Guinness Atkinson
Global Energy Brief
October 2018

REPORT HIGHLIGHTS

OIL

Brent and WTI mixed over the quarter but strengthening sharply in September

Oil prices, a key driver of the sector, were mixed over the quarter. The Brent oil price started the quarter at $79/bl and dipped during July and the first half of August to a low of $70/bl by mid quarter. The price rebounded sharply to close the quarter at $82/bl, averaging $75/bl over the quarter (vs $68/bl in the previous quarter). The West Texas Intermediate (WTI) oil price traded in a weaker fashion, moving from $74/bl to $73/bl over the quarter.

NATURAL GAS

US gas price still range bound despite inventories being at ten year lows

The US natural gas price (Henry Hub front month) opened July at $2.92/mcf (1,000 cubic feet), and traded in a tight range below $3/mcf before strengthening and ending the quarter at $3.01/mcf. Inventories are at 10 year low levels but supply is responding (up 10.5 Bcf/day yoy). European gas prices are up and staying elevated on high demand and marginal LNG cargoes being diverted into Asia.

EQUITIES

Energy underperforms the broad market

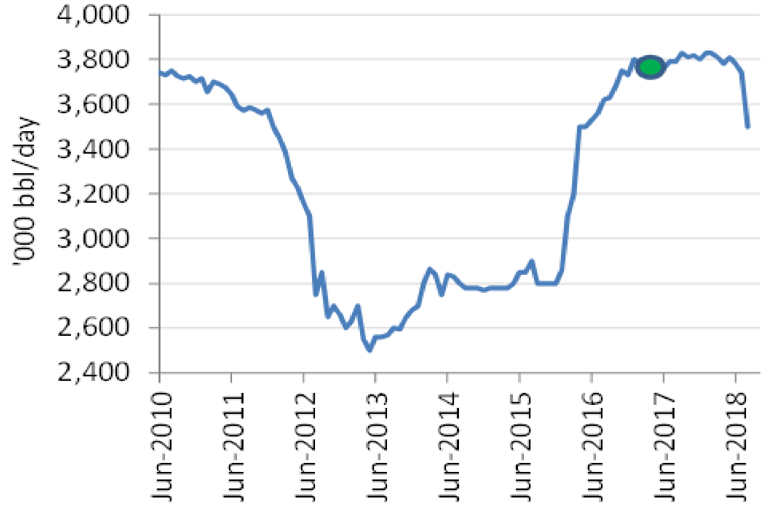
The main index of oil and gas equities, the MSCI World Energy Index, was up by 0.78% in the third quarter of 2018. The S&P 500 Index was up by 7.71% over the same period. The Guinness Atkinson fund was up by 0.71% over this period (all in US dollar terms).

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 https://www.gafunds.com/our-funds/#fund_performance or call (800) 915-6566.

CHART OF THE QUARTER – Iranian oil exports already down sharply – but more to come

Tanker tracking data for the first three weeks of September suggest that Iran managed export loading of just under 2m b/day, well below the April 2018 high of 2.85m b/day. Actual exports into the world market are likely running well below this level, given the significant volume that is building up in floating storage offshore Iran. In light of rising spot prices, the US maybe considering some imports waivers, but we still expect overall production to fall by around 1m b/day once the sanctions formally start in November.

Iranian oil production



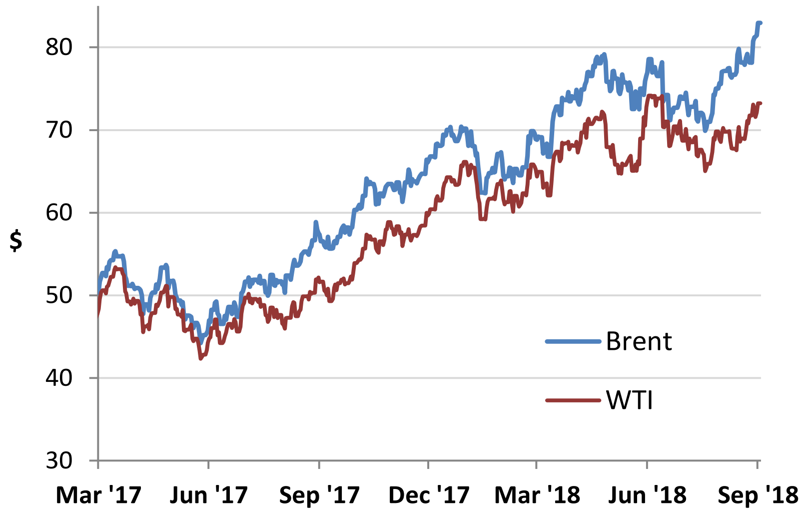
Source: Bloomberg, Guinness Atkinson Asset Management

Third Quarter 2018 in Review
Manager's Comments
Performance: Guinness Atkinson Global Energy Fund
Portfolio: Guinness Atkinson Global Energy Fund

Third quarter 2018 in review

i) Oil market

Figure 1: Oil price (WTI and Brent $/barrel) 18 months March 31, 2017 to September 30, 2018



Source: Bloomberg LP

Oil prices, a key driver of the sector, were mixed over the quarter. The Brent oil price started the quarter at $79/bl and dipped during July and the first half of August to a low of $70/bl by mid quarter. The price the rebounded sharply to close the quarter at $82/bl, averaging $75/bl over the quarter (vs $68/bl in the previous quarter).

