 3D printing is an expensive technology and is unlikely to ever replace displace more mainstream industrial production technologies where cost is the key factor.

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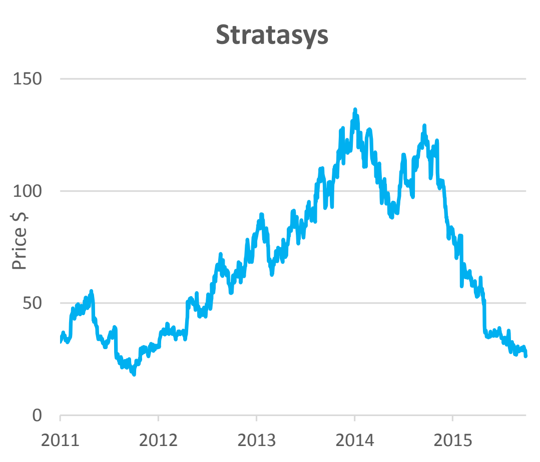
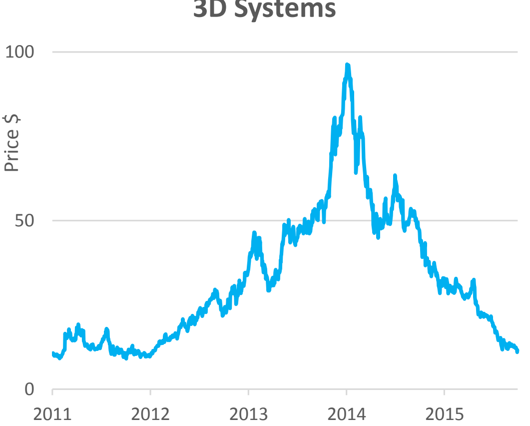
The valuations of 3D printing companies have largely reflected the level of media hype that has surrounded the technology. Two of the main players (Stratasys and 3D Systems) have seen their share prices rally dramatically from 2011 to 2013, only to have sold off just as dramatically in the last 18 months. 3D Systems' market capitalization of $732 million at the end of 2010 had become $9.5 billion by the end of 2013, at which point it traded on a P/E ratio of almost 100x 2014 expecting earnings.





Source: Bloomberg; as of 9/30/15

Just because a technology has the potential to grow rapidly does not necessarily mean that companies exposed to that technology are good investments. Where irrational hype is involved, investing without a valuation discipline relies on the *greater fool theory** to generate a return. Sometimes it is better to be exposed to companies that benefit from innovative technologies than the enablers themselves.

Boeing, which we do own in the portfolio, makes use of 3D printing technology and has used over 20,000 3D printed parts in 10 different aircraft, including the cutting edge Dreamliner. It is able to 3D print a complex component in one go that might replace ten other components coming from different manufacturers, while at the same time bringing down costs which could in time have a meaningful impact on margins.

It also has an order book that is full for the next five to ten years, depending on which aircraft you want to buy. Its revenues have almost doubled in the last ten years, while operating profit has almost quadrupled, and this trend looks set to continue. The company trades on a 2016 P/E of 14.6.

We continue to focus on companies with the characteristics of Boeing rather than companies exposed to hyped-up technologies. We believe these companies are best placed to generate long-term returns without the risk of considerable drawdowns.

Thank you for your continued support.

Matthew Page, CFA
Dr Ian Mortimer, CFA
October 2015

*** Greater fool theory -** The greater fool theory states that the price of an object is determined not by its intrinsic value, but rather by irrational beliefs and expectations of market participants. A price can be justified by a rational buyer under the belief that another party is willing to pay an even higher price. In other words, one may pay a price that seems "foolishly" high because one may rationally have the expectation that the item can be resold to a "greater fool" later.

Source: Wikipedia

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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 may invest in derivatives which involves risks different from, and in certain cases, greater than the risks presented by traditional investments.

Securities mentioned are not recommendations to buy or sell any security. Current and future portfolio holdings are subject to risk

Opinions expressed are subject to change at any time, 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 Global Innovators Fund. The prospectus contains more complete information, including investment objectives, risks, charges and expenses related to an ongoing investment in The Fund. Please read the prospectus carefully before investing.

Top 10 Holdings of Guinness Atkinson Global Innovators Fund as of 9/30/15:

1. Intel Corp 4.21% 2. Roper Industries Inc 3.97% 3. Cognizant Technology Solutions Corp - A Shares 3.89% 4. Boeing Co/The 3.74% 5. NVIDIA Corp 3.64% 6. Taiwan Semiconductor Manufacturing Co Ltd – ADR 3.61% 7. Danaher Corp 3.61% 8. Cisco Systems Inc 3.59% 9. Oracle Corp 3.50% 10. Intercontinental Exchange Inc 3.50%

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

Price to Earnings Ratio (P/E) is A valuation ratio of a company's current share price compared to its per-share earnings. Calculated as: Market Value per Share / Earnings per Share (EPS)

The MSCI World Value Index captures large and mid cap securities exhibiting overall value style characteristics across 23 Developed Markets countries.

The MSCI World Growth Index captures large and mid cap securities exhibiting overall growth style characteristics across 23 Developed Markets countries.

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