

Global Innovators Fund

Review of the 3rd Quarter 2016





Matthew Page, CFA

- Portfolio manager of strategy since 2010, previously analyst on strategy from 2005
- Joined Guinness Atkinson Asset Management in September 2005
- CFA Charterholder
- Previous to Guinness Atkinson, worked for Goldman Sachs as an analyst in Fixed Income Currencies and Commodities (FICC)
- Graduated from University of Oxford, with a Masters degree in Physics in 2004



Dr Ian Mortimer, CFA

- Portfolio manager of strategy since 2010
- Joined Guinness Atkinson Asset Management in December 2006
- CFA Charterholder
- Graduated from University of Oxford, with a D.Phil. in Physics in 2006
- Graduated from University College London, University of London, with a First Class Honors Masters degree in Physics in 2003

Global multi-cap growth with a value discipline

The Fund Seeks:

- Quality growth companies at attractive valuations
- Highly disciplined, systematic approach
- Focussed portfolio of best ideas
- Seeking high active share
- Mid-large cap bias
- Buy and hold – low turnover

Benchmark	MSCI World
Number of positions	30
Position size	3-4%
Market cap range	> \$0.5bn
Max industry weight	30%
Av. holding period	3-5 years
Cash range	1-3%

Objective: The Fund seeks long-term capital appreciation through focused investment in companies that are positioned to benefit from innovation in technology, communication, globalism or management strategies.

• AUM in strategy:	\$240M		
• Investor class:	IWIRX	Inception 12.15.98**	Expense ratio* 1.24% (net); 1.27% (gross)
• Institutional class:	GINNX	Inception 12.31.15	Expense ratio* 0.99% (net); 1.07% (gross)

See page 23 for details on the expense waiver.

** Run in its current form since 2003

- Investors often aim to identify “quality” companies for investment, in order to seek returns on investment. But the challenge is how to objectively identify quality companies?
- We believe **return on capital** is the best objective identifier of ‘quality’ businesses. We seek companies that exhibit:

1. Persistently above average return on capital over an entire cycle

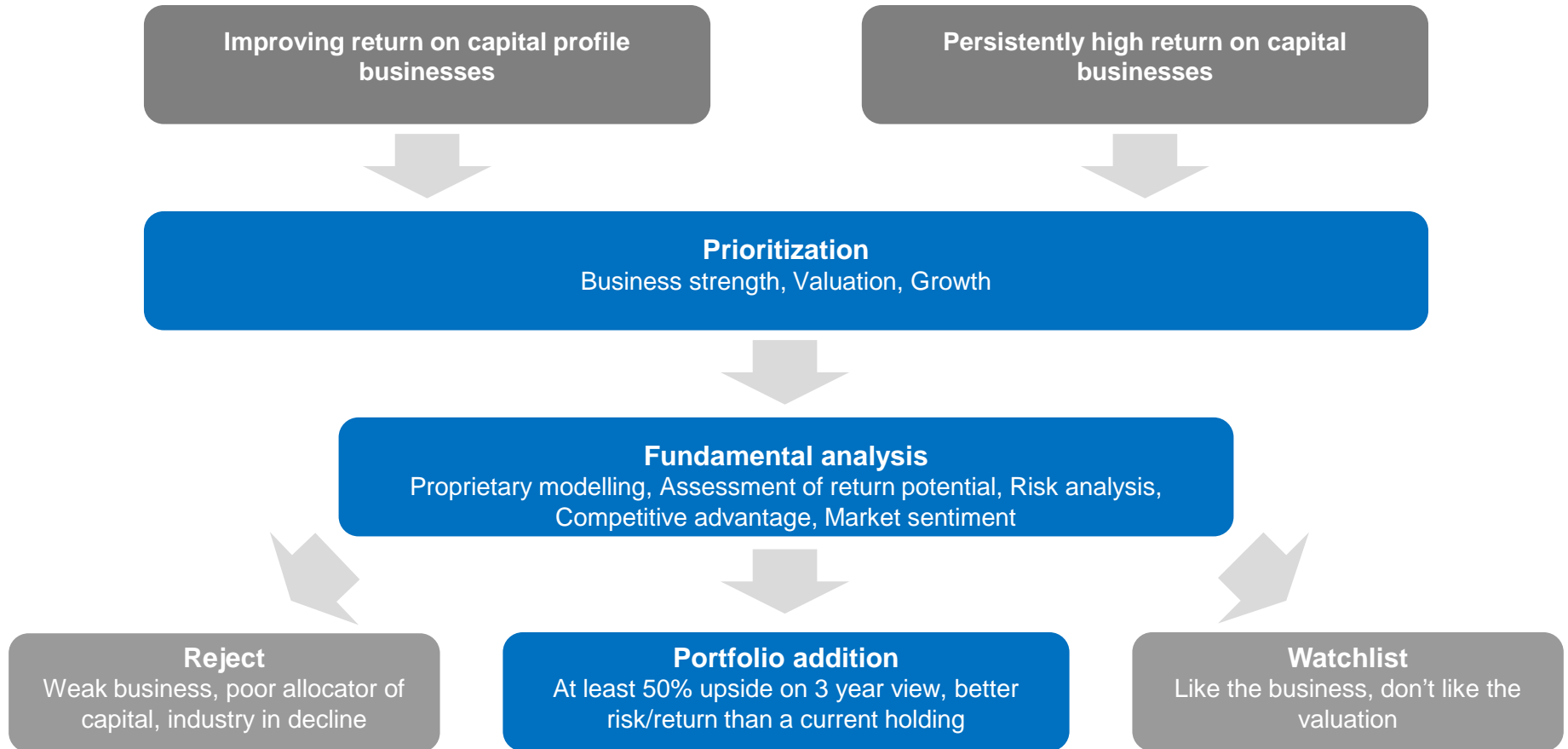
- Established competitive advantage
- High probability of continued above average return on capital (‘good companies stay good’)