The West Texas Intermediate (WTI) oil price traded in a weaker fashion, moving from $74/bl to $73/bl over the quarter. WTI averaged $51/bl in 2017, having averaged $43/bl in 2016, $49/bl in 2015 and $93/bl in 2014.

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

- **Fall in Iranian oil exports confirmed towards the end of the quarter**
  Iranian oil production, export and tanker loading data reported during the quarter all imply that US sanctions are starting to have an effect. Data for August and September showed Iranian exports averaging around 2m b/day, down by around 0.5m b/day since June. This comes ahead of the official re-imposition of sanctions, scheduled for the start of November. Given the pressure that the US has placed over the summer on European and Asian purchasers of Iranian oil, we see a likelihood that Iranian exports/supply will be reduced by around 1m b/day in the fourth quarter.

- **No increase in OPEC supply beyond June 2018 agreement.**
  The OPEC and non-OPEC joint ministerial monitoring committee (JMMC) met in Algeria in September and declared themselves satisfied regarding the current oil market outlook, so deciding not to increase production. The outcome of the meeting came after speculation that OPEC could add up to another 0.5m b/day into the

market, particularly after comments from US President Trump that encouraged OPEC to mitigate the loss of barrels from Iran. OPEC next meet formally in Vienna at the start of December.

- **Infrastructure constraints in the US onshore**
  US infrastructure bottlenecks became a greater concern over the quarter. Whilst onshore shale oil production from the Permian basin continued to grow well, the path for growth in 2019 is capped by a lack of pipeline takeaway capacity out of the basin. Some oil will be ‘trucked’ to the US Gulf Coast in order to access export markets, but local oil prices have fallen to reflect the reality that limited growth can be accommodated over the next 12 to 18 months.

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

- **Concerns around the effect of protectionism on global oil demand**
  In July, the Trump Administration announced a plan for tariffs to be placed on roughly $200bn worth of imports from China. The proposal represented a major escalation from the previous round of tariffs, which applied to around $16bn of Chinese imports into the US. July also saw an escalation of protectionist talk between the US and EU, all of which raised concerns that the global economy could slow, and with it global oil demand growth could slow. The IEA currently forecast 1.4m b/day of oil demand growth in 2018, and 1.5m b/day in 2019.

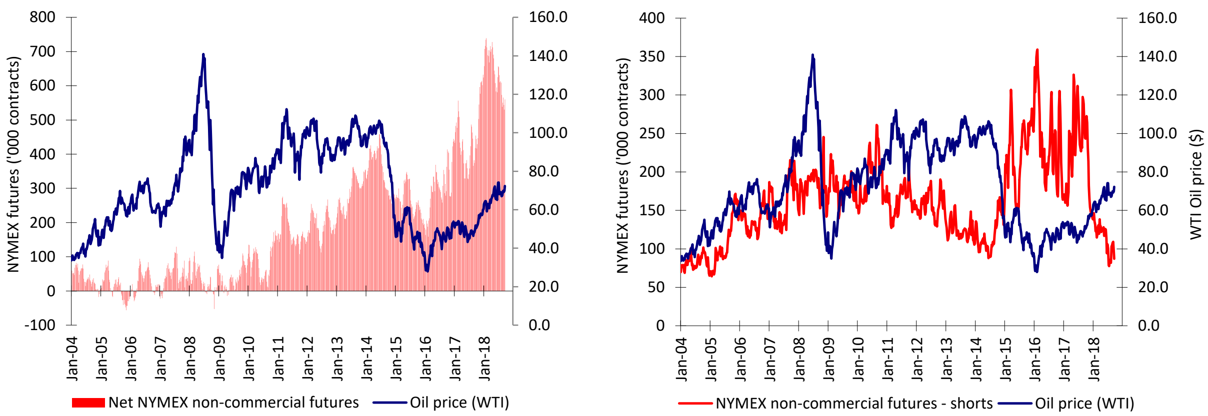
- **Increase in US onshore oil supply**
  At the start of October, the EIA reported that US onshore production increased by 136k b/day during July 2018. This implies year over year growth for the US onshore system at around 1.6m b/day, by far the biggest growth driver for oil supply globally. However, as reported on above, infrastructure constraints in the Permian basin have caused the oil directed rig count to plateau, which will dampen the rate of production growth in the remainder of 2018 and 2019.

- **Recovery in Libyan production**
  Initial estimates show that Libyan oil production in August and September averaged just under 1m b/day, up from around 0.7m b/day in July. Sharara, the country’s largest producing field, was shut down earlier in the summer following the kidnapping of oil workers, but has now come back onstream. Production of 1m b/day puts Libya back to its OPEC quota output.

Speculative and investment flows

The New York Mercantile Exchange (NYMEX) net non-commercial crude oil futures open position (WTI) fell over the quarter, ending at 560,000 contracts long versus 625,000 contracts long at the end of June. Typically there is a positive correlation between the movement in net position and movement in the oil price. The gross short position decreased from 94,000 contracts to 87,000 contracts. This short position is now at relatively low level versus those seen in the last couple of years.

