GUINNESS ATKINSON FUNDS

Energy brief

Tim Guinness

Will Riley

Jonathan Waghorn

April 2015

Commentary and Review by portfolio managers
Tim Guinness, Will Riley & Jonathan Waghorn

[Subscribe to other Guinness Atkinson E-mail services]

[View Archive Briefs]

REPORT HIGHLIGHTS

FUND NEWS

- *Fund size $63 million at end of March*

OIL

Brent and WTI fall very sharply over the quarter; global supply growth surpasses demand

Brent oil fell from $55.8/barrel(bbl) to $53.3 in the quarter while the WTI oil price fell from $53.3 to $47.6, expanding the Brent/WTI discount to around $6/bbl. The US oil directed drilling rig count fell sharply, hinting that a slowdown in production growth should follow in 2H 2015, but oil markets remain oversupplied by around 1m b/day for the timebeing.

NATURAL GAS

US gas price down; gas market remains structurally oversupplied but better than last quarter

Henry Hub gas fell during the quarter, down from $2.89 to $2.64. Strong US gas production continued, driven by production from the Marcellus, though production growth tailed off in March. A colder than average end to the 2014/15 winter, boosting heating demand for gas, helped to keep gas inventories around the 5 year average.

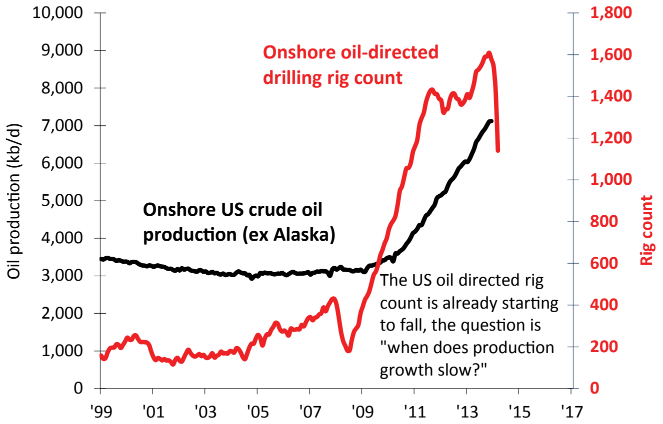
EQUITIES

Energy underperforms the broad market

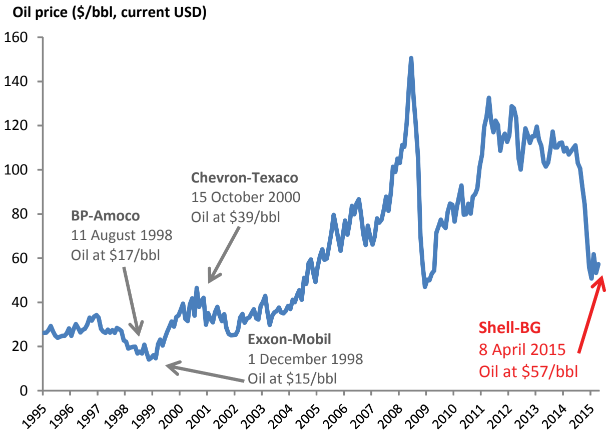
The first quarter of 2015 was reasonable for global equities, with energy equities underperforming in the face of a continued weak oil price. The MSCI World Energy Index was down 3.8%.

CHARTS OF THE QUARTER

1) US oil directed rig count (1999-2015)



2) Oil and gas large-cap mergers since 1995



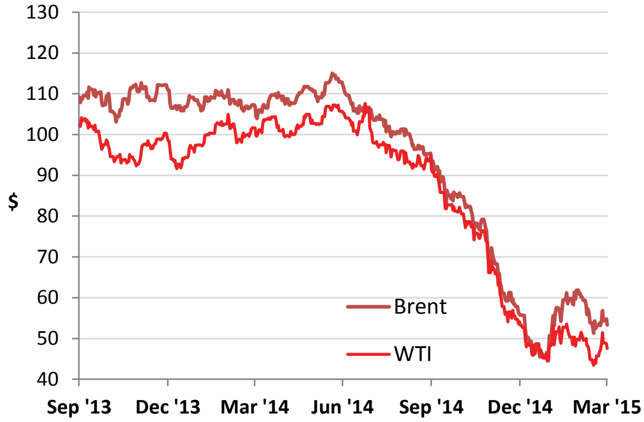
The number of rigs drilling oil wells in the United States has fallen dramatically. So far, 796 rigs have been dropped (49% off the October 2014 peak level), and we would expect to see the fall continue for a few more weeks yet, albeit at a slower pace. We expect US oil supply growth to slow sharply in the second half of 2015 as a result.

Royal Dutch Shell announced on April 8th, 2015 that they had reached agreement to purchase BG Group. Should it complete, it will be the biggest deal in the sector for nearly 15 years. Big oil has a good history of acquisition/mergers at or near lows in the oil price cycle. The 1998 oil price slump saw BP acquire Amoco in August 1998, followed by Exxon merging with Mobil in December 1998, both with oil below $20/bbl (real). Two years later, Chevron merged with Texaco, with oil still below $40/bbl. While Shell are paying a sizeable premium for BG, they identify a cyclical opportunity to improve oil (Brazil) and natural gas (LNG; East Africa) growth and returns as they look ahead to the next cycle.

1. First Quarter 2015 in Review

Oil market

Figure 1: Oil price (WTI and Brent $/barrel) 18 months September 30, 2013 to March 31, 2015



Source: Bloomberg LP

The West Texas Intermediate (WTI) oil price started January at $53.3/bbl and traded down over the quarter to close at $47.6. WTI has averaged $49 so far in 2015, having averaged $93.1 in 2014, $98.0 in 2013 and $94.1 in 2012.

The Brent oil price was a little more resilient, moving from $55.8 to $53.3 over the period. The gap between the WTI and Brent benchmark oil prices therefore widened over the quarter from $2/bbl to $6/bbl. The WTI-Brent spread averaged $5.8/bbl during 2014, having been well over $20/bbl at times since 2011.

Factors which weakened the WTI and Brent oil prices in March:

- **Build in US oil inventories**

Substantial builds in US crude oil inventories were reported throughout the quarter. The total inventory level ended March 109m (15%) above the 5 year average level. The broader monthly data from the International Energy Agency (IEA) covering OECD (Organization of Economic Co-operation & Development) oil inventories also highlights high levels of oil and oil product inventories, although not as extreme as the US weekly data.

