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Revising baseline oil forecasts and decomposing tail-risk

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We are revising our 2Q2011 Brent forecast to $122/bbl

Global oil demand has been expanding at a breakneck pace in recent quarters, and now the political situation in Libya has reduced oil production by 1 million b/d. To reflect a tighter market, we upgrade our average 2Q11 Brent crude oil forecast to $122/bbl from $86/bbl, and believe prices could briefly break through $140/bbl in the next three months. On average for 2011, we now project Brent crude oil prices at $108/bbl, up from $88/bbl prior. For WTI, we see a yearly average of $101/bbl in 2011, up from $87/bbl, as we still expect bottlenecks around Cushing, OK. As higher prices start to slow down demand and the lost supplies from Libya come back on line, we see prices heading back down towards $94/bbl by 4Q11.

Larger-than-normal risks around our base case scenario

Given the situation in the Middle East and North Africa (MENA), the tails around our baseline are very large and we present two additional scenarios. Our base case assumes Libya will stay mostly offline for 6 months, limited oil infrastructure damage, no further oil supply disruptions in the region and modest global demand destruction. Under our upside risk scenario, Libya remains offline completely for 2011, we assume a range of additional supply disruptions, and factor in severe demand destruction. Brent prices could average this year between $125/bbl and $160/bbl under this scenario, depending on the supply loss. In our downside risk scenario, Libyan supplies come back in a month and there is no further turmoil in the region. Brent prices should average $100/bbl in 2011 under this setting.

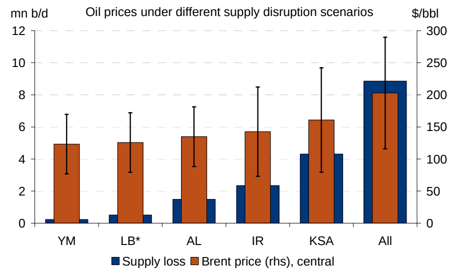
Too many open fronts in MENA suggest high contagion risk

We assign a 55% probability to our base case scenario, a 15% probability to our downside risk scenario, and a 30% probability to our upside risk scenario. Why are we so concerned about upside risks? With so many open fronts, additional oil disruptions can not be ruled out due to contagion risk. For example, unrest in Bahrain is likely to increase the risk of social unrest spreading into Saudi Arabia or Iran. To illustrate the power of the domino effect on assessing risk, we have developed a stylized quantitative model. When assuming no contagion, the risk of further disruptions appears slim. However, when assuming some degree of contagion, the probability of further supply disruptions becomes very meaningful.

Higher oil prices should create some demand destruction

While supply disruptions have become a major focus for the markets, we also see higher prices impacting demand negatively this year. In our baseline forecast, we are cutting down our global oil demand growth expectations for 2011 from 1.5 to 1.1 million b/d. We are reducing our demand growth numbers significantly for the MENA region, but also for Europe, OECD Asia and a number of key Emerging economies. North America is the least impacted region by the higher oil prices, and we also see only a modest reduction in demand in China in our baseline. In addition, we also explain in this note how higher realized Brent crude oil prices will likely translate into higher gasoline prices at the pump in the United States.

Chart 1: Due to the geopolitical uncertainty, we complement our baseline scenario with a detailed tail-risk analysis for both MENA oil production and Brent crude prices



Source: BofA Merrill Lynch Global Commodities Research
For each country the gross supply loss (left axis) represents the loss of all production at risk. Calculations are based on scenarios where 50% of the supply loss is assumed to be replaced by strategic petroleum reserves, another 15% is replaced by OPEC spare capacity and the remainder leads to demand rationing. The candle bars represent a one standard deviation confidence band on prices.
*based on loss of all production and significant infrastructure damage

Refer to important disclosures on page 23 to 24. Link to Definitions on page 22.

Table 1: BofA Merrill Lynch Commodity Research Themes and Outlook

	View	Links to recent reports
Macro outlook	■ Commodity prices should move broadly higher in 2011 on robust economic growth in EMs, despite relatively weaker growth in developed markets (DMs). ■ Even with tight money in EMs and fiscal retrenchment in DMs, a robust EM consumer and growing government spending in China should support prices. ■ While oil supply disruptions in the MENA region have become a major focus for the markets, we also higher prices impacting demand negatively this year. ■ Under our upside risk scenario for oil prices, we believe the macro outlook could deteriorate quickly and severely.	■ "Libya sets oil on the edge", 26 Feb 2011 ■ "2011 Commodity Outlook", Commodity Strategist, 3 Dec 2010 ■ "The Commodity Trilemma", 17 Oct 2010
WTI crude oil Brent crude oil	■ To reflect a tighter market, we upgrade our average 2Q11 Brent crude oil forecast to $122/bbl from $86/bbl, and believe prices could briefly break through $140/bbl in the next three months. ■ Given the situation in the Middle East and North Africa (MENA), the tails around our baseline are very large and we present two additional scenarios. Under our upside risk scenario, Brent prices could average this year between $125/bbl and $160/bbl. In our downside risk scenario, prices should average $100/bbl in 2011. ■ We assign a 55% probability to our base case scenario, a 15% probability to our downside risk scenario, and a 30% probability to our upside risk scenario.	■ "Medium-term global oil balance to tighten further", 21 Feb 2011 ■ "Oil squeezing Emerging Markets", 9 Feb 2011 ■ "How high could oil go?" 25 Jan 2011
Europe gasoil US heating oil	■ Near-term, distillate markets may tighten further as higher demand in LatAm, Europe, Asia meet falling supplies. ■ We see some upside to distillate prices in 2011 on slightly stronger transportation fuel crack spreads ■ Although diesel consumption has been leading global oil demand, increased refining capacity in Asia and Middle East limit upside.	■ "Global distillate markets looking tighter near-term," 16 Nov 2010
US gasoline	■ Relative to heating oil, we are more negative on US gasoline for 2011. ■ Weak consumer confidence, a lethargic labour market, continued housing sluggishness will limit demand growth. ■ Vehicle economy improvements and booming ethanol production will continue to eat into gasoline demand.	■ "WTI weakness driving RBOB gasoline strength," 07 Jan 2011
US natural gas	■ US nat gas balance expected to remain weak in 2011 given low demand, record inventories, and strong supply growth. ■ Ongoing drilling and relatively anaemic economic growth means stocks will likely build to 2 tcf by the end of March. ■ Longer term, we see upside potential for demand on rising power generation and cost pressures.	■ "US nat gas: Looking for a supply rationing point", 15 Feb 2011
European natural gas	■ European natural gas demand recovery will be slow and uneven as high oil-indexed contract prices depress demand. ■ High inventories in Europe, low prospects for demand and rising spot volumes of LNG will limit upside on prices. ■ We see downside risk to European natural gas prices for Cal11 and for Summer 11.	■ "High oil price squeezing European gas buyers", 08 Oct 2010
LNG	■ Although the global LNG market is still in oversupply, we believe the surplus is falling much faster than expected. ■ Liquefaction capacity growth will peak in 2010, while exports face strong domestic demand and supply disruptions. ■ Asian LNG prices should rise next summer with the recovery in gas demand and the startup of new regas terminals.	■ "Liquid gas is about to warm up", 25 Oct 2010
Thermal coal	■ Liquidity growth should boost demand, particularly from Asia, as coal currencies appreciate. ■ Markets have loosened recently on lower international demand, rather than of an improved outlook for supply, but we expect demand will strengthen in 2H11 on robust imports into China and India, and European re-stocking. ■ Supply issues in Australia and Indonesia and demand from coal-fired power in EM Asia should support prices.	■ "China and India will support Atlantic Basin coal", 2 Feb 2011 ■ "Coal, currencies and costs", 8 Nov 2010
Freight	■ Near-term upside should be limited on lower-than-expected demand growth and strong supply growth. ■ In 2H11, we remain a more positive outlook as demand growth catches up to supply growth.	■ "Look beyond the near-term weakness ", 27 Jul 10

Table 2: BofAML Commodity Price Forecasts

	1Q11F	2Q11F	3Q11F	4Q11F	2011F
WTI Crude Oil ($/bbl)	96.00	116.00	104.00	88.00	101.00
Brent Crude Oil ($/bbl)	106.00	122.00	110.00	94.00	108.00
USGC No. 2 HO crack spread ($/bbl)	14.60	11.50	10.90	15.00	13.00
USGC RBOB Gasoline crack spread ($/bbl)	7.00	13.00	10.20	7.00	9.30
USGC 1% Residual crack spread ($/bbl)	-6.90	-9.90	-10.00	-8.00	-8.70
NWE 0.2% Gasoil crack spread ($/bbl)	12.50	11.00	10.00	13.50	11.75
NWE Prem. Gasoline crack spread ($/bbl)	5.70	9.70	7.70	6.90	7.50
NWE 1% Residual crack spread ($/bbl)	-6.00	-5.65	-5.60	-4.80	-5.50
US Natural Gas ($/MMBtu)	4.35	4.30	4.60	5.15	4.60
Thermal coal, Pacific spot ($/t)	98	125	125	125	118
	1Q11F	2Q11F	3Q11F	4Q11F	2011F
Aluminium ($/t)	2,600	2,700	2,600	2,500	2,600
Copper ($/t)	10,000	12,000	11,000	12,000	11,250
Nickel ($/t)	26,000	28,000	25,000	24,000	25,750
Zinc ($/t)	2,700	2,800	2,600	2,800	2,725
Lead ($/t)	2,800	2,700	2,900	2,700	2,775
Gold ($/oz)	1,400	1,450	1,350	1,500	1,425
Silver ($/oz)	27.50	30.00	28.00	32.50	29.50
Platinum ($/oz)	1,800	2,100	2,000	2,100	2,000
Palladium ($/oz)	700	850	750	800	775
Iron ore, spot fines CIF ($/t)	160	140	130	130	140

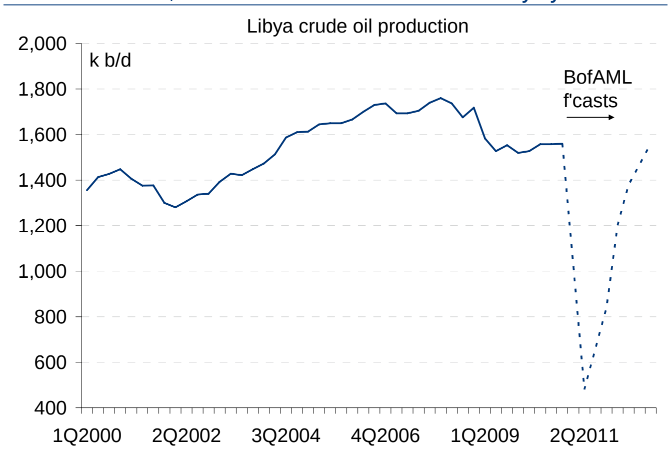
Source: BofA Merrill Lynch Global Commodities Research

Revising our baseline oil forecasts and decomposing tail-risk

We are revising up our 2Q2011 Brent forecasts to $122/bbl

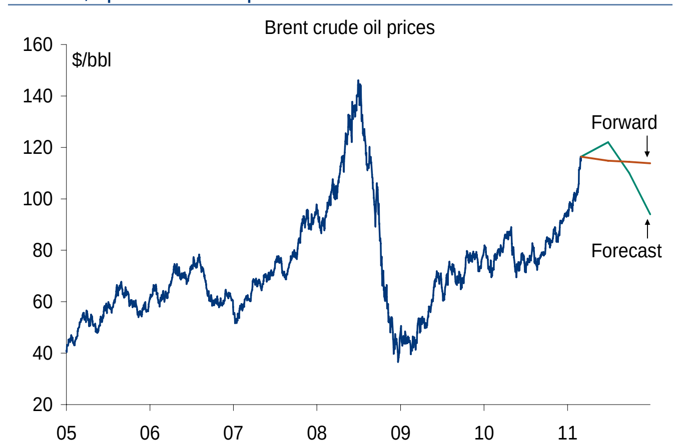
Global oil demand expanded by 3.4 million b/d or 4% in 4Q10 compared to the previous year. Some of this positive demand shock has persisted into this year, with the US economy picking up steam in recent months. More recently, the political situation in Libya has reduced domestic oil production by about 1 million b/d, according to the IEA (Chart 2). To reflect a tighter market, we are now upgrading our average 2Q11 Brent crude oil forecast to $122/bbl from $86/bbl, and we believe prices could temporarily break through $140/bbl during the next three months. On average for 2011, we now project Brent crude oil prices at $108/bbl, up from $88/bbl prior (Chart 3). For WTI, we are now projecting a yearly average of $101/bbl in 2011, up from $87/bbl, as we expect bottlenecks around Cushing, OK to persist throughout the year. As higher prices start to slow down demand and the lost supplies from Libya come back on line, we see Brent oil prices heading back down towards $94/bbl by 4Q11.

