Guinness Atkinson

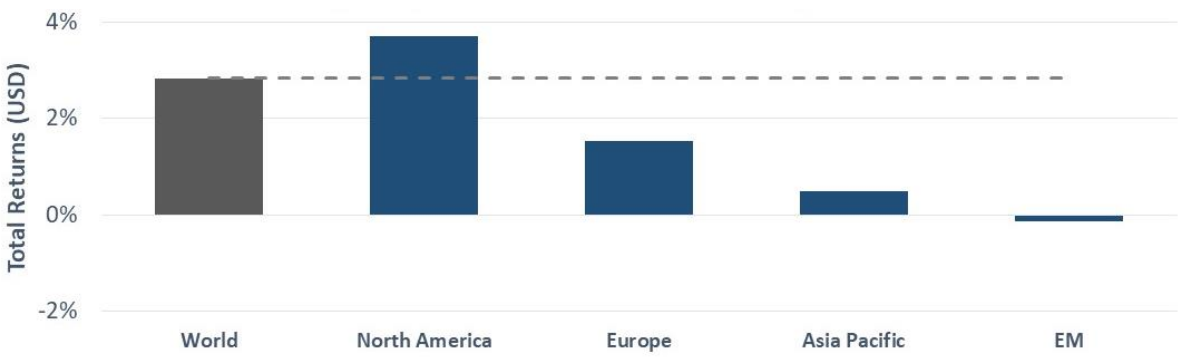
Global Innovators Fund

Managers Update – December 2019

November in review

Equity markets continued their ascent into November, led by the US with the S&P 500 Index on track for another strong year. Indeed, data out of the US continues to look healthy (at least on a relative basis) with the 3rd quarter GDP growth figure revised up from its initial 1.9% to 2.1% and an increase on the prior quarter's 2.0% growth. Additionally, the so-called 'Phase One' trade deal being negotiated between the US and China continues to have its say on equity market sentiment, with the absence of escalation seemingly taken as a small positive over the month. Having said that, a conclusion still seems distant with America's decision to sign the Hong Kong Human Rights and Democracy Act a possible cause for further tension. The act, signed by President Trump, requires the US secretary of state to decide every year whether the "one country, two systems" formula that guarantees Hong Kong's independent legal system and civil liberties is intact. If determined it is not, the US could revoke special economic and commercial privileges that it extends to Hong Kong. Although North America is the fund's largest regional exposure, our underweight position versus the MSCI World (~55% vs MSCI World 65%) was a drag on the portfolio's relative performance vs the benchmark over the month.

MSCI World regional performance: October 31st – November 30th 2019

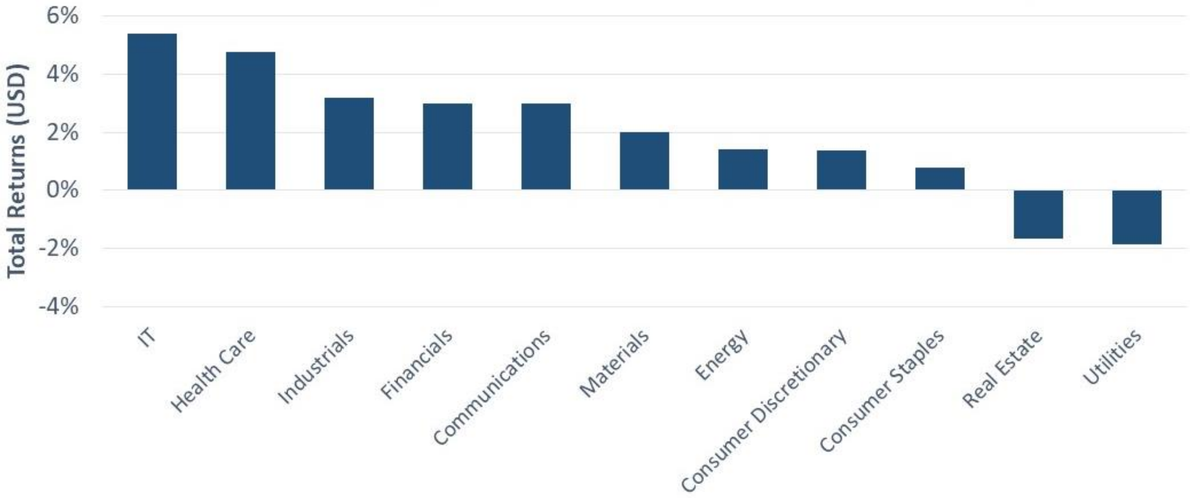


Source: Bloomberg, as of November 30th 2019

Asia and Emerging markets ended the month as the weakest regions as Hong Kong protests continued and investors braced for any retaliation by China to the US's signing of the Hong Kong bill. News out of China wasn't all bad however, with the Caixan Manufacturing PMI hitting its highest level in 3 years – despite the US-China trade dispute – while China also showed some willingness to adapt to key US concerns by issuing guidelines for improving intellectual property protection aimed at speeding up the introduction of an actual system to protect patents - a key demand from the US in trade talks. Overall, fund constituents such as Anta Sports (down 4.1% USD), Catcher Technologies (down 3.5% USD) and New Oriental Education (down 0.8% USD) gave up some of the strong gains they had made over recent months. The fund currently holds an overweight position to Asia Pacific and which was a drag on performance given the weak performance from the region.