Figure 2: NYMEX Non-commercial net and short futures contracts: WTI January 2004 – September 2018

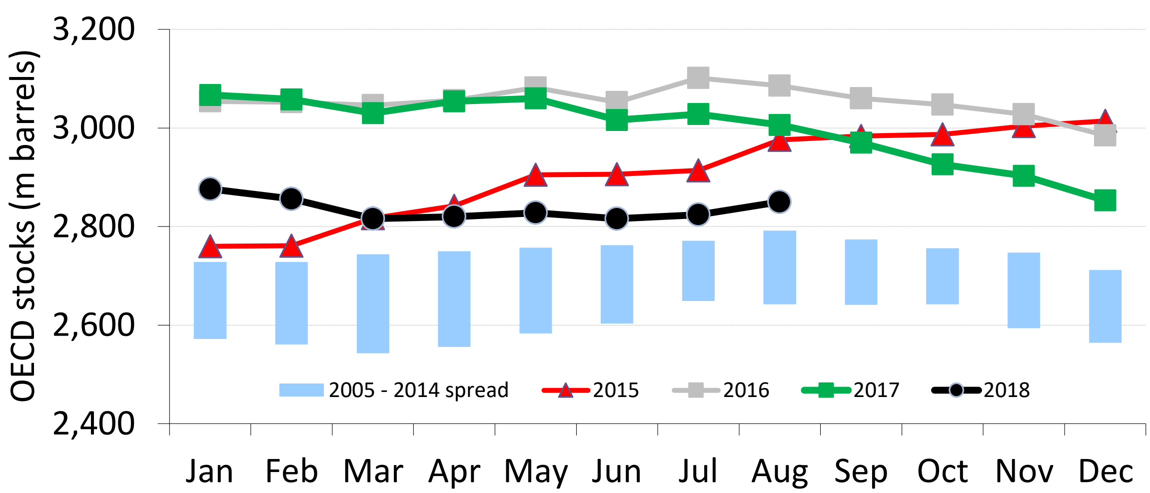


Source: Bloomberg LP/NYMEX/ICE (2018)

OECD stocks

OECD total product and crude inventories at the end of August (the latest data point available) were estimated by the IEA to be 2,850m barrels, up by 26m barrels versus the level reported for July. This compares to a 10-year average increase for July of 14m barrels, implying that the market loosened by around 0.3m b/day. Inventories have been tightening since the middle of 2017, and remain around 60m barrels above the 'normalized' (pre-2015) range. We expect tightening over the rest of 2018.

Figure 3: OECD total product and crude inventories, monthly, 2004 to 2018



Source: IEA Oil Market Reports (September 2018 and older)

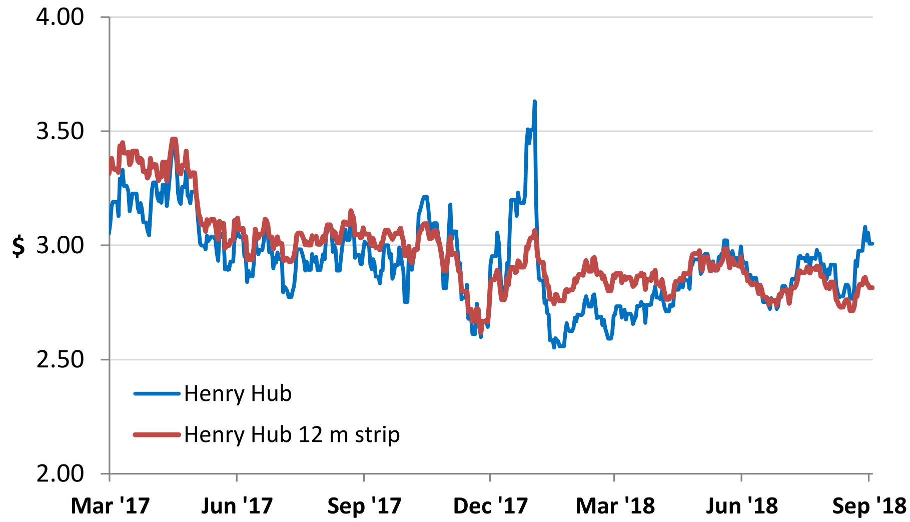
ii) Natural gas market

The US natural gas price (Henry Hub front month) opened July at $2.92/mcf (1,000 cubic feet) and traded in a tight range below $3/mcf before strengthening and ending the quarter at $3.01/mcf. The spot gas price has averaged

$2.84/mcf so far in 2018, which compares to an average gas price of $3.02 in 2017, $2.55/mcf in 2016 and $2.61/mcf in 2015.

The 12-month gas strip price (a simple average of settlement prices for the next 12 months' futures prices) opened the quarter at $2.98/mcf and weakened over the period, closing at $2.81/mcf, without benefitting from a quarter end price rally. The strip price averaged $3.12 in 2017, $2.84 in 2016 and $2.86 in 2015.

Figure 4: Henry Hub gas spot price and 12m strip ($/Mcf) March 31, 2017 to September 30, 2018

