

能源市场周评

研究报告

沙特闲置产能因缓冲利比亚供应损失而下降

沙特宣布将通过增产来缓冲利比亚的供应损失，但是我们认为其产量已显著超过去年11月和12月报告的水平。在我们看来，沙特的产量可能比官方数据高出50-100万桶/日，这意味着欧佩克闲置产能已经低于200万桶/日，也使得欧佩克闲置产能下降速度比原先提前了约6个月。因此，我们将2011年二季度布伦特油价预测上调了4.50美元/桶至105美元/桶。

沙特增产来抵消100万桶/日的利比亚产量损失

利比亚供应的持续中断以及这一局势可能蔓延至该地区其它产油国的担忧推动布伦特油价自2008年8月以来首次突破115美元/桶。据我们估算，目前的产量损失接近100万桶/日，为利比亚去年出口量150万桶/日的三分之二左右。我们认为沙特是唯一一个拥有足够闲置产能来弥补这一损失的国家，而且该国已经宣布将提高产量。

但是，我们认为沙特目前的产量已经显著高于官方数据所显示的水平

最近的报道称，沙特目前的原油产量超过900万桶/日，比1月份官方供应数据高出约70万桶/日。虽然大幅增产看似是应对最近利比亚产量锐减之举，但一些报道称沙特在利比亚动乱之前就已经显著提高产量，这与我们的预测大致相符。

欧佩克闲置产能可能已经降至200万桶/日以下

沙特的增产将显著影响到当前有效的闲置产能。虽然我们刚刚在3个月前预计闲置产能约为250-300万桶/日，但最近的事态发展表明欧佩克闲置产能实际上可能已降至200万桶/日之下。因此，利比亚局势已经使得欧佩克闲置产能下降速度比原先提前了约6个月。虽然当前的供应损失或许是暂时的，一旦局势平息下来，生产可以相对迅速地恢复，但我们认为剩余闲置产能无法弥补供应中断的加剧才是市场面临的真正风险。

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Hedging and trading recommendations

Petroleum

Hedging recommendations

Consumers: Global inventories drew substantially in 2H2010, and we expect US inventories to continue to draw to more normal levels in 2011. With the supply-demand balance in a seasonally adjusted deficit and robust world economic growth expected in 2011 and 2012, we expect OPEC spare capacity will need to return to the market in 2011. As OPEC spare capacity is drawn down, we expect a structural bull market to return to the oil market, with substantially higher prices. Consequently, we believe that forward price levels offer good hedging opportunities for consumers in calendar 2011/2012, despite the recent rally.

Refiners: Refining margins have recently showed counter-seasonal strength after a period of weakness following the sharp May sell-off. However, we expect refining margins to remain under pressure owing to the large increase in refining capacity in Asia. As the light-heavy spreads have already widened, we expect complex oil refiners to return from maintenance and increase production, which would put pressure on simple refining margins relative to WTI prices. As a result, we would view any renewed rise in long-dated refinery margins in 2011 as a selling opportunity for refinery hedgers. For 2011 and beyond, we believe that crude will be the bottleneck in the system, rather than refining; this would squeeze margins from the crude side through backwardation, suggesting that refiners should also then look for potential time-spread hedges.

Producers: While we continue to expect crude oil prices to move higher in 2011, limiting tactical opportunities, the risk-reward trade-offs for producer risk management programs will likely improve again as prices move higher over the coming months.

Trading recommendations

Long Gasoil: Buy March 2011 European ICE Gasoil (current value \$966.25/mt; first suggested at \$791.75/mt; \$209.75/mt gain including a \$35.25/mt gain rolled from a long January 2011 European ICE Gasoil recommendation).

We continue to expect improving fundamentals to provide additional support to prices.