- **Recovery in Libyan oil boosts OPEC's overall supply**

Organization of the Petroleum Exporting Countries (OPEC)-12 production grew by around 0.6 million(m) barrels(b)/day during the first quarter, according to Bloomberg. The growth came mainly from Iraq and Libya. Libyan oil production has been fluctuating for many months as ongoing civil unrest causes disruption to supplies. Production had fallen in Jan/Feb 2015 to around 0.2m b/day, but recent reports from Libya's National Oil Corporation in Tripoli suggest that supply had recovered to around 0.6m b/day by the end of March. Pre-civil war production averaged around 1.5m b/day. We regard recovering Libyan supply as a positive for the rebalancing of the oil market, since it removes a supply overhang and reduces OPEC's effective spare capacity.

- **Potential lifting of Iranian sanctions**

The prospect of a lifting of restrictions on Iranian oil exports was a much discussed topic towards the end of the quarter, as the likelihood of an agreement between Iran and the West (P5 +1) over its nuclear program improved. Iran and the P5+1 had been targeting a deal in principle by the end of March, and a final deal by the end of June. It may be that sanctions are increasingly difficult to enforce in any case as long as Iran maintains caps on its nuclear programme. Iran currently produces around 2.8m b/day, down by 0.9m b/day compared end of 2010.

Factors which strengthened the WTI and Brent oil prices in quarter:

- **Global demand indicators strong**

Global oil demand is showing clear signs of strengthening. While the IEA estimates that global oil demand grew by 0.7m b/day in 2014, the most recent data (for February 2015) indicates year over year growth in that month of around 1.5m b/day. What is more, the demand growth looks well balanced across the US, European and Asian economies. The latest data for China suggests year-on-year growth for January and February 2015 of nearly 7%, compared with around 2% in 2014.

- **North American oil directed rig count falling**

The number of rigs drilling oil wells in the United States fell sharply over the quarter. The Baker Hughes oil directed rig count has fallen from a peak of 1,609 rigs in October 2014 to 813 rigs at the end of March. So far, 796 rigs have been dropped (49% of the October 2014 peak level). Many of the initial rigs that were dropped were less efficient vertical rigs but many more horizontal rigs have dropped in recent weeks. Historically, rig count has been a lead indicator of future production levels.

- **Saudi-led airstrikes in Yemen**

A Saudi-led military coalition began a campaign of bombing against Iranian-back rebels in Yemen during the last week of March, which coincided with a small spike in the oil price as concerns were raised that military action could spill back into Saudi, or that the passage of 4m b/day of oil daily through the Bab ed-Mandeb strait (south of the Suez Canal) could be disrupted. On current evidence, actual disruption to oil supplies looks unlikely.

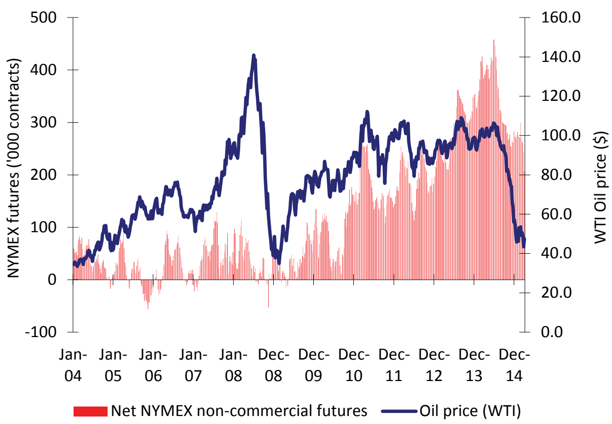
- **India develops its first strategic oil reserves**

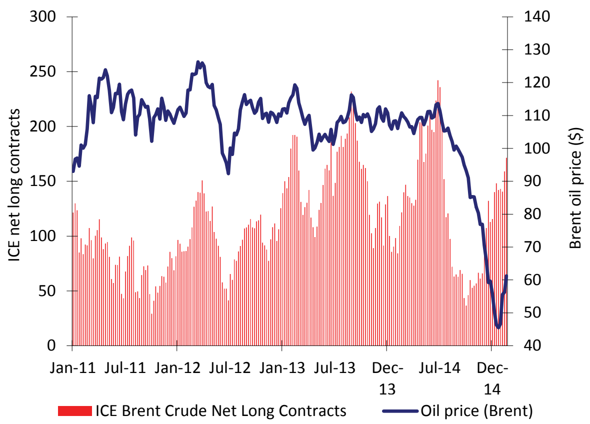
A small but symbolic data point: it was reported at the end of March that India bought the first oil for its new strategic petroleum reserve (SPR). India plans to have SPR capacity of around 30m barrels by the end of this year, and will become the second non-OECD country to establish an SPR after China. India currently consumes around 4m b/day of oil, compared to domestic production of around 1m b/day. We expect India's per capita consumption of oil to grow significantly over the next decade.

Speculative and investment flows

The New York Mercantile Exchange (NYMEX) net non-commercial crude oil futures open position (WTI) fell in the quarter, ending the month at 207,000 contracts long. We regard a net long position of 207,000 contracts as still relatively high but well down from its peak of 460,000 contracts in June 2014.
The equivalent non-commercial position for Brent oil, ICE (Intercontinental Exchange) Brent crude oil net long contracts, continued to rise, ending March at 193,000 contracts long.

Figure 2: NYMEX Non-commercial net futures contracts: WTI January 2004 – March 2015 ; ICE Brent crude net long contracts : January 2011 – March 2015

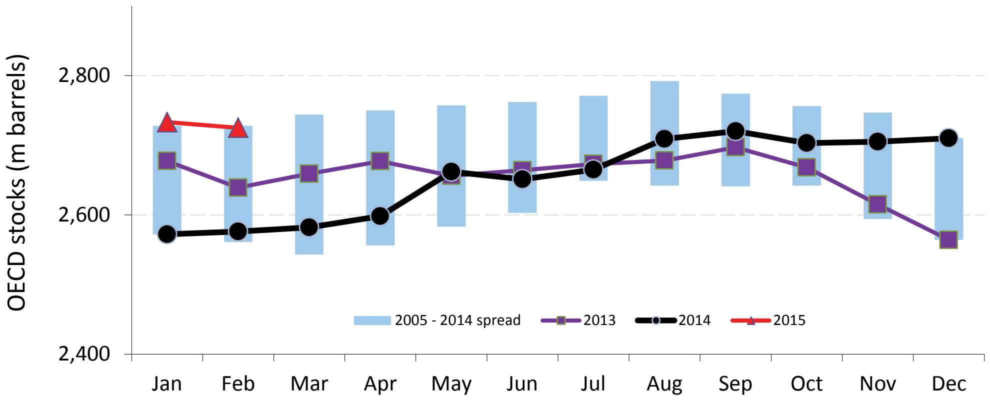




OECD stocks

OECD total product and crude inventories at the end of February (latest data point) were estimated by the IEA to be 2,725m barrels. The month on month decline in inventories of 8m barrels was well below the 10 year average decline (26m barrels), an indication of the oversupply that persists. This leaves inventories close at the top of the 10 year historic range.

