

OPEC: Brothers in arms... or not?

Resource nationalism, not economics is driving oil markets

As expected, OPEC decided this week to leave crude production quotas unchanged for the third time, but emphasized both the need for compliance among cartel members and co-operation with non-OPEC producers. Of course, price stability has come mainly thanks to cuts implemented by Saudi Arabia, Kuwait and the UAE. With limited global spare crude productive capacity outside Saudi Arabia, it has been relatively easy to prop up prices into a \$65-\$75/bbl band. By contrast, in the absence of a cartel ready to reduce volumes in other energy markets like US natural gas, prices have continued to spiral down, desperately looking for a supply-rationing point.

But oil producers are not necessarily a happy family

While OPEC members seem pleased with the attained result, the path ahead will not be easy. Simply put, there are just too many free-riders around. The cartel has lost a significant portion of market share in global crude production in the last year mostly to Russia, and compliance is falling rapidly among some members. With 1.3 million b/d of capacity coming on stream this year and an output reduction of 1.2+ million b/d, we estimate that Saudi Arabia's "missed oil revenues" are probably running at close to \$100 billion per annum, or almost 25% of GDP.

With high distillate stocks, a warm winter is a clear risk

High distillate stocks in the OECD economies present a clear downside risk to oil prices this winter. In fact, the premium on put option prices relative to calls in the WTI crude oil market is already at record levels. In a very warm winter, we estimate global oil demand could drop by 500 thousand b/d relative to trend, posing a significant challenge to OPEC. Would Saudi, Kuwait and UAE cut output again to save Russia and the rest of OPEC? With global oil producers free-riding on these three OPEC members, any additional supply cut may not come easy.

Table 1: EIA Weekly Storage Update

	Latest	Prev.	Last Year	Change
Crude Stocks	337.5	343.4	298.0	(5.9)
Mogas Stocks	207.2	205.1	187.9	2.1
Mid Dist Stocks	165.6	163.6	130.5	2.0
Fuel Oil Stocks	33.6	33.9	36.7	(0.3)
Crude Imports	9,095	9,576	8,581	(481.0)
Mogas Imports	985	878	1,121	107.0
Mid Dist Imports	235	156	117	79.0
Refinery Runs	15,105	14,951	13,483	154.0
Refinery Ut (%)	87.2	87.2	78.3	0.0
Nat gas stocks	3,392	3,323	2,905	69.0

Source: US Department of Energy

Note: Stocks in million bbl, Flows in 1000 b/d



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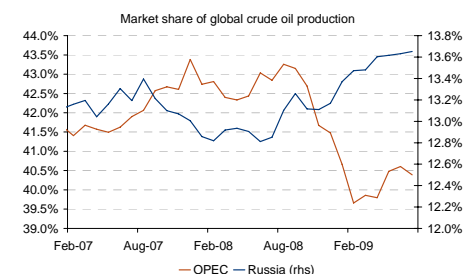
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Chart 1: Russia market share of the global crude market has increased as OPEC fell.



Source: IEA, Banc of America Securities-Merrill Lynch Commodity Research

Table 2: BAS-ML Commodity Price Forecasts

(\$/bbl)	3Q2009	4Q2009	1Q2010
WTI Crude Oil	67.00	64.00	67.00
Brent Crude Oil	66.00	64.00	67.00
USGC No. 2 HO	3.50	5.00	8.00
USGC RBOB Gasoline	6.75	1.23	5.00
USGC 1% Residual	-7.00	-8.00	-8.00
NWE 0.2% Gasoil	6.50	7.20	10.00
NWE Prem. Gasoline	4.00	-1.00	3.00
NWE 1% Residual	-7.00	-6.00	-6.00
US Natural Gas	3.80	5.00	6.50
UK Natural Gas	22.00	41.50	46.00

Source: Banc of America Securities-Merrill Lynch Commodity Estimates

Note: products quoted in crack spreads, US nat gas in \$/MMBtu, UK in p/wh.

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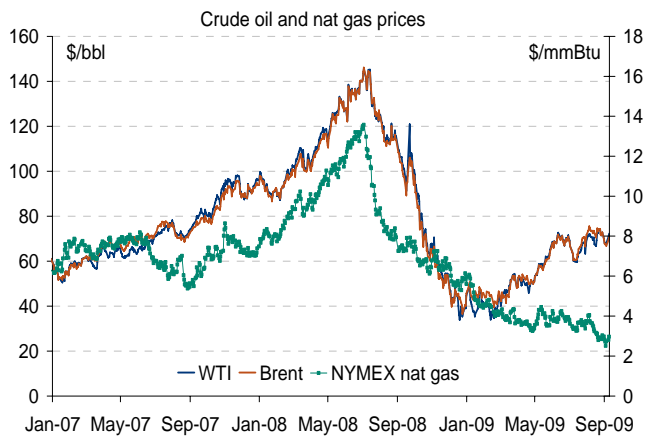
Refer to important disclosures on page 14 to 15.

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Resource nationalism, not economics is driving oil markets

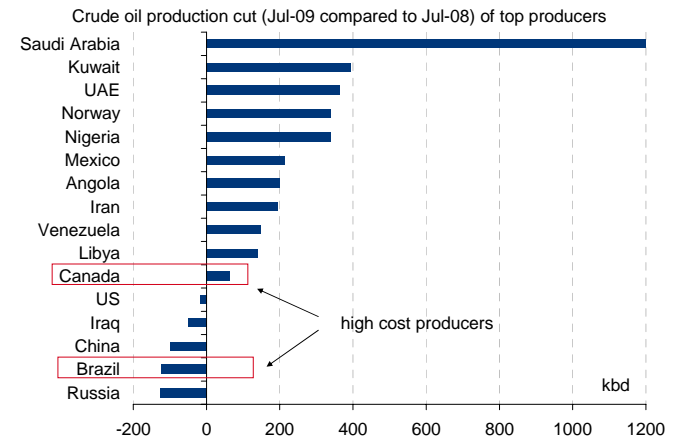
The share of global oil production directly controlled by governments rose at a rapid pace in the last decade, while taxes on oil production also surged. With governments firming their grip on resources, capacity investments into the global oil sector dried up in recent years. Given the limited productive capacity around, OPEC, the oil cartel, has now found it relatively easy to prop up prices into a \$65-\$75/bbl band. Price stability has come on the back of large volume reductions implemented by some of the world's lowest cost producers (Chart 2). In contrast, with no cartel ready to reduce volumes in the US natural gas market, Henry Hub prices have continued to spiral down (Chart 3), desperately looking for a supply-rationing point.