Chart 2: The situation in Libya has reduced domestic oil output by at least 1 million b/d, and we assume it will come back fully by end 2012



Source: IEA, BofA Merrill Lynch Global Commodities Research

Chart 3: We now project Brent crude oil prices at $108/bbl, on average for 2011, up from $88/bbl prior



Source: Bloomberg, BofA Merrill Lynch Global Commodities Research

Larger-than-normal risks around our base case scenario

Given the fluid political situation in the Middle East and North Africa (MENA) region, the tails around our base case scenario this time around are significantly greater than in previous occasions. Our base case assumes that Libya will stay mostly offline for 6 months, with a total loss of nearly 150 million barrels over that period. We assume that Libyan oil infrastructure will not be severely dented during the military struggle and we also assume no further oil supply disruptions in the region. In our base case, we see high prices moderately impacting oil demand towards year-end and we are cutting down our demand growth forecast for 2011 by 405 thousand b/d. We attribute our base case scenario a probability of 55%. However, should Libya come back sooner accompanied with a more stable political outlook for the MENA region, Brent crude oil prices could come down towards $100/bbl relatively quickly. We assign a probability of 15% to this scenario (Table 3).

Table 3: Oil price scenarios

Scenario	Probability	2011 average price	12-mo price range	Assumptions
Base case	55%	$108/bbl	$85-140/bbl	Libya production stays mostly offline for the next six months. Turmoil in the MENA region continues but does not lead to further supply losses. Modest demand destruction.
Downside risk	15%	$100/bbl	$80-125/bbl	Libya production comes back in one month. No further turmoil in the MENA region. No significant demand destruction.
Upside risk	30%	$125-160/bbl	$75-240/bbl	Libya production is completely offline for 2011. Supply disruptions in the MENA region lead to more supply loss (see Table 4). Severe demand destruction after an extended period of high oil prices.

Source: BofA Merrill Lynch Global Commodities Research

There are just too many open fronts in MENA at this point

While we see a 70% chance of prices being at or below our projections, the list of troubles in the MENA region keeps growing by the day, and we believe there is a 30% chance of substantially higher oil prices than we are projecting. There are simply too many fronts open at this stage and a more severe oil disruption can not be ruled out. As long-term strongmen Ben Ali and Hosni Mubarak were forced out of power in Tunisia and Egypt, a grassroots revolution in Libya has put the country on the verge of civil war. Yemen also seems rather unsettled, with some observers giving President Saleh a 50/50 chance of survival over the next few weeks. In Bahrain, what appears to be a Shiite revolt against the ruling Sunni elite has resulted in extensive turmoil. Meanwhile, Iran is seeing internal problems of its own, with key opposition leaders being arrested in recent days. To the sources of unrest *within* the various countries, it is important to add the potential for conflict *across* countries, as key powerbrokers in the region such as Iran could try to take advantage of the turmoil in other countries to pursue their cause (Table 4). This latter scenario of conflict *across* countries is, of course, significantly harder to model and assign probabilities to and we will leave that for a future piece.

Table 4: Political developments and impact to oil in key Middle East and North Africa countries

Country	Regime	Political developments	Oil impact
Tunisia	Republic	■ Started with broad-based uproot protests calling for regime change ■ President Ben Ali fled the country ■ Prime minister Mohamed Ghannouchi who took over Ben Ali quit in the wake of bloody protests ■ New prime minister Beji Caid-Essebsi is looking to present a new cabinet in coming days Key risk: Persistent political turmoil could impact the economy for years	■ No disruption so far Key risk: 40 k b/d off the market for several months. Impact on global oil markets very limited as the country is not a major oil exporter
Egypt	Republic	■ Started with broad-based uproot protests calling for regime change ■ President Hosni Mubarak stepped down and is said to have fled the country ■ Army in control of the country, but army-appointed prime minister Ahmed Shafiq had to step down as protests continued ■ New army appointed prime minister Essam Sharaf vows to meet protesters' demands ■ Pyramids now open again to tourists Key risk: Persistent political turmoil could impact the economy for years	■ No disruption so far Key risk: 0.5mn b/d off the market for several months. Impact on global oil markets very limited as the country is not a major oil exporter
Libya	Jamahiriya (a state of the masses) in theory, governed by the populace through local councils; in practice, an authoritarian state	■ Started with broad-based uproot protests calling for regime change ■ Domestic revolt and opposition leaders have taken over Eastern parts of the country ■ Qaddafi's forces attacking rebel strong holds ■ International community is looking for ways to restore order Key risk: Libya could be entering a protracted civil war	■ Up to 1.0 mn b/d disrupted Key risk: 1.4 mn b/d off the market for more than a year. Major impact in global oil markets.
Yemen	Republic	■ Broad-based uproot protests calling for regime change ■ Powerful clerics urging an Islamic state in Yemen ■ Opposition coalition says President Saleh has rejected a plan outlining steps leading to a peaceful transition this year ■ US diplomats give Pres. Saleh a 50/50 chance of going Key risk: Yemen may become a failed state, impacting Saudi	■ No disruption so far Key risk: 0.2 mn b/d off the market for several years. Impact on global oil markets likely limited

Table 4: Political developments and impact to oil in key Middle East and North Africa countries

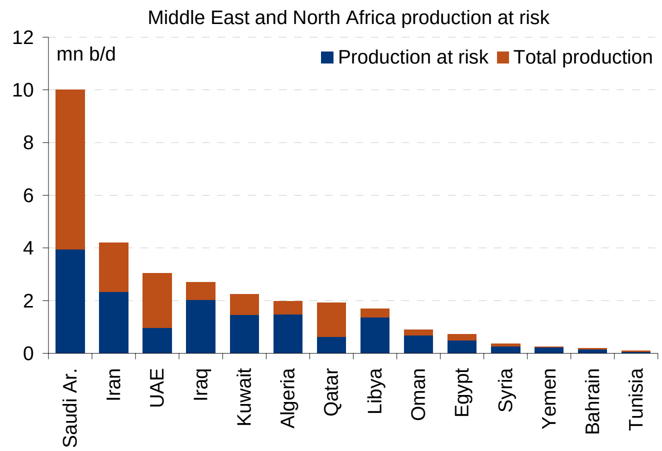
Country	Regime	Political developments	Oil impact
Algeria	Republic	■ Broad-based uproot protests calling for regime change ■ President Bouteflika announces the end to the state of emergency that had been in place for 19 years ■ Continued clashes between protesters and the police across the country Key risk: Algeria descends into social chaos and political instability, although stronger institutions than in Libya will likely reduce the risk of a civil war	■ No disruption so far Key risk: 1.5 mn b/d off the market for several months. Impact on global oil markets likely to be very large.
Iran	Theocratic Republic	■ Localized uproot protests calling for regime change ■ Opposition leaders placed under arrest ■ Clerics condemning government actions Key risk: Opposition forces gather steam, bringing broad-based political unrest in the country	■ No disruption so far Key risk: 2.3 mn b/d off the market for several months. Impact on global oil markets likely to be very large.
Syria	Republic under an authoritarian regime	■ Localized uproot protests calling for political change ■ Facebook and Youtube forbidden in the country Key risk: Uproot protests gather steam, bringing broad-based political unrest in the country	■ No disruption so far Key risk: 0.3 mn b/d off the market for several months
Iraq	Parliamentary democracy	■ Iraqis rallying to denounce corruption, demand better services ■ Clashes between rival political factions in Kurdistan ■ Political unrest turning violent in various parts of the country ■ Pressure building up on Prime Minister Nuri Kamal al-Maliki Key risk: Unrest disturbs the improving security situation and impedes on the rebuilding of the nation.	■ No disruption so far Key risk: 2.0 mn b/d off the market for several months. Impact on global oil markets likely to be very large.
Israel	Parliamentary democracy	■ Tensions are increasing again in the Gaza strip Key risk: The next elected Egyptian government may not extend existing ties with Israel, impacting border policies between Egypt and Gaza.	■ No direct impact on oil output in the region
Bahrain	Constitutional monarchy	■ Broad-based uproot protests calling for regime change ■ Shiite population adds pressure on Sunni rulers ■ Thousands protesting also against Sunni dynasty ■ Bahrain provides amnesty to political prisoners Key risk: King is forced to step down and country descends into chaos, resulting in various degrees of involvement of foreign powers Saudi Arabia and Iran, and the United States	■ No disruption so far Key risk: 0.1 mn b/d off the market for several months. Impact on global oil markets likely to be modest.
Jordan	Constitutional monarchy	■ Broad-based uproot protests calling for political change ■ Prime minister Samir Rifai resigns, Marouf Bakhit takes over ■ Terrorist attack on natural gas pipe that brings supplies from Egypt to Jordan ■ Continued demonstrations calling for reform Key risk: Protests gather steam, bringing broad-based political unrest and infecting nearby Saudi	■ No direct impact on oil output in the region
Oman	Monarchy	■ Localized uproot protests calling for political change ■ No succession in place, as Sultan has no descendents ■ Large increases in social spending planned to appease protesters Key risk: A failed state in Yemen could impact the political situation in Oman, resulting in unrest	■ No disruption so far Key risk: 0.7 mn b/d off the market for several months. Impact on global oil markets likely to be large.
Saudi Arabia	Monarchy	■ Limited protests in Jeddah, but no call for political change ■ Succession concerns around 86 year-old King Abdullah ■ Key risk: Unrest in nearby countries such as Yemen, Bahrain or Oman sparks a popular flame in Saudi Arabia	■ No disruption so far Key risk: 4.3 mn b/d off the market for several months. Impact on global oil markets likely to be extremely large.
Kuwait	Constitutional emirate	■ Kuwait has one of the most democratic political structures in the region. ■ No major call for political change so far. Key risk: Unrest in nearby countries could ultimately filter through to Kuwait, which is surrounded by the key powerhouses in the region: Iran, Saudi and Iraq.	■ No disruption so far Key risk: 1.4 mn b/d off the market for several months. Impact on global oil markets likely to be very large.
UAE	Federation with specified powers delegated to the UAE federal government and other powers reserved to member emirates	■ No major call for political change so far. Key risk: Unrest in nearby countries could ultimately filter through to the UAE	■ No disruption so far Key risk: 1.0 mn b/d off the market for several months. Impact on global oil markets likely to be very large.
Qatar	Emirate	■ No major call for political change so far. Key risk: Unrest in nearby countries could ultimately filter through to Qatar	■ No disruption so far Key risk: 0.6 mn b/d off the market for several months. Impact on global oil markets likely to be very large

Source: CIA World Factbook, New York Times, El Pais, France 24, Al Jazeera, Reuters, Bloomberg, BofA Merrill Lynch Global Commodities Research, other sources.

