



**Energy Brief**  
**February 2009**

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Welcome to the February 2009 Guinness Atkinson Energy Brief.

**STOP PRESS**

**February International Energy Agency (IEA) Oil Market Report highlights:**

- **2009 demand cut by further 0.6 million barrels per day (mb/day), following cut of 1mb/day in January report. 2009 forecast demand now at 84.7mb/day**
- **OECD inventories for December stood at 2,673 million barrels, equivalent to 56.3 days of demand cover**
- **Non-OPEC supply marked down further: growth now forecast at 0.4mb/day.**

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## New format

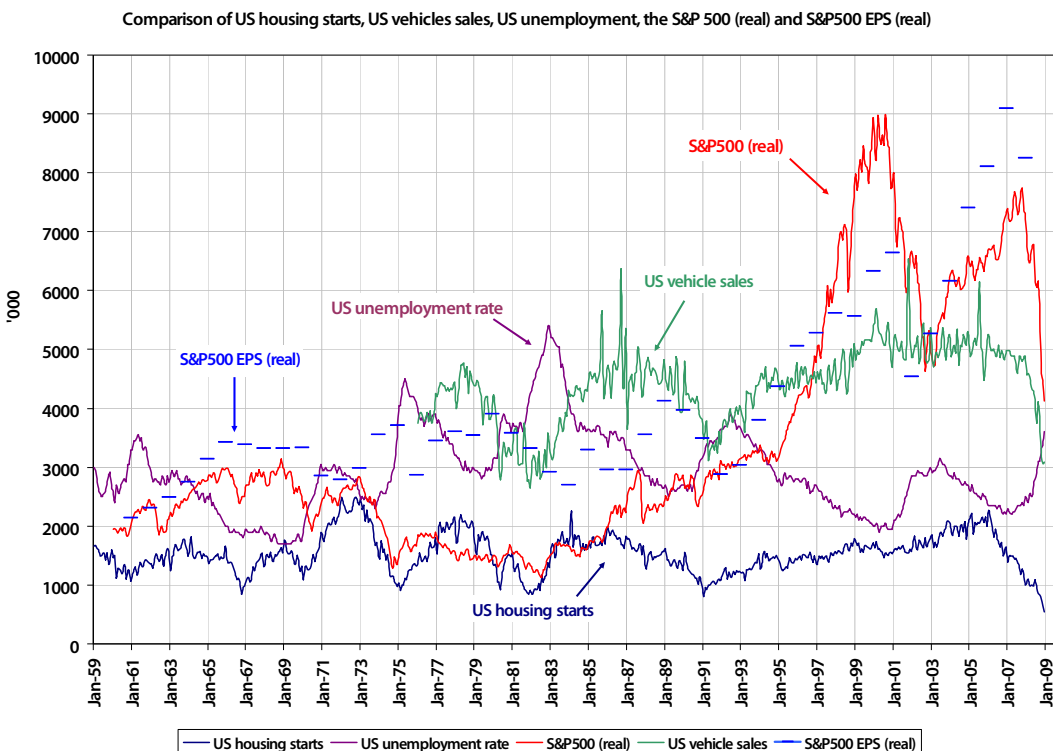
We hope you like the new format of our monthly update. Nothing has been dropped but we have sought to make the order more logical and we have also sought to make it accessible to all our investors by including appropriate risk warnings and fuller explanation where technical terms are used.

## 2009: The context within which to discuss energy markets

I repeat my comments of last month - the broad economy, broad markets and the Lehman crash had such a major impact on energy commodities and energy equities in 2008 that I set out briefly below my own views on what 2009 holds to give context to the outlook sections in this report.

I am not as gloomy for 2009 as many others. We are self evidently experiencing a significant recession in the US with greater global knock-on effects than previously due to globalization; we were, however, due a deeper recession than average having skipped one in 2001/2. It has been amplified by the banking panic/crisis induced in turn by the central bank mismanagement. In the US economy, housing starts and vehicle sales are at or below the levels plumbed in the six slowdowns seen since 1960. I am focussing here on the US since I consider that the health of the world economy and world energy markets still depend to a significant extent on the health of the US economy. Having analyzed prior economic cycles and having regard to announced government fiscal stimulus and other anti-deflationary policies, my current assessment is:

- (1) that housing and vehicle indicators, while at very depressed levels, are approaching the point at which they will start to recover; and
- (2) that unemployment will peak after that with its normal 10 month lag (i.e. in the first half of 2010).



|   |   |
|---|---|
| Notes to graph  |   |
| US housing starts   | Index of all US new-build private housing units started, on a monthly basis (in thousands of units)   |
| US unemployment rate  | Index measuring the US unemployment rate on a monthly basis (in millions of people), seasonally adjusted and scaled by factor of 500                              |
| S&P 500 (real)  | Standard & Poor's Index of 500 US companies, representing all major industries and weighted by market capitalisation, inflation adjusted, scaled by factor of 500 |
| US vehicle sales  | Monthly total sales of automobiles and trucks in the US, seasonally adjusted, scaled by factor of 300   |
| S&P 500 EPS (real)  | The aggregate earnings per share of the companies in the S&P 500 Index, inflation adjusted and scaled by factor of 100  |
| Source: Bloomberg LP; calculations: Guinness Asset Management Ltd   |   |
| Observations  |   |
| The S&P 500 in real terms is 45% higher than in the 1960s and in 1993 (in real terms) while 2010 S&P 500 EPS at \$60-70 would be double the EPS reported in the mid 1960s and mid 19 of 80s \$30-\$35 (in real terms) |   |
| S&P500 tends to trough a few months either side of the trough in US housing starts but well before trough in US unemployment  |   |
| Troughs in US housing starts & US vehicle starts tend to be coincident; unemployment trough tends to lag the trough in housing starts by around 10 months   |   |

In short, 2009 will be a year of pain; 2010 should then be a year of recovery and by 2011 business should be more or less back to normal.

As far as broad stock markets are concerned, they (markets) are anticipatory and, now that these painful but not end-of-the-world facts on the ground are becoming apparent, we believe that markets have either bottomed already, or if not, will do so soon and in doing so will little more than test previous lows. Once housing starts are seen to have bottomed (I now expect this to happen anytime between now and early summer – unsold new homes are on track to be rock bottom by May 2009), market confidence will return and the Standard and Poors 500 index (S&P500)<sup>1</sup> will increasingly look through 2009 to 2010 and 2011. We do not expect a significant inflationary problem. We think it quite probable the S&P500 will be back at 1200 (i.e. up 33% from its end of 2008 level of 900) within the next 18 months. We think of this in terms of a price earnings ratio (PER)<sup>2</sup> of 20x (typical for trough PER in non-inflationary bottoms) times 2010 S&P500 operating earnings of around 60. This level of earnings compares to peak 2006/7 operating earnings of 91.5<sup>3</sup> and is based on current 2009 consensus of 58 rounded and lagged a year to be conservative.

What this means for energy markets is that recessionary demand destruction should peak in 2009 (we refine our quantification of this later in this report) and broad market effects on energy equity valuations will move from strongly negative to neutral and then to positive over coming months. As non-OPEC<sup>4</sup> supply growth is anaemic, and OPEC is getting into its stride cutting its supply we consider the lows seen in the oil market reflect a downwards price spike which will not last any great length of time. As we discuss more fully later, we expect the oil price to recover to a trading range of \$60 - \$80. The main question left in our minds is the timing and pace of this recovery.

<sup>1</sup> Standard and Poor's 500 index is a capitalization-weighted index of 500 stocks. The index is designed to measure performance of the broad US economy through changes in the aggregate market value of 500 stocks representing all major industries. Indices do not incur expenses and are not available for investment

<sup>2</sup> The price/earnings ratio (PER) compares the price of a share to the company's earnings per share (EPS). It directly relates the price of a share to the proportion of the company's profits (PER = share price ÷ EPS). EPS is the profit attributable to shareholders divided by the number of shares in issue. It is the amount of a company's profit that belongs to a single ordinary share

<sup>3</sup> Source: Standard and Poor's website

<sup>4</sup> OPEC: Organization of Petroleum Exporting Countries. Member countries are Algeria, Angola, Ecuador, Iran, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, U.A.E., Venezuela

## 1. Oil market – January 2009 in review

### Oil price (WTI \$) 18 months – 31 July 2007 to 31 January 2009



Source: Bloomberg

The West Texas Intermediate (WTI) oil price opened the month at \$44.60 and after a brief move up to \$48.81 fell 27% to \$35.40 on 15 January. It then recovered some of this ground to end the month at \$41.68. From an all-time high of \$145 on 2 July 2008 to 31 January 2009 the oil price has fallen by 76%.