Current trading recommendations

Current trades	First recommended	Initial value	Current Value	Current profit/(loss) ¹
Long European Gasoil Buy March 2011 European ICE Gasoil	November 10, 2010 - <i>Energy Weekly</i> Rolled on January 10, 2011 from a Buy January 2011 European IE Gasoil for a \$35.25/mt gain	\$791.75/mt	\$966.25/mt	\$209.75/mt
Long CCCP basket Buy Dec-11 WTI (weight 40%), Dec-11 LME Copper (20%), Nov-11 CBOT soybeans (10%), Dec-11 NYB cotton (10%), S&P GSCI platinum index (20%)	December 1, 2010 - <i>Global Viewpoint</i>	100.0	120.8	20.8%
Long Soybeans Buy November 2011 CBOT Soybean	November 18, 2010 - <i>Agriculture Update</i>	\$11.60/bu	\$13.61/bu	\$2.01/bu
Short Aluminum Sell February 2011 Aluminum	November 5, 2010 - <i>Metals Weekly</i>	\$2,462/mt	\$2,491/mt	(\$29/mt)
Long Gold Buy December 2011 COMEX Gold	October 11, 2010 - <i>Precious Metals</i>	\$1,364.2/toz	\$1,434.2/toz	\$70.0/toz
Long Corn Buy March 2011 CBOT Corn	October 8, 2010 - <i>Agriculture Update</i>	\$5.38/bu ²	\$7.21/bu	\$1.84/bu
Long Copper Buy December 2011 Copper	October 4, 2010 - <i>Metals Watch</i>	\$8,024/mt	\$9,901/mt	\$1,878/mt
Long Platinum Long October 2011 NYMEX Platinum	July 15, 2009 - <i>Commodity Watch</i> Rolled on February 18, 2011 from a long January 2011 NYMEX Platinum for a \$626.0/toz gain	\$1,848.7/toz	\$1,843.9/toz	\$621.2/toz

¹As of close on March 4, 2011. Inclusive of all previous rolling profits/losses.

²With market limit up on trade entry, initial value proxied with closing level on October 8, 2010.

Source: Goldman Sachs Global ECS Research.