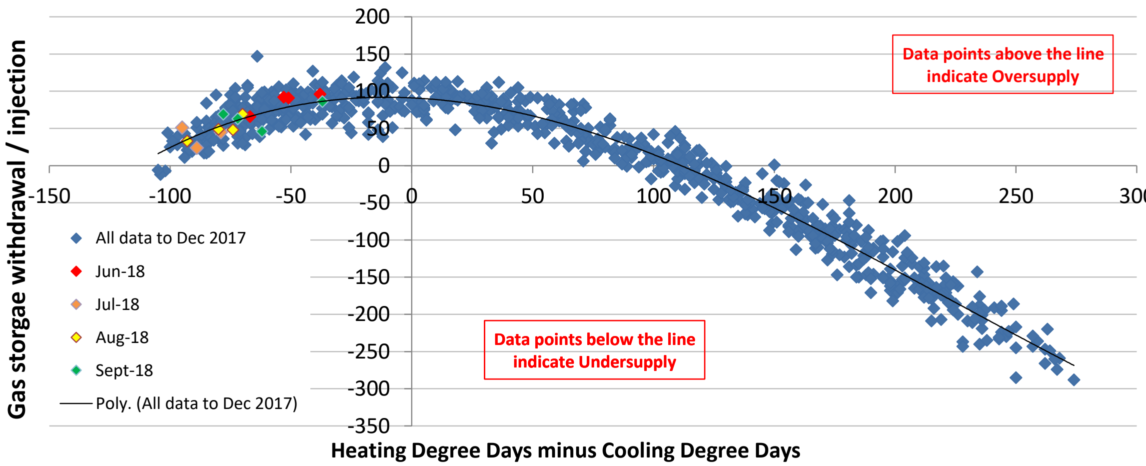


Source: Bloomberg LP

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

- **Depressed gas inventories**
  US natural gas inventories were estimated to be around 2.77 Tcf at the end of September, 0.6 Tcf lower than the 10-year average, and a 10 year low. In order for inventories to reach 'full' at the end of November, it would require an oversupply for the remainder of the year to be around 6 Bcf/day.

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



Source: Bloomberg LP; Guinness Atkinson Asset Management

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

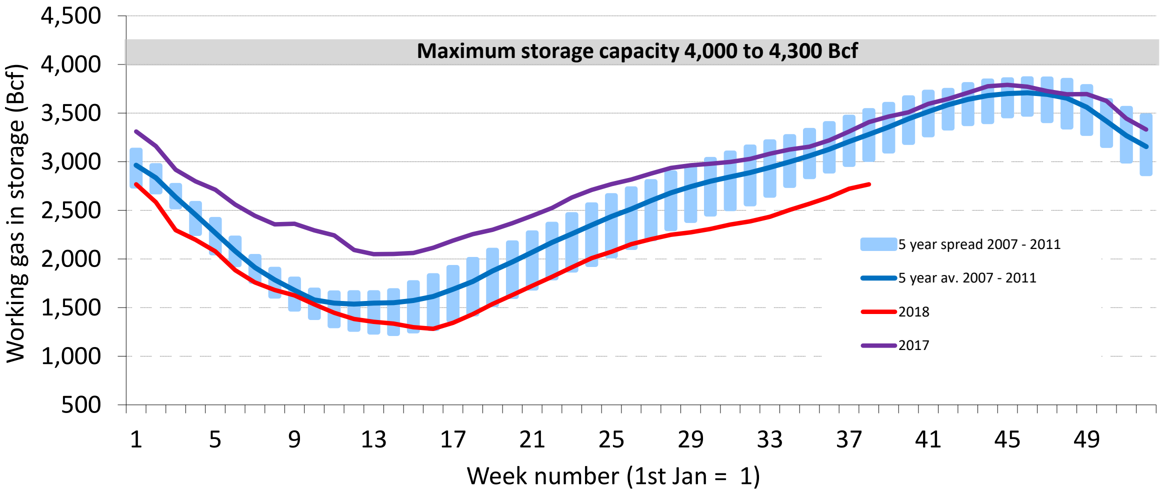
- **Strong US onshore natural gas production**
  Onshore US natural gas production averaged 89.8 Bcf/day in July 2018 (the latest available data point), up by 1.4 Bcf/day on the level reported for June and up by 3.6 Bcf/day on the level reported for April 2018. The biggest area of increase was Pennsylvania (Marcellus & Utica basins), up by around 0.5m b/day month on month. Onshore production has risen by 10.5 Bcf/day versus the level reported twelve months before, the highest year-on-year growth recorded. Rising associated gas supply from shale oil, and a pickup of activity in the Marcellus basin, are the key reasons for the rise in production: both look set to continue for the rest of 2018.

- **Structurally balanced market**
  Adjusting for the impact of weather in September, the most recent injections of gas into storage suggest the market is, on average, operating in balance (as indicated by the green dots on the graph below).

Natural gas inventories

Swings in the balance for US natural gas should, in theory, show up in movements in gas storage data. Natural gas inventories at the end of September were reported by the EIA to be 2.77 Tcf. The previous withdrawal season started with inventories peaking at 3.8 Tcf in mid-November 2017, the lowest starting point of the winter season for US gas inventories since November 2014. Seasonal temperature extremes and an undersupplied market has brought inventories to the bottom of the ten year range. While gas inventories today are low, the high visibility of low cost supply growth for 2019 is keeping a cap on prices.

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



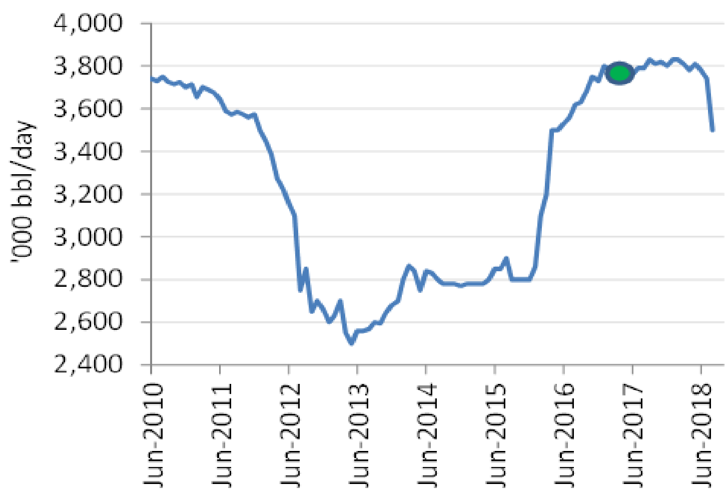
Source: Bloomberg; EIA (October 2018)