We note, too, that a significant discount opened up in January between the price of WTI and that of various other benchmark crudes. The discount widened over the first half of the month to reach 21% on 15 January, with WTI at \$35.40 and Brent crude at \$44.50. By the month end it had narrowed again, but the spread was still over \$3, or 7%. Oversupply of crude oil at Cushing, Oklahoma (the hub for WTI supply) seems the most plausible explanation for this pricing gap.

Factors which weakened the WTI oil price in January included:

- **Oil inventories.** At 346 million barrels, the US crude oil stocks (excluding the Strategic Petroleum Reserve) are at their highest January-end level since 1990 and 53 million barrels above January 2008 levels.
- **Further oil demand downgrades.** Whilst not unexpected by some commentators (ourselves particularly) the International Energy Agency (IEA) cut its 2009 global demand forecast by 1mb/day in the Oil Market Report released 16 January (from 0.5mb/day of growth to 0.5mb/day of decline). This was a sizeable downward revision, and meant that global oil demand projected by the IEA was 85.8mb/day in 2008 and 85.3mb/day in 2009 vs 86.1 mb/day in 2007. This anticipated two-year contraction would be the first since 1982 and 1983. As noted in the 'Stop Press' section at the start of this report, the IEA cut its demand forecast for 2009 by a further 0.6m b/day in the 11 February Oil Market Report.
- **Weak equity markets and strengthening US dollar.** The oil price followed the broader US equity markets surprisingly closely through the month. Like the oil price, the S&P 500 peaked a few days into the month and then fell 11% over the following 10 trading days, before recovering some of the ground before the end of the month. The dollar moved up 8%

versus the Euro over the first three weeks of the month, from 1.4045 to 1.2904 and remained around that level until the month end.

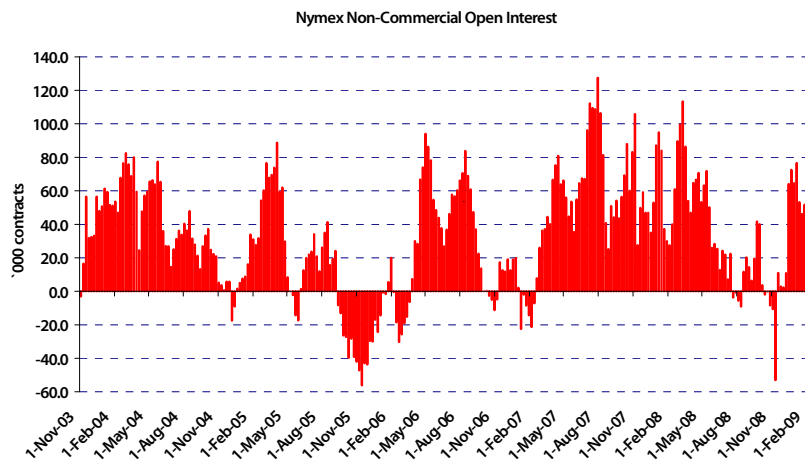
Factors which supported the price in January included:

- **President Obama's proposed rescue plan.** Oil (WTI) jumped 9% on 21 January, with the S&P 500 up 4.3% that day as markets rallied on Obama's plans to complete an assistance program alongside the \$825 billion stimulus package.

### Speculative and investment flows

The New York Mercantile Exchange (NYMEX) net non-commercial crude oil futures open position remained appreciably long over the course of the month. At the end of December 2008 it was 65,000 contracts long and by 3 February 2009 end it had reached 29,000 contracts long.

### Non-commercial net futures: NYMEX crude contracts 4 November 2003 to 3 February 2009



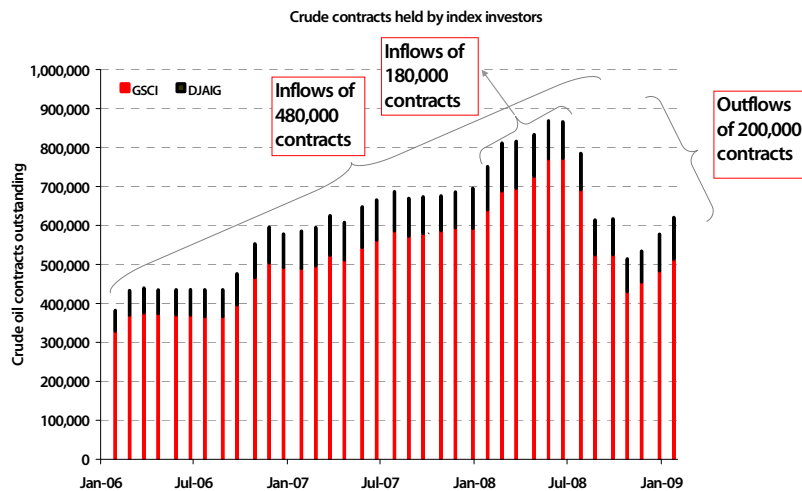
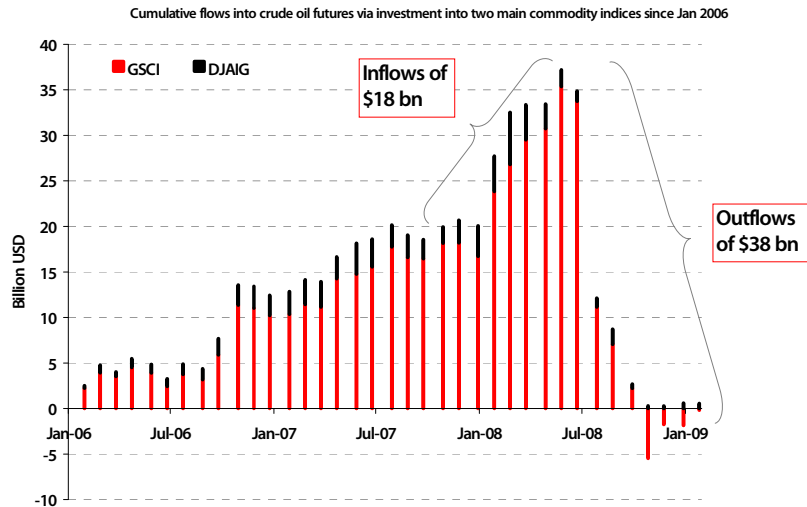
Source: Bloomberg/Nymex

### Analysis of commodity index tracking investor flows<sup>5</sup>

Our calculations show outflows of some \$38 billion in the last seven months. We conclude the premium in the oil price attributed to index fund speculators since the start of 2006 has probably unwound. We recognise, however, that further outflows from the unwinding of positions held prior to 2006 could provide a downward pressure on the oil price in the future. Charts showing cumulative flows into crude futures via the two main commodity tracking indices<sup>6</sup> since January 2006 (first data point available) and movements in contracts outstanding are shown below.

<sup>5</sup> Analysis is based on the testimony presented by Michael Masters before the Committee of Homeland Security and Governmental Affairs, United States Senate, 20 May 2008. We have sought to use Masters' methodology to quantify the weight of money flowing into WTI and Brent futures contracts from buying by investors tracking the Goldman Sachs Commodity Index or the DJ AIG Commodity Index.

<sup>6</sup>GSCI: Goldman Sachs Commodity Index is a composite index of commodity sector returns representing an unleveraged, long-only investment in commodity futures that is broadly diversified across the spectrum of commodities. DJAIG: Dow Jones AIG Commodity Index is composed of futures contracts on physical commodities.

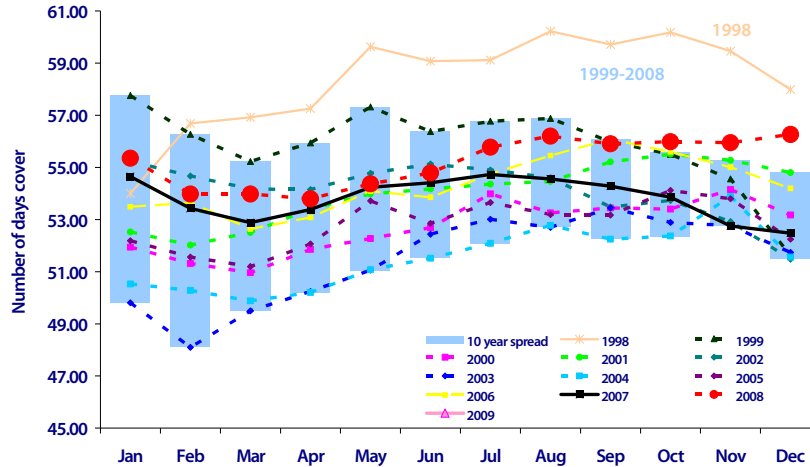


Source: Guinness Asset Management calculations (2009)

### OECD stocks

The December OECD total crude and product number published in the February IEA Oil Market Report showed a rise of 15 million barrels, giving a total stock of 2,673 million barrels. When expressed as number of days of demand cover (56.3 days) we see that we are well above last year's level (52.5 days) and above the top of the tight/loose spread of the last 10 years. This serves to underline the need for OPEC action to bring stocks down. In that regard, because of the reporting timelag, it will not be until April or even May that we see the full effect of the increased cuts OPEC is implementing from 1 January 2009.

