Crude market potentially vulnerable

Crude oil markets are vulnerable to a reversal of the bullish sentiment that has prevailed since the third quarter of 2010. We believe that in the coming months supply fears could well dissipate, while evidence of the impact of historically high prices on world economic activity grows. Rather than supply deficits in 2011/12, a swing to surplus is looking a possibility. Prices for benchmark light crudes are potentially vulnerable by $30/barrel over the next six months.

Crude oil demand: Consensus forecasts too high

The principal intergovernmental forecasting bodies are anticipating global demand growth of about 1.5mmb/d in 2011. We suspect, however, that consensus forecasts are too high in the light of sustained historically-high real oil prices and may have to be sharply reduced over the next few months. With Brent at $120/barrel or more global oil expenditure is now running at over 5.5% of world GDP. Historically this has been a trigger for softening economic activity as in the early 1980s and 2008. Anecdotal evidence has been growing that high real prices are influencing consumer behaviour, while the latest EIA statistics for US petroleum product demand are pointing to a decidedly sluggish picture. Internationally, a demand influence that may have been under estimated is the aftermath of the Japanese earthquake and radiation crisis.

Crude oil supplies: Comfortable

In recent weeks the hike in crude oil prices has been driven by supply fears stemming from political turmoil in the Middle East and North Africa. However, the market remains well supplied in terms of inventories and the loss of 1.3mmb/d of Libyan exports appears to have been comfortably absorbed. With surplus capacity of 4-5mmb/d at the beginning of 2011, OPEC has sufficient capacity to fill the void for the foreseeable future. We regard a major disruption to Saudi production due to civil unrest as fanciful to say the least. Saudi Arabia is very tightly controlled politically and from a security perspective, while the majority Sunni population has so far shown no signs of revolutionary zeal.

Crude oil prices: May be peaking

Crude prices may be in the throes of peaking assuming, as we expect, that there are no further major supply disruptions in the months ahead. The supply fear premium is difficult to assess but may be around $30/barrel, suggesting an underlying Brent price of $90/barrel. What we do know is that given existing technology, a prolonged period of $120 oil cannot be withstood without triggering an OECD recession. The upshot would be an oil price death spiral.

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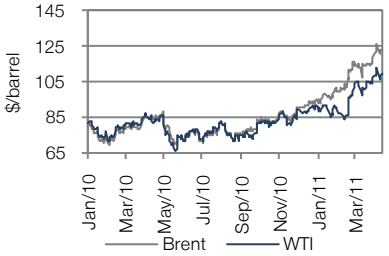
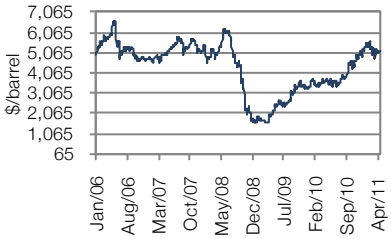
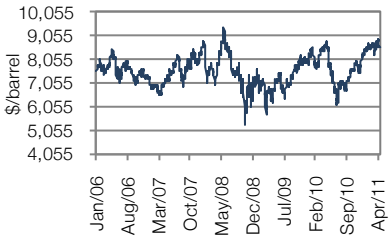
WTI vs Brent



AIM Oil & Gas Index



FTSE 350 Oil & Gas Index



Price trends

	WTI $/barrel	Brent $/barrel	Henry Hub $/mmbtu
2007	72.2	72.7	6.96
2008	99.8	97.7	8.89
2009	62.0	62.0	3.94
2010	79.5	79.7	4.37
2011e	90.4	100.1	4.25
2012e	85.0	90.0	4.60

Note: Prices are yearly averages

Crude oil market dynamics

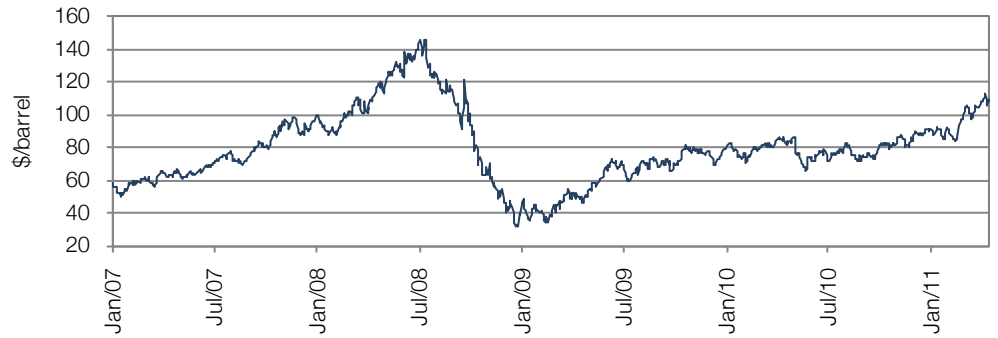
Price overview: 30-month highs

Crude oil prices surged in the second half of February and subsequently trended higher through early April, taking benchmark light crude grades to approximate 30-month highs. However, there were signs of incipient weakness in the second week of April. The upward trend in March and early April has continued to be driven by supply fears relating to acute civil unrest and armed rebellion in the Middle East and North Africa (MENA). Until now these factors, with the exception of Libya, have mainly affected relatively small oil producers in the region. The underlying fear is that civil unrest or worse could spread to the large Middle Eastern producers thereby posing a potentially catastrophic threat to global oil supplies. Adding to the supply fears in early April has been the possibility of disruption in Nigeria in the run-up to the presidential election later in the month. Day-to-day movements in crude prices of late have mainly reflected newsflow related to the status of fighting in Libya and revolutionary fervour elsewhere. Significantly, the price surge of the past three months has been despite continuing evidence of a very well supplied market and a decidedly comfortable inventory position.

Brent, the key international light crude benchmark, proved particularly sensitive to the political convulsions in MENA in February, with the price increasing during the course of the month by a hefty $12.8/barrel to $111.9/barrel. In March there was a more modest gain of $5.3/barrel to $117.3/barrel. The upward trend in the month was only really broken in the aftermath of the Japanese earthquake and tsunami, when there was a dip of around $6/barrel. This reflected the view that the disaster could significantly adversely impact oil demand. Price weakness around mid-March, however, proved short lived. In late March and early April Brent again trended strongly upwards taking the price to $126.7/barrel. This was a 31-month high and up by $32/barrel from end December 2010 and $41/barrel or 48% from a year earlier. In the second week of April Brent along with other light crude grades came under significant pressure declining to $121.0/barrel on the 12th. This reflected emerging fears concerning the impact of historically high prices on economic activity and oil demand and a switch to a bearish trading stance on commodities by Goldman Sachs.

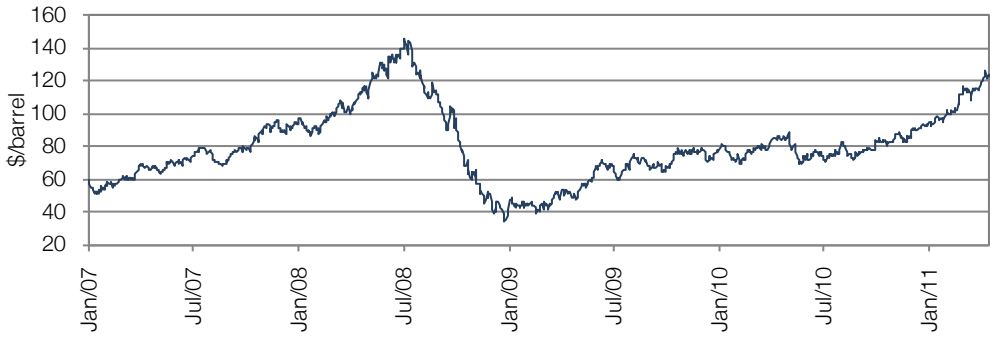
WTI, the US light crude benchmark, also rose powerfully in the second half of February. For the month it was up by $12/barrel to $97.0/barrel. During March there was a further gain of $9.75/barrel to $106.7/barrel. In early April WTI continued to firm and on the 8th was trading at round a 30-month high of $112.8/barrel. This was up $21/barrel on end-December 2010 and $27/barrel or 31% on a year previously. WTI slipped by $6.5/barrel on 11 and 12 April, taking the price to $106.3/barrel.