Additional supply losses could push oil above $200/bbl

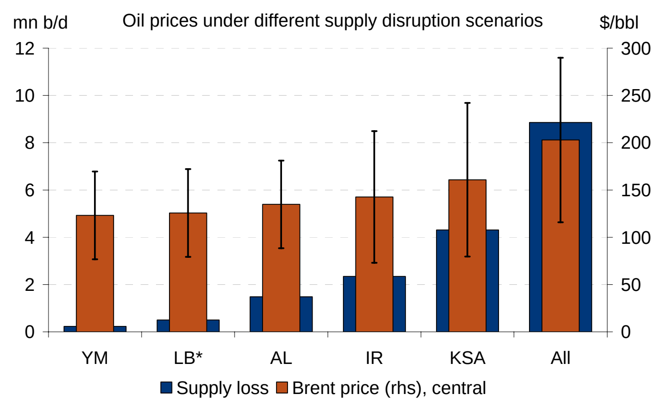
How do we assess that there is a 30% chance of further political turmoil in the MENA region resulting in additional oil supply disruptions? Our analysis suggests that the probability of turmoil *within* Algeria, for instance, is not independent of the probability of political unrest in Libya. Equally, the probability of turmoil *within* Saudi Arabia could be correlated to political risk in Yemen. The top producers in the MENA region are Saudi Arabia and Iran, followed by UAE, Iraq and Kuwait (Chart 4). Under our upside risk scenario, Libya remains offline completely for 2011, and we assume a range of additional supply disruptions. In our view, Brent prices could average this year between $125/bbl and $160/bbl under our upside risk scenario. At the lower bound, losing Yemen would imply a few more dollars on our average Brent price forecast. At the higher bound, an output loss of 4.3 million b/d could push Brent crude prices to an average of $160/bbl (Chart 5). Moreover, we also see an environment of rising volatility creating significant temporary upward pressures on prices around these exceptionally high averages. In our view, prices could spike briefly above $200/bbl if we lose over 4 million b/d in the MENA region.

Chart 4: The top producers in the MENA region are Saudi Arabia and Iran, followed by UAE, Iraq and Kuwait



Source: IEA, EIA, company reports, BofA Merrill Lynch Global Commodities Research
Total production bar above indicates incremental total production.

Chart 5: Under different supply loss scenarios, we estimate oil prices could spike to an average range of $125 to $160/bbl



Source: Bloomberg, BofA Merrill Lynch Global Commodities Research
For each country the gross supply loss (left axis) represents the loss of all production at risk. Calculations are based on scenarios where 50% of the gross supply loss is assumed to be replaced by strategic petroleum reserves, another 15% is replaced by OPEC spare capacity and the remainder leads to demand rationing. The candle bars represent a one standard deviation confidence band on prices.
*based on loss of all production and significant infrastructure damage

Not every oil field and refinery in the region is at risk…

It is also crucial to understand that Libyan oil fields are particularly vulnerable to civil unrest compared to other fields in the region. Most of the Libyan oil wells, just like those in other countries like Iraq, are onshore and not far off from important population centers. In the table below, we have broken down production across the MENA region, trying to determine which portion of output could be more susceptible of a loss under further civil unrest. In our view, the most sensitive countries to a potential disruption due to civil unrest are found in Yemen, Libya, and Algeria, on the basis of portion of total production at risk, and Saudi Arabia, Kuwait, and Algeria on the basis of total volumes at risk. Moreover, countries that rely heavily on foreign employees and companies to operate their oil industries could be more exposed to potential output disruptions due to civil unrest than companies that rely mostly on locals (Table 5).

Table 5: Middle East and North African production at risk of ongoing turmoil

	Latest production mn b/d	% production at risk	Oil production at risk mn b/d
Saudi Arabia	10.015	43%	4.306
Iran	4.213	56%	2.338
United Arab Emirates	3.038	32%	0.972
Iraq	2.714	75%	2.036
Kuwait	2.255	60%	1.353
Algeria	1.975	75%	1.481
Qatar	1.915	32%	0.618
Libya	1.692	80%	1.354
Oman	0.895	75%	0.671
Egypt	0.740	67%	0.497
Syria	0.365	75%	0.274
Yemen	0.261	88%	0.228
Bahrain	0.188	75%	0.141
Tunisia	0.089	48%	0.043

Source: IEA, BofA Merrill Lynch Global Commodities Research. We estimate these numbers by assuming oil production onshore is at greater risk of disruption than production offshore, and that fields operated by foreign companies are less likely to continue producing due to the repatriation of personnel. We assume 100% of onshore production can be disrupted (as previous cases in Iraq or Libya show) compared to only 20% of offshore production. We also assume that only 50% of production operated by local companies would go offline under military or other forms of major violent conflict.

…but MENA countries are not independent from each other

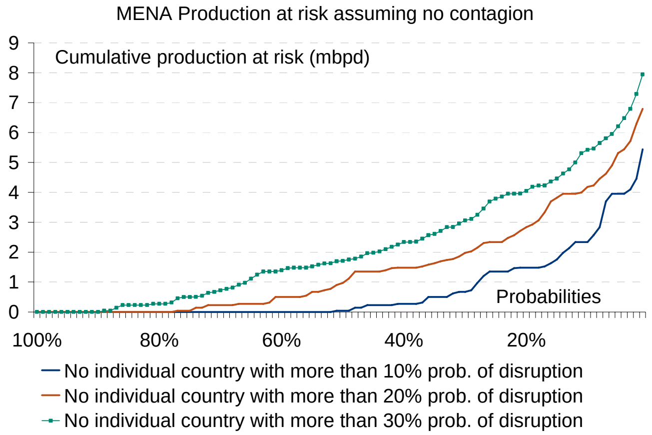
When assessing the risk of further supply disruptions in MENA, some observers believe that as long as social and political turmoil does not impact production in Saudi, Iran, Kuwait, or in the UAE, the oil market should be able to cope with the disruption by using its spare capacity. However, this assumption may be an ill-conceived approach to risk. In our view, the risks of political turmoil in MENA countries that produce little or no oil such as Bahrain, Jordan, Lebanon, Israel, or Syria are also important to the oil market. For example, political unrest in Bahrain is likely to increase the risk of social unrest spreading into Saudi Arabia or Iran. Moreover, a conflict between Bahrain's ruling Sunni class and its population, which is mostly Shia, would put strain on the political relations between Saudi Arabia and Iran, the two largest producers in MENA. Hence, the potential of contagion across the region is probably much larger if, say, we assume that the probability of unrest in country A increases with growing unrest in country B.

MENA domino effect in could lead to severe supply losses

To illustrate the power of the domino effect on assessing risk, we perform a quantitative exercise in a highly stylized model. Using the political and economic vulnerability z-score index released last week (see GEW), we calculate the relative base probability of political turmoil affecting oil producing countries in MENA. Assuming different values for the maximum probability of each individual country seeing a supply disruption, we calculate the probability distribution of a potential supply disruption in MENA based on the production at risk numbers estimated above (Chart 6). When assuming no contagion, our numbers corroborate the all-or-nothing approach. However, assuming some degree of contagion[1], the probability of further supply disruptions becomes much more meaningful (Chart 7). In our view, this is an important reason that oil market participants should continue to focus both on the large oil producers in the region as well as in political developments in the smaller countries.

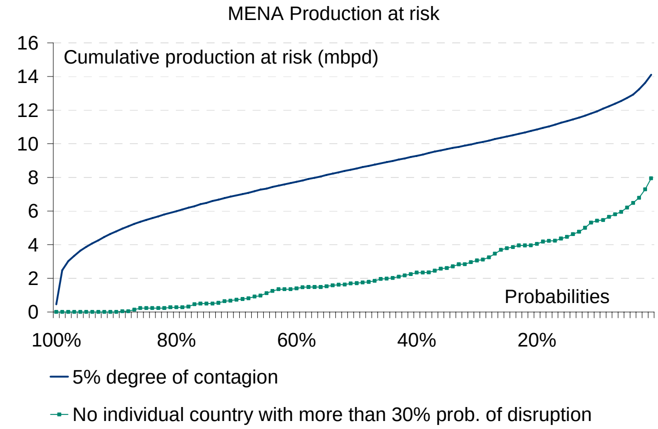
[1] We assume that disruption in a country impacts the probability of disruption in other countries as a function of the distance between their two capitals. We say that the degree of contagion across countries is X when the disruption in a country increases the probability of disruption in other countries by $X*(0.5+\Phi(-d/6500))$ where d is the distance between the two capitals in KM and $\Phi(\cdot)$ is the standard normal cumulative probability distribution.

Chart 6: Assuming different values for the maximum probability of each individual country seeing a supply disruption, we calculate the probability distribution of potential supply disruption in MENA



Source: Bloomberg, BofA Merrill Lynch Global Commodity Research

Chart 7: Assuming some degree of contagion, the probability of further supply disruptions become more meaningful

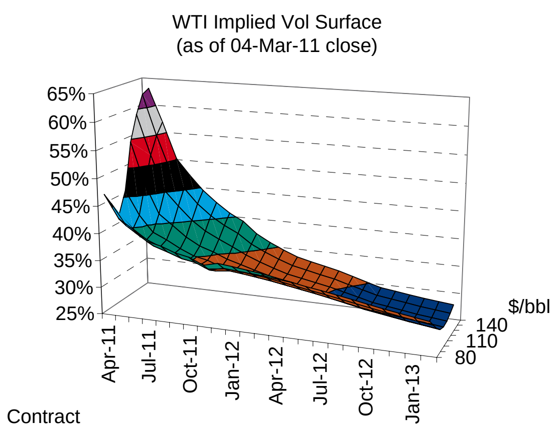


Source: Bloomberg, BofA Merrill Lynch Global Research

Options market is pricing in high risk of further disruptions

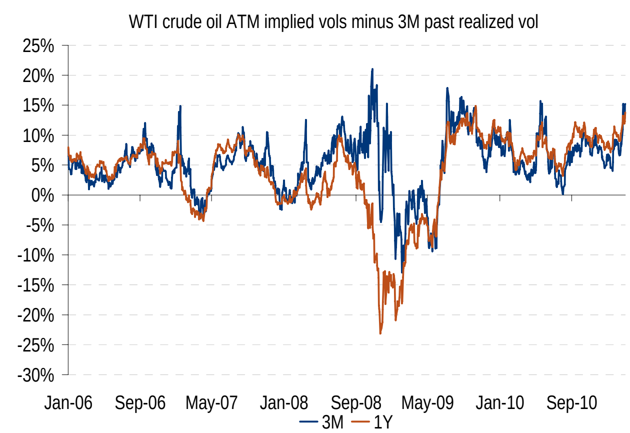
The crude oil options market seems to agree that the chances of further supply disruptions and a subsequent oil price spike from the current high levels is far from negligible. High strike calls have been bid up since the events in MENA started to unfold. The WTI crude oil vol surface has now completely reverted the pronounced put skew present on 3M option for the last couple of years (Chart 8). We see value in utilizing the skews through call spreads to benefit from a potential short-term spike in oil prices. Despite the pronounced pick up in skews and on front-end ATM implied vols, ATM implied vol in crude oil remains relatively low, particularly on the back end of the curve. In fact, at 35%, 3M ATM implied vols in WTI are lower now than they were in during the sovereign crisis in the European periphery back in May. Largely, this has been a function of the relatively low levels of realized vol. Still, the high price of risk can still be found on the historically rich implied vs. realized spreads (Chart 9).

Chart 8: The WTI crude oil vol surface has now completely reverted the put skew present on 3M option for the last couple of years



Source: Bloomberg, BofA Merrill Lynch Global Commodity Research

Chart 9: Still, the high price of risk can still be found on the historically rich implied vs. realized spreads

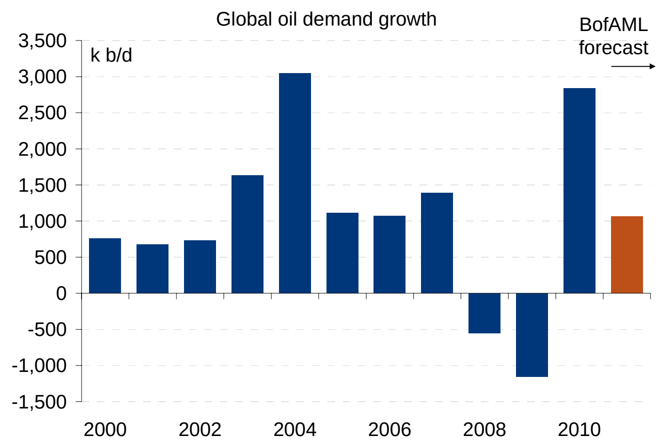


Source: CFTC, Bloomberg, BofA Merrill Lynch Global Commodity Research

High oil prices will also likely result in demand destruction

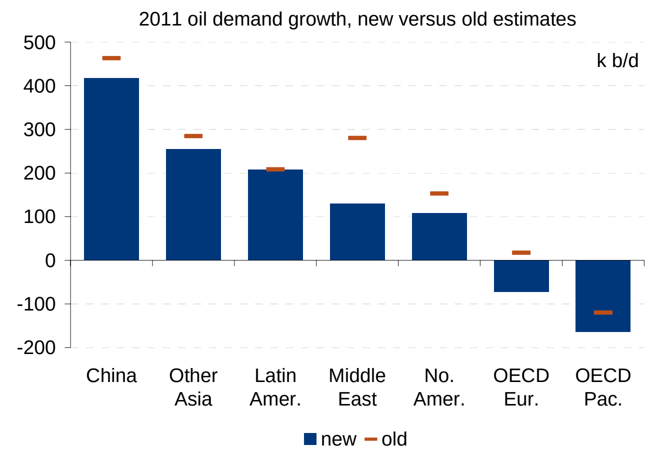
While supply disruptions have become a major focus for the markets, we also see higher prices impacting demand negatively this year. As a result, we are cutting down our demand growth expectations for 2011 from 1.5 to 1.1 million b/d (Chart 10). The Middle East is, not surprisingly, one of main contributors to the reduction in our demand forecasts. Turmoil in the MENA region may or may not impact crude oil production further as discussed above, but it is quite likely to impact economic activity. We are also reducing our demand growth numbers for Europe and OECD Asia, as well as China and other Emerging economies (Chart 11). North America is the least impacted region by the higher oil prices, and we are building in a modest demand expansion of only 108 thousand b/d, relative to our previous forecast of 153 million b/d. In China, we are now building demand growth of 418 thousand b/d compared to 463 thousand b/d prior forecast.