2. Improving return on capital profile

- Potential to achieve above average return on capital in the future
- Significant opportunities to reinvest cash flow in high return projects

- But must also consider whether the company is a good investment...

- We believe quality companies that can demonstrate some element of innovation through their business model, or their products, or through technological advances have the best chance of defending their superior return on capital
- We believe buying companies at attractive valuations significantly increases their investment return potential over the long term and allows us to better mitigate unforeseen risks
- We believe equal weighting and low turnover add useful incremental returns
- We believe that our disciplined, intelligently designed, repeatable process maximises our chance of success.



■ Prospect for return from cash-flow growth

- Higher than average return on capital or prospect of achieving it
- Confidence that earnings can grow – revenue growth, margin expansion
- Consider full spectrum of growth companies to identify best opportunities

Business
value creation

+

■ Prospect for return from re-rating

- Company out of favour or irrational hype has abated
- Multiple (P/E, EV/EBITDA) discount to peers, or market, or company history
- Avoid story stocks, don't pay up for expected future growth

Return from
re-rating

=

■ Recognise markets can be irrational over short term

- Do not know when market will re-value company
- Buy and hold
- Use any short term movements to trim/top-up position

>50% upside
to current
valuation over
3 years

As at 9.30.2016 (in USD)	Q3 2016	YTD	1 year	3 years annualized	5 years annualized	10 years annualized	Since inception annualized
Global Innovators, Investor Class¹	9.76%	7.18%	15.29%	9.50%	17.21%	8.67%	6.90%
Global Innovators, Institutional Class²	9.85%	7.40%	15.53%	9.57%	17.26%	8.69%	6.92%
MSCI World Index	4.99%	6.04%	12.01%	6.46%	12.28%	5.10%	5.09%