Manager's Comments

In the face of a tighter oil market than expected at the start of 2018, attention has turned from OPEC's strategies to support the oil price, to whether OPEC have the ability to cap the upside. At the start of the year, it was becoming known that Venezuelan oil production was faltering, that US production growth would come but would face obstacles, and that an acceleration in global GDP growth would translate into strong oil demand growth. Combined, these factors helped the gradual reduction in oil inventories that we saw in the first half of 2018, following declines that begun in the middle of 2017.

As we often point out in this industry, small swings in the balance of supply and demand, plus or minus one million barrels per day, have a disproportionately large impact on price. And in 2018, the additional supply 'swing' has come with the expectation of a loss of Iranian oil exports, following President Trump's promised reinstatement of sanctions relating to Iran's nuclear program. Today, preparations for those sanctions have resulted in Iran's exports falling by around 0.5m b/day, a number that is likely to rise to around 1m b/day once the sanctions formally start again in November.

Iranian Oil Production



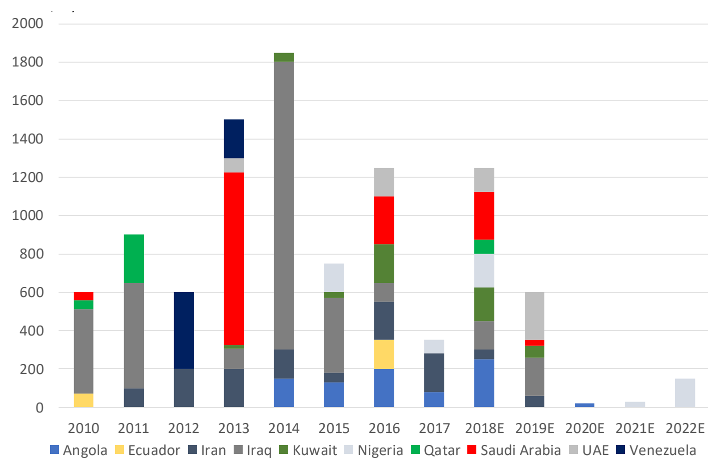
Source: Bloomberg, Guinness Atkinson Asset Management

In response, OPEC have started unwinding their 2017 quota cuts. This unwinding was always promised, but previously signalled for 2019. We view an increase in OPEC production as logical, and we see it in the interests of energy investors, who we think are best served by a flattening of the oil curve: near-term oil prices capped to ensure that there is no oil shock to the world economy, while longer dated oil prices firm up, in recognition of the supply challenges caused by chronic underinvestment in non-OPEC outside the US.

The shorter-term question is whether OPEC have the firepower to balance supply with demand, given the reduction in their effective spare capacity to a historic low. The most immediate solution, beyond Saudi quietly releasing a few more of their own barrels into the market, is a restarting of the 'Neutral Zone' in the Gulf: oilfields co-owned by Saudi and Kuwait that have a productive capacity of around 0.5m b/day. Notwithstanding a current dispute around operatorship, we would expect the Neutral Zone to come back into production in 2019, if needed. But with Libya, Nigeria, Iraq and Russia back to producing at maximum output, the status quo allows little room for error.

As investors in the sector, we are pleased to note strength in spot prices but are more interested in the rally in the 'back end' of the oil price curve that we've seen over the last six months. We believe this stems from recognition in the market that the oil industry increasingly faces structural as well as temporary supply challenges. Non-OPEC production outside the US is looking to disappoint, with key growth hubs like Brazil failing once again to deliver on forecasts. Meanwhile, in countries where declines are expected, like Mexico, decline rates in large legacy fields are surprising to the upside. Under-investment is not confined to the non-OPEC world. Within OPEC, the slowdown in spending since 2014 brings major project start-ups to a virtual standstill from 2020, while the problems faced in Venezuela cannot be readily overcome. Meanwhile there is a growing understanding that the US will accelerate its shale oil production again in 2020, but faces the 'treadmill' effect thereafter: ever increasing amounts of capital will be needed to overcome high initial decline rates.

OPEC major project start-ups 2010-2022



Source: Simmons, Guinness Atkinson Asset Management

Consistent with OPEC's longer-term plan, we believe that long run oil prices will return to around $70/bl, although an overshoot is always possible. This is a price which is sufficient for world oil demand and US shale oil to grow while also providing acceptable economics for OPEC countries and sufficient profitability for investment in new oil projects around the world. This would be a 'reasonable' oil price level for all constituents of the global oil market, economic and political.

Today, assuming operating and capital costs are held constant, we calculate that our portfolio of energy equities currently offers fair value assuming a long-term Brent oil price of around $57/bl (i.e. about $10 or so below where long dated Brent oil prices currently are). Looking out two years, while we see downside risk of about 15% if energy equities were to factor in $50/bl long-term and we see around 20% upside at $60 /bl, rising to 55% upside at a $70/bl oil price. We believe this risk/reward is attractive, given the macro backdrop.