### OECD total product and crude inventories – monthly 1998 to 2008



Source: IEA Oil market report (11 February 2009)

## 2. Oil market – outlook

### Supply and demand recent past plus 2009 forecasts

The table below illustrates the difference between world oil demand growth and non-OPEC supply growth over the last 9 years together with the IEA and our forecasts for 2009. In the 5 years prior to 2008, demand growth averaged 1.7m b/day per year, while non-OPEC supply (plus OPEC natural gas liquids) growth averaged just 0.8m b/day per year. The reasons for the slow supply growth are both geological and above-ground: on the geological side, the mature basins are declining, and the newer areas such as the Caspian and Brazil are not yet making up for these declines. The above-ground reasons have included project delays, cost overruns and political instability/disincentive. Looking at specific countries, it should be pointed out that production from the former Soviet Union (FSU), which had grown from 7.9m b/day in 2000 to 12.6m b/day in 2007 and has provided a large part of the non-OPEC supply increases, is now declining. It should be noted, too, that the list of non-OPEC countries whose oil production has peaked or will soon be peaking now includes: USA, Mexico, UK, Norway, Argentina, Colombia, Egypt, Syria, Oman, Brunei, Gabon, Cameroon, China, Malaysia, and Australia.

For 2009 we have compared a scenario where global demand declines 2.4m b/day with the latest IEA forecast of a global demand decline of 1.0m b/day. We regard the current global economic slowdown as likely to generate a sharper fall in demand than the IEA and discuss this and our slightly lower non OPEC supply assumptions below.

### Estimated annual world oil supply & demand growth 2000 – 2009

| (million barrels per day)   | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009e<br>IEA (A) | 2009e<br>GA (B) |
|---|------|------|------|------|------|------|------|------|------|------------------|-----------------|
| World Demand  | 76.7 | 77.4 | 77.7 | 79.3 | 82.5 | 84.0 | 85.1 | 86.0 | 85.7 | 84.7             | 83.3            |
| Non-OPEC supply<br>(includes Angola and Ecuador for periods when each country was outside OPEC <sup>1</sup> ) | 46.2 | 47.2 | 48.1 | 49.1 | 50.3 | 50.4 | 51.2 | 50.1 | 49.6 | 50.9             | 50.5            |
| Angola supply adjustment <sup>1</sup>   | -0.8 | -0.7 | -0.9 | -0.9 | -1.0 | -1.2 | -1.4 | 0.0  | 0.0  | 0.0              | 0.0             |
| Ecuador supply adjustment <sup>1</sup>  | -0.4 | -0.4 | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.5 | 0.0  | 0.0              | 0.0             |
| Indonesia supply adjustment <sup>2</sup>  | 1.2  | 1.2  | 1.1  | 1.0  | 1.0  | 0.9  | 0.9  | 1.0  | 1.0  | 0.0              | 0.0             |
| Non-OPEC supply<br>(ex. Angola/Ecuador and inc. Indonesia for all periods)                                    | 46.2 | 47.3 | 47.9 | 48.8 | 49.8 | 49.6 | 50.2 | 50.6 | 50.6 | 50.9             | 50.5            |
| OPEC NGLs   | 3.1  | 3.4  | 3.7  | 3.9  | 4.2  | 4.3  | 4.4  | 4.5  | 4.7  | 5.0              | 5.4             |
| Non-OPEC supply plus OPEC NGLs<br>(ex. Angola/Ecuador and inc. Indonesia for all periods)                     | 49.3 | 50.7 | 51.6 | 52.7 | 54.0 | 53.9 | 54.6 | 55.1 | 55.3 | 55.9             | 55.9            |
| Call on OPEC-12 <sup>3</sup>  | 27.4 | 26.7 | 26.1 | 26.6 | 28.5 | 30.1 | 30.5 | 30.9 | 30.4 | 28.8             | 27.4            |
| Iraq supply adjustment <sup>4</sup>   | -2.6 | -2.4 | -2.0 | -1.3 | -2.0 | -1.8 | -1.9 | -2.1 | -2.5 | -2.5             | -2.5            |
| Call on OPEC-11 <sup>5</sup>  | 24.8 | 24.3 | 24.1 | 25.3 | 26.5 | 28.3 | 28.6 | 28.8 | 27.9 | 26.3             | 24.9            |

<sup>1</sup> Angola joined OPEC at the start of 2007, Ecuador rejoined OPEC at the end of 2007 (having previously been a member in the 1980s)

<sup>2</sup> Indonesia left OPEC as of the start of 2009

<sup>3</sup> Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi, U.A.E. Venezuela

<sup>4</sup> Iraq has no official quota

<sup>5</sup> Algeria, Angola, Ecuador, Iran, Kuwait, Libya, Nigeria, Qatar, Saudi, U.A.E. Venezuela

Source: 2000 - 2008 IEA oil market reports; (A) February 2009 Oil market Report (B) GA: Guinness Atkinson/Guinness Asset Management calculations

## OPEC

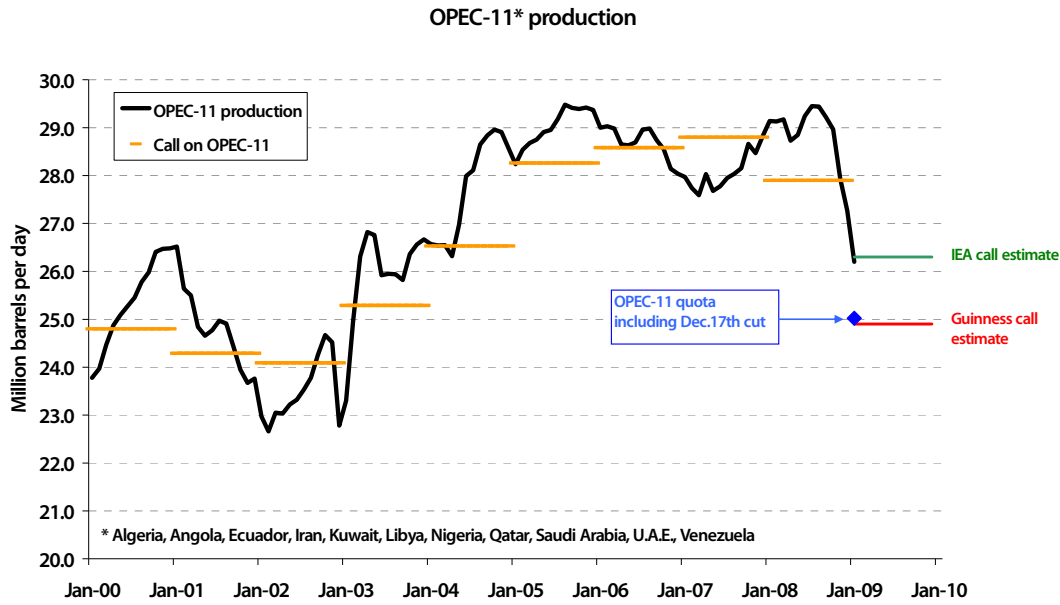
At its extraordinary meeting on 17 December 2008, OPEC announced a 4.2m b/day cut from the actual OPEC-11 September 2008 production level of 29.2m b/day, giving a new quota target of 25.0m b/day with effect from 1 January 2009. The previous quota was 27.3m b/day, implying an effective quota cut from this meeting of 2.3m b/day – the largest single cut in OPEC history.

Although we argued in our January 2009 update that they should have cut by 3m b/day, we feel it is reasonably well judged. The cuts made to date should start to tighten the market noticeably given we are in the peak winter demand period which is what is needed to stabilize the oil price (though of course to do this, quota compliance by member countries remains key). As commented last month we thought that the initial market response to this meeting of the oil price weakening and falling through \$40 reflected current looseness and a fear that OPEC would not deliver. We doubted that and believed that we would see in coming months a floor oil price for the current oil price bear market established sooner rather than later. The oil price behaviour since then confirms that view and, assuming OPEC continues to keep supplies tight in the face of seasonal early summer weakness, we continue to believe a recovery to the \$50 - \$70 range will be the next big move. Just as prices over \$100 represented, as we argued at the time, an unsustainable spike upwards so prices below \$50 represent an unsustainable spike downwards. Our only caveat, however, is that this may happen more gradually initially than in previous periods accelerating only after the economy bottoms later in the year.

The graph below illustrates that at current production levels (latest data point available is end January), OPEC countries are pumping just below the call on OPEC if the IEA projections are correct and somewhat above if our gloomier projections turn out to be correct. OPEC production will, however, move to near the bottom of the estimated range for the 2009 call if their targets are achieved in full.