Chart 2: Oil prices have rebounded since February, but other energy prices like natural gas have continued to fall



Source: Bloomberg, Banc of America Securities-Merrill Lynch Commodity Research

Chart 3: The largest reductions in global oil output have come from low cost producers in OPEC

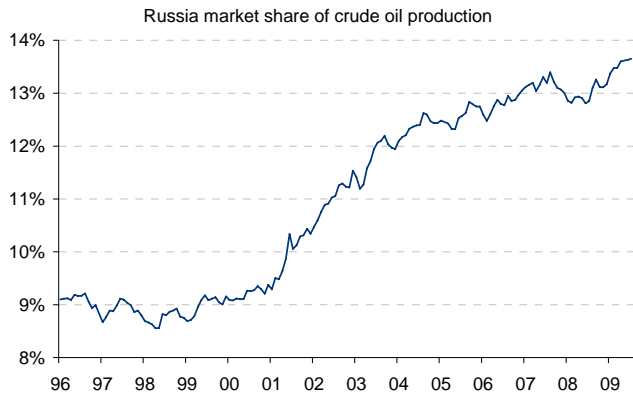


Source: IEA, Banc of America Securities-Merrill Lynch Commodity Research

OPEC has lost market share to Russia in recent years

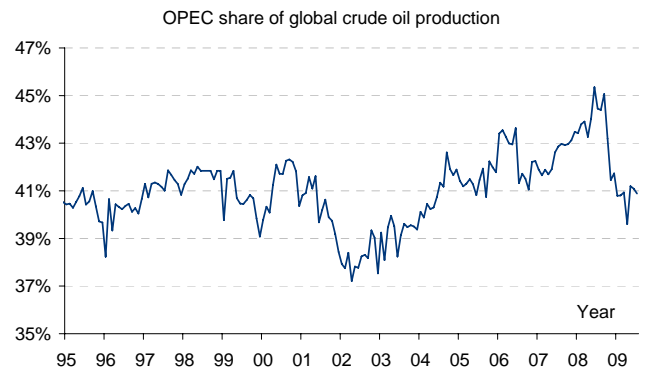
If oil supply volume reductions depend on co-ordinated action and not on marginal cost economics, the downside risk to oil prices is a function of co-operation, not competition among the world's largest oil producers. Free-riding is therefore the crux of the problem. In recent years, Russia's market share in global oil supply has continued to increase (Chart 4). On the other hand, OPEC has lost market share in global crude production mostly to Russia, particularly last year (Chart 5). In other words, Russia, as well as the rest of the world's oil producers, have enjoyed a free ride on the back of OPEC's large oil volume reductions. Is this situation acceptable to the various cartel members?

Chart 4: In recent years, Russia's market share in global oil has continued to increase



Source: IEA, Banc of America Securities-Merrill Lynch Commodity Research

Chart 5: OPEC, on the other hand, has lost market share in global crude production, particularly last year

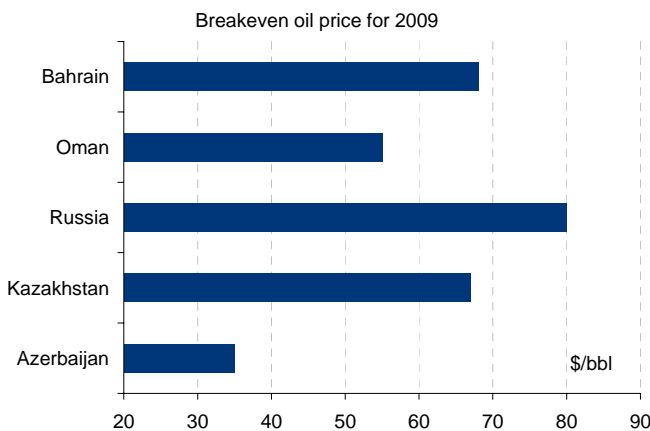


Source: IEA, Banc of America Securities-Merrill Lynch Commodity Research

Different oil producers have different oil price requirements

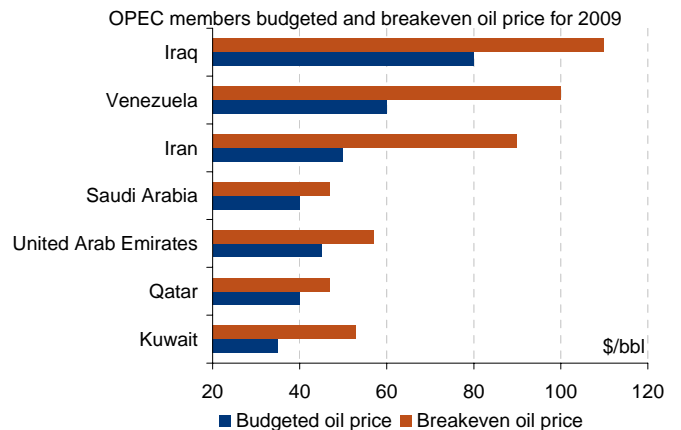
According to our economics team, the world's key oil producers outside OPEC have different oil price requirements to balance their respective government budgets. For instance, our economics team believes that Russia needs \$80/bbl to bring the government budget to a break-even point this year, while others like Azerbaijan only require \$35/bbl (Chart 6). With such high expenditures, it is no wonder Russia has failed to curb production this year despite the dire economic environment. But even within OPEC, the budgetary requirements of the various members can vary tremendously. Some members like Qatar just need \$47/bbl to break-even, while others like Venezuela need about \$100/bbl (Chart 7).

Chart 6: Non-OPEC producers have different oil price requirements to balance government budgets



Source: IMF, Banc of America Securities-Merrill Lynch Economic Research

Chart 7: Even within OPEC, some members like Qatar just needs 47 \$/bbl, while others like UAE requires 58 \$/bbl.

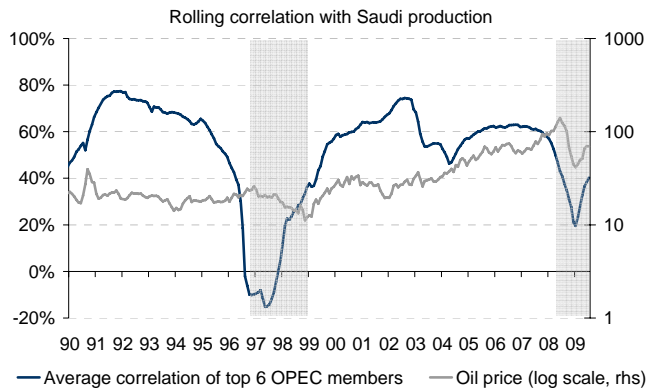


Source: IMF, Banc of America Securities-Merrill Lynch Economic Research

OPEC cohesion has increased, but compliance is coming off

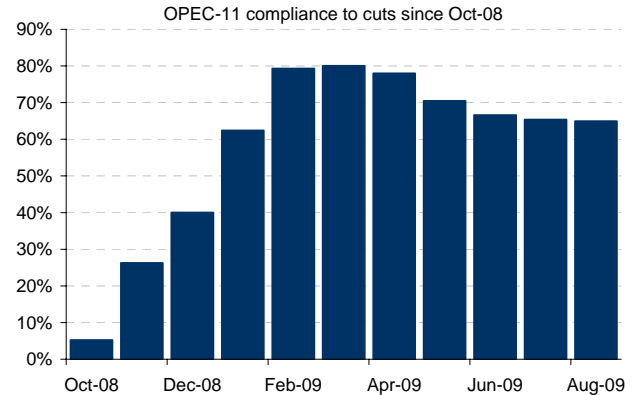
Of course, the rebound in global oil prices in recent months has come on the back of firm co-operation among key cartel members. The degree of OPEC cohesion, a measure of the average correlation of production of the various cartel members, has increased in recent months, supporting the run-up in prices (Chart 8). However, average compliance rates have already started to fall in the last few months from 80% in March 2009 to 65% in August 2009 (Chart 9), suggesting that any unexpected negative demand shock may be hard for OPEC to manage going forward.