Chart 10: We are cutting down our demand growth expectations for 2011 from 1.5 to 1.1 million b/d



Source: IEA, BofA Merrill Lynch Global Commodities Research

Chart 11: We are reducing our demand growth numbers for the Middle East, Europe, OECD Asia, plus China and other Emerging economies

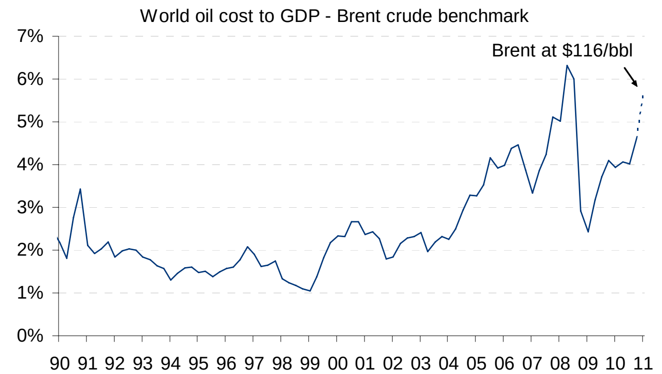


Source: IEA, BofA Merrill Lynch Global Commodities Research

Price elasticity of demand is the key metric to focus on…

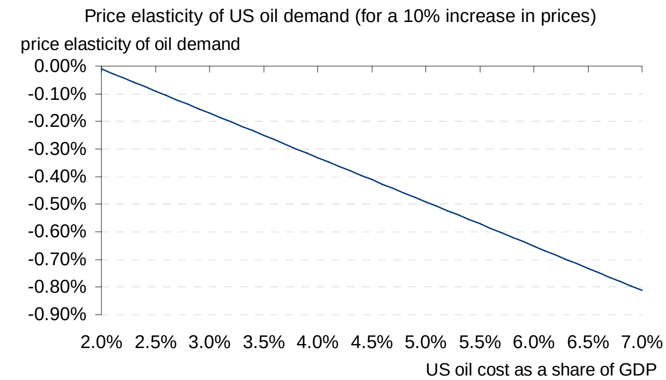
One of the key metrics to determine “how high could oil prices go?” is the price elasticity of global oil demand. Of course, it is hard to get to a global average because of all the pass-through lags, subsidies, price caps, and taxes applied to fuel prices around the world. On a global basis, we estimate that a 10% increase in oil prices pushes down global oil demand by about 0.5%. However, the price elasticity of demand also tends to increase as oil costs take up a larger share of output (Chart 12). For instance, in the US economy we believe that the price elasticity of demand has increased to 0.56% (for a 10% increase in prices) as the oil cost share of GDP has now reached about 5.4% in the US (Chart 13). Should oil costs increase by another percentage point as a share of GDP, we would see the price elasticity of demand go up by 30%, to 0.72%. In sum, other things being equal, the marginal impact of additional supply losses in the MENA region should be lower, as more demand will be destroyed at higher prices.

Chart 12: The price elasticity of demand also tends to increase as oil costs take up a larger share of global output



Source: IEA, Bloomberg, BofA Merrill Lynch Global Commodities Research

Chart 13: For the US, we believe the price elasticity of demand has risen to 0.56% as the share of oil to GDP has now reached about 5.4%

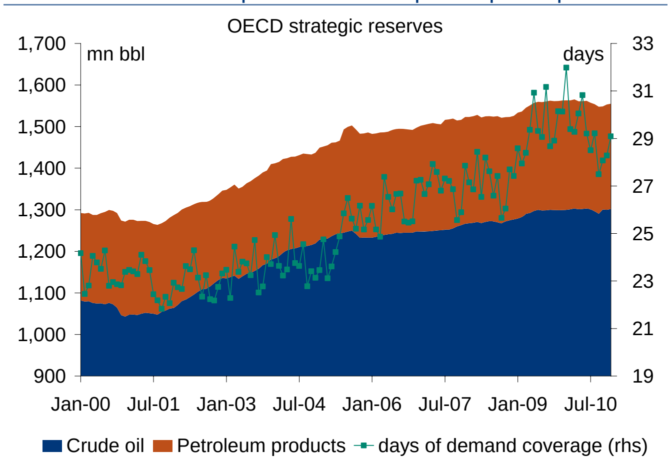


Source: IEA, Bloomberg, BofA Merrill Lynch Global Commodities Research

…as well as the ability to use SPR oil & spare OPEC capacity

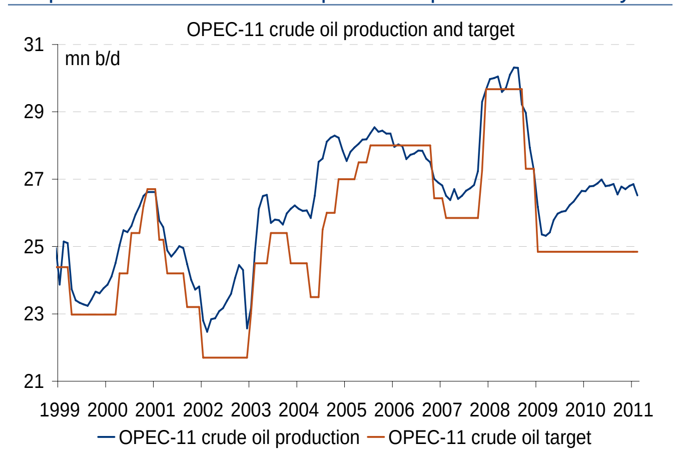
As prices spike on the back of a supply disruption, natural stabilizers such as strategic petroleum reserves and OPEC spare productive capacity become extremely important tools to balance the oil market. For the OECD as a whole, including the United States, strategic oil reserves amount to 1.6 billion barrels, suggesting that there is some cushion to prevent a further upward spike in prices (Chart 14). On top of the temporary safety valve provided by stockpiles of strategic oil reserves around the world, Saudi Arabia and other OPEC countries also have substantial spare capacity to fill in the gap left by Libya. Recent reports suggest that Saudi Arabia is already producing oil at a rate of 9 million b/d, up from 8.4 at the beginning of the year, and merely 700 thousand b/d below their 2008 highs of 9.7 million b/d. Still, we think it is fair to state that OPEC as a whole has yet to see a substantial increase in output relative to the previous business cycle highs. OPEC-11 current output levels sit at around 26.5 million b/d at present, compared to 30 million b/d at the peak of the previous business cycle (Chart 15).

Chart 14: OECD strategic oil reserves of 1.6 billion barrels suggest there is some cushion to prevent a further upward spike in prices



Source: IEA, BofA Merrill Lynch Global Commodities Research

Chart 15: OPEC-11 current output levels sit at around 26.5 million b/d, compared to 30 million b/d at the peak of the previous business cycle

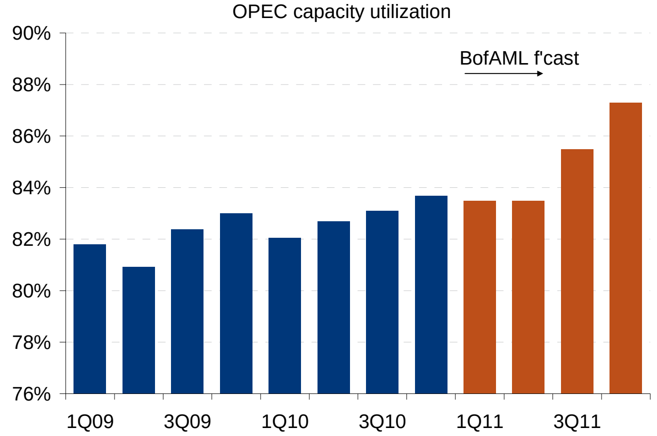


Source: Bloomberg, BofA Merrill Lynch Global Commodities Research

Medium-term, more social spending may mean higher oil

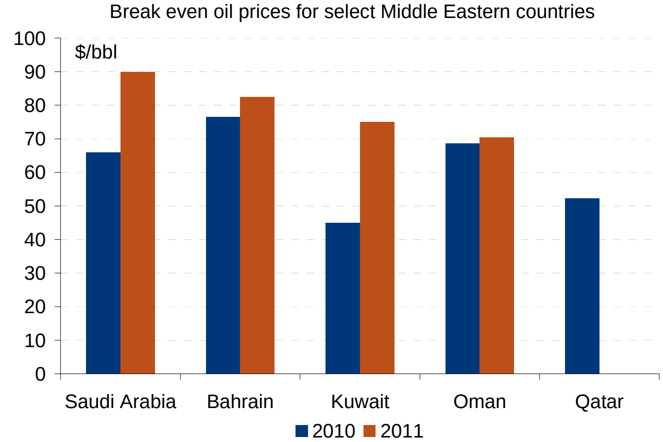
While the combination of increased supply and lower demand should ultimately result in lower oil prices towards the end of the year, we remain positive on crude oil prices into 2012. If our base case scenario turns out to be right, OPEC utilization rates will be just above 87% as we head into 2012 (Chart 16). More importantly, various Middle East countries have seen a substantial increase in their budget break-even oil prices. With the most recent measures announced in Saudi Arabia, we now see break-even prices moving to $90/bbl in 2011, up from $66/bbl in 2010. Kuwait and other Gulf Cooperation Council countries are also experiencing similar increases, with budgetary requirements ballooning across the region (Chart 17). With the full-cycle cost for Canadian oil sands producers also approaching $90/bbl in real terms, we see higher oil prices over the long-run. To reflect this view, our equities team is now moving to a 2012 Brent price of $95/bbl and WTI crude oil price of $90/bbl, and $90/bbl and $85/bbl, respectively, thereafter.

Chart 16: If our base case scenario turns out to be right, OPEC utilization rates will be just above 87% as we head into 2012



Source: IEA, BofA Merrill Lynch Global Commodities Research

Chart 17: Gulf Council Countries are experiencing increases in budget break-even prices as social requirements balloon across the region



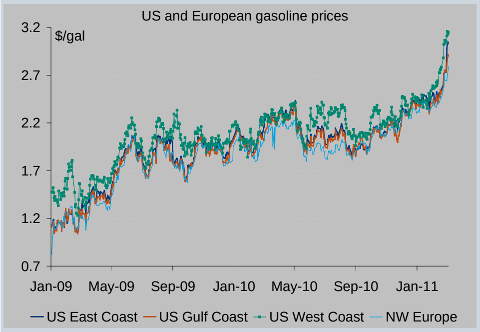
Source: BofA Merrill Lynch Global Research

How do higher Brent prices translate into US gasoline at the pump?