Price actions, volatilities and forecasts

	Prices and monthly changes ¹			Volatilities (%) and monthly changes ²				Historical Prices						Price Forecasts ³		
	units	03 Mar	Change	Implied ²	Change	Realized ²	Change	3Q 09	4Q 09	1Q 10	2Q 10	3Q 10	4Q 10	3m	6m	12m
Energy																
WTI Crude Oil	\$/bbl	101.91	↑ 9.72	30.4	2.21	38.0	8.9	68.24	76.13	78.88	78.05	76.21	85.24	97.50	100.50	103.00
Brent Crude Oil	\$/bbl	114.79	↑ 13.78	29.9	2.67	27.7	4.5	68.87	75.54	77.37	79.41	76.96	87.45	103.00	105.00	106.50
RBOB Gasoline	\$/gal	3.03	↑ 0.54	30.8	2.79	38.4	9.2	1.86	1.94	2.11	2.17	2.00	2.22	2.70	2.62	2.78
USGC Heating Oil	\$/gal	3.01	↑ 0.32	29.3	1.71	26.8	-0.9	1.73	1.94	2.01	2.07	2.01	2.31	2.72	2.76	2.84
NYMEX Nat. Gas	\$/mmBtu	3.78	↓ -0.64	32.6	-3.58	34.7	-4.7	3.44	4.93	4.99	4.35	4.23	3.98	4.00	3.75	4.50
UK NBP Nat. Gas	p/th	55.89	↑ 3.23	23.9	-13.54	19.6	-11.5	23.48	31.83	33.35	37.48	42.68	51.74	38.90	40.50	44.70
Industrial Metals⁴																
LME Aluminum	\$/mt	2612	↑ 92	23.0	-3.81	15.1	-3.8	1836	2037	2199	2122	2110	2365	2200	2200	2200
LME Copper	\$/mt	9915	↑ 170	27.8	-2.78	19.7	-2.2	5856	6677	7274	7042	7278	8614	8800	8800	11000
LME Nickel	\$/mt	28860	↑ 1510	34.5	-2.27	26.5	-0.9	17576	17593	20163	22431	21271	23619	19500	19500	19500
LME Zinc	\$/mt	2512	↑ 85	32.9	-4.20	23.3	-8.3	1780	2241	2307	2052	2043	2333	2400	2400	3100
Precious Metals																
London Gold	\$/troy oz	1416	↑ 83	15.5	-2.57	11.4	-5.6	962	1099	1110	1197	1228	1370	1480	1565	1690
London Silver	\$/troy oz	34.5	↑ 6.8	33.3	-1.76	28.8	-10.0	14.7	17.6	16.9	18.3	19.0	26.4	24.7	26.1	28.2
Agriculture																
CBOT Wheat	cent/bu	791	↓ -50	39.6	-2.21	40.5	12.1	485	522	496	467	653	707	775	750	750
CBOT Soybean	cent/bu	1406	↓ -8	26.7	-3.26	31.2	8.2	1049	1002	955	957	1035	1245	1600	1575	1575
CBOT Corn	cent/bu	730	↑ 70	37.9	-2.55	31.1	0.3	327	386	370	355	422	562	715	675	675
NYBOT Cotton	cent/lb	206	↑ 37	n/a	n/a	44.5	11.8	60	71	76	81	87	128	150	125	125
NYBOT Coffee	cent/lb	275	↑ 30	n/a	n/a	23.1	-5.4	125	139	134	140	174	205	200	175	175
NYBOT Cocoa	\$/mt	3774	↑ 422	n/a	n/a	25.3	-4.5	2867	3259	3070	2987	2863	2856	2700	2400	2400
NYBOT Sugar	cent/lb	30.6	↓ -3.4	45.5	-6.28	63.0	1.8	20.6	23.6	24.4	15.5	20.2	29.0	30.0	20.0	20.0
CME Live Cattle	cent/lb	114.2	↑ 5.3	n/a	n/a	15.3	2.0	85.4	83.6	90.5	93.7	95.0	100.5	115.0	115.0	120.0
CME Lean Hog	cent/lb	88.8	↑ 1.6	n/a	n/a	32.3	13.2	53.7	57.8	69.7	81.9	79.7	71.2	95.0	105.0	95.0

¹ Monthly change is difference of close on last business day and close a month ago.

² Monthly volatility change is difference of average volatility over the past month and that of the prior month (3-mo ATM implied volatility, 1-mo realized volatility).

³ Price forecasts refer to prompt contract price forecasts in 3-, 6-, and 12-months time.

⁴ Based on LME three month prices.

Source: Goldman Sachs Global ECS Research.

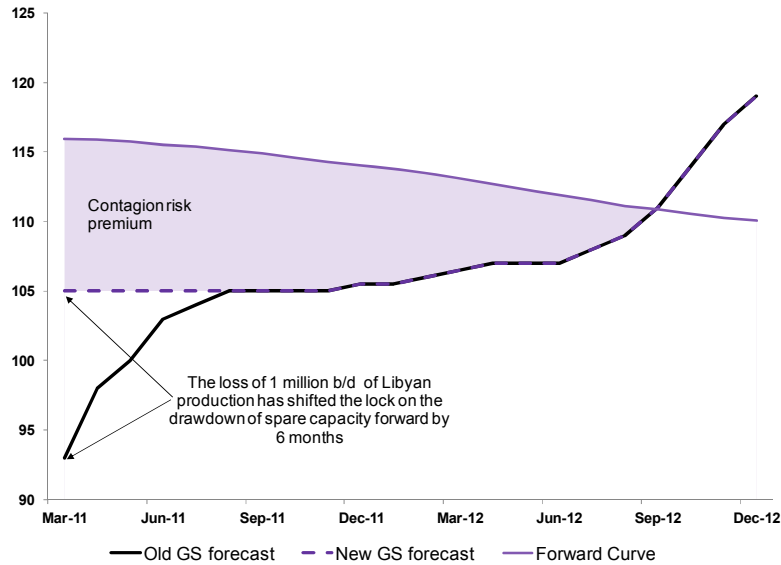
Saudi spare capacity erodes as it cushions loss of Libyan supplies