Into Europe as Germany narrowly avoided a technical recession with 0.1% GDP growth in the 3rd quarter. However, this was indicative of a month of 'not-so bad' data out of Europe with improvements in the Manufacturing PMI (in particular from Germany) while Eurozone factory output for September recorded growth for its second consecutive month – although only at 0.1% - led by solid growth in consumer products. The fund's exposure to Europe is broadly similar to that of the MSCI World, however, strong stock selection from Siemens (up 12.0% in USD) and Infineon (up 10.3% in USD) over the month left Europe as the largest regional contributor to stock outperformance.

MSCI World sector performance: October 31st – November 30th 2019



Source: Bloomberg, as of November 30th 2019

On a sector basis, IT, the best performing sector year-to-date, continued its fine run with the software industry, in particular, up 6% over the month. Semiconductors, although strong with returns of 4.4% over the month was a slight drag to the broader IT sector. This was represented by a dispersion in the performances of the fund's semiconductor names with semiconductor equipment manufacturers weaker after UBS gave a more bearish view (Applied Materials, Lam Research and KLA Tencor down 3%, 3% and 5% on the day respectively) while fabless chip designers Nvidia and Infineon were 2 of the fund's top 5 performers over the month – Applied Materials did end the month as one of the top 5 performers after rising ~9% on strong quarterly results. Defensive sectors Consumer staples, Real Estate and Utilities all underperformed over the month as growth once again outperformed (MSCI Growth Index up 3.5% vs MSCI Value Index up 2.1% USD over the month) after the value rotation experienced in September. The fund holds no exposure to these 3 sectors and as such, were positive contributors to the fund's relative performance.

Relative performance of Growth vs Value

Source: Bloomberg, as of November 30th 2019

Cisco – a deeper look:

Cisco was the fund's largest underperformer over the month (down 4.6% in USD) after reporting solid quarterly results but guiding weaker-than-expected for the coming quarter with management pointing to macro headwinds such as weakness in China. However, having bought the company back in 2014 and having seen its price increase 114% (USD), we continue to see good upside on our investment.

What is the business model?

Cisco Systems is the world's largest hardware and software supplier within the networking solutions sector. Cisco designs and sells networking hardware such as routers and switches that facilitate the connection to the internet, as well as the software which optimizes the data flow. Cisco commands a market leading position in almost all end-markets versus such peers as Arista, F5 Networks and Juniper.

Why are they innovative?

Cisco is directly exposed to the proliferation in data traffic stemming from such drivers as the expansion of mobile devices, the trend towards video streaming and the explosion of cloud-based services. Indeed, Cisco's hardware – the switches and routers – are a direct beneficiary of the increase in volume of traffic but also with it there is the increasing trend towards innovative software as opposed to innovative hardware in order to optimize data flow. This is the area in which Cisco has been increasingly focused, with software now estimated to contribute over 30% of total revenue – the highest amongst peers. Consequently, not only does Cisco derive a strong competitive advantage from the high switching costs (no pun intended) associated with the volume of switches and routers embedded in customer applications, but also the innovative software that comes alongside it. Further, this software is increasingly sold as subscription packages (currently subscriptions account for 71% of software sales) which in-turn is increasing the proportion of recurring revenue Cisco receives and which should give Cisco better insights into customer spending habits.

Why we still like Cisco?

We see Cisco as a quality company with sustainable competitive advantages derived from it brand recognition and high switching costs. The company sits in a favorable position given the growth in data traffic and the shift to software offerings and, while we see many IT names (and in particular software companies) trading on elevated levels, we view Cisco's 14x P/E valuation as modest given the good end-market growth potential and shift to software offerings.

Portfolio Managers

Matthew Page, CFA

Dr Ian Mortimer, CFA

Thank you for your continued support.

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GUINNESS ATKINSON FUNDS

Summary performance

For the month of November, the Guinness Atkinson Global Innovators Fund provided a total return of 2.7% (USD) against the MSCI World Index net return of 2.8% (USD). Hence the fund underperformed the benchmark by 0.1% (USD).

as of 11.30.2019 (in USD)	YTD	1 year	3 years annualized	5 years annualized	10 years annualized
Global Innovators, Investor Class[1]	32.79%	22.10%	14.84%	9.31%	13.67%
Global Innovators, Institutional Class[2]	33.10%	22.42%	15.12%	9.53%	13.78%
MSCI World Index NR	23.96%	14.53%	12.36%	7.74%	9.34%

as of 09.30.2019 (in USD)	YTD	1 year	3 years annualized	5 years annualized	10 years annualized
Global Innovators, Investor Class1	23.42%	2.77%	12.23%	8.63%	12.88%
Global Innovators, Institutional Class2	23.64%	3.03%	12.51%	8.83%	12.99%
MSCI World Index NR	17.61%	1.83%	10.21%	7.18%	9.00%

All returns after 1 year annualized.

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.

[1] Investor class (IWIRX) Inception 12.15.1998 Expense ratio* 1.25% (net); 1.30% (gross)

[2] Institutional class (GINNX) Inception 12.31.2015 Expense ratio* 1.00% (net); 1.13% (gross)

[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 0.99% for the Institutional class and 1.24% for the Investor class through June 30, 2020. 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 11/30/19:

1. Applied Materials Inc	3.68%
2. Siemens AG	3.67%
3. Eaton Corp PLC	3.61%
4. Schneider Electric SE	3.61%
5. Infineon Technologies AG	3.56%
6. Adobe Inc	3.51%
7. NVIDIA Corp	3.50%
8. ABB Ltd	3.48%
9. FANUC Corp	3.47%
10. Lam Research Corp	3.47%

For a complete list of holdings for the Global Innovators Fund, please visit:
https://www.gafunds.com/ourfunds/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.

One cannot invest directly in an index.

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