Brent is a now more relevant crude oil than WTI for the US

Even though equities and bond markets remain focused on WTI crude oil as the key US benchmark, we would argue that the price of Brent crude oil is more important to the US economy than the price of WTI. To begin with, seaborne crude oil grades in North America, which ultimately impact at least 70% of the population, are trading in line with Brent crude oil prices and not with landlocked WTI. In effect, a supply glut around the delivery point of WTI at Cushing, OK has depressed this important US benchmark relative to the price of near-by crude oil blends. So even if the price of WTI is depressed relative to the price of Brent, the price of gasoline across the United States remains in line with the price of gasoline in Europe (Chart 18). In other words, the benefits of depressed West Texas crude prices in Oklahoma are not accruing to drivers in North America, but to refiners and to pipeline and storage operators in some parts of the Midwest.

Chart 18: The price of gasoline across the US remains in line with that of Europe

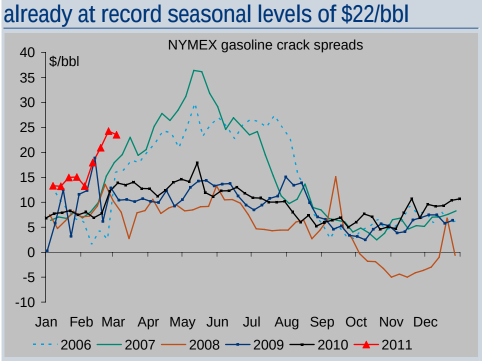


Source: Bloomberg, BofA Merrill Lynch Global Commodities Research

Gasoline prices at the pump should near 350 c/gal in 2011

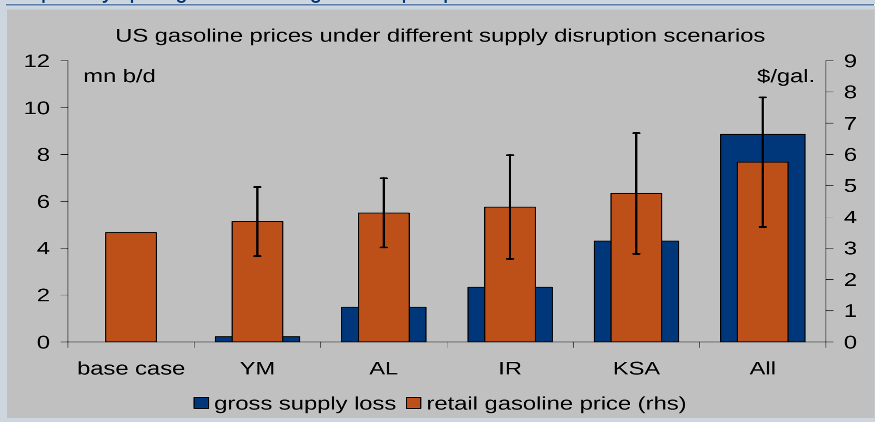
With the differential between Brent and WTI likely to stay wide through out the year, we believe nationwide average US gasoline should near 350 ¢/gal in 2011. NYMEX RBOB gasoline cracks for delivery in NY Harbour are already at record seasonal levels of $22/bbl (Chart 19), suggesting that high Brent crude oil prices are already impacting US drivers. But we remain concerned about further upside pressures on RBOB and retail gasoline prices in the US. In our upside risk scenario where Brent crude oil jumps into an average range of $125 to $160/bbl, nationwide US gasoline prices would average 390 to 470 ¢/gal at the pump (Chart 20). Most worryingly, under a large supply disruption of 4+ million b/d we could see gasoline prices temporarily spiking above 570 ¢/gal at the pump. In turn, if gasoline prices at the pump reach record nominal levels, some studies suggest it could have a substantial negative effect on consumer and business confidence.

Chart 19: NYMEX RBOB gasoline cracks are already at record seasonal levels of $22/bbl



Source: Reuters, BofA Merrill Lynch Global Commodities Research

Chart 20: Under a large supply disruption of 4+ million b/d we could see gasoline prices temporarily spiking above 570 ¢/gal at the pump



Source: Bloomberg, BofA Merrill Lynch Global Commodities Research

For each country the gross supply loss (left axis) represents the loss of all production at risk. Calculations are based on scenarios where 50% of the gross supply loss is assumed to be replaced by strategic petroleum reserves, another 15% is replaced by OPEC spare capacity and the remainder leads to demand rationing. The candle bars represent a one standard deviation confidence band on prices.

BofA Merrill Lynch global oil supply and demand balance

Table 6: BofA Merrill Lynch global oil supply forecast (in thousand b/d)

	1Q2009	2Q2009	3Q2009	4Q2009	2009	1Q2010	2Q2010	3Q2010	4Q2010E	2010E	1Q2011F	2Q2011F	3Q2011F	4Q2011F	2011F
OECD North America	13,522	13,489	13,716	13,770	13,624	13,931	14,049	14,093	14,340	14,103	14,183	14,123	14,009	14,176	14,123
Canada	3,305	3,116	3,211	3,236	3,217	3,273	3,343	3,352	3,441	3,352	3,382	3,367	3,381	3,508	3,409
Mexico	3,035	2,965	2,935	2,953	2,972	2,987	2,961	2,941	2,924	2,953	2,935	2,900	2,883	2,837	2,889
United States	7,182	7,408	7,570	7,582	7,436	7,672	7,745	7,799	7,975	7,798	7,867	7,856	7,745	7,831	7,825
OECD Pacific	651	635	667	646	650	632	615	613	572	608	541	583	629	631	596
Australia	558	543	566	546	553	530	517	517	483	512	452	496	544	548	510
OECD Europe	4,876	4,466	4,240	4,521	4,526	4,516	4,179	3,761	4,193	4,162	4,124	3,963	3,908	4,008	4,001
Norway	2,562	2,247	2,322	2,415	2,387	2,351	2,144	1,940	2,179	2,154	2,145	2,111	2,086	2,069	2,103
United Kingdom	1,620	1,556	1,259	1,461	1,474	1,518	1,404	1,208	1,363	1,373	1,375	1,252	1,232	1,345	1,301
Non-OECD Europe	143	133	140	140	139	138	137	136	134	136	138	136	136	134	136
Former Soviet Union	13,023	13,251	13,375	13,476	13,281	13,483	13,530	13,549	13,717	13,570	13,792	13,705	13,537	13,753	13,697
Russia	10,059	10,157	10,258	10,362	10,209	10,395	10,426	10,438	10,539	10,450	10,535	10,453	10,449	10,543	10,495
Azerbaijan	991	1,098	1,086	1,025	1,050	1,015	1,073	1,078	1,056	1,056	1,082	1,090	1,019	1,108	1,075
Kazakhstan	1,520	1,544	1,581	1,654	1,575	1,646	1,599	1,608	1,686	1,635	1,744	1,683	1,637	1,672	1,684
Non-OPEC Africa (ex Angola)	2,605	2,604	2,629	2,617	2,614	2,621	2,588	2,596	2,586	2,598	2,629	2,613	2,644	2,628	2,628
Egypt	761	753	745	737	749	739	739	739	739	739	729	725	726	716	724
Sudan	449	473	497	496	479	490	484	486	485	486	475	465	470	471	470
Non-OPEC Asia	7,417	7,461	7,526	7,541	7,486	7,650	7,697	7,835	7,869	7,763	8,003	7,918	7,936	7,919	7,944
India	787	794	796	813	798	829	835	883	909	864	913	940	917	915	921
Malaysia	757	737	742	723	740	740	717	700	708	716	676	664	654	651	661
China	3,829	3,896	3,929	3,910	3,891	3,990	4,059	4,143	4,218	4,103	4,304	4,271	4,260	4,278	4,278
Non-OPEC Latin America*	3,838	3,855	3,856	3,978	3,882	4,029	4,099	4,086	4,069	4,071	4,166	4,313	4,448	4,525	4,363
Argentina	743	734	699	720	724	710	709	705	644	692	691	694	691	694	692
Brazil	1,996	2,015	2,032	2,072	2,029	2,095	2,149	2,128	2,168	2,135	2,155	2,260	2,385	2,409	2,302
Colombia	640	658	672	726	674	760	783	794	819	789	857	892	904	952	901
Non-OPEC Middle East	1,643	1,659	1,687	1,677	1,667	1,704	1,699	1,702	1,707	1,703	1,708	1,696	1,694	1,685	1,696
Oman	787	799	832	832	813	855	858	867	878	865	906	903	909	927	911
Processing Gains	2,237	2,239	2,272	2,256	2,251	2,290	2,292	2,326	2,310	2,305	2,341	2,354	2,374	2,349	2,336
Global biofuels	1,129	1,625	1,771	1,730	1,564	1,370	1,945	2,132	1,735	1,796	1,519	1,976	2,320	2,076	1,973
Non-OPEC** (incl. processing gains)	51,085	51,419	51,880	52,352	51,684	52,364	52,830	52,828	53,231	52,813	53,144	53,382	53,633	53,884	53,511
OPEC-11 crude	*26,262*	*26,074*	*26,283*	*26,403*	26,256	*26,681*	*26,748*	*26,928*	*27,038*	26,849	26,229	25,623	26,351	27,046	26,312
OPEC-11 crude plus Iraq	*28,601*	*28,510*	*28,786*	*28,856*	28,688	*29,061*	*29,062*	*29,266*	*29,463*	29,213	28,849	28,305	29,108	29,878	29,035
Iraq crude	*2,339*	*2,436*	*2,503*	*2,453*	*2,433*	*2,380*	*2,314*	*2,338*	*2,425*	2,364	2,620	2,682	2,757	2,832	2,723
Total OPEC NGLs + Non-conventional	*4,663*	*4,705*	*4,883*	*4,968*	*4,805*	*5,110*	*5,186*	*5,369*	*5,476*	5,285	5,573	5,656	5,855	5,972	5,764
Total OPEC	*33,264*	*33,215*	*33,669*	*33,824*	*33,493*	*34,171*	*34,248*	*34,635*	*34,939*	*34,498*	*34,422*	*33,960*	*34,963*	*35,851*	*34,799*
Total World Supply	*84,349*	*84,634*	*85,549*	*86,176*	*85,177*	*86,536*	*87,079*	*87,463*	*88,170*	*87,312*	*87,566*	*87,342*	*88,596*	*89,735*	*88,310*

Source: IEA, EIA, various industry sources, BofA Merrill Lynch Global Commodities Research

*Non-OPEC Latin America excludes Mexico (OECD North America) and Ecuador (now OPEC)

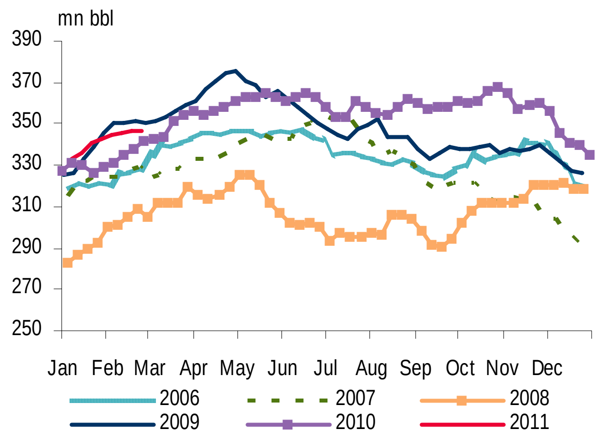
Table 7: BofA Merrill Lynch global oil demand and oil price forecasts (in thousand b/d)