Continued supply disruptions in Libya and concerns that this might spread to other oil producing nations in the region have pushed Brent prices above \$115/bbl for the first time since August 2008. We estimate that close to 1 million b/d of production is currently lost, roughly two thirds of the 1.5 million b/d Libya exported last year. While we continue to believe that the risk of contagion to GCC countries is fairly limited, there are a number of economies with similar traits to Libya that could be susceptible to contagion, including Algeria, Syria and, in an extreme case, maybe even Iran.

We think that the only country that currently would have the spare capacity to offset any large production losses is Saudi Arabia. Saudi oil minister, Ali al-Naimi, announced a week ago that his country would make up for the production cutbacks in Libya. While Minister al-Naimi did not give any indication as to whether Saudi Arabia had already started to pump more oil, recent news reports suggest that Saudi production is likely already above 9 million b/d, roughly 700 thousand b/d above the official January supply numbers. While this seems to be a direct reaction to offset the collapse in Libyan output, there are also reports that Saudi Arabia had already significantly increased production prior to the turmoil in Libya, which is more in line with our view.

This has significant implications for current effective spare capacity. In December last year, we estimated that OPEC spare capacity stood at around 2.5-3 million b/d (see *Energy Watch: 2011-2012 Outlook: The road to a structural bull market in oil*, December 1, 2010). However, some recent developments suggest that OPEC spare capacity could be even lower than we had thought three months ago. More specifically, we believe that OPEC production has been 0.5-1 million b/d above the official numbers since November, implying that OPEC spare capacity could actually have dropped below 2 million b/d by now. While under normal circumstances this additional supply would simply slow the drawdown in the global inventory overhang, it is currently being absorbed by the shortfall in Libyan production. Consequently, inventories are likely declining at the same speed as they did before the supply increase took place, but available spare capacity is much lower now. The current developments in Libya have therefore brought forward the drawdown of OPEC spare capacity by about six months, in our view. Consequently, we change our Brent price forecast for 2Q11 from \$100.50/bbl to \$105/bbl and our WTI price forecast from \$94.50/bbl to \$99/00/bbl. The Libyan fields are of the highest quality and very easy to operate, which suggests that once the current civil unrest settles down, production can be restored quickly with little or no long-term losses. Consequently, we leave our 3Q11 and 4Q11 forecasts unchanged. However, the risk is that Libyan production currently shut in will remain offline for longer, which would imply lower spare capacity than what we expect for longer. Further, we believe there is currently a \$10/bbl contagion risk premium priced in, reflecting the fear that unrest may spread to other oil production countries in the region, which poses a further upside risk to our forecast should this risk premium persist for longer or should the inherent risk actually materialize. Should more physical disruptions be realized, it is likely that oil would be released from strategic reserves, which could temper the rise in near-term prices. White House Chief of Staff William Daley announced today that the US government is considering releasing part of its strategic petroleum reserve (SPR) in order to safeguard economic growth. However, while the White House did not say how much of the SPR it might release, it indicated that it would be a small amount of the total stockpile.

Exhibit 1: We estimate that the current Brent spot prices reflects a \$10/bbl contagion risk premium
\$/bbl



Source: GS Global ECS Research.