## OPEC apparent production vs call on OPEC 2000 – 2008





Source: Bloomberg/IEA Oil Market Report (11 February 2009)

The reason we have included a 2.4m b/day decline scenario is that we estimate that net global demand destruction in 2009 is quite likely to be 2 - 3m b/day, all or mostly in the OECD. When added to declines that have already occurred in the OECD in 2007 and 2008 (2mb/day), this gives a total decline in the OECD between 2007 and 2010 of 4 – 5m b/day, or around 10%. We consider this to be a good ballpark estimate if one tries to extrapolate from the past demand destruction periods of 1974 and 1980.

The total cut which OPEC is now working towards should, if the IEA is right, ensure that the market reverts to balanced/tight. If we are right, however, and the fall off in demand is rather more than the IEA projects then the market will tend towards loose. If this latter scenario plays out we believe OPEC will make the further cuts needed to ensure the market does indeed revert to balanced/tight. We would then expect the oil price to bottom after these subsequent cuts. It is worth recalling that in both 1998 and 2002 it took 8 months from the first OPEC cuts for the oil price to bottom. Lastly we take seriously Al Naimi's (the Saudi Oil Minister) explicit comment: "OPEC will meet as often as needed to ensure stability", bearing in mind Saudi's importance in OPEC. The Saudi King has also commented that an oil price of \$75 is fair.

The next OPEC meeting is scheduled for 15 March 2009 in Vienna, Austria.

### Supply looking forward

The IEA Medium Term Report which appeared at the beginning of July 2008 confirmed the market's suspicions that meaningful non-OPEC supply growth is still some way off, if possible at all. The downgrades to the forecasts from July 2007 to July 2008 were substantial. In July 2007 non-OPEC supply was predicted to grow from 49.5m b/day to 52.1m b/day between 2007 and 2012. A year on, the outlook presented was somewhat bleaker, with the forecast reduced to 50.7m b/day for 2012.

Another important part of the big picture is that FSU production, which has driven non-OPEC growth (130% of production growth 1996-2007, excluding OPEC NGLs) was perceived in that report as struggling to increase. IEA forecasts the year before were for 13m b/day in 2008 growing to 14.4m b/day by 2012; that forecast was reduced to 13.6m b/day for 2012. Russia makes up approximately 80% of the FSU aggregate total, and Russian production is now forecast to fall in 2009 and 2010, with the IEA blaming higher fiscal take and deferred investment at existing fields. The next largest component is

Kazakhstan, which has doubled its production to 1.4m b/day since 2000: significantly, the Kashagan field start-up has been pushed back by another 1-2 years, which accounts for 0.3m b/day of the 2012 reduction. That said, FSU supply growth still made up 0.8mb/day of the forecast 1.2m b/day non-OPEC increase between 2008 and 2013.

The truth is that the non-OPEC world is struggling to grow production. The growth was 2% per annum between 1998-2003, 1% from 2003-2008 and is forecast 0.5% from 2008-2013 and we believe that has a good chance of not being realised.

### **Demand looking forward**

We are in the camp that expects global oil demand growth to be significantly reduced over the next 18 months. A combination of a high price environment rolling into a recession is dampening demand across the board, OECD and non-OECD alike. We think that a comparison with the 1973-1975 and 1979-1983 periods is appropriate. But, the structural shift away from oil as a source of heating and power generation in OECD countries and the recent rapid retreat in the oil price will mean that the demand drop will not be as severe as the 17% OECD fall in 1979-83, and will be somewhat greater than the 7-8% OECD demand fall in 1973-75. We project therefore a drop of 10%. This drop equates to around 5mb/day, of which we have already seen almost 2m b/day (OECD demand was 49.8m b/day in 2005, and for comparison the IEA forecast is for a 3.8m b/day decline by 2009). An inherent difference between the current outlook and the 1979-83 period is that back then the world was faced with a prolonged high oil price environment after the collapse of the Shah in Iran, as well as the attendant recession: this time the recession might be deeper, but the high oil price effect should be less. The other point of comparison - the 1973-5 recession - saw an oil price spike similar in scale to the recent one (although the price did not weaken as quickly as it has recently), and a recession of slightly smaller magnitude to the one we are entering. In non-OECD we expect growth to be flat from Asia, the Middle East and others - down from 1 – 1.5m b/day in 2008. Here again we are more cautious than the IEA who continue to forecast non-OECD growth of 0.5m b/day.

### **Inventory levels**

As we discussed earlier in the report, OECD total crude and product inventories look too loose. The December inventory level is above the top of the ten-year range, and the OPEC cuts should aim to bring that down to below the middle.

### **Conclusions about oil**

From the low of \$31.42 on 22 December 2008 we have seen the oil price (WTI) recover to over \$50 only to ease back to around \$40 as I write. The OPEC cut on 17 December 2008 – the biggest single cut announced in the cartel’s history – was followed by continued weakness due to the perceived inability of member countries to implement their assigned quota reductions and concerns regarding the poor economic climate effecting demand for crude. The escalation of violence in Israel/Gaza and the Russia/Ukraine gas dispute recently has supported the oil price. We have now begun to see signs of OPEC members conforming to their quotas and working in unison and sentiment swinging towards our view that OPEC can, and will, succeed in stabilising the price.

The table below illustrates our target oil price estimates and for comparison the rises in percentage terms that we have seen in the period from 2002 to 2008.

|                   | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009e | 2010e | 2011e |
|-------------------|------|------|------|------|------|------|------|-------|-------|-------|
| Average WTI (\$)  | 26.1 | 31.2 | 41.7 | 56.6 | 66.1 | 72.2 | 99.9 | 50    | 60    | 70    |
| Change y-o-y (\$) | -    | 5.1  | 10.5 | 14.9 | 9.5  | 6.1  | 27.7 | -49.9 | +10.0 | +10.0 |
| Change y-o-y (%)  | -    | +20% | +34% | +36% | +17% | +9 % | +38% | -50%  | +20%  | +17%  |

e = estimate

Source: Bloomberg, Guinness Asset Management estimates (February 2009)

### 3. Natural gas market – January 2009 in review

The US spot natural gas price (Henry Hub, Louisiana) opened the month at \$5.63 per Mcf (1000 cubic feet) and traded up to \$6.11 over the first six days of the month. It then drifted off over the remainder of January, trading down to a low of \$4.62 on 26 January before ending the month at \$4.78. The spot gas price was last below \$5 in September 2006. From a high for the year of \$13.31 on 2 July 2008, the gas price has fallen 64% in the seven months to the end of January. The 12-month gas strip price (a simple average of settlement prices for the next 12 months' futures prices) also fell in December, reaching a low of \$5.07 on 28 January before closing the month at \$5.25.

#### Henry Hub Gas price (\$/Mcf) 18 months – 31 July 2007 to 31 January 2009



Source: Bloomberg

Factors which weakened the gas price in January included:

- **Strong US production.** US domestic onshore production is still very strong despite some continuing outages from the 2008 hurricane season. The most recent data available (November 2008) shows gross onshore production of 57.6 billion cubic feet per day (Bcf/day), up 10.6% from November 2007, with Texas and Louisiana production almost back to normal following hurricane disruption in August and September 2008.
- **Fears about the likely effect of a recession on US natural gas demand.**

Factors which supported the gas price in January included:

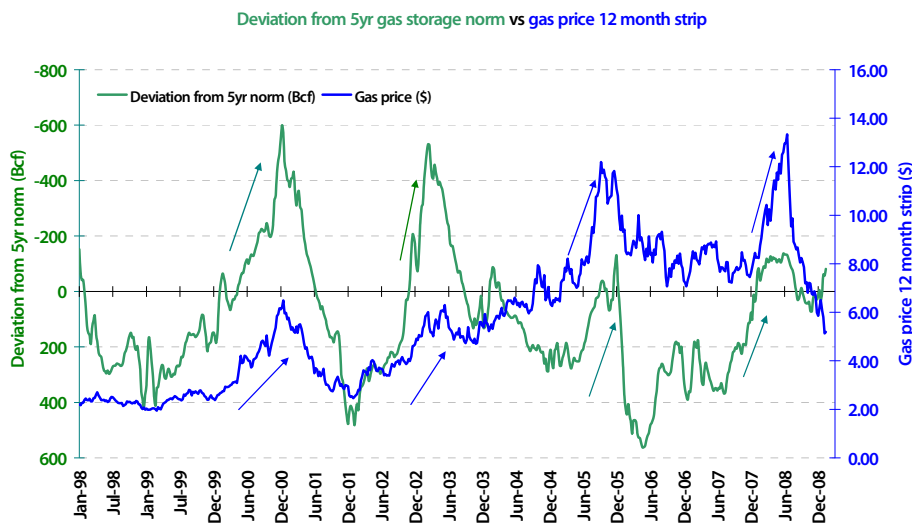
- **Cold weather.** January was colder than average across most of the US, resulting in above average withdrawals from gas storage.
- **Drilling rig count cuts.** The US natural gas rig count, which gives the number of land rigs actively drilling in the US, had fallen by the end of the first week in February to 1104 rigs (as reported by Baker Hughes) from a high on 9 September 2008 of 1606 rigs. Whilst the extent of the lag between cuts in drilling and cuts in production is unclear, the speed with which the rig

count has declined over the past 4 months has increased expectation that the gas market will tighten sooner than previously thought.