Exhibit 1: WTI crude oil price trend



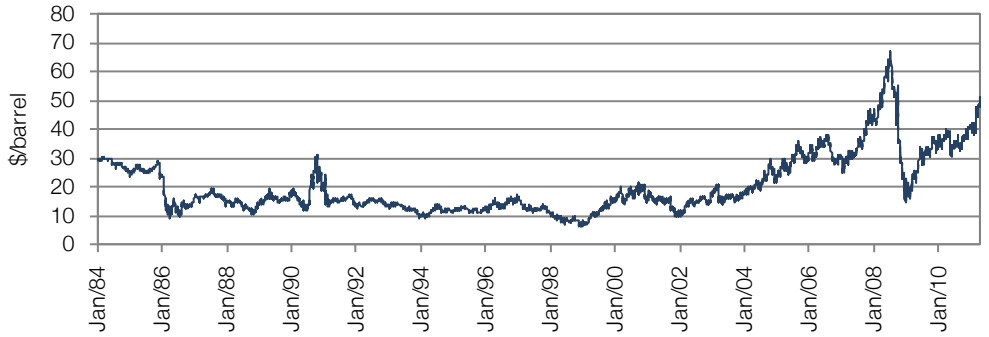
Source: Bloomberg

Exhibit 2: Brent crude oil price trend



Source: Bloomberg

Exhibit 3: WTI inflation adjusted



Source: Bloomberg

Light crude spreads: Continuing wide Brent-WTI premium

WTI-Brent

The traditional WTI premium to Brent started to decisively reverse in the closing months of 2010. In the first two months of 2011the Brent premium widened dramatically averaging $6.9/barrel in January and $14.5/barrel in February. The high point in the latter came around mid-month when Brent was trading at a premium of $17/barrel to WTI, historically an unprecedented situation. Since mid-February the Brent premium has narrowed a little but remains at historically high levels. In March it averaged $11.5/barrel and on 6 April was $13.1/barrel. For perspective Brent and WTI

traded at approximate parity on average in 2010. The emergence of such a large discount to the international Brent benchmark is clearly advantageous for the US economy. We doubt very much that the US consumer is concerned about WTI's loss of status as a barometer of world crude oil prices.

The reversal of the traditional WTI premium and the emergence of a wide Brent premium essentially reflected two broad influences. Probably the most important has been the build-up of inventories to record levels at the Cushing, Oklahoma tank farm, which significantly is the price settlement point for the NYMEX WTI quote. The inventory build-up in turn reflects growing production from Mid-Continent oilfields and rapidly increasing supplies from the Athabasca tar sands in Alberta, Canada following the completion of phase 2 of TransCanada's Keystone pipeline from Hardisty, Alberta. Importantly, for at least the next two or so years, Cushing is effectively landlocked, with no easy pipeline access to the Gulf Coast.

The second factor driving the widening Brent premium is the greater sensitivity of this grade to the convulsions in the MENA region. Correctly, the market sees a possible loss of supply in MENA as being of greater significance for Europe and Asia than the US. It should be noted, however, that so far the loss of Libyan exports since the outbreak of armed conflict in the country in February seems to have been made good comfortably from other sources. There are no spot crude shortages or unduly large inventory drawdowns outside North America. The head of Shell's refinery operations has recently indicated that no near-term difficulties are expected in absorbing the loss of Libyan exports.

We continue to believe that Brent will trade at a sizeable premium to WTI of $10/barrel plus in the near term. In our view, the Cushing inventory issue is unlikely to unwind anytime soon while MENA political turmoil is likely to support Brent along with the buoyant economy in China and the Far East. As far as the former is concerned, we believe large-scale truck shipments over the 600 miles from Cushing to the Gulf Coast are not a practical proposition given the cost and time involved. The trip one-way would probably take two days and cost over $10/barrel. Rail shipments are a possibility but the costs would also not be insignificant at possibly over $5/barrel and the journey time would probably be no less than by highway, implying a vulnerability to a sudden change in the spread.

After averaging $11/barrel in Q111, we expect the Brent-WTI premium to be similar in Q2. We see scope for a narrowing of the Brent premium in the second half of 2011 to $5-10/barrel, reflecting a business slowdown in China and elsewhere in Asia and the possible lessening of the political turmoil that has gripped the MENA region in recent months. Key factors here are the potential lagged impact of anti-inflation measures in China, possible weariness among the populations concerned of a prolonged period of civil strife and quasi civil war and just conceivably a resolution of the armed conflict in Libya. In terms of the last mentioned, resolution does not necessarily have to be defined in terms of a complete victory for the rebels.

After 2013, WTI may once again become more reflective of international crude oil market influences. This follows from the possible completion of the third and fourth phases of the Keystone pipeline, which will provide both a shorter route from Hardisty to Cushing and importantly, a link from Cushing to Houston and Port Arthur Texas. WTI will then be able to more easily displace

seaborne imports from the Middle East and Venezuela as feedstock for Gulf Coast refineries. Even if Keystone 3 and 4 are constructed, we still believe WTI will retain a North American continental bias. This reflects the anticipated development of more shale oil capacity in the Mid-Continent and Texas and the increasing availability of supplies from the Athabasca tar sands. As a consequence, a WTI discount of a few dollars a barrel may well become the norm after a prospective Keystone 3 and 4.

WTI-LLS

LLS (Light Louisiana Sweet) is light sweet crude sourced from the Gulf of Mexico with a specification similar to WTI. Historically LLS has traded at a premium to WTI of a dollar or so per barrel but in Q111 this widened dramatically to about $17/barrel, and in early April was running at $13/barrel. Significantly, LLS competes with imported light crudes that are effectively priced off Brent. Clearly, Gulf Coast refineries that use LLS as a feedstock, or indeed other Atlantic Basin grades for that matter, are at a major competitive disadvantage currently to Mid-Continent refineries using WTI.

Other key international light benchmarks

The key development in international light crude markets of late has been the widening of sweet to sour spreads. Dubai Fateh, a light but relatively sour grade for shipments from the Middle East to the Far East, for example, was trading on average at a discount to Brent of $3.7/barrel in February and $5.8/barrel in March while on 6 April, the discount had widened to $7/barrel well above the upper end of the historical range of $2 to $3/barrel. Similarly Nigerian sourced ultra low sulphur Bonny Light has experienced a widening of the premium to Brent from $1.9/barrel in February to $3.9/barrel in early April. The premium of the ultra high specification Malaysian benchmark Tapis to Dubai Fateh has widened markedly between February and early April from $7.4/barrel to $14/barrel, which we believe is a record.

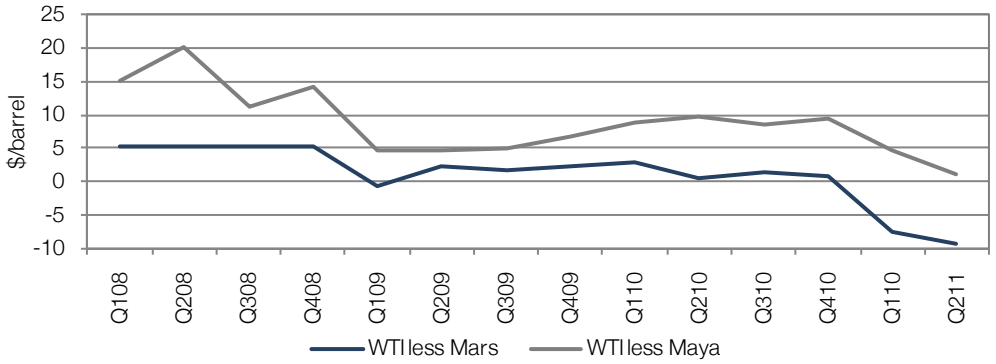
We believe the pronounced widening of the international sweet to sour light spreads of late is directly attributable to the cessation of Libyan exports which were mainly focused on light sweet grades. As far as refineries in Western Europe (the destination for 85% of Libyan exports) are concerned, the obvious alternatives logistically to Libyan light crudes are Brent, Bonny Light and possibly Urals. Interestingly, to provide a grade comparable to Libyan Sarir Saudi Aramco has concocted a new light-sweet blend called Arab Extra Light. This has an API of 41 degrees and a sulphur content of 0.7%. An even higher grade is available with an API of 44 degrees and a sulphur content of 0.5%. For reference Sarir has an API of 37.6 degrees and a sulphur content of 0.16%.