While forecasting oil prices is inherently difficult, we are comfortable that we are seeing positive results from energy companies' recent efforts to control operating and capital costs in order to improve profitability. Our preferred method for monitoring longer term profitability is Return on Capital Employed (ROCE) while we use Free Cash Flow Return on Capital Employed (FCF Return) as our preferred measure of near-term profitability movements.

ROCE is recovering from a low of 2% in 2016 to around 5% in 2018. The long run average for our portfolio is around 11% and we see good reason to believe that profitability will return to around the long run average level, just as it did after 1998 when oil prices last hit a bottom. It takes time for ROCE to improve but we have increasing confidence that this will happen. FCF return, which often acts as a leading indicator of ROCE, has rebounded sharply and is now at above average levels (based on $60/bl crude oil prices).

The stock market has historically valued energy companies based on their sustainable levels of profitability whether it is delivered by self-help improvements or via increases in the long-term oil price. Current energy equity valuations imply that the ROCE of our companies will not improve from the current level. If ROCE improves to 11% and the market were to pay for it sustainably, it would imply an increase in the equity valuation of around 35%.

Ultimately, we see rising profitability for the Guinness Atkinson Global Energy portfolio stemming from a combination of higher long dated oil prices and sustained capital discipline.

Performance: Guinness Atkinson Global Energy Fund (GAGEX)

The main index of oil and gas equities, the MSCI World Energy Index, was up by 0.78% in the third quarter of 2018. The S&P 500 Index was up by 7.71% over the same period. The Guinness Atkinson Global Energy Fund was up by 0.71% over this period (all in US dollar terms).

At the positive end of the portfolio, the stronger performing stocks tended to be our emerging market large cap producers (CNOOC +17.3%; Gazprom +19.9%; PetroChina +8.3%). All benefitted from the strength in global (Brent) oil prices relative to US (WTI) prices, and for Gazprom, the surge in European gas prices also boosted earnings. Our most direct exposure to offshore services (Helix +18.6%) performed well, as elevated oil prices being offshore spending back into the spotlight. Elsewhere, European majors and large caps (Total +7.6%; Equinor +7.2%) also proved a good place to be invested.

Weaker performers included our global oil service companies (Schlumberger -8.4%; Halliburton -9.6%), suffering from the slowdown in US shale oil growth driven by infrastructure constraints. US exploration and production companies were also weak (Noble Energy -11.3%; Devon -9.0%), as capital spending plans announced during the quarter generally came in higher than expectations.

Performance as of September 30, 2018 (inception date is June 30, 2004)

Inception date 6/30/04	Full Year 2010	Full Year 2011	Full Year 2012	Full Year 2013	Full Year 2014	Full Year 2015	Full Year 2016	Full Year 2017
Global Energy Fund (GAGEX)	16.63%	-13.16%	3.45%	24.58%	-19.62%	-26.99%	27.04%	-1.06%
MSCI World Energy NR Index	11.88%	0.17%	1.87%	18.12%	-11.60%	-22.80%	26.56%	4.97%
S&P 500 Index	15.06%	2.09%	15.99%	32.36%	13.66%	1.38%	11.76%	21.82%

Inception date 6/30/04	YTD 2018	1 year (annualized)	Last 5 years (annualized)	Since Inception (annualized)
Global Energy Fund (GAGEX)	12.07%	18.62%	-2.61%	7.31%
MSCI World Energy NR Index	7.45%	14.60%	0.80%	6.23%
S&P 500 Index	10.56%	17.90%	13.95%	9.04%

Source: Bloomberg
Expense ratio: 1.62% (gross), 1.45% (net)

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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 1.45% through June 30, 2019. To the extent that the Advisor absorbs expenses to satisfy this cap, it may recoup a portion or all of such amoounts 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 the waiver. The expense limitation agreement may be terminated by the Board of the Fund at any time without penalty upon 60 days' notice.

Portfolio: Guinness Atkinson Global Energy Fund (GAGEX)

In July, JA Solar was sold from the portfolio, acquired by its Chairman under a long-running takeover plan that was first announced in 2017. We had owned JA Solar, a Chinese manufacturer of solar modules, since 2011. We regarded the acquisition price as satisfactory, given the current competitive environment for solar module manufacturing.

The portfolio saw the disposal of Sino Gas & Energy in September. Sino Gas, a 'research' position that we had held in the portfolio for around four years, was acquired by US energy firm Lone Star, at a price which gives the fund a good profit over the invested period. The company has successfully expanded its unconventional drilling operations in the Ordos Basin, China's largest natural gas producing region, such that it came to the attention of a number of potential acquirers.

Sector Breakdown

The following table shows the asset allocation of the Fund as of **September 30, 2018**.

(%)	31 Dec 2010	31 Dec 2011	31 Dec 2012	31 Dec 2013	31 Dec 2014	31 Dec 2015	31 Dec 2016	31 Dec 2017	30 Sept 2018	*Change YTD*
Oil & Gas	**93.2**	**98.5**	**98.6**	**95.6**	**95.3**	**94.4**	**97.9**	**97.7**	**99.5**	***1.8***
Integrated	41.2	39.6	39.1	39.6	37.5	40.5	45.8	41.8	44.3	*2.5*
Exploration and production	36.9	41.5	41.6	36.8	38.1	37.0	37.3	38.0	38.1	*0.1*
Drilling	6.3	6.0	7.4	6.8	3.1	1.7	2.3	1.8	1.8	*0.0*
Equipment and services	5.3	6.6	7.1	9.0	13.1	11.1	8.9	9.2	8.5	*-0.7*
Storage & transportation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.3	*-0.1*
Refining and marketing	3.5	4.8	3.4	3.4	3.5	4.1	3.6	3.5	3.4	*-0.1*
Coal and consumables	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Solar	**3.2**	**1.2**	**1.2**	**2.8**	**3.5**	**4.9**	**1.0**	**2.1**	**0.6**	**-1.5**
Construction and engineering	**0.4**	**0.4**	**0.6**	**0.9**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Cash	**3.2**	**-0.1**	**-0.4**	**0.7**	**1.2**	**0.7**	**1.1**	**0.2**	**-0.1**	**-0.3**
Total	**100.0**	**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)
Holdings are subject to change at any time