- **Weak imports.** Imports from Canada and exports to Mexico have begun to show signs of decline.
- **Hurricane effects on offshore production.** Gross Gulf of Mexico production remained below full capacity.

### Natural gas storage

Swings in the supply/demand balance for US natural gas should, in theory, show up in movements in gas storage data. The following graph shows the 12 month gas strip price (in blue) against the amount of gas in storage expressed as the deviation from the 5 year storage average (in green). It is interesting to note that swings in storage have, in several instances since 1998, acted as a leading indicator to movements in the gas strip price.



Source: Bloomberg, EIA (February 2009)

The surplus of gas in the second half of 2008 can be seen in gas storage data, with the inflection point in storage occurring in July 2008 and the storage line moving from negative (i.e. deficit) to positive (i.e. surplus) territory at the end of the year. This coincided with the gas strip price falling from a peak of over \$13 in July to around \$6 by the end of the year. Most recently the storage number has moved back into slight deficit, as above-average cold weather and continued hurricane induced shut-ins appear in the short-term to have trumped declining commercial and industrial demand for gas.

## 4. Natural gas market - outlook

### Supply & demand recent past

The sharp contraction in the gas price since July 2008, while following the move down in the oil price, appears to be mainly influenced by the fact that supply/demand fundamentals in the US natural gas market are not nearly tight enough to justify the near doubling of the spot gas price that occurred during the first half of 2008.

The supply side fundamentals for natural gas in the US are driven by 5 main moving parts: onshore and offshore domestic production, net imports of gas from Canada, exports of gas to Mexico and imports of liquefied natural gas (LNG). In the last 2 years onshore production has been growing at an accelerating

pace as gas shales have been developed using advances in horizontal drilling and “fracing” techniques; by contrast offshore production and imports from Canada and of LNG have been declining.

On the demand side, industrial gas demand and electricity gas demand, each about a third of total US gas demand, are key. Commercial and residential demand, which make up the final third, has been fairly constant on average over the last decade - although yearly fluctuations due to the coldness of winter weather can be marked. Growth in gas’ market share of the residential and commercial heating market has been balanced by efficiency gains.

Industrial demand tends to trend up and down depending on the strength of the economy; the level of the US dollar; and the differential between US and international gas prices. Until mid-2008 a weaker dollar, high international gas prices and a strong economy saw industrial demand recovering after declining in the first half of this decade. Not surprisingly, just recently demand has turned down (November 2008 industrial demand was 21.6 Bcf/day vs 22.4 Bcf/day for November 2007).

Generally speaking, the majority of incremental electricity demand over the last few years has been met by gas rather than coal, nuclear or hydro power. While electricity demand has grown 1-2% per annum (pa), gas demand for electricity generation has grown by on average 5% pa (1 Bcf/day per year).

## **Supply Outlook**

### *Fall in Rig Count*

The most important immediate short term supply driver is a sharply dropping rig count. Since the start of September almost all of the leading US gas exploration and production companies have announced an intention to cut capital spending. These moves are lowering the gas drilling rig count dramatically and will tighten the balance between gas supply and demand as soon as production falls as a result. One unknown, however, is the length of the lag between cuts in capital expenditure and resulting cuts in production. We expect the rig count to drop from a peak of 1600 gas land rigs to 800–1000 by May 2009 (the rig count has fallen to 1104 as of early February 2009) and for this to halt supply growth early next year and bring supply down by 3 Bcf/day by September 2009.

### *Liquid natural gas (LNG) arbitrage*

The UK national balancing point (NBP) gas price – which serves as a proxy to the European gas price – rose 5% in January, up in dollar terms from \$8.60 to \$9.10 over the month (the rise in sterling terms was slightly more). The differential to Henry Hub remains sufficient to divert LNG cargoes away from the US.

### *Canadian imports into the US*

These are now dropping at about 10% pa (to approximately 10 Bcf/day) Falling rig counts; a less attractive royalty regime enacted in 2007; and increased demand from Canadian oil sands development are all factors at work here.

## **Demand Outlook**

The likely effect of this current recession on US natural gas demand is more difficult to ascertain. Previous recessions may offer some guide. Between 1972-5, industrial and total demand for natural gas fell 18% and 12%, and the 1979-83 period saw a fall of 21% and 17%. Industrial demand thus tends to be more sensitive to recession than other types of demand. However, industrial demand constituted almost 50% of total demand in the 1970’s versus around 34% today, and the mix of industrial use appears to be less business cycle sensitive so the effect this time should be less marked. Nevertheless, a 20% decline in industrial demand (c.3.5 Bcf/day) would generate a 6% overall decline in gas demand and put significant downward pressure on a US natural gas price already depressed by strong production growth. However,

as noted above the sizeable cut we are seeing in the rig count is on track to deliver a supply cut of this magnitude by the autumn of this year.

## Other

### *Relationship between gas price and other energy commodity prices in the US*

The oil/gas price ratio (\$ per bbl WTI/\$ per mcf Henry Hub) of 8.7x at the end of January was down from nearly 14.0x at the end of September and is now within the more normal ratio of 6-9x. If oil averages, say, around \$60 in 2010 and the relationship between the oil and gas price returns to its longer-term average of 6-9x, this implies the gas price increasing back to around \$8 once the market has returned to balance.

The following chart of the front month US natural gas price against heating oil (No2), residual fuel oil (No5) and coal (Sandy Barge adjusted for transport and environmental costs) seeks to illustrate how coal and residual fuel oil switching provide a floor and heating oil a ceiling to the natural gas price. The recent sharp pullbacks in the coal and residual oil prices has seen the price of gas end up above the coal support level but below the residual oil support level. Though to be fair it has been trading below residual oil for some 16 months now.

### **Natural gas price (black) vs residual fuel oil (light blue) and heating oil (dark blue) and Sandy Barge (adjusted) (green) 2000 – 2008**



Source: Bloomberg LP

### **Conclusions about US natural gas**

We expect weakness in the US natural gas price to continue until a reduced US land rig count is seen to be working its time honoured function of reducing supply to bring it back into balance with demand reduced by the current recession by at least 3.5 Bcf/day. We judge the earliest this could occur is Q3 2009.

## 5. Guinness Atkinson Global Energy Fund performance review

The main index of oil and gas equities, the MSCI World Energy Index, was down 3.66% over the month of January. The S&P 500 was down 8.43% in January. The Fund performed slightly worse than the MSCI World Energy Index, falling by 4.21% (all in US dollar terms).

Within the Fund, January's stronger performers were Transocean, OMV, Peabody, Statoil and Petroleo Brasileiro. Poorer performers were Helix, Nexen, Patterson-UTI, Repsol and Opti-Canada.

### Performance as of December 31<sup>st</sup>, 2008

| Inception date June 30, 2004 | Q4 2008 | Q3 2008 | Full Year 2007 | Full Year 2008 | One year (annualised) | Last 2 years (annualised) | Since Inception (annualised) |
|------------------------------|---------|---------|----------------|----------------|-----------------------|---------------------------|------------------------------|
| Global Energy Fund           | -33.86% | -34.08% | 37.25%         | -48.56%        | -48.47%               | -15.91%                   | 10.23%                       |
| MSCI Energy Index            | -21.26% | -27.98% | 30.86%         | -37.88%        | -37.80%               | -9.80%                    | 8.81%                        |
| S&P 500 Index                | -21.94% | -8.37%  | 5.49%          | -37.00%        | -36.92%               | -18.41%                   | -3.16%                       |

### Performance as of January 31<sup>st</sup>, 2009

| Inception date June 30, 2004 | Q4 2008 | January 2009 | Full Year 2007 | Full Year 2008 | One year (annualised) | Two years (annualised) | Inception to end 2008 (annualised) | Since inception (annualised) |
|------------------------------|---------|--------------|----------------|----------------|-----------------------|------------------------|------------------------------------|------------------------------|
| Global Energy Fund           | -33.86% | -4.21%       | 37.25%         | -48.56%        | -48.47%               | -17.71%                | 10.23%                             | 9.01%                        |
| MSCI Energy Index            | -21.26% | -3.66%       | 30.86%         | -37.88%        | -37.80%               | 7.76%                  | 8.81%                              | 7.76%                        |
| S&P 500 Index                | -21.94% | -8.43%       | 5.49%          | -37.00%        | -36.92%               | -4.94%                 | -3.16%                             | -4.94%                       |

Gross Expense Ratio 1.34%\*The Global Energy Fund has an expense cap in place and the advisor is contractually obligated to cap the total expenses at least through June 30, 2009.