US heavy crude spreads: Anomalies persist

The relationship of WTI to heavy crudes sourced from the Gulf of Mexico or Latin America remains extremely anomalous from a specification viewpoint. In the case of Mars, a medium sour grade sourced from the GOM, there was a premium of no less than $10.8/barrel to the considerably higher grade WTI in February. The premium narrowed to $8.8/barrel in March and in early April was around $9.1/barrel. Historically, Mars has traded at a more plausible discount to WTI of at least $2 to $3/barrel. Mexican sourced Maya, a heavy sour grade has remained at a discount to WTI in 2011 but by early April this had fallen to $2/barrel. For comparison, the discount averaged $9.2/barrel in 2010 and was $12 to $15/barrel for much of the period between 2004 and 2008.

The anomalous premiums for GOM and Latin American sourced medium and heavy grades effectively reflect the same bullish international influences as for the light grades and the relatively bearish domestic backdrop for WTI.

Exhibit 4: Medium and heavy sour crude oil



Source: Bloomberg

The domestic medium sour grade WTS (West Texas Sour) with a similar specification to Mars and a delivery point of Midland Texas, has recovered strongly from a three-month low of $77.6/barrel in mid-February to around $107/barrel in early April. As a result, the discount to WTI has narrowed from a historically wide $7/barrel to a more normal $3.5/barrel. The discount to Mars is around $13/barrel currently, which again points to the feedstock advantage of inland refineries.

Exhibit 5: Recent benchmark light crude prices

Note: All prices are period averages other than where indicated.

	2010					2011			
$/barrel	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr 14
WTI	76.6	75.3	81.9	84.2	89.2	89.4	89.5	102.9	108.1
Brent	76.7	77.8	82.9	85.7	91.8	96.3	104.0	114.4	122.7
Dubai	74.2	75.3	80.3	83.7	89.1	92.4	100.3	108.6	115.3
Bonny	78.7	79.3	84.5	87.5	93.4	98.5	105.9	117.8	125.6
Tapis	81.3	82.3	89.9	91.6	95.2	101.2	107.7	118.7	129.2
Spreads									
WTI-Brent	-0.1	-2.5	-1.0	-1.5	-2.6	-.6.9	-14.5	-11.5	-14.6
Brent-Dubai	+2.5	+2.5	+2.6	+2.0	+2.7	+3.9	+3.7	+5.8	+7.4
Brent-Bonny	-2.0	-1.5	-1.6	-1.8	-1.6	-2.2	-1.9	-3.4	-2.9
Tapis-Dubai	+7.1	+7.0	+9.6	+7.9	+6.1	+8.8	+7.4	+10.1	+13.9

Source: Bloomberg

Exhibit 6: WTI 2007-11 quarterly price scenario

Note: Quarterly data are averages.

$/barrel	Q1	Q2	Q3	Q4	Average
2007	58.1	65.0	75.2	90.5	72.2
2008	97.9	123.8	118.2	59.1	99.9
2009	43.2	59.7	68.1	76.0	62.0
2010	78.8	77.9	76.1	85.2	79.5
2011	93.9	95.5e	87.0e	85.0e	90.4e

Source: Bloomberg

Exhibit 7: Brent 2007-11 quarterly price scenario

$/barrel	Q1	Q2	Q3	Q4	Average
2007	58.1	68.7	74.9	88.9	72.7
2008	96.5	122.2	115.9	56.2	97.7
2009	45.1	59.4	68.4	75.0	62.0
2010	76.8	78.6	76.4	86.9	79.7
2011	104.9	108.5e	95.0e	92.0e	100.1e

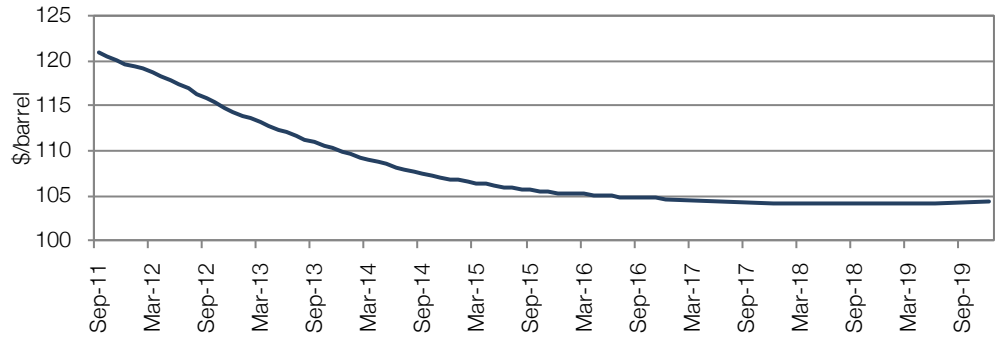
Source: Bloomberg and Edison Investment Research

Forward curves: Pronounced Brent backwardation

Brent remains in pronounced backwardation, reflecting the perceived tightness in spot markets particularly for high-grade light products and uncertainties about near-term supplies. From a spot price of around $125/barrel the curve trends downward through mid-decade hitting around $105/barrel in 2018. The curve then trends flat over the following two years. We would expect Brent's backwardation to rapidly evaporate once near term supply uncertainties ease with key wildcard being the quasi civil war in Libya.

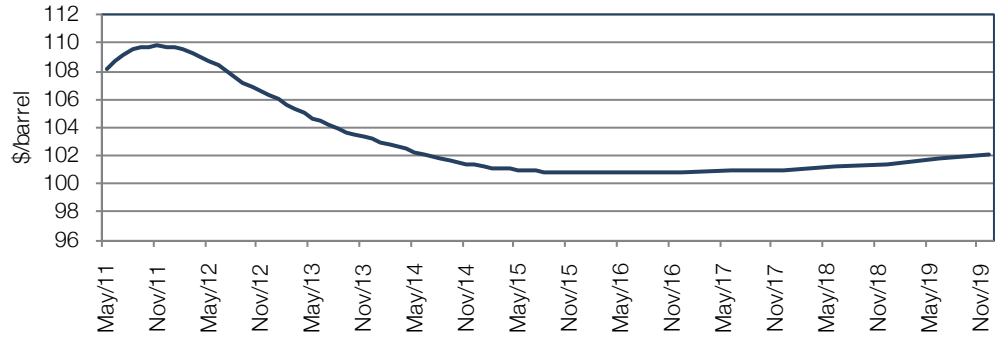
The WTI forward curve by contrast is in contango over the first nine months with a rise from current spot levels of about $106/barrel to just over $110/barrel in December. The curve then goes into backwardation over the following four years with the price for December 2016 deliveries dropping to $101.5/barrel. After 2016 the curve then moves into moderate contango. The near-term WTI contango reflects the expectation of tightening supplies in the coming months. Thereafter the market appears to be taking a considerably more bearish position.

