Guinness Atkinson
Global Innovators Fund Update
December 2017

November in Review

Equity markets over the past year have persistently defied the skeptics, who have pointed to political dysfunction, monetary policy uncertainty, and potential geopolitical crises as reasons for woe. November marked the 1-year anniversary for President Trump's time in office; he has consistently touted the stock market as well as taken credit for its steady ascent since the U.S. election on November 8th 2016.

How much President Trump has contributed to stock market gains will remain debateable, however it is not fake news that his initial proposals were in-fact pro-business. These included lower corporate taxes, a repatriation tax holiday (tax break on overseas profits), huge infrastructure spending, and financial deregulation. Although the propositions faced significant hurdles, November finally saw some traction with tax legislation being passed through the Senate. The bill now must be reconciled with the House version before the President gets the opportunity to sign it into law. This boosted U.S. equity markets late in November, and the S&P 500 index reached the $2,600 mark for the first time. The index is in its 2nd longest bull market in history without a 20% correction. It's the 10th longest streak without a 10% correction; the 4th longest streak without a 5% pullback; and the longest streak in history without a 3% pullback. The climb so far has largely been attributed to optimism about economic growth and company earnings, in an environment characterized by loose monetary policy.

In terms of macroeconomic news, third quarter GDP growth was revised upwards – it climbed at an annualised rate of 3.3%, up from the previously reported 3%. The nomination of Jerome Powell as the new chairman of the Federal Reserve (FED) could have created some uncertainty, but was seen as the choice for continuity. Strong economic data and encouraging comments from current FED chair, Janet Yellen, increased the likelihood for a December interest rate hike, as she told the Joint Economic Committee: "The economic expansion is increasingly broad based across sectors as well as across much of the global economy". The S&P 500 Index gained 3.1% (in USD) in November revising up the year-to-date return to 20.5%.

In Europe, November saw the return of political uncertainty, involving Germany, Italy and Spain. Election and coalition apprehensions were possibly key reasons for the correction of the MSCI Europe (ex-UK) Index, which ended the month with a -2.0% (in EUR) return (although it is still up 12.7% year-to-date). From a macroeconomic viewpoint, the "goldilocks" tale continued. Strong growth and modest inflation – the "just right" environment – was broad based across the Eurozone economies; the 19-nation bloc has also seen the unemployment rate drop to 8.8%, the lowest in almost nine years. Policy makers continue to express confidence that GDP growth and falling unemployment will eventually feed through to prices as the slack in the economy wanes. The latest manufacturing survey data (by IHS Markit) shows signs that a mounting order backlog in the Eurozone is putting upward pressure on both input and output prices for goods, and this could eventually be reflected in inflation figures.

In the UK, the equity market fell in November as continued uncertainty in domestic politics weighed on confidence in the UK's economic outlook. At the start of the month, the Bank of England implemented the first interest rate rise in a decade, up from 0.25% to 0.5%, as third-quarter GDP growth was confirmed at 1.5% and inflation remained unchanged at 3.0%. The Autumn Budget revealed a slower pace of fiscal tightening to support the economy through the Brexit negotiations.

The FTSE 100 closed with decline of 1.8% (in GBP), marginally reducing the year-to-date return to +6.6%.

Market Movements

Towards the end of the month, there has been some notable sector rotation – perhaps a healthy way for the market to consolidate some gains without the overall market suffering to any significant degree. U.S. tax reform prompted a rotation out of technology stocks, the year's best performing sector, and into firms seen to benefit the most from a potential reduction in the corporate tax rate, such as banks. Technology companies are expected to see little boost, as the industry's average effective tax rate of 18.5% is already lower than the new level of 20% proposed by Republicans.

The tables below compare S&P 500 sector performance over two specific time periods: year-to-date through November 27th; and the brief period between November 27th and December 1st. November 27th is chosen since this marked the swift reversal of tech stocks from their leadership perch, among other notable sector reversals.

S&P 500 Sector Performance, 2017

Sector	12/31/16 - 11/27/17	Sector	11/27/17 - 12/01/17
IT	39.0%	Telecoms	6.3%
Healthcare	18.6%	Financials	5.2%
Materials	17.1%	Energy	3.7%
Consumer Discretionary	16.2%	Industrials	2.7%
Utilities	14.8%	Consumer Staples	2.3%
Financials	12.3%	Consumer Discretionary	2.0%
Industrials	12.0%	Healthcare	1.8%
Real Estate	8.7%	Materials	1.0%
Consumer Staples	6.1%	Utilities	0.4%
Energy	-10.8%	Real Estate	-0.2%
Telecoms	-16.0%	IT	-2.0%

Source: Bloomberg. GICS sector price returns, in USD.