Chart 8: The degree of OPEC cohesion has increased in recent months, supporting a run up in prices



Source: IEA, Banc of America Securities-Merrill Lynch Commodity Research

Chart 9: However, average compliance rates have fallen from 80% to 65% in the last few months

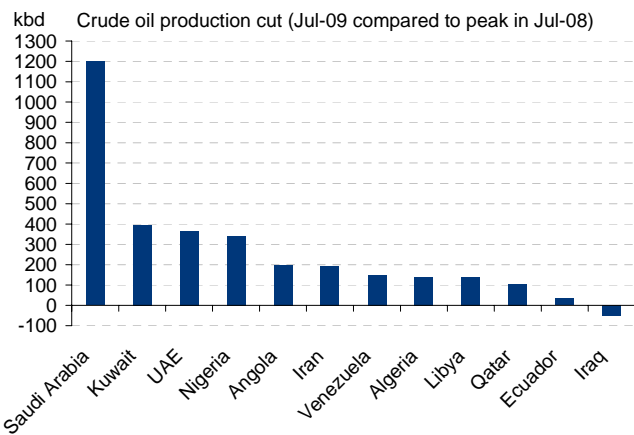


Source: IEA, Banc of America Securities-Merrill Lynch Commodity Research

There are some clear winners and losers among OPEC members

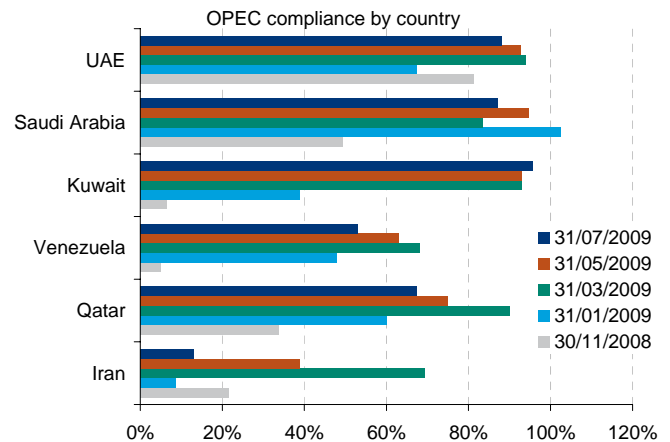
Specifically, the great disparity of the volume reduction contributions could make it particularly hard for OPEC to keep prices at around \$70/bbl in the face of a warm winter. On our estimates, Saudi Arabia is the country contributing the most to the reduction in volume, while Ecuador contributed the least (Chart 10). The gap in volumes is staggering, with Saudi Arabia leaving the most money on the table. One may argue, of course, that Saudi Arabia is the cartel's largest producer and thus should bear the brunt of the cut. Still, the picture does not change significantly on a relative basis. Saudi Arabia, UAE and Kuwait are 90% compliant at the moment compared to compliance rates of 53% for Venezuela or 13% for Iran (Chart 11).

Chart 10: Saudi Arabia is the country contributing the most to the reduction in volume, while Iraq contributed the least



Source: IEA, Banc of America Securities-Merrill Lynch Commodity Research

Chart 11: On a relative basis, Saudi Arabia, UAE and Kuwait are 90% compliant compared to Venezuela and Iran at 53% and 13%



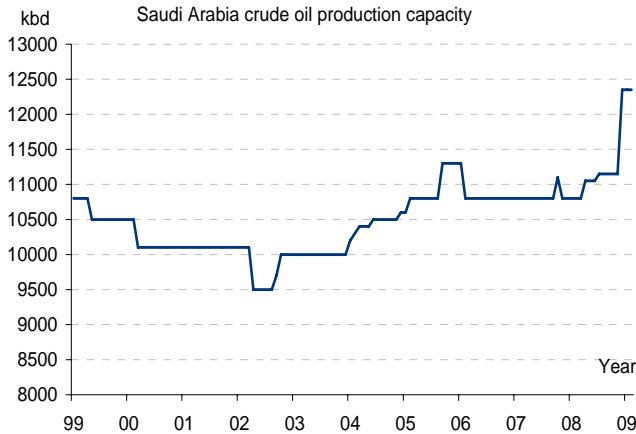
Source: IEA, Banc of America Securities-Merrill Lynch Commodity Research

Saudi spare output capacity is the highest in 2 decades...

Perhaps more importantly, Saudi Arabia has been investing very heavily in new productive capacity in recent years, only to see global oil demand plummet on the back of the global credit crisis. This year alone, Saudi Arabia has brought 1.3 million b/d of new fields on stream (Table 3), while total spare productive capacity is nearing

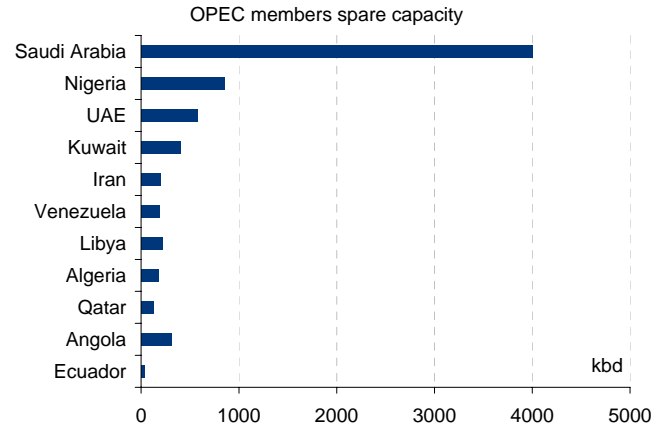
4 million b/d (Chart 12). Large investments in new capacity, coupled with a significant output production cut, have recently pushed Saudi Arabia's spare production capacity to the highest level in two decades. On a relative basis, Saudi Arabia now has substantially more spare capacity than any other OPEC member (Chart 13).

Chart 12: Saudi Arabia has invested very heavily in recent years, bringing several million b/d of incremental capacity on line



Source: Bloomberg, Banc of America Securities-Merrill Lynch Commodity Research

Chart 13: On a relative basis, Saudi Arabia now has substantially more spare capacity than any other member



Source: Bloomberg, Banc of America Securities-Merrill Lynch Commodity Research

Table 3: Saudi Upstream Petroleum Projects

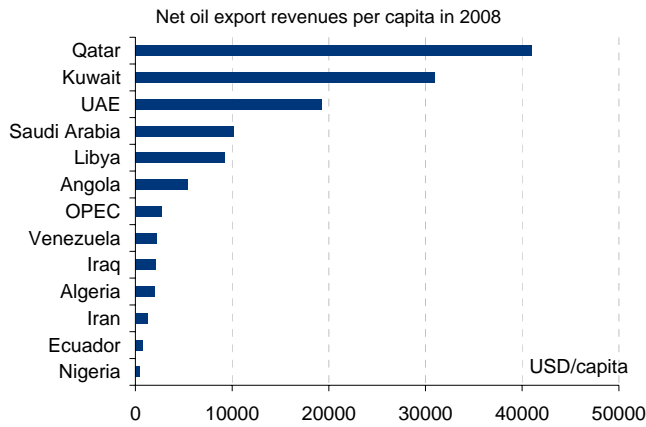
Field	Projected Capacity Add. (bbl/d)	Online (startup)	Type
Qatif/Abu Safah	800,000	2004	Medium
Haradh-III	300,000	2006	Light
Khursaniyah	500,000	2008 (Q3)	Light / Medium
Shaybah-I	250,000	2008 (Q4)	Extra Light
Nuayyim	100,000	2009	Super Light
Khurais	1,200,000	2009 (Q2)	Light
Manifa	900,000	2011 (Q3)	Heavy
Shaybah II-III	225,000	2010	Extra Light
Neutral Zone	30,000	2010	Medium
Berri	300,000		Extra Light
Zuluf	900,000		Medium
Safaniyah	700,000		Heavy
Khurais-II	250,000		Light