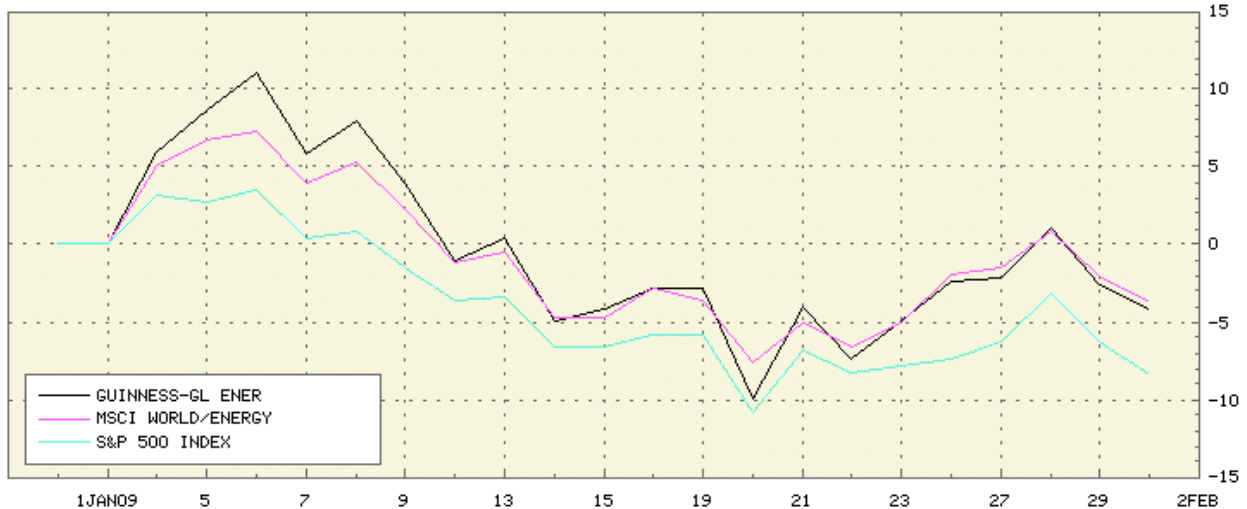
*Performance data quoted represent past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance of the Fund may be lower or higher than the performance quoted. For most recent month-end and quarter-end performance, visit [www.gafunds.com/performance.asp](http://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.*

The following chart shows the Fund's performance year to date to 31 January 2009.

**Guinness Atkinson Global Energy Fund vs S&P 500 and MSCI World Energy Index – YTD to 31 January 2009**

| Range      |                 | 12/31/08 | - | 1/30/09 | Period | D | Daily     | 30 Day     | Period    |
|------------|-----------------|----------|---|---------|--------|---|-----------|------------|-----------|
| Securities |                 | Crncy    |   | Prc     | Appr   |   | Total Ret | Difference | Annual Eq |
| 1          | GAGEX US Equity | USD      |   | -4.21   | %      |   | -4.21 %   | -0.54 %    | -40.74 %  |
| 2          | MXWOEN Index    | USD      |   | -3.71   | %      |   | -3.66 %   |            | -36.51 %  |
| 3          | SPX Index       | USD      |   | -8.57   | %      |   | -8.43 %   | -4.76 %    | -65.74 %  |

(\* = No dividends or coupons)



Source: Bloomberg

**Past performance is no guide to future performance.**

The value of this investment and any income arising from it can fall as well as rise. This will be as a result of market, currency and exchange rate fluctuations as well as other factors. The Fund's Prospectus gives a full explanation of the characteristics of the Fund and is available at [www.guinnessfunds.com](http://www.guinnessfunds.com). You may lose money in this investment.

**Buys/Sells**

There were no buys or sells during the month.



## Sector Breakdown

The following table shows the asset allocation of the Fund at 31 January 2009:

| (%)                                 | 31 Dec 2006* | 31 Dec 2007* | 31 Dec 2008 | 31 Jan 2009 | Change in 2009 |
|-------------------------------------|--------------|--------------|-------------|-------------|----------------|
| <b>Oil &amp; Gas</b>                | <b>95.4</b>  | <b>103.5</b> | <b>96.4</b> | <b>95.9</b> | <b>-0.5</b>    |
| Integrated                          | 45.2         | 66.2         | 53.7        | 54.3        | +0.6           |
| Exploration and production          | 30.3         | 25.8         | 28.7        | 27.9        | -0.8           |
| Drilling                            | 9.9          | 8.1          | 5.2         | 5.4         | +0.2           |
| Equipment and services              | 3.4          | 3.4          | 6.4         | 5.6         | -0.8           |
| Refining and marketing              | 6.6          | 0.0          | 2.4         | 2.7         | +0.3           |
| <b>Coal and consumables</b>         | <b>3.3</b>   | <b>2.5</b>   | <b>2.3</b>  | <b>2.5</b>  | <b>+0.2</b>    |
| <b>Construction and engineering</b> | <b>0.0</b>   | <b>0.0</b>   | <b>0.4</b>  | <b>0.5</b>  | <b>+0.1</b>    |
| <b>Cash</b>                         | <b>1.3</b>   | <b>-6.0</b>  | <b>0.9</b>  | <b>1.1</b>  | <b>+0.2</b>    |
| <b>Total</b>                        | <b>100</b>   | <b>100</b>   | <b>100</b>  | <b>100</b>  | <b>-</b>       |

Source: Guinness Asset Management

Basis: Global Industry Classification Standard (GICS)

## Equity valuation

While it is hard to be precise, the current price of energy equities reflects a medium to long-term oil price of \$30-\$38/barrel. You can make a rough calculation that takes the 2007 PER of the Fund (5.9x) which reflected earnings when the oil price was \$72 and work out what oil price would reduce earnings by enough to put the Fund on the same P/E ratio as the broad market is currently. The reduction in earnings depends on which 2008 P/E ratio you take for the S&P500 – either 14.8x (S&P 500 operating earnings which exclude write-downs) or 28.2x (S&P 500 reported earnings which include write-downs). Today that implied oil price is \$30-\$38. These sums are very crude and make heroic assumptions (for instance, that Finding and Discovery (F&D) and lifting costs are \$20/barrel) but is in my view a perfectly respectable approach to give an indication of oil price implicit in current energy equity valuations.

## 6. Guinness Atkinson Global Energy Fund portfolio

The fund at 31 January 2009 was on a PER (2008) of 5.4x (5.9x 2007) with a median PER (2008) of stocks held of 6.2x. By comparison the S&P 500 Index at 825.88 was on a PER of 14.8x (2008) (*Based on S&P 500 'operating' earnings per share estimates of 55.93 for 2008*). This is shown in the following table:

| At 31 January 2009                       | 2007          | 2008                                     | 2009                |
|--|---------------|--|---------------------|
| Fund PER                                 | 5.9           | 5.4                                      | 9.0                 |
| S&P 500 PER                              | 12.5          | 14.8                                     | 15.1                |
| Premium (+)/Discount (-)                 | -52.8%        | -63.5%                                   | -40.4%              |
| <b>Fund 2007 vs<br/>S&amp;P 500 2008</b> | <b>-60.1%</b> | <b>Fund 2008 vs<br/>S&amp;P 500 2009</b> | <b>-64.2%</b>       |
| Average oil price (WTI) \$               | \$72.2/bbl    | \$99.9/bbl                               | \$41.9/bbl<br>(YTD) |

Source: Standard and Poor's; Guinness Asset Management Ltd (S&P500 'operating' EPS consensus 2009 54.70)

### Portfolio Holdings

Our **Integrated** and similar stock exposure (c.54%) is comprised of a mix of mid-cap and large-cap stocks. Mid-caps are ConocoPhillips, Marathon, Statoil, Occidental, OMV, Hess, Petro-Canada, Repsol and ENI. Our four large caps are Royal Dutch Shell, BP, Total and Chevron. At the end of January the median PER of this group was 5.7x 2008 earnings.