It should be highlighted that the "correction" time-period is very short, and in the context of the entire year technology stocks have performed very strongly – where the fund has a big overweight. The Information Technology sell off appeared to be driven by concerns raised by a Morgan Stanley analyst report that the cycle was peaking for memory chips. This resulted in chip manufacturers and equipment makers leading the selloff. The Philadelphia Semiconductor (SOX) index was down 5% in the week vs the S&P500 up 1.8% (total return in USD, week ending November 30). This then led to other Information Technology companies selling off as well (e.g. Facebook, Alphabet), however this didn't seem to be driven by any fundamental changes. End of year profit taking has been suggested as an explanation for the fall. In context the SOX was up 50% before the sell-off, vs S&P500 up 18% (total return in USD, year-to-date ending November 24). The sell-off was most prevalent in the Emerging Market economies.

The Global Innovators Fund's current overweight position in Information Technology contributed negatively to its performance over the month of November. However, over the year Information Technology remains the biggest contributor to positive total attribution of the Fund.

Portfolio update

Individual stock performance in the month followed, in general, the market movements described above. Key stock movements are highlighted below.

Stocks held in the fund that were directly impacted by the selloff in Semiconductors (in the week ending 11.30.2017) were Samsung Electronics (-8%, total return in USD), Applied Materials (-9%), Nvidia (-8%) and Infineon (-6%). However, this must be seen in the context of the very positive year to date performance for these four stocks which were up on average 83% (total return, in USD) up to 11.24.2017.

More positive performance in the month came from Nike and AAC Technologies.

Nike (+9.9% total return in USD) was added to the portfolio in Nov-2016. It has all the characteristics we seek in terms of a business with a strong balance sheet, good returns, and good capital allocation discipline that shows the company as selectively and profitably re-investing cash flows. Nike has been attempting to cut out the middleman and sell direct to customers. The threats of increased competition, inventory overhang, and whether future lines are well received remain but Nike's focus on robotics and price segmentation is an example of the companies' ability to innovate, in both technology and business. Nike has collaborated with Flex, the high-tech manufacturing company, to roll out innovations such as laser-cutting and automated gluing across Nike's supplier base. The shift to automation has the attraction of driving down costs and deliver innovative designs more quickly, and at a premium.

AAC Technologies (+9.3% total return in USD), is a Hong Kong listed company that is a market leader in the design and manufacture of various components for consumer electronic components. It historically specialized in acoustic parts, most notably speakers and microphones for smart phones and tablets but has been diversifying into non-acoustic parts such as haptic vibrators and RF antenna. Like many Asian technology companies its client base is concentrated, with companies such as Apple and Samsung accounting for significant proportions of overall revenue - which poses obvious risks. However, unlike many other product manufactures AAC has consistently managed to maintain high operating margins of around 30% and has a strong balance sheet. AAC did see some pull back after the iPhone 8 went on sale in late September, but with the launch of the iPhone X and reports of healthy iPhone sales, AAC has performed well in through November.

Changes to portfolio

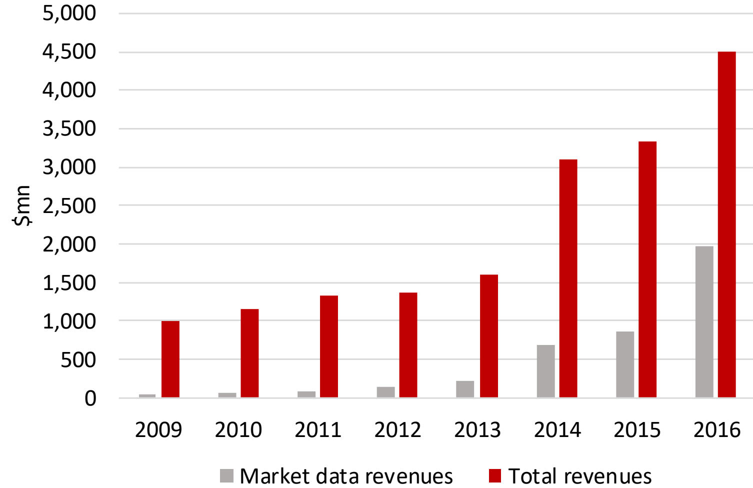
We made no changes to the portfolio in November.

Accessing Innovation in Other Companies and Other Sectors

The Guinness Global Innovators Fund does include some well-known, obvious innovators such as Facebook (owned since August 2017), Alphabet (owned since August 2015) and PayPal (owned since July 2015). All three of these companies are in the Information Technology sector, but there are also many good opportunities to access innovative themes in other companies and in other sectors, as highlighted in the following three examples.

Consumer discretionary sector: New Oriental Education provides educational services in China, such as foreign language training, test preparation for Western university admissions, primary and secondary education. This was bought in October 2016 on a 25x forward PE. It is currently a market leader with sales growth exceeding 20% per year. Asset growth has been between 10-20% a year and return on capital has been steadily increasing. The drivers of this growth have been the use of a scalable platform to accelerate its market share growth. In 2017 they started a collaboration with Tencent and Digital China for “smart campus”, an online AI-based education platform.

Financials sector: Intercontinental Exchange (ICE) operates 12 exchanges, 6 clearing houses and a data business. ICE was included in the Fund in September 2009 on a 20x forward PE basis. The company has grown organically and through acquisitions (for example the NYSE) and now has more than 50% of its revenues generated on a recurring basis. The business works on a 'virtuous cycle' from selling data to improve trading, and subsequently generating more data from the clearing of trades.