Source: Dow Jones, Reuters, Oil Daily, Saudi Aramco, Global Insight, MEES

...while others are running at close to full capacity utilization

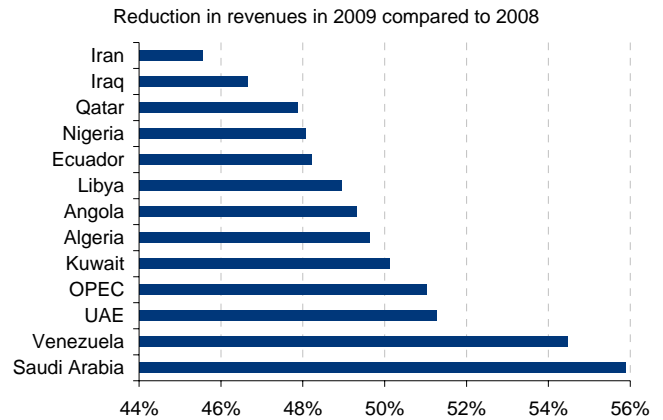
Of course, Saudi oil export revenues per capita are not the highest in the group due to the large population of the country. In 2008, oil export revenues per head amounted to \$10,242 compared to revenues of \$41,028 in Qatar or \$1,253 in Iran (Chart 14). Still, we calculate that the “opportunity cost” in terms of missed revenues is the highest in the group both in absolute and even in relative terms. Is Saudi Arabia taking on too much weight on its shoulders? Looking at the loss of potential revenue, we find that Saudi Arabia citizens have taken up the largest share of the reduction in revenues.

Chart 14: On a per capita basis, Qatar is OPEC's wealthiest member while Ecuador and Nigeria sit at the other end



Source: IEA, Banc of America Securities-Merrill Lynch Commodity Research

Chart 15: However, on a per capita basis, Saudi Arabia citizens have taken up the largest share of the reduction in revenues

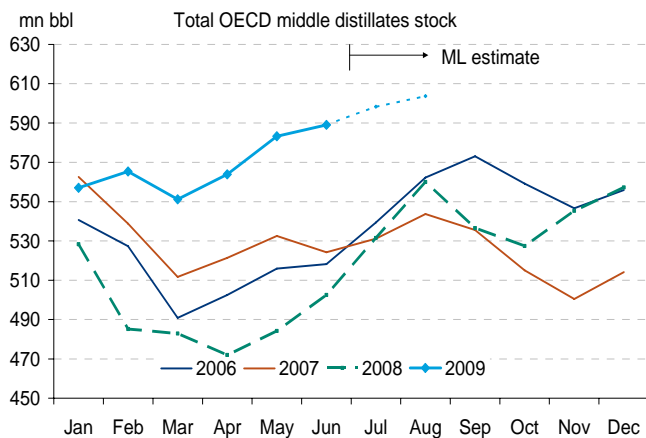


Source: IEA, Banc of America Securities-Merrill Lynch Commodity Research

With high distillate stocks, a warm winter is a clear risk

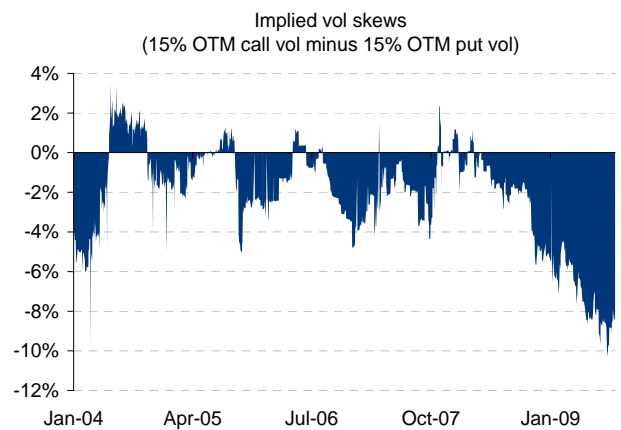
With distillate stocks in the OECD economies at extremely high levels (Chart 16), there is a clear downside risk to oil prices this winter. As we showed in our latest Global Energy Weekly (see "[Crude oil volatility trending lower](#)"). the premium on put option prices relative to calls in the WTI crude oil market is at record levels (Chart 17), reflecting the market's concern about a downward move in oil prices. In a very warm winter, we estimate global oil demand could drop by 0.4 million b/d relative to trend, posing a significant challenge to OPEC. Would Saudi, Kuwait and UAE cut output again to save Russia and the rest of OPEC? Given the strong fiscal position of these three countries and the fact that they have already borne a disproportionate share of the recent output reductions, any additional OPEC supply cut may take some time to implement.

Chart 16: Distillate stocks in the OECD economies are extremely high and present a clear downside risk to oil prices



Source: IEA, Banc of America Securities-Merrill Lynch Commodity Research

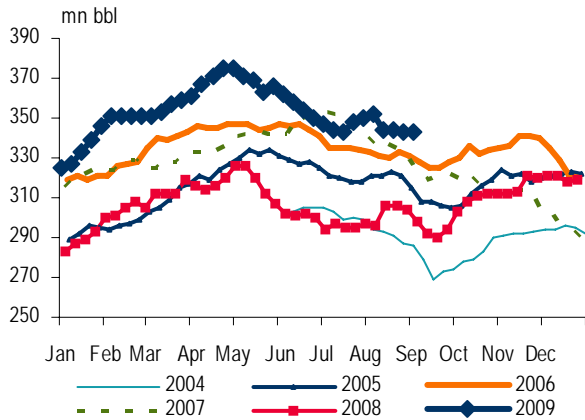
Chart 17: The premium on put option prices relative to calls in the WTI crude oil market is at record levels