Our **Exploration & production** exposure (c.28%) gives us exposure most directly to any recovery in the oil price after its 75% fall from \$145 per barrel to \$35 per barrel. The stocks with oil sands exposure are Imperial Oil, Encana, OPTI Canada, Suncor and Nexen. The pure E&P stocks are all now largely in the US (Anadarko, Newfield, Pioneer Natural Resources and Swift), although Apache and Noble have significant international production as well. The metrics behind three of the E&P stocks held are low EV/Proven Reserves (Noble, Swift, and Pioneer). All of them also give us exposure to North American natural gas (they are each maximum 50% oil) and they include one of the industry leaders (Apache) and one of the more leveraged companies (Anadarko). We also have smaller positions in two non-US E&P stocks, Dragon Oil and Addax Petroleum, both of which were previously held in our 'research' portfolio. Dragon Oil has producing oil assets in the Caspian Sea and trades on 5.3x 2007 earnings (3.1x 2008 earnings) whilst Addax, mainly an oil producer in offshore Nigeria, also trades on attractive metrics. Both companies also have sizeable contingent gas assets.

We have exposure to two **Emerging Markets** stocks (Petrobras and CNOOC). They are both mainly E&P focused and have significant growth potential and advantages as national champions. For Petrobras, the recent Tupi, Jupiter and Carioca discoveries and the surrounding acreage in the offshore Brazilian subsalt could yield substantial value.

We have useful exposure to **North American Oil Service** stocks. On estimated 2008 earnings they are all trading with PERs of between 1.9x and 7.9x - Transocean (3.9x), Halliburton (7.9x), Patterson UTI (4.2x), Helix (1.9x).

Our independent **Refining** exposure is now in the Far East, and with PERs of 2.5x 2007 and 5.4x 2008 earnings Singapore Petroleum looks good value provided refining margins hold up in 2009 as we expect them to.

Of other holdings, Peabody gives exposure to the huge differential between the coal and oil prices in British Thermal Unit (Btu) terms. Their energy reserves (on a Btu basis) are greater than Exxon's despite a market capitalisation of less than 2% of Exxon's.

### Portfolio at 31 January 2009

| GAGEX - Global Energy Fund 31 January 2009 |         |          |                 |                 |                 |                 |                                |                |          |  |
|--|---------|----------|-----------------|-----------------|-----------------|-----------------|--------------------------------|----------------|----------|--|
| Stock                                      | Country | % of NAV | 2007            | 2008            | 2009            | 2010            | Sector                         | Mkt. Cap. (bn) | 31.12.08 |  |
|  |         |          | B'berg mean PER | B'berg mean PER | B'berg mean PER | B'berg mean PER |                                |                |          |  |
| Chevron Corp                               | US      | 3.1      | 8.0             | 6.2             | 13.4            | 9.0             | Integrated Oil & Gas           | 150.3          |          |  |
| BP PLC                                     | GB      | 3.1      | 9.1             | 8.0             | 8.2             | 7.1             | Integrated Oil & Gas           | 143.7          |          |  |
| Total SA                                   | FR      | 3.2      | 6.7             | 7.2             | 8.3             | 7.1             | Integrated Oil & Gas           | 128.7          |          |  |
| ConocoPhillips                             | US      | 3.2      | 4.8             | 4.5             | 11.6            | 7.1             | Integrated Oil & Gas           | 77.2           |          |  |
| ENI SpA                                    | IT      | 3.1      | 6.1             | 6.4             | 7.8             | 6.7             | Integrated Oil & Gas           | 94.7           |          |  |
| Royal Dutch Shell PLC                      | NL      | 3.3      | 5.3             | 8.3             | 7.9             | 7.2             | Integrated Oil & Gas           | 92.8           |          |  |
| StatoilHydro ASA                           | NO      | 3.8      | 8.6             | 7.4             | 9.2             | 7.6             | Integrated Oil & Gas           | 51.8           |          |  |
| Occidental Petroleum Corp                  | US      | 3.6      | 9.0             | 6.5             | 17.8            | 9.7             | Integrated Oil & Gas           | 48.6           |          |  |
| Repsol YPF SA                              | ES      | 3.1      | 5.3             | 5.7             | 6.7             | 6.0             | Integrated Oil & Gas           | 26.0           |          |  |
| Marathon Oil Corp                          | US      | 3.8      | 4.8             | 5.5             | 9.4             | 6.5             | Integrated Oil & Gas           | 19.3           |          |  |
| Hess Corp                                  | US      | 4.4      | 9.3             | 7.7             | 37.8            | 14.6            | Integrated Oil & Gas           | 17.5           |          |  |
| Petro-Canada                               | CA      | 3.4      | 4.8             | 4.1             | 8.8             | 5.2             | Integrated Oil & Gas           | 10.6           |          |  |
| OMV AG                                     | AT      | 4.2      | 4.2             | 3.5             | 5.1             | 4.2             | Integrated Oil & Gas           | 7.9            |          |  |
| Petroleo Brasileiro SA                     | BR      | 4.5      | 6.2             | 6.4             | 7.7             | 7.1             | Integrated Oil & Gas           | 75.5           |          |  |
| Afren PLC                                  | GB      | 0.1      | nm              | nm              | 2.2             | 1.3             | Oil & Gas Exploration & Produc | 0.2            |          |  |
| Shandong Molong Petroleum M HK             |         | 0.2      | 8.2             | 4.9             | 4.1             | 2.7             | Oil & Gas Equipment & Services | 0.1            |          |  |
| EnCana Corp                                | CA      | 2.3      | 10.6            | 7.3             | 12.1            | 12.2            | Oil & Gas Exploration & Produc | 35.1           |          |  |
| Suncor Energy Inc                          | CA      | 1.2      | 7.8             | 10.4            | 17.4            | 8.4             | Integrated Oil & Gas           | 18.2           |          |  |
| Imperial Oil Ltd                           | CA      | 3.4      | 12.0            | 8.9             | 19.0            | 12.1            | Integrated Oil & Gas           | 29.1           |          |  |
| Nexen Inc                                  | CA      | 3.0      | 8.8             | 4.6             | 11.4            | 6.0             | Oil & Gas Exploration & Produc | 9.2            |          |  |
| OPTI Canada Inc                            | CA      | 0.5      | nm              | nm              | nm              | 3.1             | Oil & Gas Exploration & Produc | 0.3            |          |  |
| Apache Corp                                | US      | 2.5      | 8.9             | 6.3             | 17.0            | 8.6             | Oil & Gas Exploration & Produc | 25.0           |          |  |
| Anadarko Petroleum Corp                    | US      | 2.4      | 4.6             | 5.3             | 167.0           | 14.4            | Oil & Gas Exploration & Produc | 17.7           |          |  |
| Noble Energy Inc                           | US      | 3.5      | 9.0             | 7.1             | 12.9            | 9.2             | Oil & Gas Exploration & Produc | 8.5            |          |  |
| Pioneer Natural Resources Co               | US      | 1.2      | 7.4             | 7.9             | 58.6            | 7.0             | Oil & Gas Exploration & Produc | 1.9            |          |  |
| Addax Petroleum Corp                       | CA      | 1.5      | 6.3             | 3.0             | 6.9             | 3.8             | Oil & Gas Exploration & Produc | 2.7            |          |  |
| Newfield Exploration Co                    | US      | 2.2      | 14.5            | 5.6             | 5.9             | 5.1             | Oil & Gas Exploration & Produc | 2.6            |          |  |
| Dragon Oil Plc                             | GB      | 2.0      | 5.3             | 3.1             | 5.3             | 3.8             | Oil & Gas Exploration & Produc | 1.2            |          |  |
| Swift Energy Co                            | US      | 2.9      | 3.1             | 2.2             | nm              | 4.8             | Oil & Gas Exploration & Produc | 0.5            |          |  |
| Coastal Energy Co                          | CA      | 0.4      | nm              | 145.0           | 1.5             | 0.6             | Oil & Gas Exploration & Produc | 0.1            |          |  |
| Grey Wolf Exploration Inc                  | CA      | 0.0      | nm              | 53.0            | nm              | nm              | Oil & Gas Exploration & Produc | 0.0            |          |  |
| WesternZagros Resources Ltd                | CA      | 0.1      | nm              | nm              | nm              | nm              | Oil & Gas Exploration & Produc | 0.1            |          |  |
| Transocean Ltd                             | US      | 3.4      | 3.9             | 3.9             | 3.8             | 3.7             | Oil & Gas Drilling             | 15.1           |          |  |
| Halliburton Co                             | US      | 3.7      | 6.4             | 7.9             | 9.9             | 9.4             | Oil & Gas Equipment & Services | 16.3           |          |  |
| Patterson-UTI Energy Inc                   | US      | 2.0      | 3.4             | 4.2             | 29.0            | 22.2            | Oil & Gas Drilling             | 1.8            |          |  |
| Helix Energy Solutions Group Inc           | US      | 1.8      | 1.5             | 1.9             | 2.7             | 1.9             | Oil & Gas Equipment & Services | 0.7            |          |  |
| Kentz Corp Ltd                             | GB      | 0.5      | 8.2             | 6.0             | 5.7             | 5.1             | Construction & Engineering     | 0.2            |          |  |
| CNOOC Ltd                                  | HK      | 3.4      | 9.3             | 5.7             | 8.9             | 6.9             | Oil & Gas Exploration & Produc | 41.5           |          |  |
| Singapore Petroleum Co Ltd                 | SG      | 2.7      | 2.4             | 5.4             | 7.3             | 5.0             | Oil & Gas Refining & Marketing | 0.8            |          |  |
| Peabody Energy Corp                        | US      | 2.6      | 16.0            | 6.9             | 7.9             | 6.8             | Coal & Consumable Fuels        | 6.1            |          |  |
| Cash                                       | Stocks  | 98.9     |                 |                 |                 |                 |                                |                |          |  |
|  | Cash    | 1.1      |                 |                 |                 |                 |                                |                |          |  |
|  | Total   | 100.00   |                 |                 |                 |                 |                                |                |          |  |
|  |         |          | 5.9             | 5.4             | 9.0             | 6.2             |                                |                |          |  |
|  |         |          | 6.7             | 6.2             | 8.6             | 6.8             |                                |                |          |  |

nm = Not meaningful

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.