Figure 3: OECD total product and crude inventories, monthly, 2004 to 2015



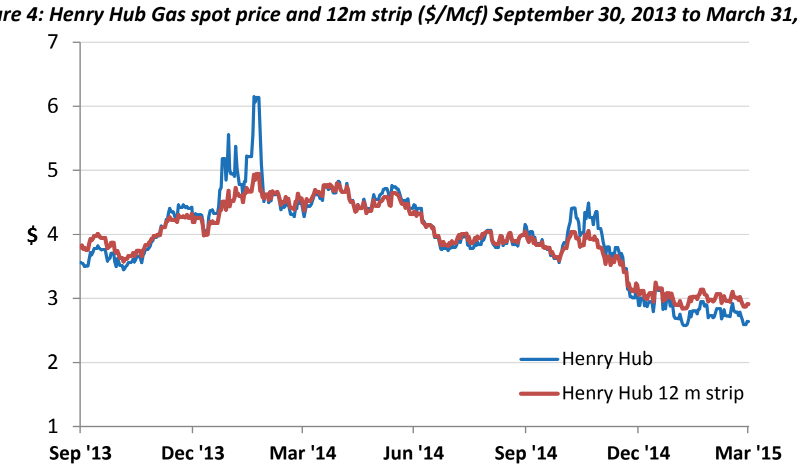
Source: IEA Oil Market Reports (March 2015 and older)

2. Natural Gas Market

The US natural gas price (Henry Hub front month) opened the year at $2.89 per Mcf (1000 cubic feet). The price traded briefly higher to over $3 before declining to close March at $2.64 per Mcf. Year to date, the spot gas price has averaged $2.87/mcf, which compares to an average gas price in 2014 of $4.26 (assisted by a very cold 2013/14 US winter). The price averaged $3.72 over the preceding four years (2010-2013), significantly below the average in each of the previous five years (2005-2009).

The 12-month gas strip price (a simple average of settlement prices for the next 12 months' futures prices) traded in a similar fashion, starting 2015 at $3.06, rising briefly then trading down to end the quarter at $2.91. The strip price averaged $3.92 in 2013, having averaged $3.28 in 2012, $4.35 in 2011, $4.86 in 2010 and $5.25 in 2009.

Figure 4: Henry Hub Gas spot price and 12m strip ($/Mcf) September 30, 2013 to March 31, 2015



Source: Bloomberg LP

Factors which weakened the US gas price in the quarter included:

- **US domestic production continues to grow rapidly**

Despite having the lowest number of rigs drilling for natural gas since 1993, US gas production contiues to grow. Gross gas production in December 2014 (the latest data point available) for the lower 48 states was up 1.4 Bcf/day (month over month) and 8.1 Bcf/day (year over year) to 83.0 Bcf/day. Growth in gas production has been driven by two main factors:

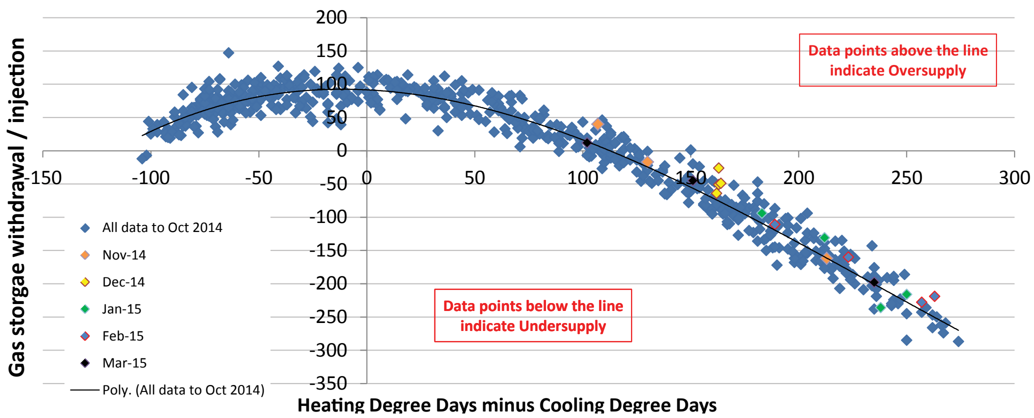
i) Accelerating supply in the Marcellus region in the north-east of the country, which has grown year-on-year by around 5.0 Bcf/day.

ii) Associated gas production (gas produced as a by-product to oil), estimated to have grown by around 2.5 Bcf/day in 2014.

- **Structurally oversupplied market**

Adjusting for colder than average weather in March 2015, the most recent injections of gas into storage suggest the market is, on average, about 1-2 Bcf/day oversupplied (as indicated by the black dots on the graph below). The market has been consistently oversupplied over recent months and has caused natural gas inventory levels to return to average levels, having been heavily depleted by cold weather last winter.

Figure 5: Weather adjusted US natural gas inventory injections and withdrawals



Factors which strengthened the US gas price in the quarter included:

- **Lower rig count**

The US gas drilling rig count has taken another leg down, despite starting the year a historically low level. The rig count fell in March by 47 rigs (17%) to 233 rigs. We expect a number of rigs that have been laid down were drilling for 'wet' gas, i.e. dry gas with a relatively cut of high natural gas liquids, where the economics have deteriorated due to falling NGL prices (linked to oil prices).

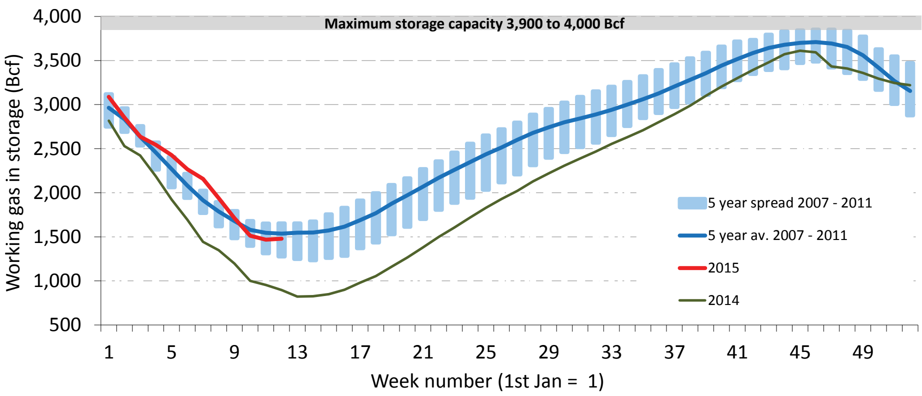
- **Lower oil prices**

The fall in oil prices in the second half of 2014 has settled somewhat in the first three months of 2015, with WTI now trading at around $45-50/bbl. This raises the prospect of a substantial slowdown in US shale oil production, which will have a knock-on effect to gas production. While oil and gas prices in the US are not explicitly linked, a significant proportion of onshore gas production growth in the last three years has come from 'associated' gas: gas produced as a by-product from shale oil wells. In 2014, we estimate that associated gas production growth will be around 2.5 Bcf/day. If US shale production growth starts to fall, so will associated gas growth.