Source: Banc of America Securities-Merrill Lynch Commodity Research

Petroleum - US

Chart 18: US crude oil stocks



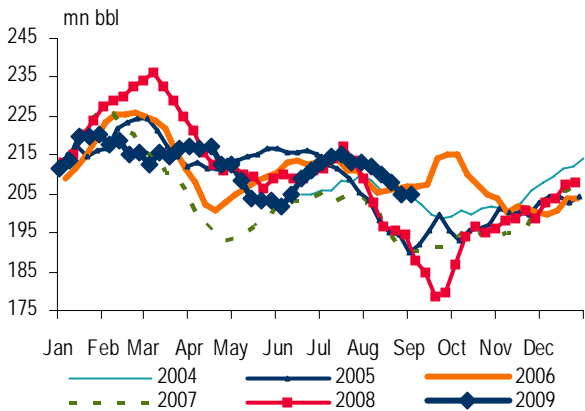
Source: US Department of Energy

Chart 19: WTI crude oil price



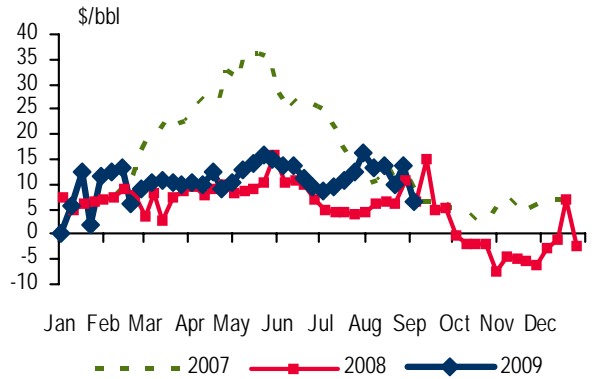
Source: NYMEX, Bloomberg

Chart 20: US gasoline stocks



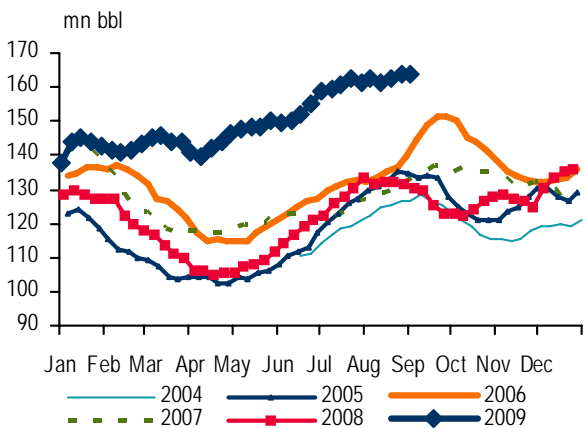
Source: US Department of Energy

Chart 21: US RBOB cracks



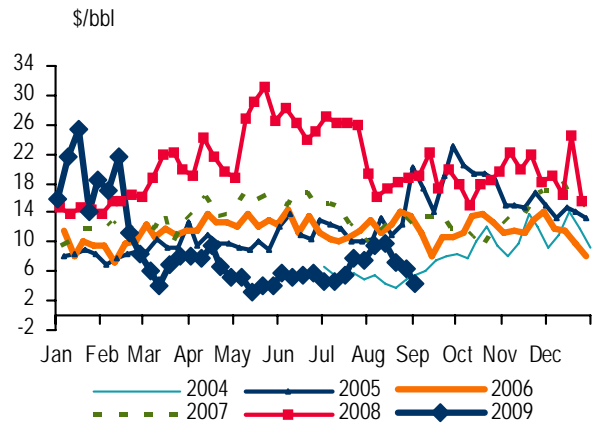
Source: NYMEX, Reuters

Chart 22: US distillate oil stocks



Source: US Department of Energy

Chart 23: US distillate oil cracks



Source: NYMEX, Reuters

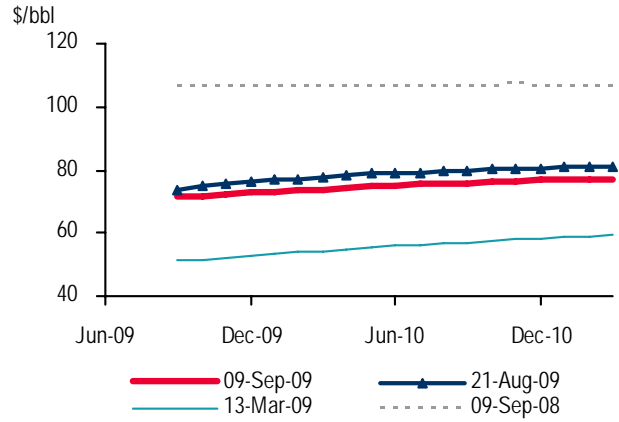
Petroleum - US & Europe

Chart 24: WTI implied volatility



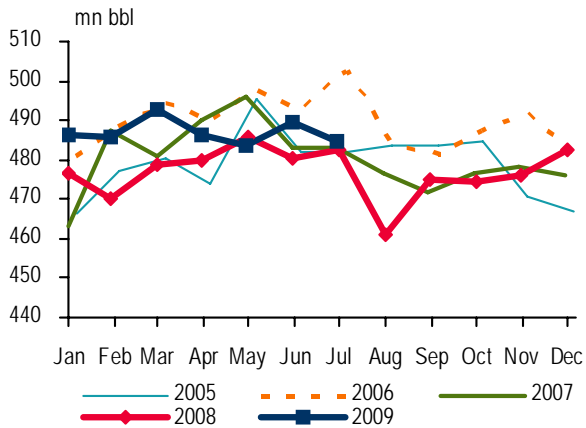
Source: NYMEX, Bloomberg

Chart 25: WTI Term Structure