	1Q2009	2Q2009	3Q2009	4Q2009	2009	1Q2010	2Q2010	3Q2010	4Q2010E	2010E	1Q2011F	2Q2011F	3Q2011F	4Q2011F	2011F
TOTAL OECD Demand	46,443	44,481	44,987	45,893	45,451	45,937	45,206	46,608	46,764	46,129	46,179	45,206	46,065	46,546	45,999
OECD North America Demand	23,429	22,941	23,276	23,554	23,300	23,580	23,775	24,223	24,085	23,916	23,704	23,813	24,349	24,228	24,024
OECD Europe Demand	14,893	14,265	14,465	14,353	14,494	14,166	14,115	14,788	14,648	14,429	14,308	14,157	14,474	14,487	14,356
OECD Pacific Demand	8,121	7,275	7,246	7,986	7,657	8,191	7,316	7,597	8,031	7,784	8,166	7,236	7,242	7,832	7,619
OECD Stock Changes															
Industry	617	88	183	(1,233)	(91)	180	993	(316)	(801)	14	(626)	(860)	(184)	(152)	(456)
Government	227	154	33	1	103	29	(35)	(155)	76	(21)	30	30	30	30	30
OECD Stocks (mn bbl)															
Industry	2,752	2,761	2,777	2,664	2,664	2,680	2,771	2,741	2,668	2,668	2,611	2,534	2,518	2,504	2,504
Government	1,547	1,561	1,564	1,564	1,564	1,567	1,563	1,549	1,556	1,556	1,559	1,562	1,564	1,567	1,567
Total Stocks	4,299	4,322	4,341	4,228	4,228	4,247	4,334	4,291	4,224	4,224	4,170	4,096	4,082	4,071	4,071
TOTAL NON-OECD Demand	37,991	39,685	40,388	40,015	39,520	40,443	41,741	42,005	42,525	41,679	41,596	42,997	43,144	43,798	42,884
China	7,513	8,467	8,702	8,777	8,365	8,932	9,362	9,230	10,030	9,389	9,419	9,750	9,629	10,428	9,807
Other Asia	9,935	10,105	9,843	10,144	10,007	10,254	10,418	10,032	10,504	10,302	10,410	10,699	10,330	10,788	10,557
Middle East	6,764	7,276	7,735	7,099	7,219	7,139	7,542	7,975	7,286	7,486	7,343	7,768	8,141	7,211	7,616
Latin America	5,789	5,978	6,085	6,124	5,994	6,029	6,278	6,439	6,343	6,272	6,212	6,469	6,633	6,607	6,480
FSU	3,981	3,868	4,111	4,036	3,999	4,196	4,142	4,381	4,389	4,277	4,205	4,196	4,358	4,681	4,360
Africa	3,260	3,237	3,181	3,119	3,199	3,191	3,292	3,240	3,254	3,244	3,303	3,405	3,342	3,369	3,355
Non-OECD Europe	749	754	731	716	738	702	707	708	719	709	704	709	710	713	709
TOTAL Demand	84,434	84,166	85,375	85,908	84,971	86,380	86,947	88,613	89,289	87,807	87,775	88,203	89,209	90,344	88,883
WTI crude oil price forecast ($/bbl)	43.31	59.79	68.24	76.13	61.87	78.88	78.05	76.21	85.24	79.60	96.00	116.00	104.00	88.00	101.00
Brent crude oil price forecast ($/bbl)	45.72	59.90	68.87	75.54	62.51	77.37	79.41	76.96	87.45	80.30	106.00	122.00	110.00	94.00	108.00

Source: IEA, EIA, various industry sources, BofA Merrill Lynch Global Commodities Research