## 7. Manager's concluding comments

For much of the last 10 years we have enjoyed a favourable environment for energy investing. In 1999 - 2000 oil was recovering from a very cheap level. In 2003 - 2008 oil demand growth exceeded supply growth due to strong developing world demand and accelerating depletion rates in mature basins.

In the second half of 2008 the landscape changed. We confess to being taken by surprise by the size and rapidity of the onset of the current recession. We did not expect our central banks and regulators to fail to deal with the sub-prime mortgage crisis so comprehensively that it has turned into a banking panic and a massive short-term shutdown in global consumer spending.

How long and deep the recession turns out to be is still unclear. We incline to the view that the recapitalisation of our banks that has now occurred and the sizeable fiscal and government spending stimuli are large enough to do the job of preventing a depressionary spiral. We expect the recession to be the deepest since the war – 5% peak to trough in US GDP – and to have its nadir around Q3 2009. We expect the US broad market (S&P 500) to trade between 700 and 1200. We expect S&P earnings to trough in the \$40s (the 2007 high was \$90) and to recover by 2011 to around \$60. It may yo-yo between a PER in the 12-14x range (fearing the single digits of 1929 and 1974) and the 18-20x range of past non-inflationary recessions (1957, 1991 and 2001).

As for energy equities our view is that they remain a great store of value and potential for above average returns as the oil price recovers first to the long term level sought by OPEC (\$60 - \$80) and then in maybe three years time resumes its rise to the level that will match dwindling supply and relentless demand from developing economies. We find it much easier to see how energy equities on a PER of 5-6x 2007 earnings when oil was \$72 and gas \$6.90 can double or more than how the broad market (at 900) can rise 50% to 1350.

We recognise there are risks. OPEC may fail to stabilise the price at the \$60 – \$80 level. The US natural gas market may not rebalance as fast as we hope. But we keep coming back to one key proposition: oil and gas are running out and it does seem reasonable to believe that before they do run out they will trade at much higher prices than we have yet seen and shareholders in companies that are part of that world will be duly rewarded.

Overall, the Fund continues to seek to be well placed to benefit from the oil price environment described above and to enable investors to benefit from a recovery in energy markets when it comes.

### **Tim Guinness**

Chairman & Chief Investment Officer  
16 February 2008

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 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. The MSCI World Energy Index is an unmanaged index composed of more than 1,400 stocks listed on exchanges in the U.S., Europe, Canada, Australia, New Zealand and the Far East. They assume reinvestment of dividends, capital gains and excludes management fees and expenses. They are not available for investment. The Goldman Sachs Commodity Index is a global production weighted index composed of 24 commodity futures contracts. The index is managed by Goldman Sachs Group Inc. The DJ AIG Commodity Index is also an index composed of commodity futures contracts. The index is managed by Dow Jones and Company. Bloomberg Active Indices for Funds (BAIF) are used to measure a fund's performance against its peers. BAIF indices

represent a composite of funds in the same peer group. This index (BBOENRUS) represents open-ended energy funds domiciled in the United States. They are not available for investment.

Cash flow is equal to cash receipts minus cash payments over a given period of time.

This information is authorized for use when preceded or accompanied by a prospectus for the Guinness Atkinson Global Energy Fund. 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.

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## Appendix: oil and gas markets, historical context

### Oil price (WTI \$) last 20 years.



Source: Bloomberg

For the oil market, the period since the Iraq Kuwait war (1990/91) can be divided into two distinct periods: the first 9-year period was broadly characterized by decline. The oil price steadily weakened 1991 - 1993, rallied between 1994 -1996, and then sold off sharply, to test 20 year lows in late 1998. This latter decline was partly induced by a sharp contraction in demand growth from Asia, associated with the Asian crisis, partly by a rapid recovery in Iraq exports after the UN Oil for food deal, and partly by a perceived lack of discipline at OPEC in coping with these developments.

The last 9 years, by contrast, have seen a much stronger price and upward trend. There was a very strong rally between 1999 and 2000 as OPEC implemented 4 mb/d of production cuts. It was followed by a period of weakness caused by the rollback of these cuts, coinciding with the world economic slowdown, which reduced demand growth and a recovery in Russian exports from depressed levels in the mid 90's that increased supply. OPEC responded rapidly to this during 2001 and reintroduced production cuts that stabilized the market relatively quickly by the end of 2001.

Then, in late 2002 early 2003, war in Iraq and a general strike in Venezuela caused the price to spike upward. This was quickly followed by a sharp sell-off due to the swift capture of Iraq's Southern oil fields by Allied Forces and expectation that they would win easily. Then higher prices were generated when the anticipated recovery in Iraq production was slow to materialise. This was in mid to end 2003 followed by a much more normal phase with positive factors (China demand; Venezuelan production difficulties; strong world economy) balanced against negative ones (Iraq back to 2.5 mb/d; 2Q seasonal demand weakness) with stock levels and speculative activity needing to be monitored closely. OPEC's management skills appeared likely to be the critical determinant in this environment.

By mid 2004 the market had become unsettled by the deteriorating security situation in Iraq and Saudi Arabia and increasingly impressed by the regular upgrades in IEA forecasts of near record world oil demand growth in 2004 caused by a triple demand shock from strong demand simultaneously from China; the developed world (esp. USA) and Asia ex China. Higher production by OPEC has been one response and there was for a period some worry that this, if not curbed, together with demand and supply responses to higher prices, would cause an oil price sell off. Offsetting this has been an opposite worry that non OPEC production could be within a decade of peaking; a growing view that OPEC would defend

\$50 oil vigorously; upwards pressure on inventory levels from a move from JIT (just in time) to JIC (just in case); and pressure on futures markets from commodity fund investors.

Since 2005 we saw a further strong run-up in the oil price. Hurricanes Katrina and Rita which devastated New Orleans caused oil to spike up to \$70 in August 2005, and it spiked up again in July 2006 to \$78 after a three week conflict between Israel and Lebanon threatened supply from the Middle East. OPEC implemented cuts in late 2006 and early 2007 of 1.7 million barrels per day to defend \$50 oil and with non-OPEC supply growth at best anaemic demonstrated that it could to act a price-setter in the market at least so far as putting a floor under it.

Continued expectations of a supply crunch by the end of the decade, coupled with increased speculative activity in oil markets, contributed to the oil price surging past \$90 in the final months of 2007 and as high as \$147 by the middle of 2008. This latest spike has now unwound and the oil price has fallen back to below \$50 as fears that a global recession might result in oil demand destruction outweigh supply crunch concerns in the shorter-term.

### North American gas price last 17 years (Henry Hub \$/Mcf)



Source: Bloomberg

With regard to the US natural gas market, the price traded between \$1.50 and \$3/Mcf for the period 1991 - 1999. This was followed by two significant spikes up to \$8-10/Mcf, one in late 2000 and one early in 2003. The spikes were caused by very tight supply situations because there is an underlying problem with supply in the rapid depletion of North American gas reserves. On both occasions, the price spike induced a spurt of drilling which brought the price back down. More recently we have seen another period of very firm (over \$5/Mcf) gas prices followed by a hurricane induced spike. Since the big spike in late 2005 the gas price has traded mainly in the \$6-\$8 range, with a significant move down precipitated by the collapse of Amaranth in 2006 and most recently a new but short-lived spike in 2008 above \$10.

North American gas prices are important to many E&P companies. In the short-term, they do not necessarily move in line with the oil price, as the gas market is essentially a local one. (In theory 6 Mcf of gas is equivalent to 1 barrel of oil so \$60 per barrel equals \$10/Mcf gas). It is a regional market more than a global market because Liquid Natural Gas imports cannot rapidly respond to increased demand because of the high infrastructure spending needed to increase capacity. But that is slowly becoming less true as LNG infrastructure is put in place.