Exhibit 8: Brent forward curve



Source: Bloomberg

Exhibit 9: WTI forward curve



Source: Bloomberg

Supply/demand balance: Potential demand forecast downgrades

Recent developments and 2011 outlook

Forecasts of the global supply/demand balance for crude oil and liquid fuels in 2011 made by the IEA (the intergovernmental organisation for the energy consumers), OPEC and the EIA (the statistical arm of the US Department of Energy) have not changed significantly of late. Looking at the key relationship between global demand and non-OPEC supply (includes OPEC natural gas liquids that are not subject to quota), all three are forecasting modest supply deficits for 2011. The IEA has the smallest deficit at 0.1mmb/d while those forecast by OPEC and the EIA are somewhat larger at 0.4mmb/d and 0.6mmb/d respectively. All three organisations have similar demand growth forecasts for 2011 at about 1.5mmb/d or 1.6%, driven by China, non-OECD Asia, Latin America and the Middle East. Non-OPEC supply gains in 2011 are forecast to be smaller than in 2010 and driven principally by Brazil, Colombia, China, FSU global bio-fuels (principally Brazil and the US) and OPEC natural gas liquids.

Interestingly, global crude and liquid fuels production appeared to have developed robustly early in 2011. According to the IEA total supply in February was running at a record 89mmb/d, up 0.2mmb/d from January and an estimated 0.55mmb/d from December 2010. Compared with a year earlier global supply in February was 2.2mmb/d or 2.5% higher. Significantly, non-OPEC production in February climbed by 0.3mmb/d from the previous month assisted in part by a

reinstatement of Alaskan output following an earlier pipeline outage. Canadian production also appears to have shown a firmer trend than previously expected by the IEA.

Based on IEA data, OPEC production was marginally down in February and apparently also in March reflecting the large scale scaling back of operations in Libya. Production here has apparently dropped from about 1.6mmb/d prior to the commencement of hostilities and sanctions in February to 0.2mm to 0.3mmb/d. All the production presently is being used domestically. Importantly, Iraqi production has risen noticeably in recent months driven by the resumption of exports from the Kurdish region and field development programmes in the south of the country. In February, production was running at 2.68mmb/d, well up on the 2010 average of 2.4mmb/d and a post-Saddam record. Saudi production also started to move higher in February and was 8.9mmb/d against 8.5mmb/d in December. The picture in March appears confused, with some sources pointing to a further rise to 9mmb/d and others suggesting a decline.

Key issues

We see four key issues surrounding the near-term outlook for the global supply/demand balance for crude oil and liquid fuels:

- The ability of OPEC to cover the export shortfall from Libya and possibly elsewhere.
- The speed with which Libyan exports might come back on-stream.
- The impact of the recent Japanese earthquake and tsunami on petroleum and liquid fuel demand.
- The impact of historically high crude oil prices on global economic activity and petroleum product demand.

OPEC capacity utilisation

The only large-scale concentration of surplus crude oil production capacity globally is held by OPEC. At the end of February, the IEA estimated OPEC's theoretical surplus capacity on conservative assumptions in terms of quick response times and sustainability at about 5mmb/d. After allowing for what the IEA perceives as potentially unreliable suppliers this is reduced to a still meaningful 4.1mmb/d. Saudi Arabia accounts for 78% of the total followed by Angola, UAE, Kuwait and Qatar on 6%, 5% 4% and 4% respectively. So far, turmoil in MENA has involved the loss of exports of about 1.4mmb/d with roughly 1.3mmb/d originating from Libya and 0.1mmb/d from Yemen. Conceptually the lost exports can therefore quite easily be made good by OPEC, although the margin of spare capacity obviously declines significantly in the process.

Rather than the pure arithmetic of capacity utilisation the key issue now is, perhaps, what would be the implication of a major supply disruption in Saudi Arabia or one of the other large Gulf producers. The short answer is disaster from a consumer's perspective with benchmark crude prices probably exceeding $200 if not $300/barrel. Quite simply, there would not be sufficient capacity available elsewhere to offset a shortfall of say 2-3mmb/d in Saudi Arabia. However, we believe that such a scenario is highly fanciful to say the least. The country is very tightly controlled politically and from a security perspective, while the majority Sunni population has shown no particular signs of revolutionary zeal. Admittedly there has been some dissent of late among the minority Shia population in the Eastern Province but this is nothing new. Historically there have

been disturbances in the 1950s, 1960s 1970s and 1980s. The most serious one was probably in 1979. However, oil production was unaffected.

Libyan exports

The consensus view is that Libyan exports, other than perhaps shipments out of inventory, will remain off line for many months, if not a year or more. This reflects an apparent stalemate on the battlefield and possible damage to infrastructure in the fighting. In practice, it is impossible to provide a definitive answer on exports given the many imponderables. Clearly, Colonel Gaddafi is not without political support and financial resources, and still has superior firepower and armed forces to the rebels at his disposal. Conceivably he might be able withstand a prolonged military stalemate. An alternative scenario is that Gaddafi suffers a growing number of defections among the military in the coming months as economic conditions deteriorate. This could rapidly undermine his authority and military capability, possibly leading to his overthrow surprisingly quickly. There is also an outside possibility that Gaddafi will agree to exile, which would then pave the way for the creation of new regime acceptable to the western powers.

As far as infrastructure is concerned we do not think any damage sustained so far has been particularly severe. In all probability it can be repaired fairly quickly subject to the caveat that the political situation stabilises sufficiently to facilitate a return to Libya of skilled oilfield and construction workers. We suspect that if Gaddafi is either removed from power or agrees to cede power by the end of the third quarter, Libyan exports will return to at least half 2010 levels by 2011 year end. A scenario that would have highly negative implications for Libyan exports medium to long term would be if the country descends into a prolonged period of anarchy and faction fighting post Gaddafi leaving power. In these circumstances, exports might well be zero over an extended period.

Japan

The earthquake, tsunami and related radiation crisis that hit Japan in mid-March has proven highly disruptive to manufacturing and energy sector activity across a wide swath of the country. Service sector activity has, of course, also been hit hard in the north of the country. The depressing effect of the earthquake and tsunami on industrial activity is likely to persist well into the third quarter if not beyond reflecting, in particular, the severe damage to the electrical power generation and distribution infrastructure. Clearly, economic activity will take a very heavy hit in the first, second and third quarters before recovering in the fourth quarter. Given the weakness of the Japanese economy prior to the quake in March it would probably be not too surprising if GDP declined by several percentage points in 2011.

Assuming a 2-3% drop, the impact on Japanese crude oil consumption of 4.5mmb/d holding all other factors constant might be in the region of 0.2mmb/d. In practice all other factors are not constant. Oil consumption in Japan will be boosted in the coming weeks and months; first by a higher burn rate at oil-fired power stations to compensate for the roughly 35% of nuclear capacity that is offline. The second boost will come from greater use of diesel-fuelled generating sets in businesses and homes. Conceivably then, the first order negative impact of the quake on oil consumption may be offset by fuel switching. However, this is very much a wildcard. Based on anecdotal evidence from the automotive and other industries, it would not be entirely surprising if

the quake has dealt a far greater blow to the economy than allowed for in consensus forecasts presently. Nevertheless it would appear that oil looks like being the main beneficiary of the nuclear power station outages, given the ready availability of oil-fired generation capacity. Apparently, coal and gas fired power station utilisation rates in Japan were much higher than those for oil-fired stations going into the crisis.

Commentators have made much of the economic recovery potential in Japan after 2011 due to anticipated reconstruction outlays. However, the boost to the economy will depend on how the outlays are financed. There is a suggestion that reconstruction will be financed at least in part by higher taxes. This could imply lower spending and activity elsewhere in the economy.