Guinness Atkinson Global Energy Fund Portfolio

Based on the information shown previously, the table below shows the fund valuation in terms of historical and forward (analyst consensus estimates from Bloomberg) price/earnings (P/E) ratios versus the S&P500 Index.

	2011	2012	2013	2014	2015	2016	2017	2018E
Fund P/E	9.6	9.4	10.5	11.4	22.6	37.5	24.3	13.4
S&P 500 P/E	30.2	30.1	37.2	24.7	29.0	27.5	23.4	18.5
Premium (+) / Discount (-)	-68%	-69%	-72%	-54%	-22%	36%	4%	-28%
Average oil price (WTI $)	$95/bbl	$94/bbl	$98/bbl	$93/bbl	$48/bbl	$43/bbl	$51/bbl	$65/bbl

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

Forecasts are inherently limited and cannot be relied upon. Holdings are subject to change.

Portfolio Holdings

Our integrated and similar stock exposure (c.26%) is comprised of a mix of mid cap, mid/large cap and large cap stocks. Our four large caps are Chevron, BP, Royal Dutch Shell and Total. Mid/large and mid-caps are ENI, Equinor and OMV. As of September 30, 2018 the median P/E ratios of this group were 13.5x/11.7x 2018/2019 earnings. We also have two Canadian integrated holdings, Suncor and Imperial Oil. Both companies have significant exposure to oil sands in addition to downstream assets.

Our exploration and production holdings (c.35%) 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 GICS approach. The stock here with oil sands exposure is Canadian Natural Resources. The pure E&P stocks have a bias towards the US (Newfield, Devon, Oasis and QEP Resources), with five other names (Apache, Anadarko, Occidental, ConocoPhillips, Noble) having a mix of US and international production and one (Tullow) which is African focused. One of the key metrics behind a number of the E&P stocks held is low enterprise value / proven reserves. Almost all of the US E&P stocks held also provide exposure to North American natural gas.

We have exposure to four (pure) emerging market stocks in the main portfolio, though one is a half-position, and in total represent 13% of the portfolio. Two are classified as integrateds (Gazprom and PetroChina) and two as E&P companies (CNOOC 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 3.1x 2018 earnings. PetroChina is one of the world's largest integrated oil and gas companies and has significant growth potential and, alongside CNOOC, enjoys advantages as a Chinese national champion. SOCO International is an E&P company with production in Vietnam.

The portfolio contains one midstream holding, Enbridge, North America's largest pipeline company. With the growth of onshore oil and gas production expected in the US and Canada over the next five years, we believe Enbridge is well placed to execute its pipeline expansion plans.

We have useful exposure to oil service stocks, which comprise around 10.2% 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 and Schlumberger).

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 only one company, Sunpower, a diversified US solar developer. We see them as well placed to benefit from the expansion in the solar market we expect to continue for a number of years.