Petroleum – US

Chart 21: US crude oil stocks

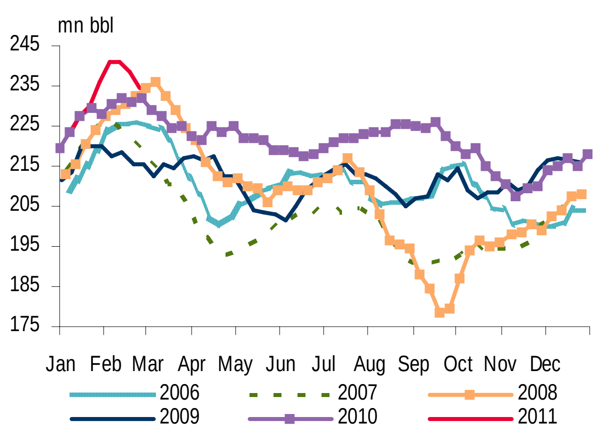


Source: US Department of Energy

Chart 22: WTI crude oil price

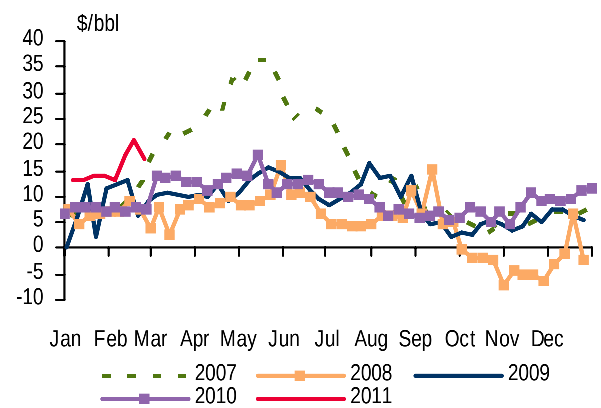
Source: NYMEX, Bloomberg

Chart 23: US gasoline stocks



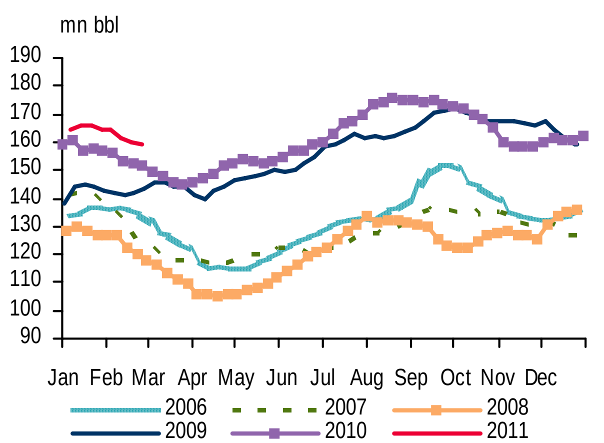
Source: US Department of Energy

Chart 24: US RBOB cracks



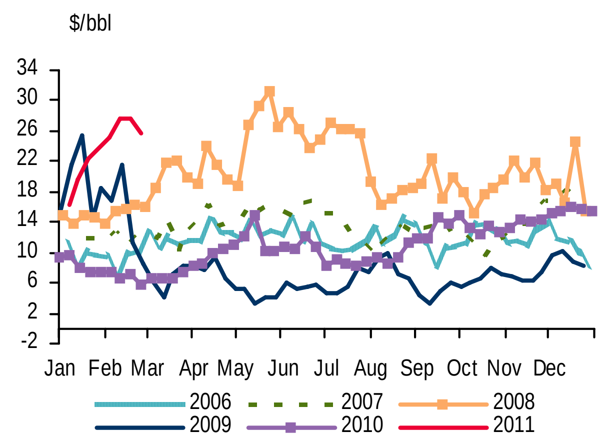
Source: NYMEX, Reuters

Chart 25: US distillate oil stocks



Source: US Department of Energy

Chart 26: US distillate oil cracks



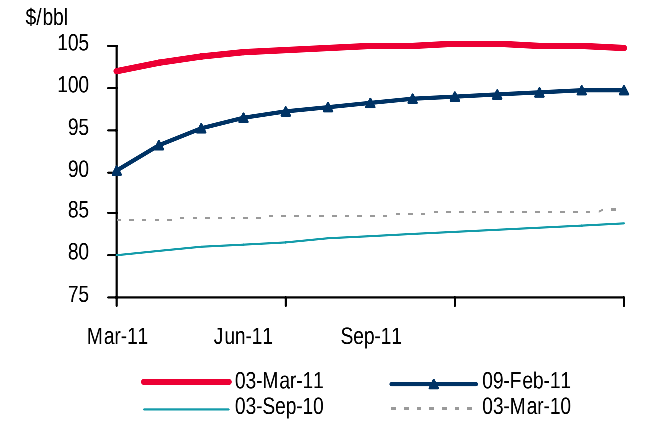
Source: NYMEX, Reuters

Petroleum – US & Europe

Chart 27: WTI implied volatility

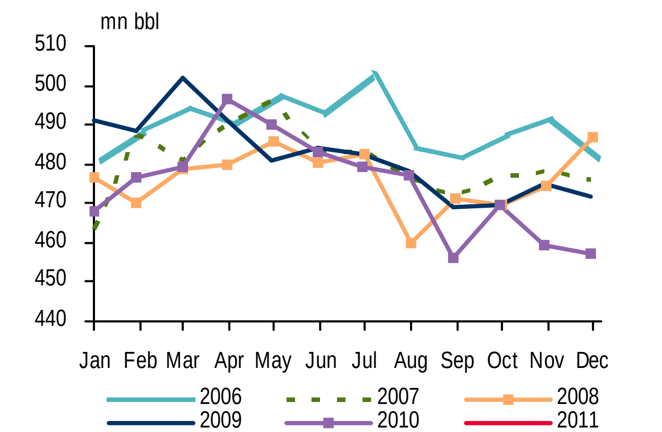
Source: NYMEX, Bloomberg

Chart 28: WTI Term Structure



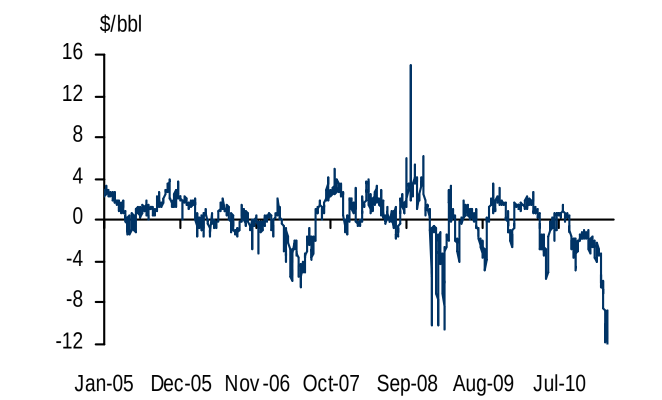
Source: NYMEX, Reuters

Chart 29: European crude oil stocks



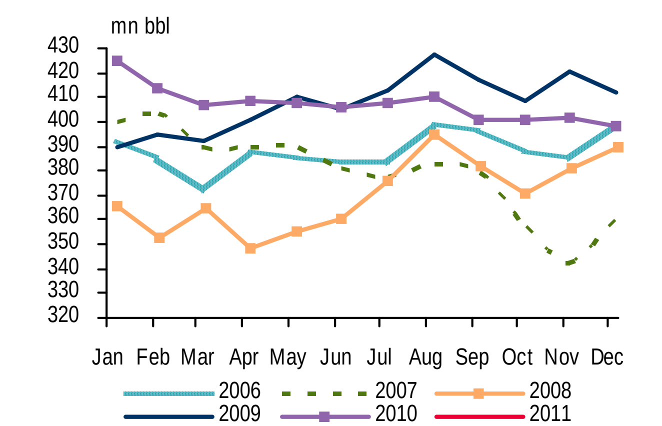
Source: Euroil

Chart 30: Brent - WTI crude spread



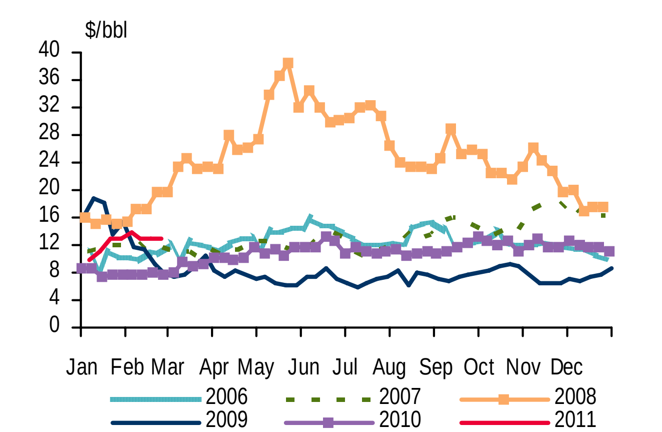
Source: IPE, Bloomberg

Chart 31: European distillate stocks



Source: Euroil

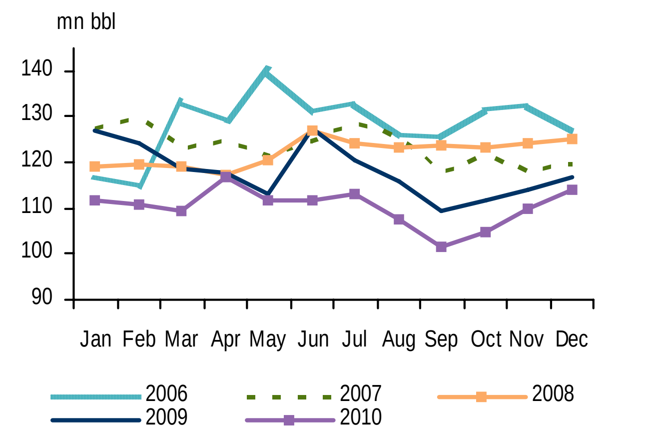
Chart 32: ICE gasoil cracks



Source: Reuters

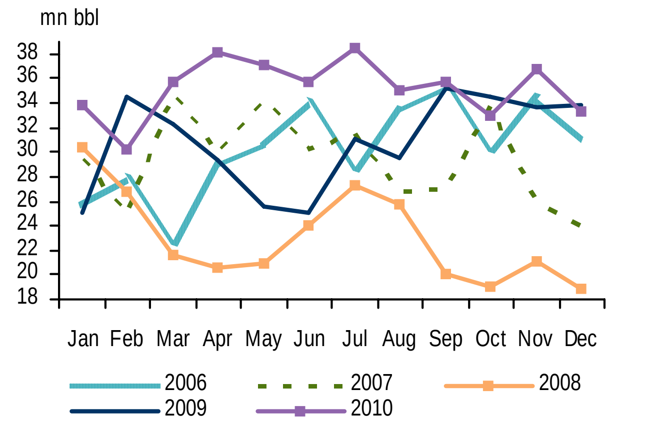
Petroleum – Asia

Chart 33: Japanese crude oil stocks



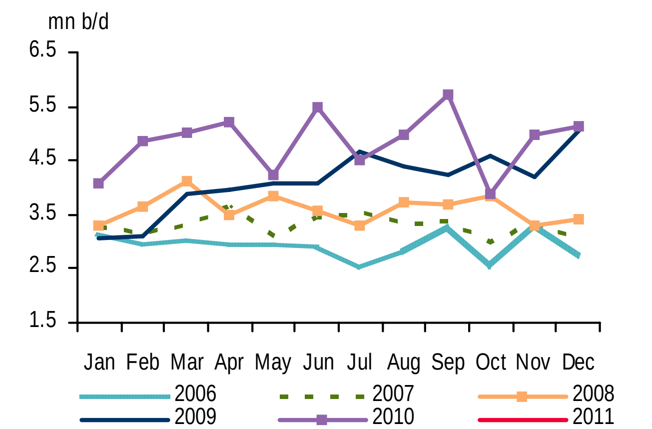
Source: International Energy Agency

Chart 34: South Korean crude oil stocks



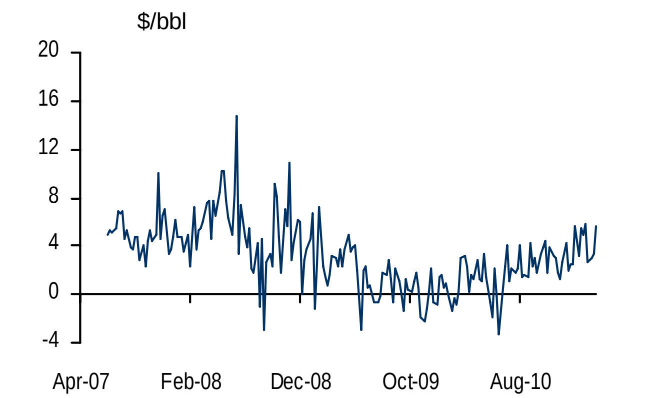
Source: International Energy Agency

Chart 35: China crude oil imports



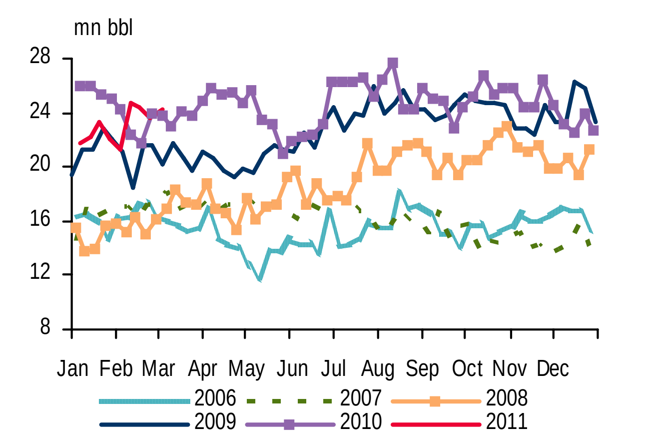
Source: Reuters

Chart 36: Brent - Dubai crude oil spread (1-month contract)