In addition, we believe that the widening of the heavy-light spreads provides further support to our view that Saudi Arabia increased production long before the turmoil in Libya started. We find that heavy-light spreads such as Maya-LLS and Dubai-Brent are strongly driven by OPEC heavy production. Further, we believe that most of the Saudi spare capacity is heavy crude oil and as this spare capacity is brought back online, heavy-light spreads widen. However, the current heavy-light spreads are wider than our modeling would predict assuming the official OPEC supply numbers are accurate. This suggests that Saudi production is likely above the officially reported levels. More importantly, the heavy-light spreads widened to these levels long before the turmoil in Libya started, indicating that large volumes of Saudi spare capacity have already come back to the market.

Supply disruptions in Libya and fears of contagion push Brent prices to the highest levels since August 2008

Based on company reports, we estimate that close to 1 million b/d of the total Libyan production capacity of around 1.6 million b/d is currently either shut-in or cannot be exported. Assuming that all oil fields and export terminals controlled by the opposition are currently offline, the disruptions could be larger than our current estimates (Exhibit 2). However, given the unstable situation in the country, it is sometimes very difficult to determine who actually controls the asset. We have seen conflicting reports in which both the government and the opposing forces claim control over the same ports and fields.

Exhibit 2: Libyan production streams are currently to a large extent controlled by the opposition

Stream	Location	Control	Owner	Capacity kb/d	Potential shortfall kb/d	Api*	Sulfur %
Abu Attifef	Central East	Opposition	Eni / NOC	117	117	43.30	0.06
Al-Jurf	North East	Opposition	Total / NOC / Wintershall (BASF)	41	41	30.20	1.90
Amna (Amal)	Central East	Opposition	NOC / Petro-Canada / Wintershall (BASF)	180	180	37.10	0.17
Bouri	North West	Government	Eni / NOC	50		25.90	1.86
Brega	North Central	Unclear, likely Opposition	NOC	72	72	42.40	0.22
El-Sharara	South West	Unknown, likely Government	Repsol / Total / OMV / Statoil	340	200	42.10	0.07
Es Sider	South Central	Likely Government, but fields in hands of Opposition	NOC / ConocoPhillips / Marathon / Hess	333	333	37.00	0.39
Mellitah	Central West	Unknown	NOC / Eni / KNOC / Other	140		42.00	0.10
Sarir	Central East	Opposition	NOC	198	198	37.50	0.17
Sirtica	North Central	Government	NOC	77		41.10	0.42
Zueitina	North East	Opposition	NOC / Occidental / OMV	38	38	40.80	0.35
				1584	1178	39.02	0.30

Source: Energy Intelligence Research, GS Global ECS Research.

The market has also become increasingly concerned about further contagion in the region. While we continue to believe that it is unlikely that the turmoil will spread to the richer and politically more stable GCC countries, there are a number of economies with similar traits to Libya that could be susceptible to further contagion, namely Algeria, Syria and in the extreme maybe even Iran. The question therefore arises how much spare capacity is left to absorb potential supply disruptions in other countries?

While Saudi Arabia announced a boost to production to offset the shortfalls, the production increase had likely already happened some time ago...

We believe that only Saudi Arabia would have the spare capacity to offset the current losses in Libyan production. Prior to the supply disruptions in Libya, we estimated OPEC spare capacity to be around 2.5-3 million b/d, of which Saudi Arabia accounted for close to 2 million b/d. Saudi oil minister, Ali al-Naimi, announced last week that Saudi Arabia would make up for the barrels lost in Libya, without specifying whether Saudi Arabia just plans to increase production or has already taken the necessary steps. However, some news reports suggest that Saudi production already exceeds 9 million b/d, which is at least 700 thousand b/d above the official January 2011 number. However, we believe that Saudi Arabia had significantly increased production more than two months ago. More specifically, we believe that Saudi Arabia has been producing 0.5-1 million b/d above the official numbers since November.