GUINNESS ATKINSON FUNDS

Portfolio as of September 30, 2018

Guinness Atkinson Global Energy Fund 28 September 2018				2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Stock	Curr.	Country	% of NAV	B'berg mean PER	B'berg mean PER	B'berg mean PER	B'berg mean PER	B'berg mean PER	B'berg mean PER	B'berg mean PER	B'berg mean PER	B'berg mean PER	B'berg mean PER
Integrated Oil & Gas													
Chevron	USD	US	3.65	13.3	9.3	10.1	11.2	12.9	34.2	89.7	30.0	15.6	13.4
Royal Dutch Shell PLC	EUR	NL	3.72	11.1	8.3	8.2	10.8	9.5	20.2	33.2	18.0	12.6	10.6
BP PLC	GBP	GB	3.74	6.8	6.8	8.5	10.5	12.5	22.1	42.2	25.2	14.0	12.4
Total SA	EUR	FR	3.66	12.3	11.0	10.5	11.7	11.8	15.2	18.0	16.8	12.3	10.9
ENI SpA	EUR	IT	3.58	8.7	8.3	8.1	13.0	15.1	70.6	nm	28.5	13.5	11.7
Equinor ASA	NOK	NO	3.91	12.2	10.6	9.4	11.5	16.0	39.3	199.3	20.8	14.2	12.8
OMV AG	EUR	AT	3.59	12.3	15.5	10.8	13.3	16.3	14.6	14.9	10.0	9.7	8.8
			25.85										
Integrated Oil & Gas - Canada													
Suncor Energy Inc	CAD	CA	3.36	32.1	14.3	15.8	16.0	15.9	45.2	nm	27.3	15.7	12.7
Canadian Natural Resources Ltd	CAD	CA	3.40	17.7	18.6	27.1	19.2	12.5	309.9	nm	36.7	12.1	11.3
Imperial Oil	CAD	CA	3.68	18.7	11.6	10.3	13.4	11.2	24.1	71.2	33.5	18.1	14.4
			10.44										
Integrated Oil & Gas - Emerging market													
PetroChina Co Ltd	HKD	HK	3.76	7.5	7.4	8.5	9.5	9.3	28.9	113.4	44.1	17.3	15.1
Gazprom OAO	USD	RU	4.13	4.6	3.1	3.2	3.0	5.0	3.1	4.4	4.9	3.1	3.0
			7.89										
Oil & Gas E&P													
Apache Corp	USD	US	4.06	5.2	4.1	5.0	6.0	8.6	nm	nm	456.2	26.8	26.2
Anadarko Petroleum Corp	USD	US	3.57	39.7	21.7	20.5	16.6	15.0	nm	nm	nm	23.7	16.5
Occidental Petroleum Corp	USD	US	3.56	14.8	10.0	12.0	12.0	14.3	500.8	nm	92.6	16.6	14.7
ConocoPhillips	USD	US	3.84	13.5	9.4	14.0	14.2	15.1	nm	nm	128.2	17.8	15.8
QEP Resources Inc	USD	US	1.66	8.3	7.0	9.2	8.2	8.1	nm	nm	nm	nm	53.6
Devon Energy Corp	USD	US	3.48	6.8	6.7	12.5	9.5	7.8	16.3	nm	21.9	27.0	15.2
Noble Energy Inc	USD	US	3.42	15.3	12.1	13.9	10.3	13.6	557.2	nm	1,985.0	31.7	23.5
Newfield Exploration Co	USD	US	3.61	6.3	7.1	11.9	16.1	15.7	40.0	27.0	13.5	8.2	6.6
Oasis Petroleum Inc	USD	US	2.11	110.2	22.4	12.5	6.7	7.6	23.3	nm	nm	45.1	19.7
			29.31										
International E&P													
CNOOC Ltd	HKD	HK	4.01	11.6	8.8	9.4	9.5	11.5	34.1	nm	19.7	10.8	9.8
Tullow Oil PLC	GBP	GB	1.89	25.8	5.9	5.3	39.7	nm	nm	nm	18.0	11.8	10.0
Soco International PLC	GBP	GB	0.97	9.5	6.1	1.7	1.8	2.8	nm	nm	nm	27.9	12.1
			6.88										
Midstream													
Enbridge Inc	USD	CA	3.28	40.9	36.8	33.9	31.3	28.7	25.9	24.0	29.1	21.0	23.1
			3.28										
Drilling													
Unit Corp	USD	US	1.82	8.8	6.5	6.4	7.2	6.2	nm	nm	50.2	31.4	22.1
			1.82										
Equipment & Services													
Halliburton Co	USD	US	3.22	20.4	12.3	13.8	13.2	10.4	27.8	nm	35.3	20.1	16.2
Helix Energy Solutions Group Inc	USD	US	1.91	18.7	6.6	5.3	9.2	5.1	58.5	nm	nm	50.9	27.8
Schlumberger	USD	US	3.29	22.3	17.0	14.7	12.9	11.1	18.4	53.3	42.1	34.4	24.2
			8.42										
Solar													
SunPower Corp	USD	US	0.59	4.9	86.7	47.4	5.1	5.4	3.6	nm	nm	nm	nm
			0.59										
Oil & Gas Refining & Marketing													
Valero Energy Corp	USD	US	3.40	71.8	28.6	23.3	27.8	18.7	13.0	31.0	23.4	17.4	11.0
			3.40										
Research portfolio													
Cluff Natural Resources PLC	GBP	GB	0.38	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm
EnQuest PLC	GBP	GB	0.86	6.0	6.9	2.1	2.3	4.2	40.7	2.7	nm	6.4	3.4
JKX Oil & Gas PLC	GBP	GB	0.39	1.2	1.4	1.9	3.6	10.0	nm	nm	nm	nm	nm
Ophir Energy PLC	GBP	GB	0.08	nm	nm	nm	nm	0.9	nm	nm	nm	nm	3.5
Reabold Resources PLC	GBP	GB	0.37	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm
Shandong Molong Petroleum Machinery Cc	HKD	HK	0.10	2.7	3.7	nm	nm	nm	nm	nm	nm	nm	nm
			2.18										
		Cash	-0.06										
		Total	100										
		PER		10.9	8.7	8.9	9.7	10.7	23.6	40.2	25.7	14.0	11.7
		Med. PER		12.2	9.0	10.3	11.2	11.2	27.8	32.1	28.5	16.9	13.1
		Ex-gas PER		12.0	9.3	8.9	9.9	11.0	22.1	36.2	24.6	13.4	11.4

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.

Forecasts are inherently limited and cannot be relied upon. Holdings are subject to change.

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.

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 fund's 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.

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

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.

One cannot invest directly in an index.

The Henry Hub pipeline is the pricing point for natural gas futures on the New York Mercantile Exchange.

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

The New York Mercantile Exchange is the world's largest physical commodity futures exchange.

Enterprise Value, or EV for short, is a measure of a company's total value, often used as a more comprehensive alternative to equity market capitalization

Standard Deviation (SD) is applied to the annual rate of return of an investment to measure the investment's volatility. Standard deviation is also known as historical volatility and is used by investors as a gauge for the amount of expected volatility.

Debt/EBITDA is a measure of a company's ability to pay off its incurred debt. This ratio gives the investor the approximate amount of time that would be needed to pay off all debt, ignoring the factors of interest, taxes, depreciation and amortization.