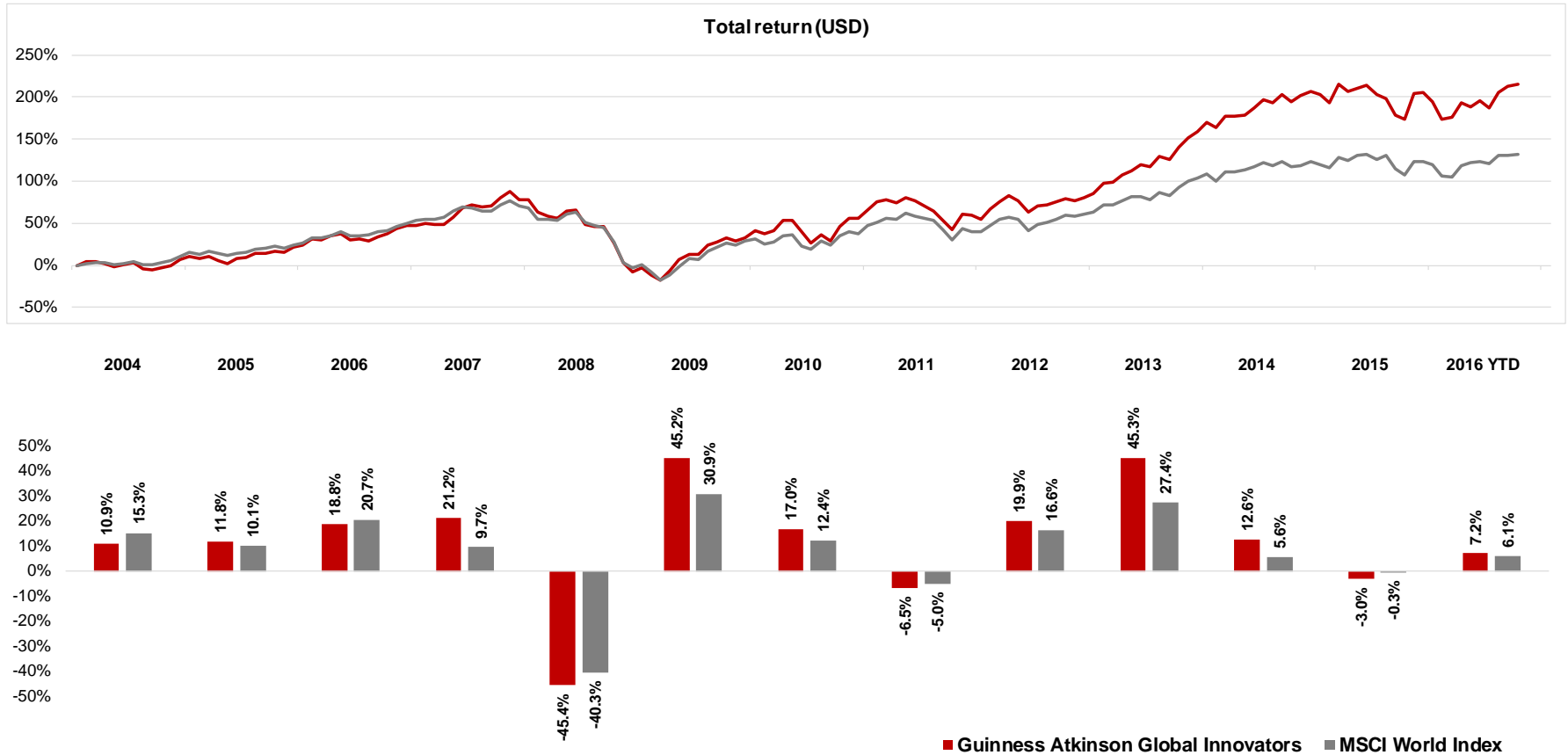
¹**Investor class** Ticker: IWIRX Inception 12.15.1998 Expense ratio* 1.24% (net); 1.27% (gross)

²**Institutional class** Ticker: GINNX Inception 12.31.2015 Expense ratio* 0.99% (net); 1.07% (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 Funds may be lower or higher than the performance quoted. Performance data through the most recent month-end may be obtained by visiting www.gafunds.com.

Total returns reflect a fee waiver in effect and in the absence of this waiver, the total returns would be lower. See page 23 for details on the expense waiver.

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).



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Top 5 performing stocks

	Total return
NVIDIA	46.0%
State Street	29.9%
Qualcomm	28.9%
Applied Material	26.2%
SAP	22.2%

Bottom 5 performing stocks

	Total return
Cognizant Technology	-16.6%
VeriFone Systems	-15.1%
TEGNA	-5.0%
Gilead Sciences	-4.6%
Oracle	-3.7%

Fund holdings are subject to change.