Oil prices and demand

Crude oil prices are at historically high levels. They have, in fact, only been significantly higher in the early 1980s and in mid 2008. As of early April real WTI prices were about 25% below the July 2008 peak while Brent was off around 15%. Importantly, based on IEA methodology with WTI at $110/barrel and Brent at over $120/barrel, global oil expenditure is now running at over 5.5% of world GDP. Historically when this ratio has exceeded 5% as in the early 1980s and 2008 economic activity has softened with a lag. The issue here is that transportation fuel demand is notoriously inelastic with regard to price, so higher prices essentially divert expenditure away from discretionary consumer and non-oil business spending. Since in the short term, at least, higher prices tend to be saved either by corporations or overseas oil producers the net impact on economic activity is potentially recessionary. From a practical perspective it is salutary to note that the $0.86/gallon increase in US retail gasoline prices over the past year mean that a driver using 20 gallons a week pays an extra $17.This is a not insignificant burden for many.

Recently there has been a certain amount of anecdotal evidence that high real prices fuel prices have been influencing consumer behaviour at the margin. Indeed, US gasoline consumption data has been pretty lacklustre of late. The key concern from a demand perspective is however the second order effect through the lagged impact on economic activity. This impact of course tends to be more pronounced in the OECD countries than the developing world where price subsidies or government jawboning tends to shield both personal and business petroleum product users from rising prices. Nevertheless, over the past few years there has been tendency for gasoline and diesel pricing regimes in several major developing countries to be at least partially liberalised. Key examples are China, India and Iran. In the case of China, a price hike of around 6% was applied to gasoline and diesel in early April after a similar increase in February.

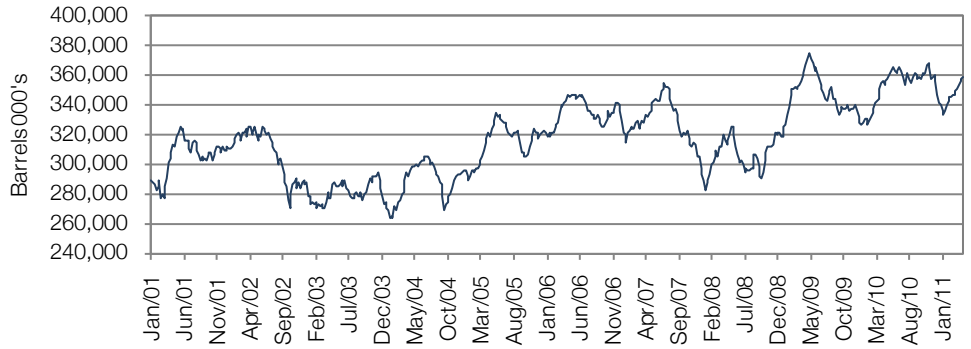
The upshot of the above and quite probably a downgrading of economic growth forecasts for other reasons, is that current consensus petroleum product growth forecasts will in all likelihood have to be reduced significantly for both 2011 and 2012. It would not be surprising to see several hundred thousand b/d come out of demand forecasts for both years, resulting in market equilibrium or even supply surpluses.

US inventories

Crude oil: Continuing to rise

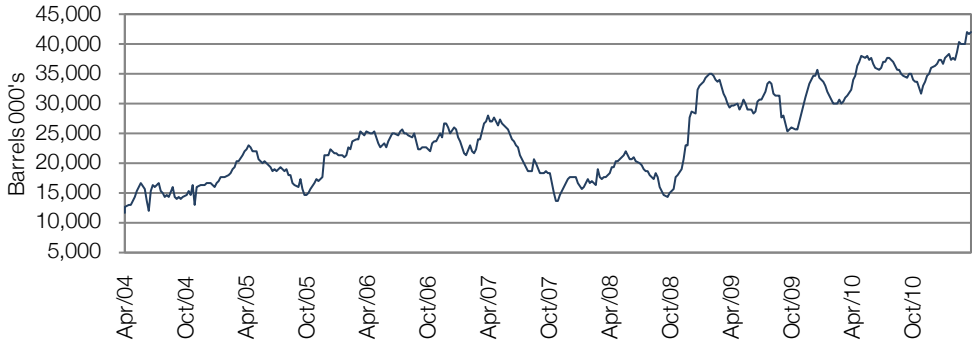
US crude inventories continue to run at historically high levels both absolutely and relative to supply. For the week ending 1 April, commercial crude inventories were 357.7mm barrels up 2mm barrels on the previous week and 1.5mm barrels above a year previously. Inventories continue to run above the upper limit of the average range for the time of year and in absolute terms are close to a post 2000 high. Note, this is despite a declining trend in imports of late. In terms of days supply commercial inventories for the week ending 1 April were equivalent to 25 days supply, much the same as in the two prior weeks and significantly above the average of 22 to 23 days since 2000.

Exhibit 10: US crude oil inventories



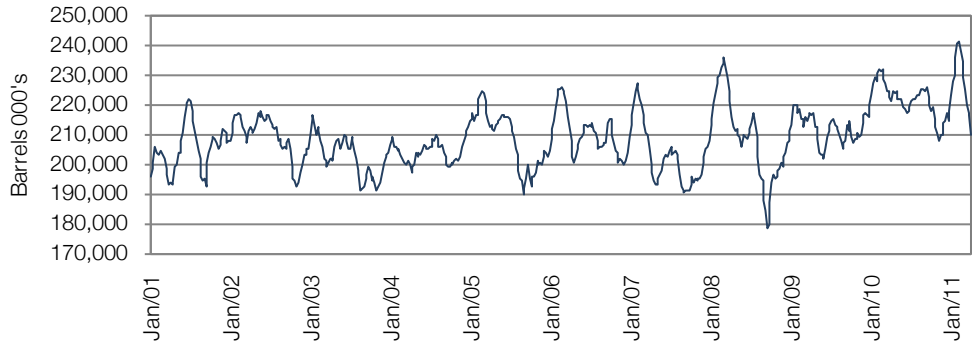
Source: Bloomberg

Exhibit 11: US Cushing oil inventories



Source: Bloomberg

Exhibit 12: US gasoline inventories



Source: Bloomberg

Cushing: Record levels

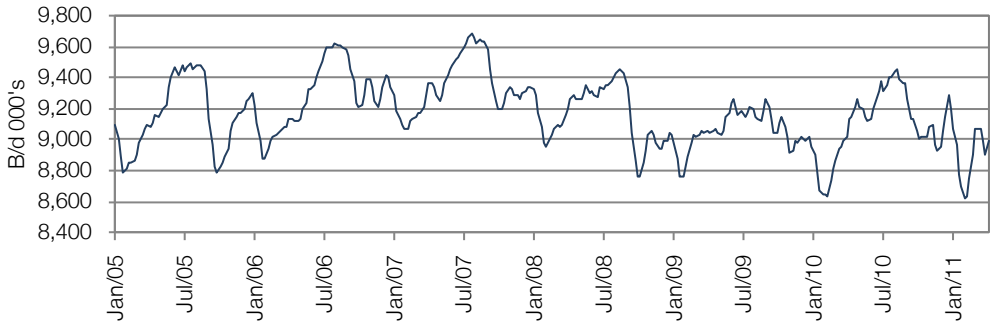
Inventories at Cushing have risen sharply since the fourth quarter and reached a record 41.9mm barrels in late March. In the week to 1 April there was a marginal drop of 16,000 barrels but compared with a year earlier there was a gain of a hefty 10.7mm barrels. Cushing's inventories currently are equivalent to 91% of the working capacity of 45.9mm barrels. The shell capacity of 55mm barrels is in the throes of being expanded by 10mm barrels.

Gasoline: Heavy downward pressure of late

US gasoline inventories have come under seasonally heavy pressure since the recent peak in February. For the week ended 8 April inventories were 209.7mm barrels, down 7mm on the previous week, 31.4mm barrels on the February high and 11.7mm barrels on a year earlier. As a result, inventories have rapidly moved from being at the upper to the lower end of the historical range. In terms of days supply gasoline inventories were equivalent to 23.3 days on 8 April against 24.2 days a year ago. The former is towards the lower of the historical range but is unusually low in the context of the past five years.