Natural gas inventories

Swings in the supply/demand balance for US natural gas should, in theory, show up in movements in gas storage data. Natural gas inventories at the end of March were reported by the EIA to be 1,479 Bcf. The month on month decline was slightly steeper than average, owing to colder weather, leaving inventories just below the 5 year average level.

Figure 6: Deviation from 5yr gas storage norm vs gas price 12 month strip (H. Hub $/Mcf)



Source: Bloomberg; EIA (March 2015

The 2013/2014 winter saw gas in storage tighten very considerably as a result of extremely cold weather rather than any structural tightening. Coal regained some market share in the spring and summer of 2014 as a result of the higher natural gas prices, though gas in storage remains lower than average. A surge in onshore production, particularly from the Marcellus region, has since led to gas in storage levels above the previous year.

3. Manager's Comments

US oil production in a low price environment

Over the last few weeks, we have been busy digesting Q4 2014 results and 2015 guidance of companies in the global energy industry. To be honest, the results have been largely unexciting (and, with the move in the oil price, reflect a transitory environment) so the main focus has been on analyzing corporate budgets and projected production levels for 2015. Our biggest focus has again been on the North American E&P (exploration & production)-focused companies, to understand how they are changing their activity levels under a $50-60/bl oil price environment.

It is pretty clear that the 'brakes have been applied' for the North American E&P industry as a whole. In summary, oil and gas capital expenditure in 2015 is likely to be down 40% versus 2014 levels, and oil production growth is likely to be around one third of the level achieved in 2014. The best leading indicator of this rapid change in activity levels is the onshore US oil-directed rig count; which is already down 39% from its peak. The North American oil industry is rapidly adjusting to $50-60/bl oil prices, and, given their recent debt-fuelled years of higher oil prices, it isn't an easy adjustment.

As part of our monitoring, we were particularly struck by the 2015 capex (capital expenditure) and production guidance of EOG Resources Inc., the poster child of the US shale oil industry. EOG is one of the largest independent US oil and gas E&Ps that has delivered very strong production growth in recent years from an industry leading position in the Eagle Ford shale as well as good positions in the Bakken and the Permian. In summary, EOG is well placed relative to its peers to get through this period of weaker oil prices. Despite this strong relative position, EOG is cutting capex by 40% in 2015 (on average versus 2014) and expects 2015 production to be broadly flat on 2014 levels.

Our surprise relates to the fact that if EOG truly holds the 'best of the best' and the 'core of the core' acreage in the best shale plays around the United States, then what does it say about the production outlook for all the other shale oil companies out there and the larger companies that do not give specific guidance? If EOG is not expecting to grow, should we discount the guidance from the other companies as being too optimistic? EOG's announcement followed similar (although not as extreme) projections from Marathon Oil, Apache and Devon Energy which, together with EOG, represent around a million barrels per day of oil production. These four are big, well positioned companies with good acreage, strong technical skills, service company pricing power and strong balance sheets. They should be performing better than the average, so it is clear to us that US oil production growth is going to slow rapidly during 2015.

We have tracked the guidance of a large number of North American-focused E&P companies over the last few weeks and compiled the data below. The group that we have tracked represent around 5.7m barrels per day of oil and gas production and as a whole grew their oil production in 2014 by around 380k(1000) barrels/day (approx. 9% growth yoy – year-over-year). Based on company guidance, these companies are likely to grow in 2015 by around 120k b/day; around one third of the rate achieved in 2014. If these companies are a fair representation of the North American E&P industry as a whole, then it indicates that North American oil and liquids supply growth should slow from 1.6m b/day in 2014 to around 0.5m b/day in 2015.

North American Capex and Production tracker for 2015

	2014 actual				Guidance for 2015				Production mix
	Capex (US$mn)	Capex chg vs 2013	Production (kboe/d)	Production change	Capex (US$mn)	Capex chg vs 2014	Production (kboe/d)	Production change vs 2014	% oil and liquids
Devon Energy	6350	-7%	670	0%	5000	-21%	660	-1%	50%
Apache	9700	-8%	636	6%	3800	-61%	570	-10%	63%
EOG	8100	13%	595	17%	5000	-38%	575	-3%	63%
Occidental	8700	-3%	590	4%	5800	-33%	645	9%	71%
Suncor	7000	0%	536	2%	6600	-6%	570	6%	98%
Marathon Oil	5500	8%	425	-4%	3500	-36%	440	4%	70%
Husky Oil	5100	2%	341	9%	3400	-33%	340	0%	70%
Hess	5600	-10%	318	2%	4700	-16%	355	12%	75%
Cenovus	3000	-8%	278	4%	1900	-37%	278	0%	75%
Murphy Oil	3500	-13%	222	8%	2300	-34%	205	-8%	65%
Pioneer Natural Reso	3300	14%	185	7%	1850	-44%	205	11%	68%
Continental	4600	24%	170	25%	2700	-41%	201	18%	70%
Whiting (inc Kodiak)	4000	5%	153	24%	2000	-50%	162	6%	88%
Concho	2600	42%	112	21%	2000	-23%	132	18%	64%
Denbury	1000	-20%	75	7%	550	-50%	75	0%	100%
Baytex	780	40%	74	30%	615	-21%	90	21%	90%
MEG	1200	20%	70	95%	305	-75%	70	0%	100%
Rosetta	1200	40%	66	32%	950	-21%	78	18%	63%
Oasis	1400	40%	46	35%	800	-43%	49	8%	90%
Halcon	1500	-32%	42	31%	900	-40%	49	17%	50%
Whitecap	330	74%	32	62%	245	-26%	37.5	17%	76%
Laredo	1100	47%	32	4%	525	-52%	35.8	12%	100%
Legacy Oil+Gas	400	25%	23.1	22%	238	-41%	24.5	6%	85%
Diamondback	450	0%	18.8	159%	425	-6%	27	44%	75%
Goodrich	320	28%	11.7	-11%	175	-46%	12	3%	53%
NAM	**86730**	**4%**	**5722**	**9%**	**56278**	**-35%**	**5886**	**3%**	**71%**