Buys	Sells
Infineon	Oracle
Shire	Tegna

- Long term holding (since 2003)
- Total return of stock over holding period (in USD) +222%; vs MSCI World +132%
- Outperformance of 90% over holding period (~2.8% p.a.)
- EPS growth since purchase: 441% (325% net income growth + 21% reduction in share count)
- P/E multiple contracted 46% over holding period – reflecting maturity of business over holding period
- Small benefit from dividend payments (dividend only initiated 2009)
- Today
 - Reasonable valuation multiple reflects lower prospects for growth
 - Declining return on capital suggest company struggling to find good projects for reinvestment of cash
 - Company shift to new business model (license to SaaS) and increased competition (especially in DB) present uncertainty and risk to future growth
 - **Sell discipline:** Better opportunity

- Held in portfolio since October 2013 (original purchase was Gannett, pre-split)
- Total return: Tegna stock underperformed the MSCI World over period by ~9%

- Digital business
 - Cars.com spin out expected 1H2017
 - Careerbuilder.com under strategic review

- Broadcast
 - Tough market to be in - competition increasing
 - Future growth a concern, and maybe being held up in near term by focus on costs – not sustainable

- Prefer growth from reinvestment (and ideally combined with a secular growth trend in companies' end market)

- Valuation not demanding (11x forward earnings) but maybe still expecting too high a growth rate/good execution of management (value trap?)

- **Sell discipline:** Quality of company, better opportunity

- New holding for the fund
- German-listed semiconductor designer and manufacturer
- Stock price performance has been strong in 2016 but we still see good opportunity

- Growth
 - Earnings growth over next 5 years of ~15% CAGR possible
 - #1 or #2 market position in very fast growing segments (power and automotive)

- Quality
 - Cyclical businesses, but improving return on capital
 - High operating margins
 - Improving economic profit through revenue and asset growth

- Valuation
 - At higher end of what we consider (20x forward earnings) but exceptional growth prospects, especially relative to market
 - Better valuation than similar, specialist, semi companies.

- **Buy:** Higher growth, lower potential for re-rating




- Previously held in the portfolio (October 2013 to August 2014)
- Sold after the bid from Abbvie (which was later withdrawn based on 'tax inversion' issues)
- Repurchased September 2016

- Growth
 - Shire notable M&A post Abbvie (NPS & Dyax in 2015, Baxalta in 2016) – reduces dependence on ADHD
 - Created largest global biopharma company focussed on rare diseases
 - Strong pipeline provides optionality




- Quality
 - Increased return on capital every year for last 3 years
 - Expect specialisation to enable continued high margins and lower threat of pricing issues

- Valuation
 - Trading below 5yr average multiple, and below broad market
 - Undemanding versus peers

- **Buy:** Moderate to high growth, potential for significant re-rating

Future Expectations*		Portfolio today	Allocation Range last 10years
0 – 10% growth		40%	20 - 50%
10 – 20% growth		56%	30 - 60%
20% + growth		4%	0 - 20%

*Future allocations presented are the belief of Guinness Atkinson which are used to help allocate the portfolio.