The sharp decline in gasoline inventories in recent weeks certainly reflects no lack of feedstock. Rather it is a consequence of a dip in refinery utilisation related to maintenance schedules, seasonal changes in the product mix and possibly refinery management decision making to tighten the market. Given relatively high crack spreads we would expect refinery utilisation and refinery runs to increase in the coming weeks.

Exhibit 13: US gasoline supplied

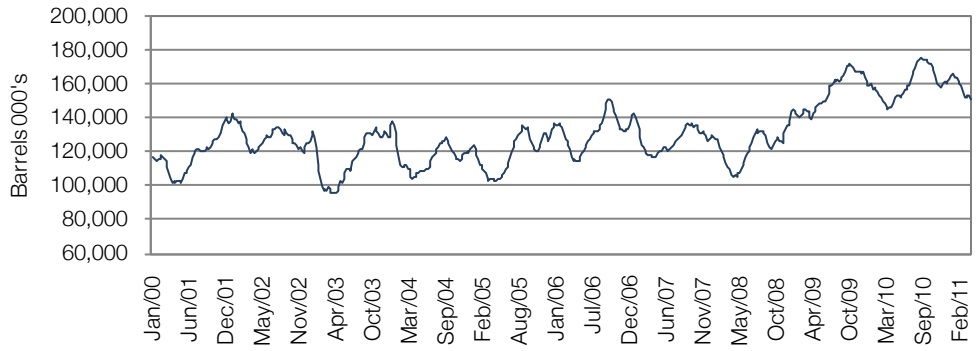


Source: Bloomberg

Distillates: High relative to the historical range

US distillate inventories have also slipped of late, although this is a seasonal phenomenon. At 1 April inventories stood at 153.5mm barrels against the recent high in mid-January of 165.8mm barrels. The former was up 7.8mm barrels on a year earlier and was also above the upper limit of the average range for the time of year. Distillate inventories on 1 April were equivalent to 41 days supply against 39.2 days a year earlier. In terms of days supply, distillate inventories continue to run above average for the period since 2000. Interestingly, the persistence of seasonally high distillate inventories both absolutely and relatively has occurred despite the incidence of severe winter weather across principal US heating oil consuming zones.

Exhibit 14: US distillate inventories



Source: Bloomberg

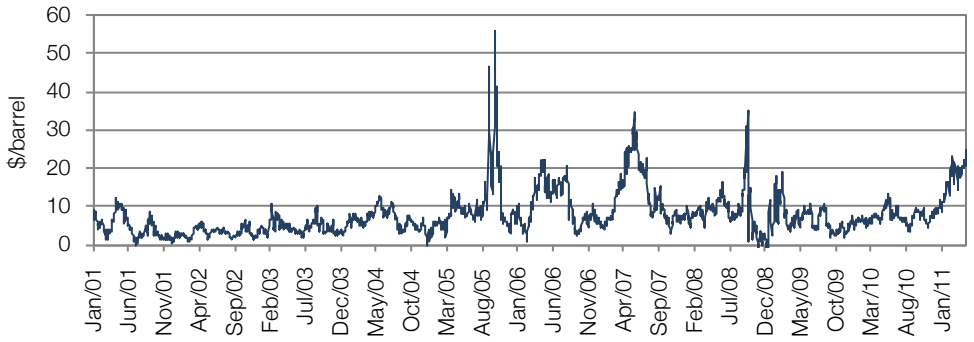
Refinery crack spreads: GC/WTI 321 still above $20/barrel

After the surge of late 2010, US refinery crack spreads based on inland feedstock have remained at historically high levels in recent weeks. According to Bloomberg data, the Gulf Coast/WTI 321 crack spread (the margin before refining costs on converting three barrels of WTI into two barrels of gasoline and one of diesel) was $21.2/barrel on 8 April, only slightly below the mid-February peak of $23/barrel. For comparison, the year earlier GC/WTI 321 crack spread was $5.7/barrel while the longer-term average is about $10/barrel. Since the 16 February peak for the GC/WTI 321 crack spread, wholesale prices for gasoline and particularly distillates have moderately lagged the 31% gain in WTI. Between 16 February and 8 April Gulf Coast gasoline increased by 25% while diesel and heating oil were up by 16% and 20% respectively. Surprisingly perhaps in the light of the surge

in crack spreads in recent months, US refinery activity has remained subdued of late with the utilisation rate dipping from 84% to 81% over the past four weeks. If spreads remain above $20/barrel for any length of time we would expect utilisation and/or refined product imports to increase.

After languishing early in the first quarter of 2011, European crack spreads have widened noticeably in recent weeks. The NWE/Brent 321 spread, for example, widened from a mere $1.1/barrel at the beginning of March to $9.9/barrel on 2 April, while the Mediterranean/Urals 321 spread rose on the same basis from roughly $5/barrel to $13/barrel. We would expect extensive earthquake related refinery damage in Japan to support crack spreads internationally in the coming months.

Exhibit 15: GC/WTI 321 crack spread



Source: Bloomberg

Exhibit 16: Refinery crack spreads

Note: All data are yearly averages other than where indicated. YTD April 11, 2011 averages USGC/WTI 321 $17.54/barrel, NWE/Brent 321 $6.22/barrel.

$/barrel	2005	2006	2007	2008	2009	2010	04/11/11
USGC/WTI 321	10.63	10.31	12.89	8.41	6.66	7.43	20.33
NWE/Brent 321	10.13	10.37	11.67	10.27	8.83	8.62	11.11

Source: Bloomberg

US refined product demand: Lacklustre

US petroleum product demand has been lacklustre so far in 2011. Based on EIA data for the four weeks to 1 April, demand overall was up on a year earlier by 0.1% to 19.05mmb/d, while in the year to date there has been a gain of 0.6% to 19.18mmb/d. Constraining demand growth so far in 2011 has been the sluggish trend in the largest product category gasoline. In the four weeks to 1 April gasoline demand averaged 8.91mmb/d, down 1.2% on a year ago. Cumulatively in 2011, however, gasoline has shown a marginal year-on-year gain of 0.3%. The other key product categories reflect year-on-year cumulative movements as follows: kerosene +3.3%, distillate fuel oil +1.5%, residual fuel oil -0.4% and miscellaneous applications that are heavily orientated to petrochemicals -0.4%.

Sluggish gasoline demand in early 2011, we believe reflects three key factors. These include the impact of severe weather in the first quarter that restricted driving, possible fuel conservation measures in response to the surge in gasoline prices in late 2010 and early 2011 and the steady improvement in the fuel efficiency of the vehicle fleet. The last mentioned stems partly from a switch in the vehicle mix and partly from advances in powertrain technology. Tightening corporate average fuel economy standards are expected to boost the fuel economy of the new car fleet by about 35% by the second half of the current decade.

The EIA is currently forecasting US petroleum product demand to increase by 0.7% in 2011 and 1% in 2012. We suspect these forecasts may be too bullish in the light of the weak trend in early 2011 and US gasoline prices, which may be poised to increase from $3.68/gallon currently to over $4/gallon in the coming months. Based on the experience of 2008, the latter may trigger intensified fuel conservation measures as well as severely constraining economic growth.

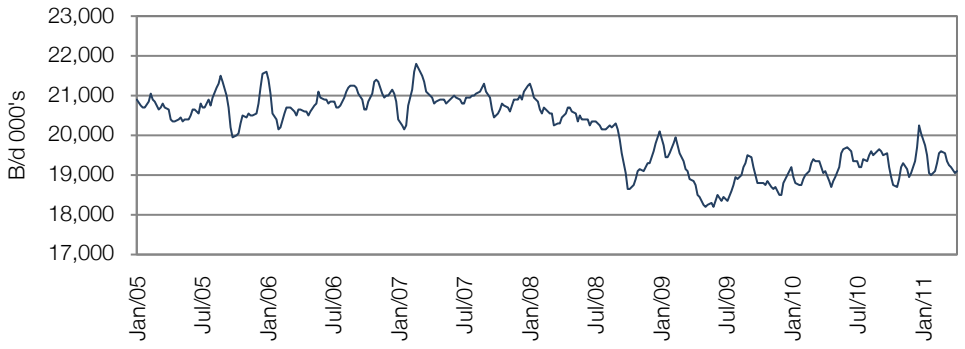
Exhibit 17: US petroleum product demand trends

Note: Data relate to yearly averages.