	2014 oil growth (kboe/d)			Est. 2015 oil growth (kboe/d)
Sample companies:	**386**			**120**
		Implied sample 2015 growth as % of 2014 growth	**31%**	
Total NAM (US & Canada)	**1600**	*Implied total NAM growth*		**498**

The falling oil directed rig count gives us confidence that activity levels are being cut, but when do we see production growth start to slow? Timing the exact link between capex falling, rigs dropping and production slowing is very difficult and we would highlight that this is the first time that the oil industry has ever had to adjust shale oil drilling and production activities to sharply lower oil prices. Post EOG's announcement, we are more confident that US production growth will fall off in the second half of 2015, with 2015 being a year of substantially less growth than 2014. However, the actual data confirming this roll over in production growth is not expected for two or three more months yet. The most recent monthly production data for December 2014 (published a few days ago) showed record year on year production growth from the US onshore, yet the oil rig count had already started falling by then. One positive is that if the downturn in production growth takes longer than expected to come through in 2015 then it is likely that 2016 production will also be below current expectations. It doesn't look to us like the industry can have $50-60/bl oil and deliver significant US oil production growth.

Shale production can clearly be 'switched on' and 'switched off' in future years depending on the level of oil price, it is the marginal source of supply in the near to medium term. This will continue to be the main source of non-OPEC oil growth as well – we don't expect to see growth anywhere else in non-OPEC given the low level of oil prices. It is apparent that $50-60/ bl is not enough for this industry to grow and that $100/bl+ in the near term brings too much growth. We are therefore comfortable with oil prices returning to $75-80 per barrel in the next twelve months with Saudi seeking higher prices thereafter depending upon the profitability and growth of North American unconventional oil production. One thing we do know is that it won't be a straight line recovery.

Lessons from energy conference season

Late February and March is a busy time for the energy sector, with a number of investor conferences being held, mostly in the US. We thought we would take the opportunity this month to summarize some of the key feedback from the conferences and, as importantly, to highlight some of the themes that were not discussed so prominently at each event. We have used feedback provided by Credit Suisse (CS), Simmons & Company International (SCI) and Howard Weil (HW) from their respective conferences to draw out some of the key current themes in the energy sector.

Interest levels and attendance: lots of interest in the energy sector at the moment, and it seems to be coming as much from 'generalist investors' as it is from 'energy specialists'. HW noted standing room only in some presentations, while CS saw 28% higher attendance than in 2014 with an increased level of involvement from more 'generalist' investors. Clearly the energy sector is gaining some attention at the moment. In terms of investor meetings, Halliburton was the most requested company meeting at the CS conference, with some investors sitting on the floor during the main address by the President of the company.

Oil production response from North America: there seems little debate over the fact that US oil production growth will adjust in 2015, but there is significant debate over the pace of the adjustment. As SCI noted, "the industry is currently undergoing the first significant recalibration in oil prices and upstream reinvestment since the birth of unconventional oil in 2009. The degree of price elasticity and production resilience are THE prominent unknowns ...". The outcome in 2015 is still very unclear, and few companies were willing to give any growth indications for 2016 as the combination of zero hedging, lower reinvestment rates and higher declines on existing production will likely hamper corporate production growth rates.

Investors' near-term oil price trajectory: we take investor and conference surveys with a pinch of salt, but were interested to see the outcome of the CS survey of conference attendees. Sentiment does seem to be pretty poor; most investors thought at the time of the survey (late February) that oil would reach new lows before ending 2015 at around $60 per barrel. However, it also seemed that most investors were already positioned for lower oil prices, and had not yet taken positions in the sector.

Companies' near term oil price trajectory: there was a clear divergence in opinion from the companies attending the conferences, and we sense a bit of gamesmanship going on of course. ExxonMobil led the views of the SuperMajors, expecting a "weaker for longer" or "U shaped" oil price trajectory, with Brent averaging around $55 per barrel for the next few years. In addition, BP added that US oil storage at Cushing could be full by April and that WTI could test $30 per barrel. In contrast, EOG set out the view of many of the North American E&Ps that supply and demand would rebalance more sharply, prompting a "V shaped" oil price recovery with prices substantially higher by the end of the year. We can't help but think that each party is "talking their own book", but we were interested to note that there is clear divergence of opinion on how the new NAM (North American) shale oil industry will react to the recent oil price weakness.

Production outlook from the rest of non-OPEC: SCI noted that the "forgotten variable in the rebalancing algorithm is international oil production", implying that while investors focus so heavily on the unfolding North American story, little attention is being paid to the rest of non-OPEC. New projects continue to be cancelled and delayed, and SCI concluded that "the austerity agenda… will eventually have significant consequences on forward oil supply". We were particularly drawn to a comment made by an industry veteran at one of the conferences, that "small streams make big rivers", implying that lots of small delays, cancellations and production losses will ultimately combine to have a meaningful negative impact on non-OPEC production.

Cost deflation: according to HW, "Drilling costs have declined very quickly and, in most instances, have declined faster than previously estimated in the capital budgets. All in drilling costs have declined by approximately ~15%, if not more, with the potential to reach 30%". The remainder of 2015 will show us whether the savings get consumed in greater levels of activity or lower capex budgets (with more debt being paid down). We would hope for the latter but fear the former, especially if oil prices get above $65 per barrel by year end. At the CS conference, a number of oil services capital equipment companies reported that major oil companies are starting to change years of behaviour and show a willingness to start working with service, equipment and engineering firms earlier in the offshore development effort. This will be good in terms of reducing per unit development costs and is a sign of progress for the Majors in their "value over volume" strategies.

Merger & Acquisition (M&A) activity: a consistent theme at all the conferences although (as ever) the spread between the prices of buyers and sellers is still too wide. All three European Super Majors (BP, RD/Shell and TOTAL) highlighted at the CS conference that "they want to use this period of weakness to strengthen their long term businesses [via M&A]…"

Offshore activity is going to remain in the doldrums for a while longer yet as offshore projects (which were already less economic than many of the onshore unconventional projects) now suffer further under the lower oil price environment. CS noted that "26 Douglas-Westwood [DW] rigs have been stacked to-date and investors at the conference seemed to expect 100+ to be stacked in the end" with "offshore rigs and projects running in to headwinds that could take a couple of years to fix". Seems to be more pain ahead as far as we can see…

Oilfield services continue to suffer a negative near-term outlook. CS reported that "the overall tone from the conference for the Oilfield Services group was increasingly negative, as companies reported increased pricing pressure, a record fall in the activity barometer of the rig count…" Management teams were "talking about some continuing duration of slower activity" and that "things are going to get worse before they get better". We say that this is typical boom/bust behaviour for the group and we fully expect to see activity and pricing rebound once the oil market starts to rebalance.