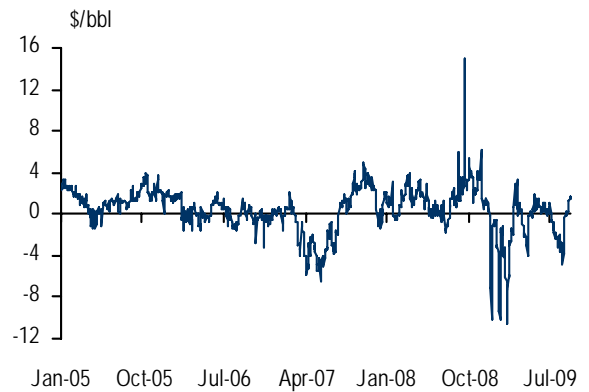
Source: NYMEX, Reuters

Chart 26: European crude oil stocks



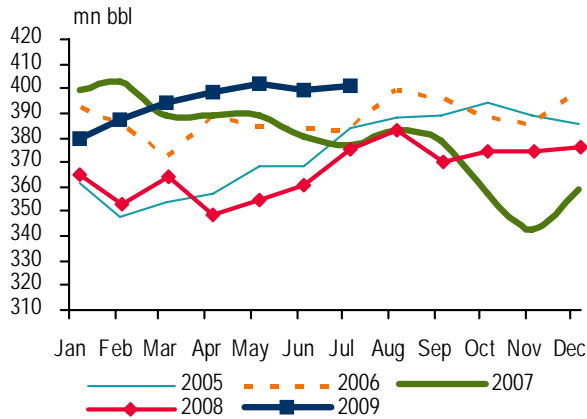
Source: Euroil

Chart 27: Brent - WTI crude spread



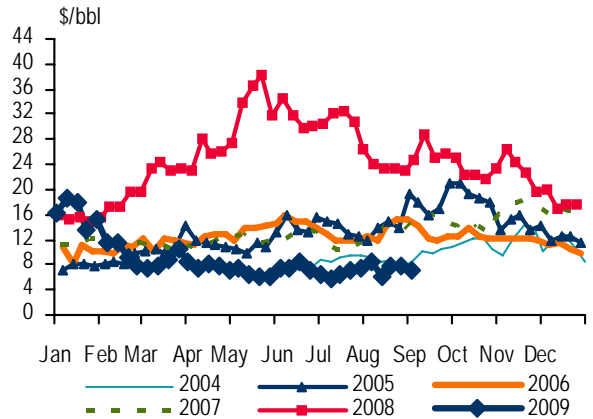
Source: IPE, Bloomberg

Chart 28: European distillate stocks



Source: Euroil

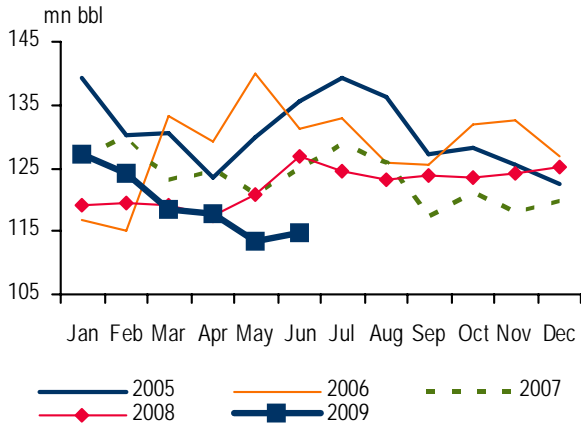
Chart 29: ICE gasoil cracks



Source: Reuters

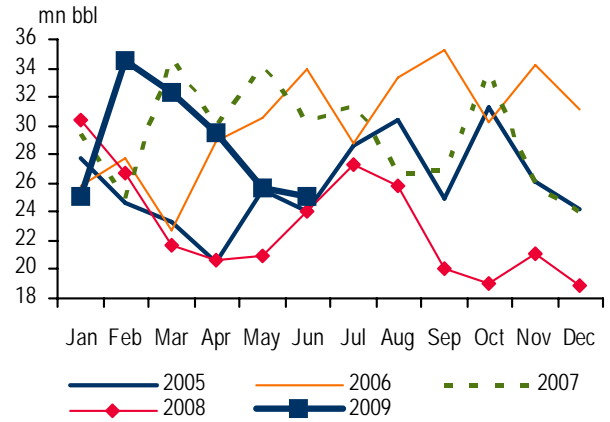
Petroleum - Asia

Chart 30: Japanese crude oil stocks



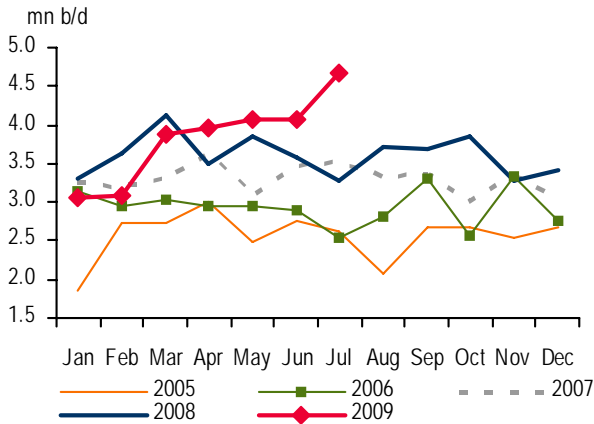
Source: International Energy Agency

Chart 31: South Korean crude oil stocks



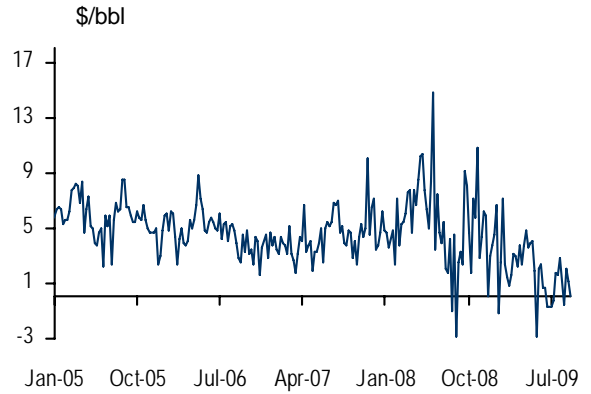
Source: International Energy Agency

Chart 32: China crude oil imports



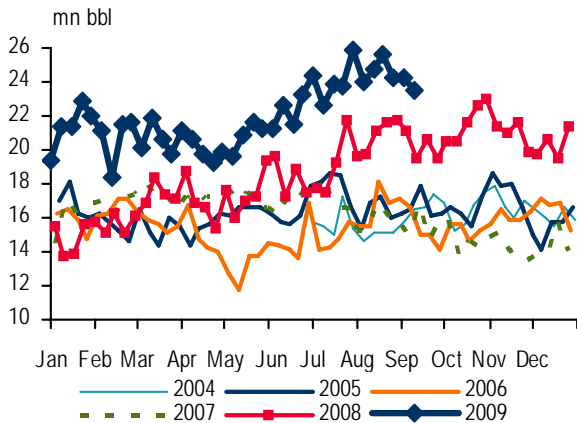
Source: Reuters

Chart 33: Brent - Dubai crude oil spread (1-month contract)