Mmb/d	2004	2005	2006	2007	2008	2009	2010	2011e	2012e
Gasoline	9.11	9.16	9.25	9.29	8.99	9.00	9.03	9.10	9.16
Other	11.62	11.64	11.44	11.39	10.51	9.77	10.12	10.18	10.30
Total	20.73	20.80	20.69	20.68	19.50	18.77	19.15	19.28	19.46

Source: EIA

Exhibit 18: US petroleum products supplied



Source: Bloomberg

Crude oil price outlook: Potentially bearish influences

Since the third quarter of 2010, sentiment in crude oil markets has been overwhelmingly bullish and has led to a gain in Brent of almost 80%. Bullishness was driven, first, by the surprisingly strong recovery in OECD demand in the wake of the recession and more recently by OPEC supply concerns, springing from civil unrest and armed rebellion in the MENA region. As far as the market is concerned, there is apparently no limit to the upside with buoyant global demand continually outpacing constrained supplies. The all pervasive bullishness in oil markets of late often portends a peak and indeed we think this may prove to be the case this time around.

In our view two broad influences could potentially weigh on crude oil prices in the coming months. These are, first, a dissipation of supply fears and second, growing evidence of the impact of historically high prices on world economic activity and hence oil demand. Regarding the first point it needs to be remembered that the loss of Libyan exports has been comfortably absorbed so far, OPEC has sufficient capacity to fill the void for the foreseeable future and inventory positions are more than adequate. The conflict in Libya is a wildcard but a resolution followed by the prospect of a near term recommencement of exports would, of course, be a major bearish influence for crude oil prices. As we have noted, US petroleum demand is already looking decidedly sluggish and it is difficult to believe that more bearish evidence on the demand front will not materialise in the weeks ahead. In the wake of March's earthquake and related radiation crisis, Japan is a potential bearish wildcard from a demand perspective, given that the impact on economic activity may have been considerably under estimated in official forecasts.

Another factor that should be taken into consideration in terms of commodity price forecasts near term is the likely termination of the Federal Reserve's $600bn QE2 (quantitative easing) programme at the end of June. This together with the earlier QE1 programme has probably provided a significant prop to commodity prices in general and oil in particular over the past two years or so reflecting partly the direct injection of cash into the financial system and partly the weakening dollar. The withdrawal of quantitative easing will, in our view, be a bearish influence for commodities and may also help the dollar recover some lost ground. Anticipated monetary tightening in Europe and China could act as a further constraint on commodity market euphoria.

Our WTI and Brent price scenarios for 2011 and 2012 are broadly unchanged from the February Commentary. We are, however, moderately uplifting our 2011 forecasts for both grades to reflect slightly higher than expected prices in the first quarter and the very strong start to the second quarter. For WTI we are now looking for an average of $90.4/barrel against $89.0/barrel previously while Brent is upgraded from $98.5/barrel to $100.1/barrel. Our quarterly price scenarios are as follows: WTI Q1 $93.9, Q2 $95.5, Q3 $87.0, Q4 $85.0; Brent Q1 $104.9, Q2 $108.5, Q3 $95.0, Q4 $92.0. Forecasts for 2012 are unchanged at $85.0/barrel and $90.0/barrel for WTI and Brent respectively.

As we have noted in our previous Commentary, the alternative scenario is probably for oil prices to continue to be driven sharply higher in the near term driven by an intensification and broadening of civil unrest and armed rebellion in MENA. The upshot could easily be light crude benchmark prices of over $200/barrel and US gasoline prices of $7/gallon plus. We would not, however, expect such prices to be sustained for long as a severe recession would in all probability be triggered in the OECD world and a dramatic economic slowdown elsewhere. The proverbial crude oil death spiral would follow taking benchmark prices down to $40/barrel or maybe less.

Exhibit 19: WTI and Brent price trends

Note: Data refer to yearly averages YTD April.

$/b	2003	2004	2005	2006	2007	2008	2009	2010	2011e	2012e
WTI	31.1	41.5	56.6	66.1	72.2	99.8	62.0	79.5	90.4	85.0
Brent	28.9	38.3	54.5	65.4	72.7	97.7	62.0	79.7	100.1	90.0

Source: Bloomberg and Edison Investment Research

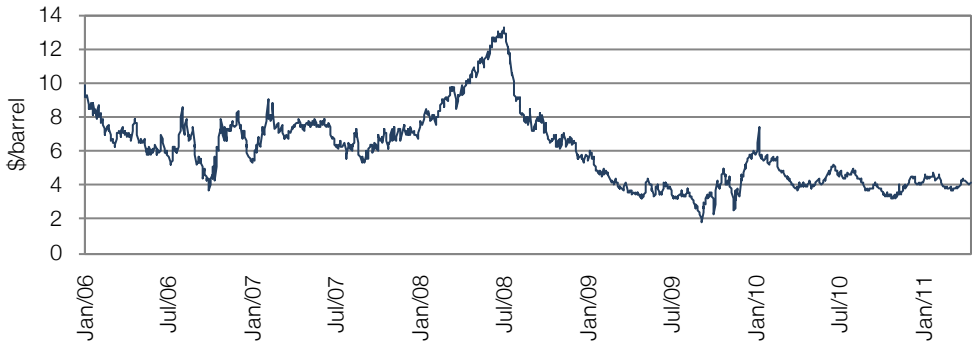
US natural gas market

Production/consumption: Production remains robust

There have been no dramatic developments in US natural gas supply/demand fundamentals of late. Consumption has remained reasonably buoyant driven by a cold winter and the continuing recovery in industrial markets. According to EIA data consumption in January was 2.87bcf, up 1.1% on a year previously. Natural gas production in the early weeks of 2011 was hit by extremely low temperatures that led to some producers temporarily shuttering operations. Nevertheless, although production in January was down marginally from the previous month it was still up a hefty 6.4% year-on-year. Reflecting the strong underlying trend production hit a daily record of 64.5bcf at the end of March. Net imports of gas have continued to drop in 2011 owing to falling LNG cargoes and higher exports to Mexico. In the aftermath of the Japanese quake and outages at nuclear plants, LNG shipments originally scheduled for North America have been diverted to Japan for power generation purposes. It might also be added that LNG prices in Japan are more than twice those for natural gas in the US.

The EIA continues to look for moderate growth in US natural gas production and consumption in 2011 and 2012. The former is expected to increase by 2.4% and 0.8% respectively while the latter is forecast to show gains of 1% and 0.7%. Production gains in the lower 48 states and specifically in the shale gas zones of Texas, Mid-Continent and the Rockies are expected to more than offset falling output in the Gulf of Mexico. Consumption growth forecasts reflect normal weather conditions during the summer. Hotter than normal conditions could conceivably result in upward forecast revisions.

Exhibit 20: Henry Hub price trend



Source: Bloomberg

Drilling activity: Declining

US natural gas drilling activity has continued to slip in recent months, which possibly portends a weakening trend in production in due course. For the week ending 8 April, the Baker Hughes natural gas rotary rig count came in at 889. This was down two on the previous week, 30 on end December 2010 and 103 on the recent high of 992 on 13 August 2010. Compared with the 29 August 2008 peak of 1606, the rig count currently is off 717 or 45%. The continuing downward trend reflects unattractive natural gas industry economics at prices not much above $4/mmbtu. Major natural gas industry players continue to switch resources to shale oil and natural gas liquids development where the economics are considerably more attractive at current prices.