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Name	Industry	Mkt. cap	Country of domicile	% NAV	PE	
					16Y	17Y
Boeing Co/The	Capital Goods	82.5	US	3.5%	20.7	13.8
Eaton Corp PLC	Capital Goods	29.2	US	3.7%	15.4	14.4
Fortive Corp	Capital Goods	17.6	US	1.0%	20.9	19.4
Roper Technologies Inc	Capital Goods	18.4	US	3.2%	27.6	25.0
Schneider Electric SE	Capital Goods	40.7	FR	3.4%	16.7	15.7
Siemens AG	Capital Goods	99.5	DE	3.8%	14.8	13.7
Li & Fung Ltd	Consumer Durables & Apparel	4.4	HK	2.4%	14.6	13.5
H&R Block Inc	Consumer Services	4.9	US	2.3%	13.8	13.3
Intercontinental Exchange Inc	Diversified Financials	31.9	US	3.3%	19.6	17.5
State Street Corp	Diversified Financials	27.8	US	4.0%	13.9	12.5
WisdomTree Investments Inc	Diversified Financials	1.4	US	2.8%	41.3	35.4
Schlumberger Ltd	Energy	109.2	US	3.4%	70.3	40.2
Danaher Corp	Health Care Equipment & Servic	53.6	US	2.9%	22.0	20.1
Comcast Corp	Media	158.8	US	3.6%	18.9	17.1
Gilead Sciences Inc	Pharmaceuticals, Biotechnology	101.9	US	2.8%	6.7	6.8
Shire PLC	Pharmaceuticals, Biotechnology	58.3	US	3.3%	15.0	12.7
Applied Materials Inc	Semiconductors & Semiconductor	32.0	US	3.7%	17.2	13.5
Infineon Technologies AG	Semiconductors & Semiconductor	20.3	DE	3.4%	22.3	19.7
Intel Corp	Semiconductors & Semiconductor	177.6	US	3.9%	14.5	13.4
NVIDIA Corp	Semiconductors & Semiconductor	36.5	US	4.2%	43.4	29.7
QUALCOMM Inc	Semiconductors & Semiconductor	98.3	US	4.3%	16.0	14.5
Taiwan Semiconductor Manufacturing Co Ltd	Semiconductors & Semiconductor	157.6	TW	4.2%	16.0	14.8
Alphabet Inc	Software & Services	542.0	US	3.3%	23.5	19.9
Check Point Software Technologies Ltd	Software & Services	13.7	IL	3.1%	17.4	16.0
Cognizant Technology Solutions Corp	Software & Services	30.4	US	2.3%	14.1	12.9
PayPal Holdings Inc	Software & Services	49.2	US	3.5%	27.4	23.7
SAP SE	Software & Services	111.6	DE	3.7%	21.1	18.9
Cisco Systems Inc	Technology Hardware & Equipmen	157.2	US	3.4%	13.6	13.1
Lenovo Group Ltd	Technology Hardware & Equipmen	7.4	CN	2.3%	13.0	10.2
Samsung Electronics Co Ltd	Technology Hardware & Equipmen	205.6	KR	3.3%	11.1	9.4
VeriFone Systems Inc	Technology Hardware & Equipmen	1.8	US	2.1%	9.5	9.7

Average mkt. cap	88.2	Total portfolio	17.0	15.1
Median mkt. cap	40.7	Y-o-Y growth		12.5%

MSCI World Index	17.4	15.4
Fund premium / (discount)	-2.3%	-1.9%

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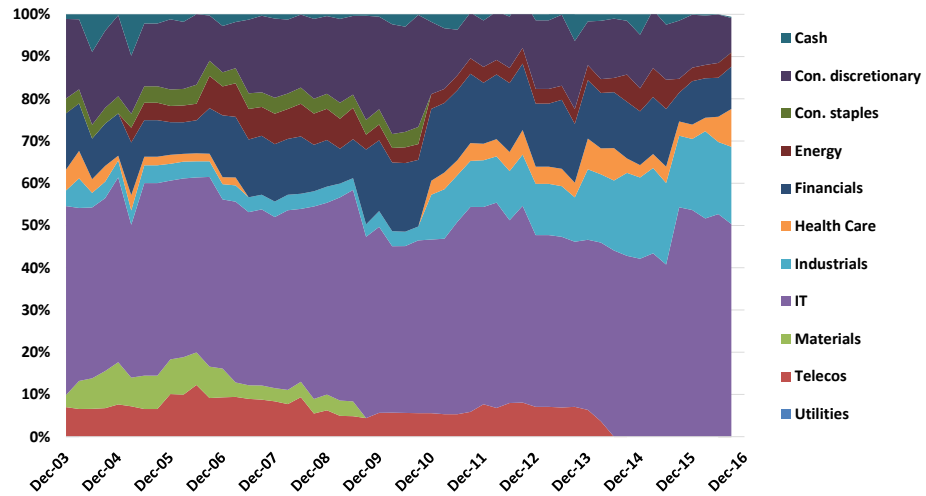
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Industry breakdown	% NAV
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Consumer Services	2.2%
Cash	0.9%
	100.0%