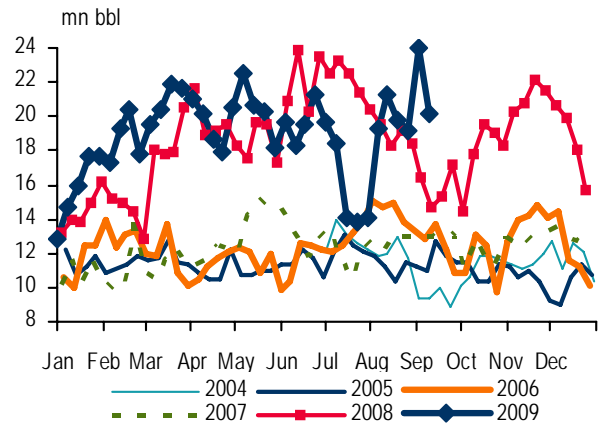
Source: Reuters

Chart 34: Singapore light & mid distillate stocks



Source: Reuters

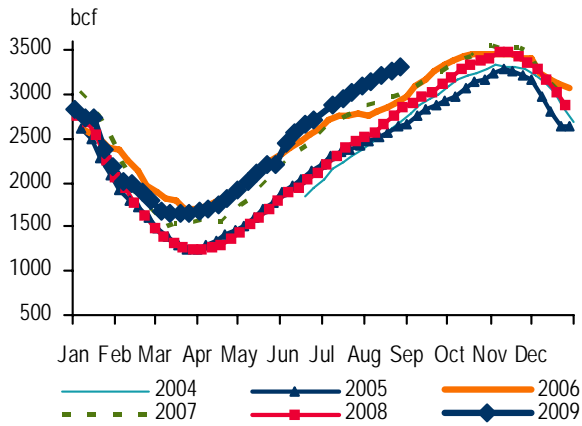
Chart 35: Singapore residual stocks



Source: Reuters

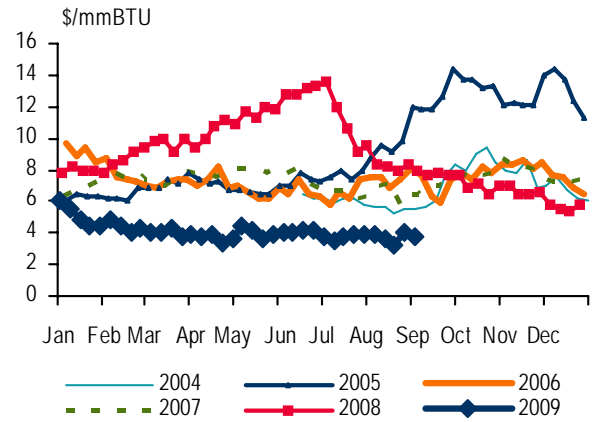
Gas & Power - US

Chart 36: US natural gas stocks



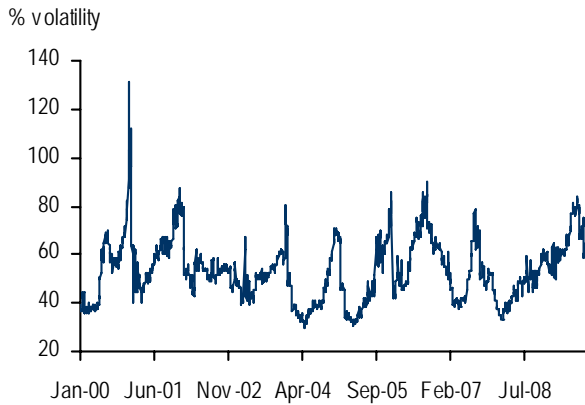
Source: US Department of Energy

Chart 37: US natural gas price



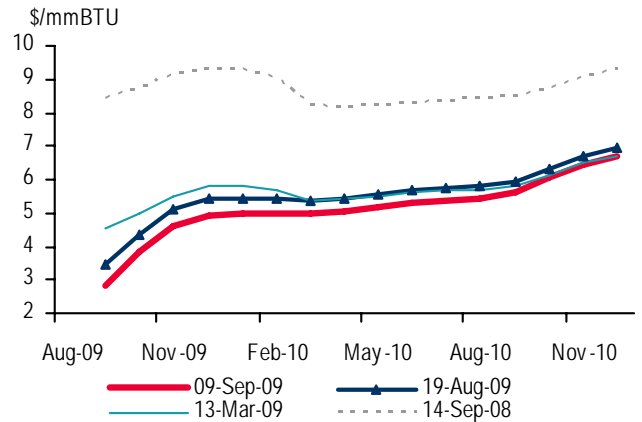
Source: NYMEX, Reuters

Chart 38: US natural gas implied volatility



Source: NYMEX, Bloomberg

Chart 39: US natural gas term structure



Source: NYMEX, Reuters

Chart 40: US NYMEX forward coal prices



Source: NYMEX, Reuters

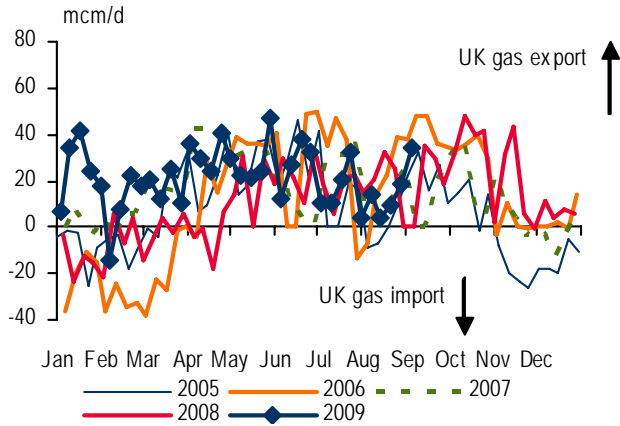
Chart 41: US spot PJM power prices



Source: NYMEX, Reuters

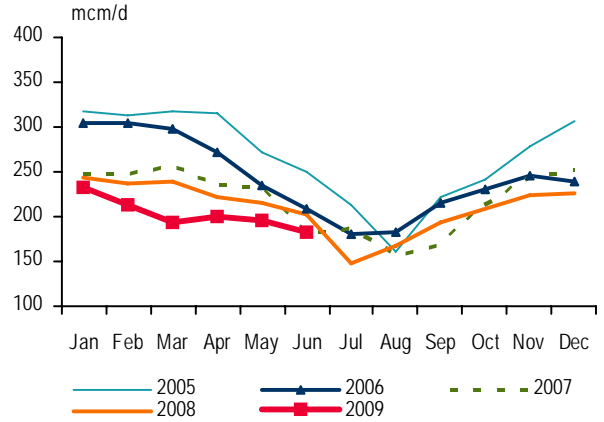
Gas & Power - Europe

Chart 42: UK Interconnector gas flows



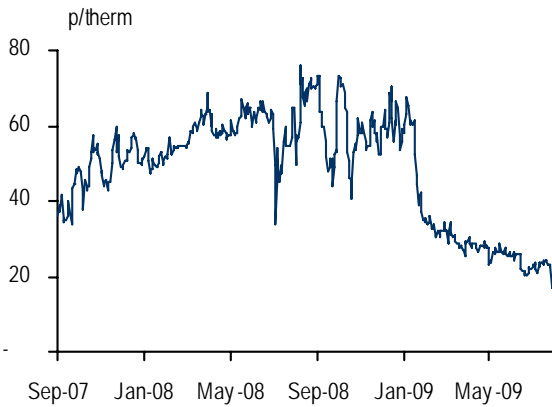
Source: UK Interconnector Flows

Chart 43: UK gross gas production



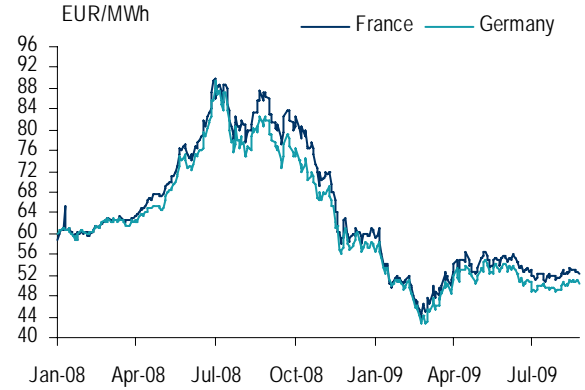
Source: UK Department of Trade and Industry