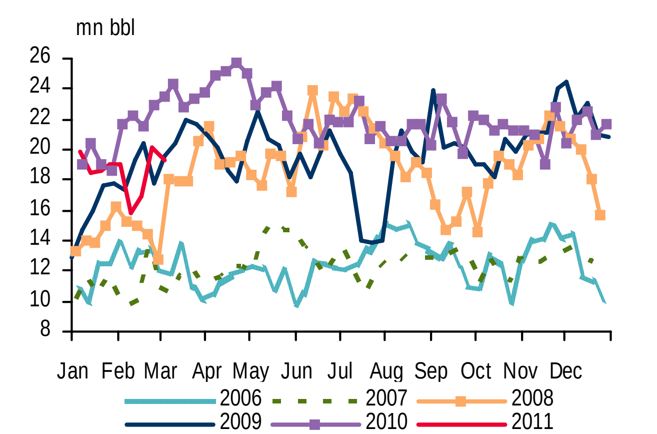
Source: Reuters

Chart 37: Singapore light & mid distillate stocks



Source: Reuters

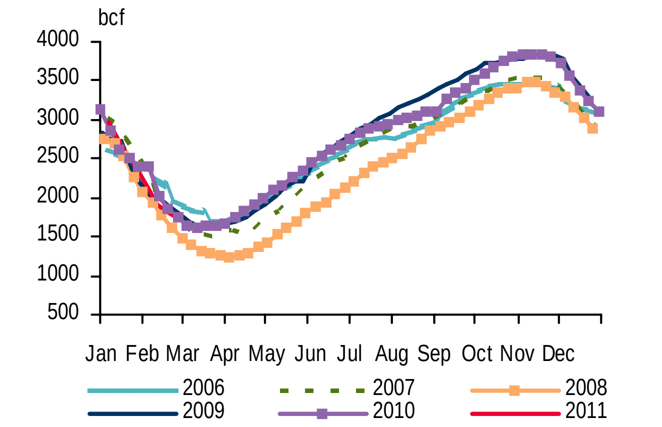
Chart 38: Singapore residual stocks



Source: Reuters

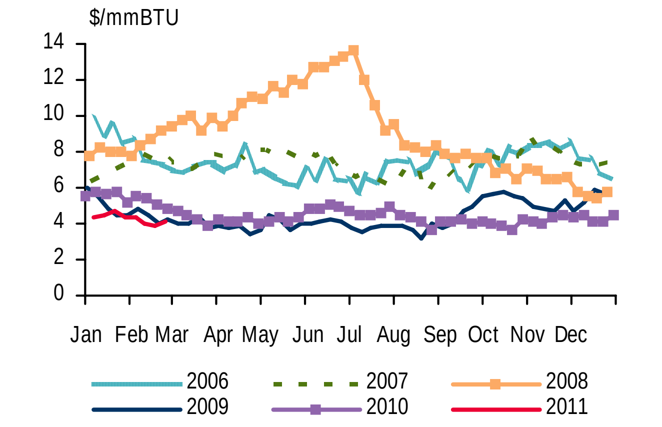
Gas & Power – US

Chart 39: US natural gas stocks



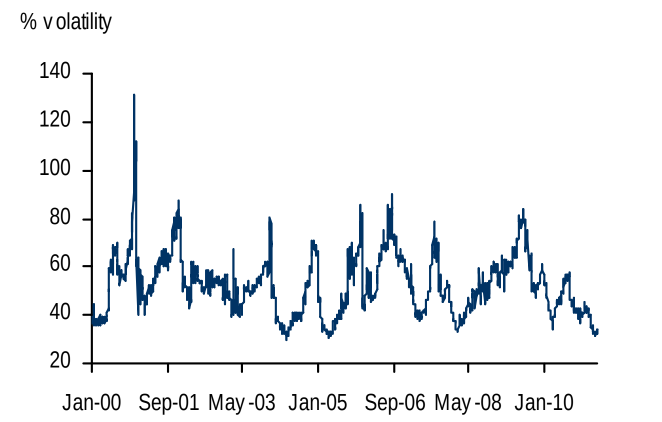
Source: US Department of Energy

Chart 40: US natural gas price



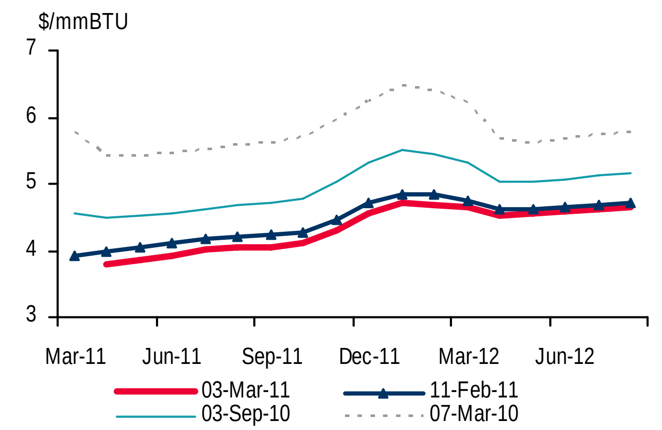
Source: NYMEX, Reuters

Chart 41: US natural gas implied volatility



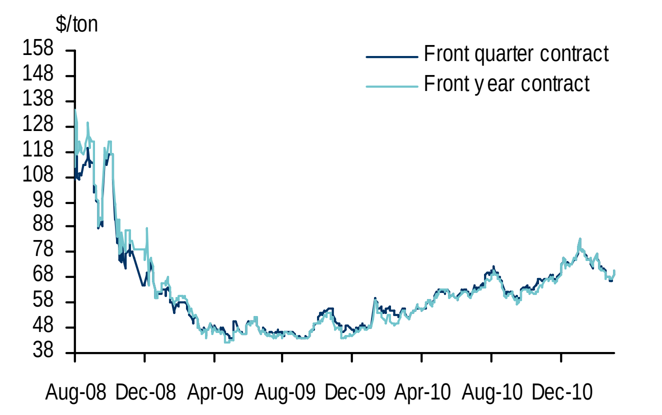
Source: NYMEX, Bloomberg

Chart 42: US natural gas term structure



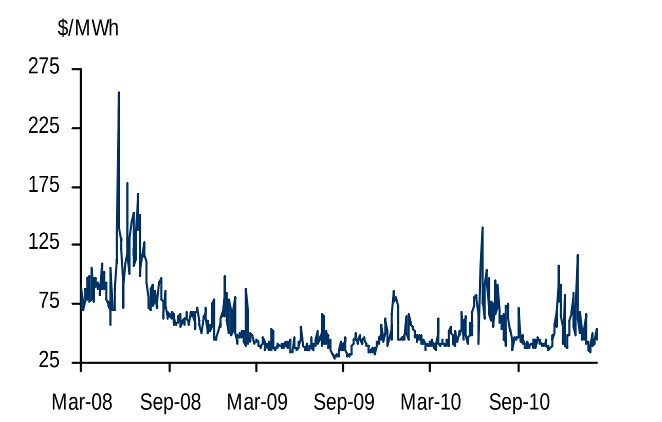
Source: NYMEX, Reuters

Chart 43: US NYMEX forward coal prices



Source: NYMEX, Reuters

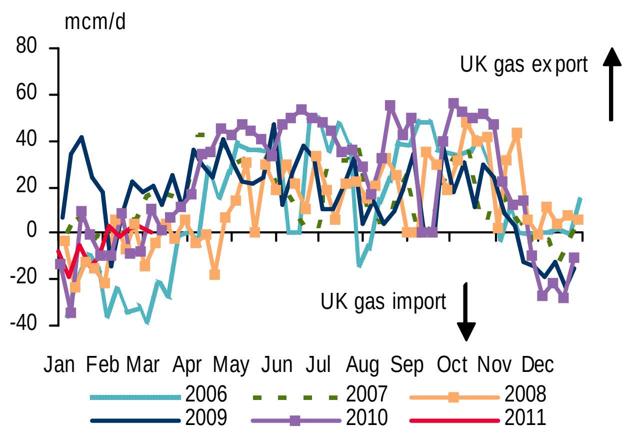
Chart 44: US spot PJM power prices



Source: NYMEX, Reuters

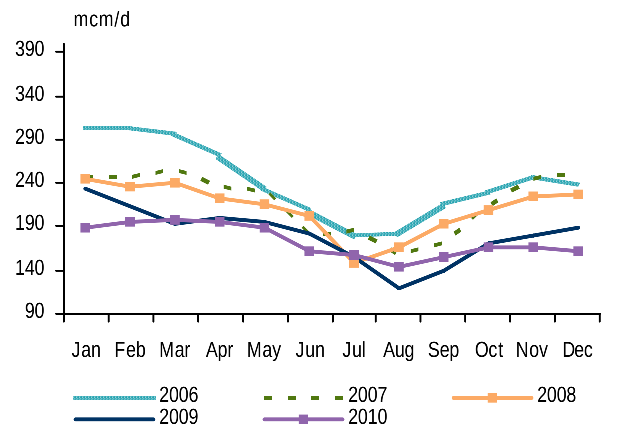
Gas & Power – Europe

Chart 45: UK Interconnector gas flows



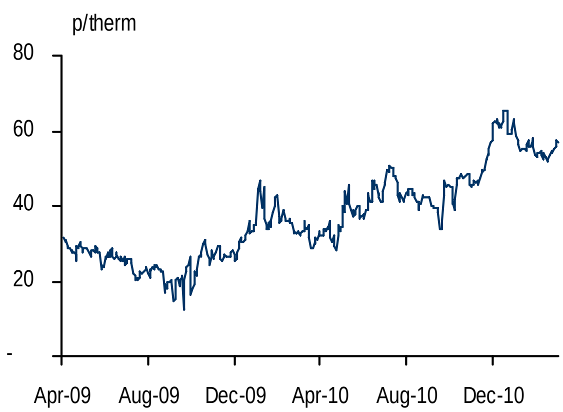
Source: UK Interconnector Flows

Chart 46: UK gross gas production



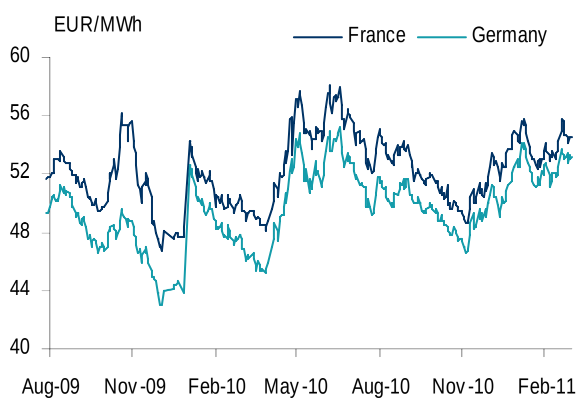
Source: UK Department of Trade and Industry

Chart 47: UK National Balancing Point (NBP) day ahead



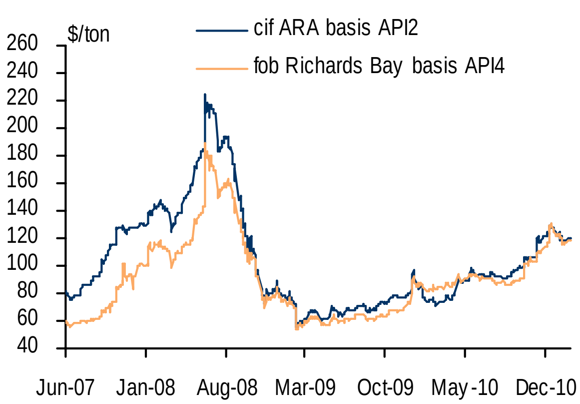
Source: Bloomberg

Chart 48: Germany and France CAL09 Baseload



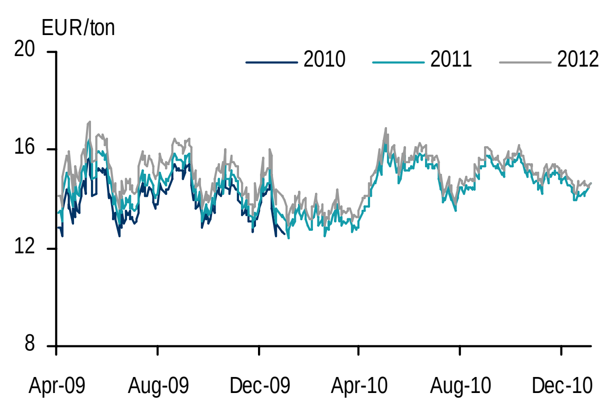
Source: Bloomberg

Chart 49: TFS API2 coal in Rotterdam



Source: Reuters

Chart 50: European CO_2 Emissions Price 2008



Source: Reuters

Table 8: Global Commodity Research Publications - Past Topics*

Date	Publication	Title
03-Mar-11	Global Metals Weekly	Oil leading gold
02-Mar-11	Commodity Portfolio Monthly	Pure Commodity Alpha
26-Feb-11	Global Energy Weekly	Libya sets oil on the edge
24-Feb-11	MLCX Managed Indices Update	MLCX Managed Indices Update
23-Feb-11	Global Metals Weekly	Drivers of base metal volatility
21-Feb-11	Global Energy Paper	Medium-term global oil balance to tighten further
18-Feb-11	Commodity Derivatives Insights	Hedging tail-risk in the US nat gas market
15-Feb-11	Global Energy Weekly	US nat gas: Looking for a supply rationing point
15-Feb-11	Global Metals Weekly	Platinum miners: power, safety and productivity a concern
15-Feb-11	MLCX Managed Indices Update	MLCX Managed Indices Update
09-Feb-11	Global Energy Weekly	Oil squeezing Emerging Markets
08-Feb-11	Global Metals Weekly	Zinc prices to underperform
02-Feb-11	Global Energy Weekly	China and India will support Atlantic Basin coal
01-Feb-11	Commodity Portfolio Monthly	Revisiting the mechanics of commodity investing
31-Jan-11	Global Metals Weekly	Copper to hit $11,250/t even with lower Chinese imports
25-Jan-11	Bulk Strategist	Coal's H1 supply shocks = market adjustments in H2
25-Jan-11	Global Energy Weekly	How high could oil go?
24-Jan-11	Commodity Derivatives Insights	The MLCX WTI Crude Oil Vol Arbitrage Indices
24-Jan-11	Global Metals Weekly	High oil prices curb Russian palladium destocking
18-Jan-11	MLCX Managed Indices Update	MLCX Managed Indices Update
14-Jan-11	Global Metals Weekly	Economics of physical metal ETFs
13-Jan-11	Global Energy Weekly	Could Iraqi output bring oil prices lower?
09-Jan-11	Global Metals Weekly	Silver outperforms gold
07-Jan-11	Global Energy Weekly	WTI weakness driving RBOB gasoline crack strength
04-Jan-11	Commodity Portfolio Monthly	Commodities close 2010 on a high note
22-Dec-10	Global Energy Weekly	US oil to play catch up in 2011
21-Dec-10	Commodity Derivatives Insights	Hedging tail risks with commodity options
21-Dec-10	Global Metals Weekly	Metallurgical coal: Rain easing, but a storm brewing
20-Dec-10	MLCX Managed Indices Update	MLCX Managed Indices Update
13-Dec-10	Global Metals Weekly	Real rates driving gold
13-Dec-10	Global Energy Weekly	When will OPEC open up the taps?
03-Dec-10	Commodity Strategist	2011 Commodity Outlook
03-Dec-10	Energy Strategist	2011 Energy Outlook
01-Dec-10	Commodity Portfolio Monthly	2011 Commodity index rebalancing
26-Nov-10	Global Metals Weekly	Copper mine supply: higher risk, lower grade
24-Nov-10	Commodity Derivatives Insights	Hedging tail-risk with commodity correlation
23-Nov-10	Global Energy Weekly	US nat gas: More of the same in 2011?
18-Nov-10	Global Metals Weekly	China still needs copper despite high prices
16-Nov-10	Global Energy Weekly	Global distillate markets looking tighter near-term
11-Nov-10	Bulk Strategist	Rising cost pressures to drive bulks prices higher
11-Nov-10	Metals Strategist	QE2, China and ETF's to push metal prices higher into 2011
08-Nov-10	Global Energy Weekly	Coal, currencies and costs
02-Nov-10	Global Metals Weekly	A look at Shanghai and London metal price differentials

Table 8: Global Commodity Research Publications - Past Topics*

Date	Publication	Title
01-Nov-10	Commodity Portfolio Monthly	Measuring tracking error risk in active commodity strategies
01-Nov-10	Global Energy Weekly	Global oil demand set to hit record in 2011
25-Oct-10	Global Metals Weekly	Metallurgical Coal: Quality vs Leverage
25-Oct-10	Global Energy Weekly	Liquid gas is about to warm up
18-Oct-10	Global Metals Weekly	ETFs a key topic during LME week
17-Oct-10	Global Energy Weekly	The Commodity Trilemma
14-Oct-10	Commodity Derivatives Insights	Energy risk management: concept and strategy
08-Oct-10	Global Metals Weekly	Copper backwardation to become more pronounced
08-Oct-10	Global Energy Weekly	High oil price squeezing European gas buyers
01-Oct-10	Commodity Portfolio Monthly	Commodities rebound in September
30-Sep-10	Global Energy Weekly	How will QE2 impact commodities
30-Sep-10	Global Metals Weekly	Metals between protectionism and FX interventions
30-Sep-10	MLCX Managed Indices	MLCX Managed Indices Update
24-Sep-10	Global Metals Weekly	Structural silver surplus set to disappear
23-Sep-10	Global Energy Weekly	Diesel Strength after this winter overdone
21-Sep-10	Commodity Derivatives Insights	Gold and FX reserve risk management
15-Sep-10	Energy Strategist	Easy money is OPEC's new friend
14-Sep-10	Global Metals Weekly	Platinum mine supply set to underperform
13-Sep-10	Global Commodity Paper #13	Commodity lessons from Japan
07-Sep-10	Global Metals Weekly	China targets qualitative supply growth
06-Sep-10	Global Energy Weekly	Liquidity to offset weaker US growth outlook
01-Sep-10	Commodity Portfolio Monthly	Building on momentum to enhance commodity alpha
31-Aug-10	Global Metals Weekly	Met Coal: Cyclical Weakness vs Sturctural Strength
24-Aug-10	Global Energy Weekly	No recovery in US nat gas prices in 2011
24-Aug-10	Global Metals Weekly	What drives Chinese copper demand
20-Aug-10	MLCX Managed Indices Update	MLCX Managed Indices Update
20-Aug-10	Commodity Derivatives Insights	Oil vol skews imply double-dip
18-Aug-10	Global Energy Weekly	Heavy crude and products find support for now
17-Aug-10	Metals Strategist	Balanced view for 2H10, but upside for 2011 intact
17-Aug-10	Bulk Strategist	Bulk Commodities: H2 - opportunity knocks
12-Aug-10	Global Energy Weekly	Oil and the Fed
09-Aug-10	Global Metals Weekly	Gold prices still on track to $1500/oz
03-Aug-10	Global Metals Weekly	Macro versus micro: the metals heat grid
03-Aug-10	Global Energy Weekly	Only modest upside to cracks in 2011
02-Aug-10	Commodity Portfolio Monthly	Tough times for commodity alpha, but what's next?
27-Jul-10	Global Energy Weekly	Looking beyond the near-term weakness in dry freight
26-Jul-10	Global Metals Weekly	Nickel forward curve is overvalued
26-Jul-10	Commodity Derivatives Insights	The MLCX Gold Volatility Arbitrage indices
19-Jul-10	Global Energy Weekly	Is the oil market normalizing?

Source: BofA Merrill Lynch Global Commodity Research

*Please contact us if you would like to receive copies of any of the above

Link to Definitions

Macro

Click here for definitions of commonly used terms.

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