Price elasticity of crude oil demand: while there is clear consensus that North American oil production growth will slow rapidly, SCI commented that "there really shouldn't be much debate about demand elasticity and normalization as leading edge data corroborates that meaningful improvement is unfolding. US demand is accelerating, Europe is stabilizing, Asia is inflecting". We would add that recent monthly data shows global oil demand growth is currently running at a rate of around 1.5m b/day versus 0.7m b/day growth in 2014.

And five topics that did not grab headlines at the conferences…

We found it interesting that US natural gas prices and International natural gas prices did not get mentioned in the conference feedback. Often the topics that are least discussed provide the most interesting opportunities, and we believe that US gas prices (at $2.60 per mcf) are low enough to incentivize switching from coal-fired power generation to natural gas-fired power generation. We have recently added Southwestern to the portfolio on the basis that gas prices improve from here.

In addition, there was no discussion about oil hedging, which we take to mean that North American E&P companies are choosing not to hedge forward production based on the current futures curve. We are not surprised (with the 12 month WTI strip averaging $54 per barrel) since we believe that the actual costs of unconventional oil are higher than many believe and we think that the 12 month strip needs to be around $65/bl to incentivize hedging activity.

Also of interest was that no companies appeared to discuss the potential benefits of lower taxation as a result of lower oil prices (tax is a big component of all-in costs of supply), and no-one ventured to predict future OPEC strategy – probably a wise move given the group's change of strategy in November 2014.

3. Performance – Guinness Atkinson Global Energy Fund

The main index of oil and gas equities, the MSCI World Energy Index, was down by 3.76% in the first quarter of 2015. The S&P 500 Index was up by 0.95% over the same period. The Fund was down by 2.68% over this period, outperforming the MSCI World Energy Index by 1.1% (all in US dollar terms).

Within the Fund, the first quarter's stronger performers were Valero, Trina Solar, JA Solar, Newfield and Carrizo. Poorer performers were Soco, Helix, Shawcor, Chesapeake and Unit.

Performance as of March 31, 2015

Inception date 6/30/04	Full Year 2010	Full Year 2011	Full Year 2012	Full Year 2013	Full Year 2014	YTD 2015	1 year (annualized)	5 years (annualized)	10 years (annualized)	Since Inception (annualized)
Global Energy Fund	16.63%	-13.16%	3.45%	24.58%	-19.62%	-2.68%	-25.80%	0.30%	6.16%	9.26%
MSCI World Energy Index	12.73%	0.71%	2.54%	18.98%	-10.93%	-3.76%	-15.88%	3.68%	5.31%	7.68%
S&P 500 Index	15.06%	2.09%	15.99%	32.36%	13.66%	0.95%	12.70%	14.44%	8.00%	7.90%

Source: Bloomberg
Gross expense ratio: 1.30%

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 www.gafunds.com/performance.asp or call (800) 915-6566.

The Fund imposes a 2% redemption fee on shares held for less than 30 days.
Total returns reflect a fee waiver in effect and in the absence of this waiver, the total returns would be lower.

Performance data does not reflect the redemption fee and, if deducted, the fee would reduce the performance noted

4. Portfolio – Guinness Atkinson Global Energy Fund

Buys/Sells

In February, we sold our position in Ultra Petroleum and switched into Southwestern. Southwestern is a 100% natural gas oriented exploration and production company with assets onshore United States. The company was one of the first to develop onshore shale gas (developing the Fayetteville field) and it has since expanded operations into the Marcellus field, delivering consistent production and high quality operations. We believe that low natural gas prices (front month natural gas prices at $2.80/mcf and the 12 month strip at $3.2/mcf) together with a weak equity valuation for

Southwestern (post the acquisition of Marcellus gas assets from Chesapeake) provides a good entry point for Southwestern shares.

We have sold our position in Ultra Petroleum to fund the purchase of Southwestern, partly increasing our exposure to natural gas E&Ps in the portfolio in the process. We were increasingly concerned by the financial leverage of Ultra Petroleum post its recent acquisition of assets from RD/Shell and felt that Southwestern offered offered similar natural gas price exposure with less balance sheet

Sector Breakdown

The following table shows the asset allocation of the Fund at March 31, 2015.

(%)	31 Dec 2008	31 Dec 2009	31 Dec 2010	31 Dec 2011	31 Dec 2012	31 Dec 2013	31 Dec 2014	31 Mar 2015	*Change YTD*
Oil & Gas	**96.4**	**96.1**	**93.2**	**98.5**	**98.6**	**95.6**	**95.3**	**94.2**	***-1.4***
Integrated	53.7	47.2	41.2	39.6	39.1	39.6	37.5	36.5	*-3.1*
Exploration and production	28.7	32.0	36.9	41.5	41.6	36.8	38.1	38.8	*2.0*
Drilling	5.2	8.4	6.3	6.0	7.4	6.8	3.1	2.5	*-4.3*
Equipment and services	6.4	5.4	5.3	6.6	7.1	9.0	13.1	11.9	*2.9*
Refining and marketing	2.4	3.1	3.5	4.8	3.4	3.4	3.5	4.5	*1.1*
Coal and consumables	**2.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Solar	**0.0**	**0.0**	**3.2**	**1.2**	**1.2**	**2.8**	**3.5**	**4.3**	**1.5**
Construction and engineering	**0.4**	**0.4**	**0.4**	**0.4**	**0.6**	**0.9**	**0.0**	**0.0**	**-0.9**
Cash	**0.9**	**3.5**	**3.2**	**-0.1**	**-0.4**	**0.7**	**1.2**	**1.5**	**0.8**
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**0.0**

Source: Guinness Atkinson Asset Management
Basis: Global Industry Classification Standard (GICS)

Guinness Atkinson Global Energy Fund Portfolio

The table below shows the fund valuation in terms of historical and forward (analyst consensus estimates) price/earnings ratios versus the S&P500 Index.