Chart 44: UK National Balancing Point (NBP) day ahead



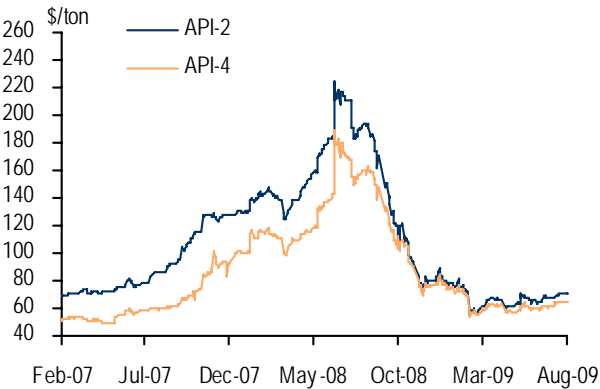
Source: Bloomberg

Chart 45: Germany and France CAL09 Baseload



Source: Reuters

Chart 46: TFS API2 coal in Rotterdam



Source: Reuters

Chart 47: European CO2 Emissions Price 2008



Source: Reuters

Table 4: Global Commodity Research Publications - Past Topics*

Date	Publication	Title
01-Sep-09	Commodity Portfolio Monthly	Metals perform again in August
28-Aug-09	Global Metals Weekly	Housing as a foundation to metal demand
26-Aug-09	Global Energy Weekly	Crude oil volatility trending lower
21-Aug-09	Global Metals Weekly	Tight scrap supply to support metals
19-Aug-09	Global Energy Weekly	Rebound in distillate cracks months away
17-Aug-09	Commodity Derivatives Insights	Determining the risk premium in WTI crude oil futures
14-Aug-09	Global Metals Weekly	Governments save the day for metals
12-Aug-09	Global Energy Weekly	US gas: short-term pain, improving in 2010
06-Aug-09	Global Energy Weekly	Oil and money
05-Aug-09	Global Metals Weekly	Raising metal forecasts: be bullish
03-Aug-09	Commodity Portfolio Monthly	Metals outshine other commodities in July
31-Jul-09	Global Metals Weekly	Nickel demand is stabilising
30-Jul-09	Global Energy Weekly	A brief guide to the US carbon market
24-Jul-09	Global Metals Weekly	Platinum set to shine
22-Jul-09	Global Energy Weekly	No mean reversion in WTI-Brent spreads
20-Jul-09	Commodity Derivatives Insights	US nat gas: a high volatility, low return investment
16-Jul-09	Global Metals Weekly	Lead demand set to recover
14-Jul-09	Global Energy Weekly	No strength in jet until 2010
10-Jul-09	Global Metals Weekly	No abundance in copper mine output
07-Jul-09	Global Energy Weekly	Revising our crude oil price forecasts
02-Jul-09	Global Metals Weekly	Long-term storage deals limit spot aluminium availability
01-Jul-09	Commodity Portfolio Monthly	Commodity returns flat in June
30-Jun-09	Global Energy Weekly	Looking for leadership in energy
25-Jun-09	Global Metals Weekly	Bearish metals in the short-term, followed by recovery
23-Jun-09	Global Energy Weekly	No signs of life in European gas
17-Jun-09	Commodity Derivatives Insights	Not enough speculation in the commodity markets
15-Jun-09	Global Energy Weekly	Will gasoline hold up this winter?
09-Jun-09	Metals Strategist	Rotate from copper to zinc & nickel, and avoid aluminium
08-Jun-09	Global Energy Weekly	Can Iraq change the long-run bull case for oil prices?
01-Jun-09	Commodity Portfolio Monthly	Best performance in decade for MLCX Commodities in May
29-May-09	Global Energy Weekly	Volatility in US nat gas to trend higher
22-May-09	Global Energy Weekly	How high can oil go near-term?
20-May-09	Commodity Derivatives Insights	Energy and gold volatility coming off as prices stabilize
15-May-09	Global Energy Weekly	East vs. West in global coal
08-May-09	Global Energy Weekly	Money equals power in China
01-May-09	Commodity Portfolio Monthly	Commodity returns flat in April despite diverging sector moves
30-Apr-09	Global Energy Weekly	No shortage of winter gas in the UK
23-Apr-09	Energy Strategist	Coping with abundant spare productive capacity in energy
20-Apr-09	Commodity Derivatives Insights	Lower gold volatility on higher risk appetite
15-Apr-09	Global Energy Weekly	The up and coming 1.7 billion energy consumers
07-Apr-09	Global Energy Weekly	Swimming in liquid gas
01-Apr-09	Commodity Portfolio Monthly	Commodities post positive return in March after 8 months
31-Mar-09	Global Energy Weekly	More pain ahead for refiners
27-Mar-09	Commodity Derivatives Insights	Trading oil & US nat gas storage
18-Mar-09	Global Energy Weekly	Revising our 2009 oil forecast up, lowering 2010
17-Mar-09	Global Commodity Paper #9	Commodities and inflation: a framework for asset allocation
13-Mar-09	Global Energy Weekly	Set for wider summer-winter natural gas spreads in the US

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Table 4: Global Commodity Research Publications - Past Topics*

Date	Publication	Title
05-Mar-09	Global Energy Weekly	Biofuels ready to make a comeback
04-Mar-09	Metals Strategist	Copper & Zinc over aluminium
02-Mar-09	Commodity Portfolio Monthly	Commodities fall again in February, but metals hold up
24-Feb-09	Global Energy Weekly	Watch China's money supply as oil demand fades
23-Feb-09	Commodity Derivatives Insights	Derivatives markets support the case for higher gold prices
16-Feb-09	Global Energy Weekly	The oil market is stabilizing. Where to next?
13-Feb-09	Global Commodity Paper #8	Capitalizing on highly volatile markets
09-Feb-09	Global Energy Weekly	Gasoline poised to outpace diesel this spring
03-Feb-09	Global Energy Weekly	Has non-OPEC oil production peaked?
02-Feb-09	Commodity Portfolio Monthly	Commodity correlations decline in January
26-Jan-09	Global Energy Weekly	Does the oil market need Canadian sands?
21-Jan-09	Commodity Derivatives Insights	WTI vol term structure to flatten as the market stabilizes
19-Jan-09	Global Energy Weekly	Cold weather and supply cuts hit the European gas market
12-Jan-09	Global Energy Weekly	Global power demand to languish in 2009
05-Jan-09	Commodity Portfolio Monthly	Energy, base metals push down commodities in December
30-Dec-08	Year Ahead Conference Call	2009 Commodity Outlook
19-Dec-08	Global Energy Weekly	Our best ideas for 1H2009
16-Dec-08	Commodity Strategist	2009 Commodity Outlook
12-Dec-08	Commodity Derivatives Insights	Index rebalancing should create opportunities in early January
05-Dec-08	Global Energy Weekly	Will long dated oil prices hold up at \$80/bbl?
01-Dec-08	Commodity Portfolio Monthly	In November commodities fell again as the economy faltered
26-Nov-08	Energy Strategist	2009 Energy Market Outlook
21-Nov-08	Global Energy Weekly	Back to basics: energy and the business cycle
14-Nov-08	Global Energy Weekly	The storm is not over for global coal
07-Nov-08	Global Energy Weekly	A race to the bottom for petroleum product demand
03-Nov-08	Commodity Portfolio Monthly	Commodities post worst ever monthly return in October
31-Oct-08	Global Energy Weekly	Too much domestic gas in the US
24-Oct-08	Global Energy Weekly	Oil contango to widen as stocks build
21-Oct-08	Commodity Derivatives Insights	Fat tails in the options market signal more downside to oil
17-Oct-08	Global Energy Weekly	Will OPEC cut for real?
13-Oct-08	Metals Strategist	Turn your lead into gold
02-Oct-08	Commodity Portfolio Monthly	Economic downturn hits commodities in September
01-Oct-08	Global Energy Weekly	Oil to drop next year, but the super-cycle is not over
24-Sep-08	Global Energy Weekly	Credit crunch & energy crunch: the same market failure?
15-Sep-08	Global Energy Weekly	Get ready to offload your gasoline tank
08-Sep-08	Global Energy Weekly	Cyclical slowdown, but no hard landing... Yet
29-Aug-08	Global Energy Weekly	Kyoto moving to centre stage for European carbon
19-Aug-08	Metals Update	Weak auto sales do not spell the end for lead
18-Aug-08	Global Energy Weekly	The WTI-Brent conundrum
11-Aug-08	Global Energy Weekly	A new paradigm for US nat gas

Source: Banc of America Securities-Merrill Lynch Commodity Research

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