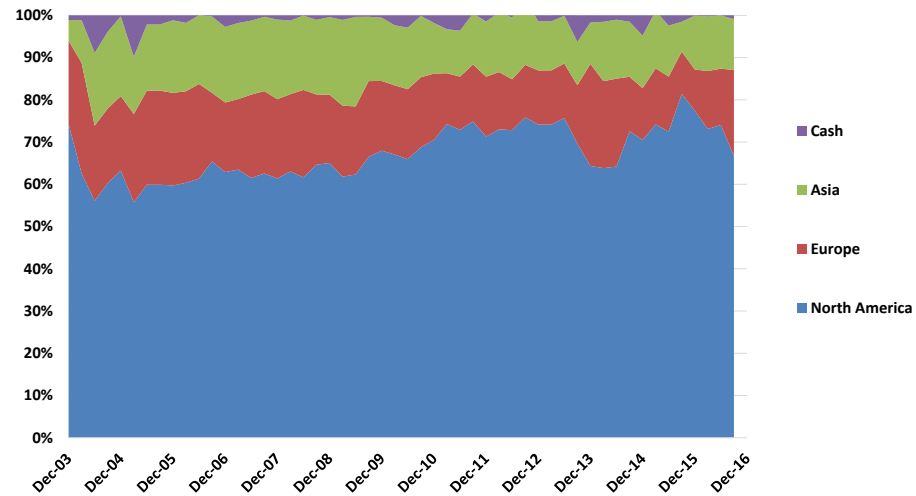
Market cap. (\$bn) breakdown	% NAV
<10	11.7%
10 to 50	38.5%
>50	48.9%
Cash	0.9%
	100.0%

Regional breakdown	% NAV
US	70.0%
Europe	14.0%
Asia	12.1%
MENA	3.0%
Cash	0.9%
	100.0%