	2010	2011	2012	2013	2014	2015
Guinness Atkinson Global Energy Fund P/E	9.1	*9.0*	*9.1*	9.7	10.2	20.2
S&P 500 P/E	24.7	21.4	21.4	19.3	18.3	17.5
Premium (+) / Discount (-)	*-63%*	*-58%*	*-57%*	*-50%*	*-44%*	*15%*
Average oil price (WTI $)	$79.5/bbl	$95/bbl	$94/bbl	$98/bbl	$93/bbl	

Source: Standard and Poor's; Guinness Atkinson Asset Management

Portfolio Holdings

Our integrated and similar stock exposure (c.38%) is comprised of a mix of mid cap, mid/large cap and large cap stocks. Our four large caps are Exxon, BP, Royal Dutch Shell and Total. Mid/large and mid-caps are ENI, Statoil, Hess and OMV. At December 31 2014 the median P/E ratios of this group were 10.9x/19.8x 2014/2015 earnings. We have one Canadian integrated holding, Suncor. The company has significant exposure to oil sands in addition to its downstream assets.

Our exploration and production holdings (c.38%) give us exposure most directly to rising oil and natural gas prices. We include in this category non-integrated oil sands companies, as this is the Global Industry Classification Standard (GICS) approach. The stock here with oil sands exposure is Canadian Natural Resources. The pure E&P stocks are all largely in the US (Newfield, Devon, Chesapeake, Carrizo, Stone, Southwestern and QEP Resources), with three more US names (Apache, Occidental and Noble) which have significant international production and two (Enquest and Bankers Petroleum) which are North Sea and European focused respectively. One of the key metrics behind a number of the E&P stocks held is low enterprise value / proven reserves. Almost all of the E&P stocks held also provide exposure to North American natural gas and include three of the industry leaders (Devon, Southwestern and Chesapeake).

We have exposure to four (pure) emerging market stocks in the main portfolio, though two are half-positions. Two are classified as integrateds by the GICS (Gazprom and PetroChina) and two as E&P companies (Dragon Oil and SOCO International). Gazprom is the Russian national oil and gas company which produces approximately a quarter of the European Union gas demand and trades on 3.2x 2015 earnings. PetroChina is one of the world's largest integrated oil and gas companies and has significant growth potential and advantages as a Chinese national champion. Dragon Oil is an oil and gas E&P company focused on offshore Turkmenistan in the Caspian Sea and trades on 14.8x 2015 earnings. SOCO International is an E&P company with production in Vietnam and exploration interests across East Africa in Angola, Democratic Republic of Congo and the Republic of Congo.

We have useful exposure to oil service stocks, which comprise just under 17% of the portfolio. The stocks we own are split between those which focus their activities in North America (land driller Unit Corp) and those which operate in the US and internationally (Helix, Halliburton, Wood Group and Shawcor).
Our independent refining exposure is currently in the US in Valero, the largest of the US refiners. Valero has a reasonably large presence on the US Gulf Coast and is benefitting from the rise in US exports of refined products seen in recent times.

Our alternative energy exposure is currently a single unit split equally between two companies: JA Solar and Trina Solar. Both companies are Chinese solar cell and module manufacturers. They were loss making in 2012 and 2013 due to sharp falls in solar prices during the year but returned to profitability during 2014.