Source: Guinness Atkinson Asset Management, Bloomberg

The market data segment has grown from $54mn of revenue in 2009 to almost $2bn in 2016, now accounting for over 40% of overall revenues. Key themes the company is focusing on includes big data, automation and AI.

Industrial sector: Boeing, specializing in commercial jet aircrafts was purchased for the Fund in August 2014 on a 15x forward PE basis. Sales have grown 4-6% on average per year and we have seen operating margins increase 200bps last year. Asset turnover, a measure of a company's efficiency and productivity, has also increased by more than 25%. One key improvement to the business has been the adoption of planes being assembled on a moving assembly line (52 aircraft per month expected in 2018 vs 31 in 2005). This is also occurring concurrently with the adoption of lighter, smarter materials and the increasing use of robotics and automation in the assembly process.

Outlook

The fund has always sought to provide exposure to many of the exciting innovation growth themes that exist and this year the market has begun to react to the potential of many of these themes. Recent earnings results from many of the large technology companies suggest that the growth opportunities continue to expand, and we are pleased with the way that our holdings have been executing on their growth plans as well as their share price performance. We also hold better quality companies than the broader market. The current portfolio has, on average, more cash than debt on their balance sheets and a cash flow return on investment of 18%, which is 60% higher than the broader market.

We do not attempt to predict future market directions, but we feel confident that the strong balance sheets and superior return on capital of the businesses held in the portfolio will serve the fund well over the long term.

Thank you for your continued support.

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Performance

In November, the Guinness Atkinson Global Innovators Fund produced a total return of 0.75% (investor class) versus the MSCI World Index return of 2.22%. The fund therefore underperformed the index by 1.47%.

as of 11.30.2017 (in USD)	YTD	1 year	3 years annualized	5 years annualized	10 years annualized	Since inception annualized
Global Innovators, Investor Class[1]	33.59%	35.84%	11.89%	18.97%	9.27%	8.23%
Global Innovators, Institutional Class[2]	33.88%	36.15%	12.08%	19.09%	9.32%	8.26%
MSCI World Index	21.42%	24.37%	8.83%	12.42%	5.40%	5.95%

as of 09.30.2017 (in USD)	YTD	1 year	3 years annualized	5 years annualized	10 years annualized	Since inception annualized
Global Innovators, Investor Class[1]	26.82%	29.58%	11.50%	17.88%	8.49%	8.00%
Global Innovators, Institutional Class[2]	27.04%	29.88%	11.67%	17.98%	8.54%	8.03%
MSCI World Index	16.53%	18.85%	8.33%	11.65%	4.86%	5.78%

Investor class (IWIRX) Inception 12.15.1998 Expense ratio* 1.24% (net); 1.35% (gross)

Institutional class (GINNX) Inception 12.31.2015 Expense ratio* 0.99% (net); 1.38% (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/global-innovators-fund or call (800) 915-6566.

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 reduce its fees and/or pay 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 .99% for the Institutional class and 1.24% for the Investor class through June 30, 2018. To the extent that the Advisor waives its fees and/or absorbs expenses to satisfy this cap, it may seek repayment of a portion or all of such amounts at any time within three fiscal years after the fiscal year in which such amounts were waived or absorbed, subject to the 0.99% for the Institutional class and 1.24% for the Investor class expense cap.

Total returns reflect a fee waiver in effect and in the absence of this waiver, the total returns would be lower

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.

Top 10 holdings for Global Innovators Fund, as of 11/30/17, are:

1. FANUC Corp	3.82%
2. Samsung Electronics Co Ltd	3.79%
3. Infineon Technologies AG	3.66%
4. PayPal Holdings Inc	3.62%
5. NVIDIA Corp	3.51%
6. Intel Corp	3.46%
7. Cognizant Technology Solutions	3.46%
8. Cisco Systems Inc	3.42%
9. Boeing Co/The	3.42%
10. Wisdom Tree Inv. Inc.	3.42%

For a complete list of holdings for the Global Innovators Fund, please visit https://www.gafunds.com/our-funds/global-innovators-fund

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

The Fund's investment objectives, risks, charges and expenses must be considered carefully before investing. The statutory and summary prospectus contains this and other important information about the investment company, and it may be obtained by calling 800-915-6566 or visiting gafunds.com. Read 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.

IHS Markit Ltd. is a company based in London, United Kingdom. IHS Markit provides information and analysis to support the decision-making process of businesses and governments in industries such as financials markets; aerospace, defense and security; automotive; chemical; energy; maritime and trade; and technology.

(FTSE 100) The Financial Times Stock Exchange 100 Index is representative of approximately 80% of the market capitalization of the London Stock Exchange in its entirety. Larger companies comprise a greater portion of the index because it is weighted by market capitalization. The FTSE 100 is managed by the FTSE Group, jointly owned by the Financial Times and the London Stock Exchange.

The price-earnings (PE) ratio is the ratio of a company's stock price to the company's earnings per share. Often used in the comparative valuation of a company, it reflects how many times earnings investors are ready to pay for a share.

One cannot invest directly in an index.

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