Inventories: Surprisingly high

US natural gas inventories appear to have ended the winter withdrawal season at a surprisingly high level considering the severity of the winter and the heavy drawdowns earlier in the winter. Based on EIA data, 1 April inventories were 1579bcf, down 90bcf on a year earlier but still 10bcf above the five-year average between 2006 and 2010. Given the buoyant production trend inventories should remain at comfortable levels in relation to demand although possibly slightly below levels a year ago. Much will depend on power generation requirements in the coming months, with air conditioner usage being the key wild card.

Prices: Weak trend continues

The seasonal uptick in US natural gas prices during the winter of 2010/11 was exceedingly weak and indeed virtually non-existent despite severe winter weather. Taking the benchmark Henry Hub quote at Erath, Louisiana (NYMEX delivery point) the price rose from $4.23/mmbtu at the end of December 2010 to a first quarter 2011 high on 21 January of $4.73/mmbtu. The quote then drifted down through February and bottomed out on March 4 at $3.70/mmbtu. Post the Japanese quake prices received a mild fillip hitting a peak of $4.35/mmbtu on 28 March. Since end March, the trend has once again softened with the Henry Hub quote hitting a recent low of $4.05/mmbtu on 8 April. The 13 April quote of $4.14/mmbtu was 4% above a year previously. Note that for some of the more remote western hubs, such as Opal, Wyoming, prices are significantly lower than for Henry Hub at around $3.9/mmbtu. For perspective, the UK gas price at the NBP hub is $9.88/mmbtu while the LNG price in Japan is $11 to $12/mmbtu including delivery.

The trend in US gas prices has now been almost flat at not much over $4/mmbtu in the case of Henry Hub since end 2008. The halcyon days of 2003 to 2008 when the average was around $7/mmbtu now appear very distant. The continuing lacklustre trend in US gas reflects plentiful supplies and the assumption that nothing of significance will change on this front in the near to medium term.

US gas prices look like remaining subdued in the coming months abstracting from a period of sustained hot weather or some very positive economic statistics. In the light of the lacklustre start to the year and apparently plentiful supplies, we are downgrading our forecast Henry Hub quote for 2011 from an average $4.40/mmbtu to $4.25/mmbtu. We are also reducing our 2012 forecast from $4.90/mmbtu to $4.60/mmbtu to reflect the looser than expected supply/demand balance.

Exhibit 21: Henry Hub quarterly price scenario

Note: January to April 13, 2011 average $4.18/mmbtu.

$/mmbtu	Q1	Q2	Q3	Q4	Average
2007	7.19	7.38	6.18	7.10	6.96
2008	8.66	11.37	9.06	6.45	8.89
2009	4.54	3.70	3.17	4.37	3.94
2010	5.15	4.15	4.32	3.86	4.37
2011	4.18	4.15e	4.26e	4.40e	4.25e

Source: Bloomberg and Edison Investment Research

Exhibit 22: Henry Hub natural gas price trend

	2003	2004	2005	2006	2007	2008	2009	2010	2011e	2012e
$/mmBtu	5.63	5.85	8.79	6.72	6.96	8.89	3.94	4.37	4.25	4.60

Source: Bloomberg and Edison Investment Research

Share price performance

UK indices: Losing momentum

The AIM Oil & Gas Index of E&P juniors performed strongly in the opening weeks of 2011 reaching around a 30-month high on 7 February. Subsequently the Index has lost ground and as of 13 April was down 10% from the earlier high. Nevertheless, it remains 37% above levels a year ago. Interestingly, the AIM All Share Index also peaked on 7 February but has subsequently declined by a somewhat lower 6%. Over the past year the AIM juniors have comfortably outperformed the 26% gain in the broader AIM All Share Index.

A recent negative for sentiment has been the hike in the UK supplementary tax announced at the time of the Budget although many AIM juniors, of course, are not affected. Meanwhile, there has continued to be positive news flow on the exploration front. Key examples have been provided by Rockhopper, Gulf Keystone and Encore Oil.

Rockhopper announced in early April that following further interpretation of its 14/10-4 appraisal well results the low case estimate of recoverable reserves at its Sea Lion discovery in the North Falklands Basin is now 155mm barrels. This is more than twice that given in the CPR of 66mm barrels. Potential flow rates are also highly promising. Sea Lion appears to be moving towards commerciality at anything like current oil prices. However, more drilling will be required to prove the scale of the reserves.

Gulf Keystone has reported more very encouraging news concerning its Shaikan project in the Kurdistan region of north Iraq. The best estimate of oil in place has been raised from 4.2bn to 7.5bn barrels following extensive appraisal work and testing at the three wells drilled so far, plus further seismic evaluation studies. Significantly, management believes the latest estimates are still conservative. Appraising drilling continues at Shaikan 2 to assess the deeper horizons in the Jurassic and Triassic, which could yield another 1bn barrels plus of oil in place. Shaikan 4 is also

expected to be spudded in the near future. Shaikan is clearly emerging as a giant discovery. It may in fact have the potential for super-giant status.

The recent news at Encore surrounds the Burgman discovery in the central North Sea in close proximity to its earlier Catcher and Varadero discoveries. The discovery is estimated at 80-120mm barrels oil in place and adds significantly to critical mass in the Catcher area.

The FTSE 350 Oil & Gas Index made a solid start to 2011 but lost ground in mid-March and again in the second week of April. Both events were associated with oil market sell-offs. Nevertheless, taking the period from end December 2010 to 13 April, the FTSE 350 Oil & Gas Index rose 5%, thereby comfortably outperforming the 4% decline in the AIM juniors over the same period. The former is now running roughly in line with a year ago, having regained the ground lost in the wake of the BP Macondo well disaster in late April 2010. Compared with the May 2008 decade high, the FTSE 350 Oil & Gas Index currently is off 8%. By contrast, the AIM Oil & Gas Index is down about 18% from its 2008 high.

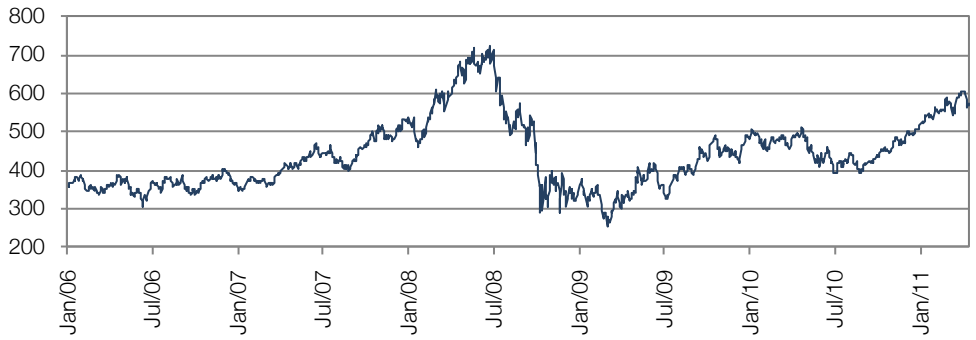
US indices: Under pressure in early April

US oil and gas stocks in early 2011 maintained the strong upward trend that had been apparent since end August 2010. In common with the FTSE 350 Oil & Gas Index, the US indices have tended to lose momentum over the past two months. This has been most pronounced in the case of the S&P 400 Oil & Gas Index of mid-tier US E&P stocks. Since reaching a 33-month high on 5 April this index has fallen 8%, which appears to have been triggered by the pronounced softening in crude oil prices on 11 and 12 April. The S&P 500 Oil & Gas Index of mid- and large-capitalization energy stocks has declined about 6% since also peaking at about a 33-month high at the beginning of April. Compared with a year ago the S&P 500 Oil & Gas Index has gained 15% while the S&P 400 Index has climbed 37%.

Exhibit 23: S&P 400 E&P index

Source: Bloomberg

Exhibit 24: S&P 500 Oil and Gas index



Source: Bloomberg