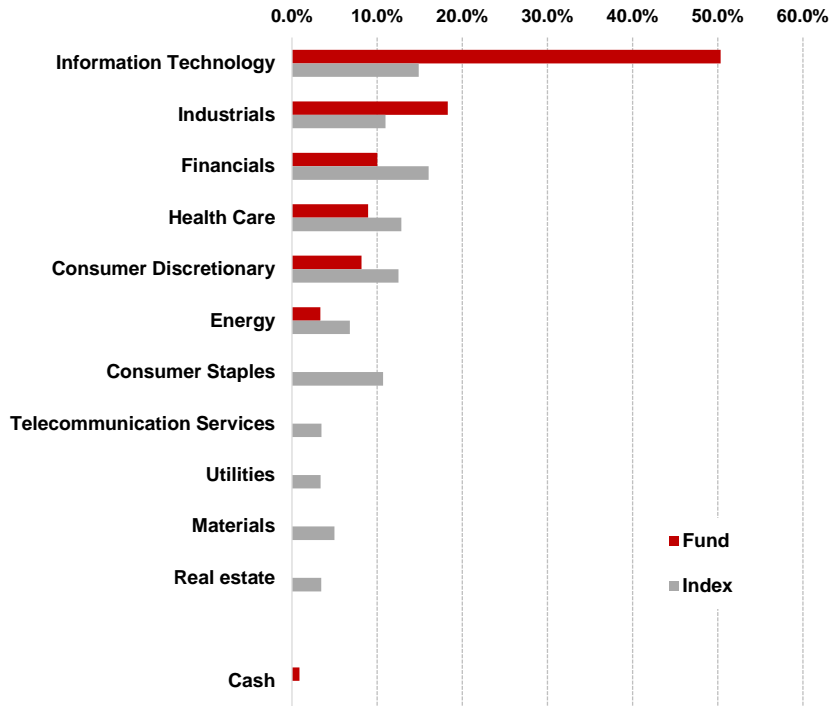
Sector allocation



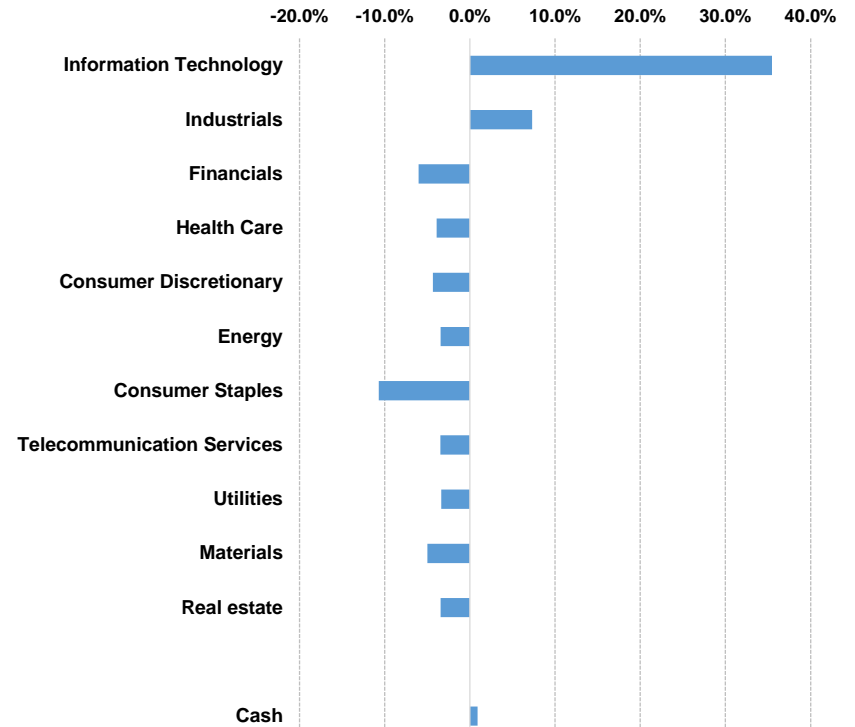
Geographic allocation



Fund allocation vs MSCI World Index



Over / under weights



* 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% or 1.24% 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 .99% or 1.24% expense cap. The expense limitation agreement may be terminated by the Board of the Fund at any time without penalty upon 60 days' notice.

This information is authorized for use when preceded or accompanied by a prospectus for the Guinness Atkinson Funds. The prospectus contains more complete information including investment objectives, risks, fees and expenses related to an ongoing investment in the Fund. Please read it carefully before investing.

Fund holdings and sector allocations are subject to change and are not recommendations to buy or sell any security.

Diversification does not assure a profit or protect against loss in a declining market

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. The Fund also invests in smaller companies, which will involve additional risks such as limited liquidity and greater volatility. The Fund is non-diversified meaning its assets may be concentrated in fewer individual holdings than diversified funds. Therefore, the Fund is more exposed to individual stock volatility than diversified funds.

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

Forward earnings are a company's forecasted, or estimated, earnings made by analysts or by the company itself.

Standard deviation is a measure of the dispersion of a set of data from its mean. The more spread apart the data, the higher the deviation. Cash flow is the total amount of money being transferred into and out of a business.

EV/EBITDA, also known as Enterprise or EBITDA Multiple, is a ratio used to determine the value of a company. The enterprise multiple looks at a firm as a potential acquirer would, because it takes debt into account.

Price to Earnings Ratio (P/E) is A valuation ratio of a company's current share price compared to its per-share earnings.

Return on Capital is a return from an investment that is not considered income.

Delta is the ratio comparing the change in the price of the underlying asset to the corresponding change in the price of a derivative. Sometimes referred to as the "hedge ratio."

Basis Points (BPS) is a unit that is equal to 1/100th of 1%,

Market capitalization (cap) is calculated by multiplying a company's shares outstanding by the current market price of one share. The investment community uses this figure to determine a company's size, as opposed to sales or total asset figures.

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

S&P GSCI (Goldman Sachs Commodity Index) is a composite index of commodity sector returns which represents a broadly diversified, unleveraged, long-only position in commodity futures.

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

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

One cannot invest directly in an index.

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