Portfolio at March 31, 2015

Guinness Atkinson Global Energy Fund 31 March 2015

Stock	ID_ISIN	Curr.	Country	% of NAV	2007 B'berg mean PER	2008 B'berg mean PER	2009 B'berg mean PER	2010 B'berg mean PER	2011 B'berg mean PER	2012 B'berg mean PER	2013 B'berg mean PER	2014 B'berg mean PER	2015 B'berg mean PER
Integrated Oil & Gas													
Exxon Mobil Corp	US30231G1022	USD	US	3.30	11.68	10.0	21.9	14.2	10.1	10.8	11.5	11.6	22.0
Royal Dutch Shell PLC	GB00B03MLX29	EUR	NL	3.20	6.0	6.9	13.7	9.7	7.2	7.1	9.4	8.3	15.3
BP PLC	GB0007980591	GBP	GB	3.46	5.9	4.7	8.3	5.7	5.7	7.1	8.8	10.2	18.8
Total SA	FR0000120271	EUR	FR	3.23	6.2	5.0	12.9	10.1	9.1	8.6	9.6	9.8	14.8
ENI SpA	IT0003132476	EUR	IT	3.27	6.2	5.7	11.3	8.6	8.2	8.0	12.8	14.9	28.0
Statoil ASA	NO0010096985	NOK	NO	3.36	10.3	7.7	14.1	10.6	9.1	8.6	9.5	10.7	22.4
Hess Corp	US42809H1077	USD	US	3.25	11.4	9.3	35.4	13.1	11.3	11.5	11.9	16.3	nm
OMV AG	AT0000743059	EUR	AT	3.62	4.8	4.0	10.2	6.4	8.0	5.6	6.9	8.4	14.9
				26.69									
Integrated Oil & Gas - Canada													
Suncor Energy Inc	CA8672241079	CAD	CA	3.25	15.6	11.6	35.0	23.3	10.3	11.5	11.6	11.6	54.5
Canadian Natural Resources Ltd	CA1363851017	CAD	CA	3.22	18.4	11.9	16.1	16.0	16.8	24.4	17.3	11.3	209.8
				6.47									
Integrated Oil & Gas - Emerging market													
PetroChina Co Ltd	CNE1000003W8	HKD	HK	3.44	8.5	10.9	11.6	9.3	9.2	10.6	11.7	11.6	20.9
Gazprom OAO	US3682872078	USD	RU	3.05	nm	nm	4.9	3.9	2.6	2.7	2.6	3.2	2.9
				6.49									
Oil & Gas E&P													
Apache Corp	US0374111054	USD	US	3.39	7.0	5.4	10.9	6.5	5.1	6.3	7.4	10.8	nm
Occidental Petroleum Corp	US6745991058	USD	US	3.27	13.9	8.2	19.6	13.0	8.8	10.5	10.5	12.6	52.7
QEP Resources Inc	US74733V1008	USD	US	1.23	nm	nm	nm	15.1	12.8	16.8	14.9	14.8	nm
Southwestern Energy Co	US8454671095	USD	US	3.02	36.5	15.1	15.5	13.5	12.6	16.8	11.6	10.3	28.1
Devon Energy Corp	US25179M1036	USD	US	3.61	8.7	6.1	16.7	10.2	10.0	18.7	14.2	11.7	33.7
Chesapeake Energy Corp	US1651671075	USD	US	2.80	4.4	4.0	5.7	4.8	5.1	29.2	8.6	9.1	97.7
Noble Energy Inc	US6550441058	USD	US	3.64	18.0	13.9	28.9	23.6	18.6	21.4	15.9	20.9	105.2
Newfield Exploration Co	US6512901082	USD	US	4.72	10.9	11.2	6.9	7.6	8.6	14.5	19.5	19.0	36.9
Stone Energy Corp	US8616421066	USD	US	1.21	2.9	2.6	6.4	7.2	3.8	5.3	5.2	30.8	nm
Carrizo Oil & Gas Inc	US1445771033	USD	US	2.37	70.9	27.6	33.7	39.0	48.3	34.1	22.4	22.4	41.9
				29.26									
International E&P													
Bankers Petroleum Ltd	CA0662863038	CAD	CA	1.10	nm	nm	714.5	31.5	11.3	10.9	7.5	6.6	24.9
Dragon Oil PLC	IE0000590798	GBP	GB	1.87	14.8	12.3	17.9	12.9	7.0	7.1	8.0	6.6	15.4
EnQuest PLC	GB00B635TG28	GBP	GB	0.81	nm	nm	nm	5.3	6.1	1.8	2.0	3.7	16.5
Soco International PLC	GB00B572ZV91	GBP	GB	0.92	20.1	21.7	13.5	18.6	12.0	3.3	3.5	5.4	19.9
				4.69									
Drilling													
Unit Corp	US9092181091	USD	US	2.53	4.9	4.1	10.6	9.2	6.8	6.7	7.6	6.6	nm
				2.53									
Equipment & Services													
Halliburton Co	US4062161017	USD	US	3.54	17.3	20.2	33.5	21.8	13.1	14.8	14.2	11.1	30.1
Helix Energy Solutions Group Inc	US42330P1075	USD	US	2.16	4.5	6.1	25.8	28.3	10.0	8.0	13.9	7.7	21.3
ShawCor Ltd	CA8204391079	CAD	CA	2.53	22.0	18.1	19.3	28.2	48.2	15.8	9.7	13.9	16.3
John Wood Group PLC	GB00B5N0P849	GBP	GB	3.47	24.5	17.5	23.3	24.2	15.9	11.1	9.5	9.7	10.7
				11.70									
Solar													
Trina Solar Ltd	US89628E1047	USD	US	2.33	16.7	10.0	7.4	3.6	447.8	nm	nm	15.0	10.0
JA Solar Holdings Co Ltd	US4660902069	USD	US	2.02	12.1	5.0	nm	1.3	nm	nm	nm	9.8	7.9
				4.35									
Oil & Gas Refining & Marketing													
Valero Energy Corp	US91913Y1001	USD	US	4.53	8.2	11.7	nm	40.1	16.0	13.0	15.5	10.5	9.7
				4.53									
Construction & Engineering													
Cluff Natural Resources PLC	GB00B6SYKF01	GBP	GB	0.30	nm	nm	nm	nm	nm	nm	nm	nm	nm
JKX Oil & Gas PLC	GB0004697420	GBP	GB	0.41	0.5	0.6	1.0	1.2	1.4	1.8	3.7	9.5	nm
Ophir Energy PLC	GB00B24CT194	GBP	GB	0.15	nm	nm	nm	nm	nm	nm	nm	3.3	nm
Shandong Molong Petroleum Machinery Co Ltd	CNE1000001N1	HKD	HK	0.15	10.1	6.7	18.6	7.3	10.1	nm	nm	nm	nm
Sino Gas & Energy Holdings Ltd	AU000000SEH2	AUD	AU	0.43	nm	nm	nm	nm	nm	190.0	nm	190.0	95.0
Triangle Petroleum Corp	US89600B2016	USD	US	0.20	nm	nm	nm	nm	nm	nm	nm	8.7	9.4
Trinity Exploration & Production PLC	GB00B8JG4R91	GBP	GB	0.05	nm	nm	nm	nm	nm	nm	0.6	nm	nm
WesternZagros Resources Ltd	CA9600081009	CAD	CA	0.11	nm	nm	nm	nm	nm	nm	nm	nm	nm
				1.81									
			Cash	1.47									
			Total	100									
			PER		9.1	8.0	13.6	8.8	9.1	9.6	9.8	10.3	19.7
			Med. PER		10.6	8.7	14.8	10.4	10.0	10.7	9.6	10.6	21.3
			Ex-gas PER		9.2	8.3	14.9	8.8	9.5	8.9	9.5	9.7	16.7

Research holding

The Fund's portfolio may change significantly over a short period of time; no recommendation is made for the purchase or sale of any particular stock.

Tim Guinness

Chairman & Chief Investment Officer

Will Riley & Jonathan Waghorn

Fund investment team

For more information on the factors affecting the global energy market read our Global Energy Outlook.

Commentary for our views on Dividends, Alternative Energy and Asia markets is available on our website. Please click here to view.

The Fund's holdings, industry sector weightings and geographic weightings may change at any time due to ongoing portfolio management. References to specific investments and weightings should not be construed as a recommendation by the Fund or Guinness Atkinson Asset Management, Inc. to buy or sell the securities. Current and future portfolio holdings are subject to risk.

Mutual fund investing involves risk and loss of principal is possible. The Fund invests in foreign securities which will involve greater volatility, political, economic and currency risks and differences in accounting methods. The Fund is non-diversified meaning it concentrates its assets in fewer individual holdings than a diversified fund. Therefore, the Fund is more exposed to individual stock volatility than a diversified fund. The Fund also invests in smaller companies, which involve additional risks such as limited liquidity and greater volatility. The Fund's focus on the energy sector to the exclusion of other sectors exposes the Fund to greater market risk and potential monetary losses than if the Fund's assets were diversified among various sectors. The decline in the prices of energy (oil, gas, electricity) or alternative energy supplies would likely have a negative effect on the funds holdings.

MSCI World Energy Index is the energy sector of the MSCI World Index (an unmanaged index composed of more than 1400 stocks listed in the US, Europe, Canada, Australia, New Zealand, and the Far East) and as such can be used as a broad measurement of the performance of energy stocks.

The S&P 500 Index is a broad based unmanaged index of 500 stocks, which is widely recognized as representative of the equity market in general.

MSCI World Index is a capitalization weighted index that monitors the performance of stocks from around the world.

One cannot invest directly in an index.

Price to earnings (P/E) ratio (PER) reflects the multiple of earnings at which a stock sells and is calculated by dividing current price of the stock by the company's trailing 12 months' earnings per share.

Earnings per share (EPS) is calculated by taking the total earnings divided by the number of shares outstanding.

Price to discounted cash flow is a valuation method used to estimate the attractiveness of an investment opportunity.

Free cash flow (FCF) represents the cash that a company is able to generate after laying out the money required to maintain or expand its asset base.

Basis Point (BSP) is a unit that is equal to 1/100th of 1%, and is used to denote the change in a financial instrument.

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. 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.

Distributed by Quasar Distributors, LLC