This view is primarily driven by inconsistencies in the preliminary stock data published by the International Energy Agency (IEA). In our Energy Weekly of January 24, 2011, we highlighted that the IEA preliminary inventory data suggested that the drawdown in the global inventory overhang had stalled in November and December (see *Energy Weekly: Demand accelerating, so why is world oil inventory draw stalling?* January 24, 2011). As we noted, this shift from a global deficit into a global surplus could have been caused by:

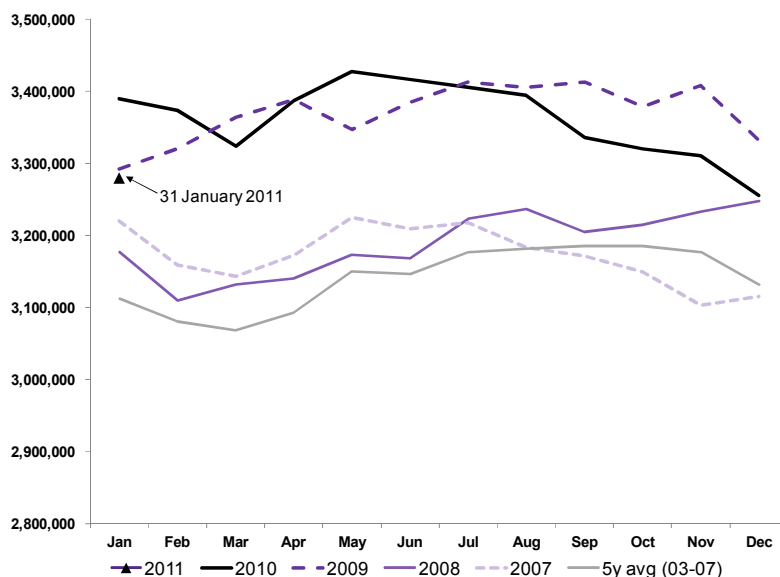
- **Erroneous inventory data.** Preliminary inventory data is very often subject to major revisions. The movements in inventories in November and December seemed at odds with both the physical market pricing and the latest economic indicators including the very cold weather.
- **Supply was higher than that reported.** This would suggest that OPEC had started to bring its spare capacity back to the market earlier than we anticipated.

- **Lower demand in the Emerging Markets ex China.** Assuming that both the preliminary inventory data and the supply data were correct, this would have implied that demand in the Emerging Markets ex China had suddenly collapsed in 4Q, similar in magnitude to 4Q 2008.

We considered the third scenario as highly unlikely given the strong demand growth in both the OECD economies and China and concluded that the apparent shift in trend was likely the result of a combination of underestimated inventory draws and higher OPEC supply. The latest oil data published by the IEA in February and news reports about effective Saudi production are consistent with this view.

More specifically, the IEA has revised down its preliminary inventory data for November and December by a combined 42.7 million barrels, pushing global inventories to the lowest levels in two years (Exhibit 3).

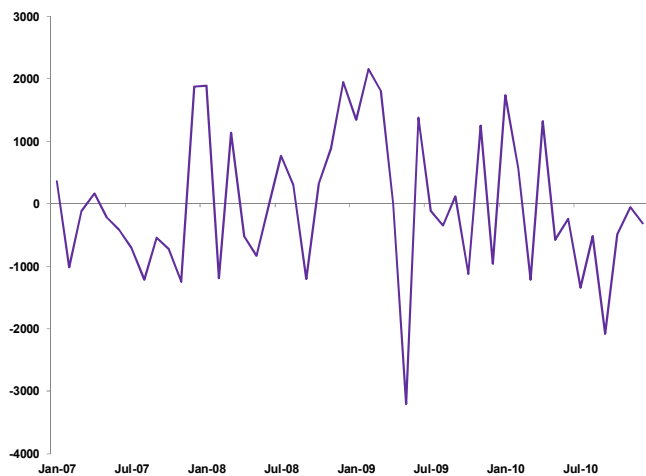
Exhibit 3: Global inventory data for November and December was revised down significantly, pushing global stocks to the lowest levels in two years
 OECD inventories plus oil at sea, thousand barrels



Source: IEA, GS Global ECS Research.

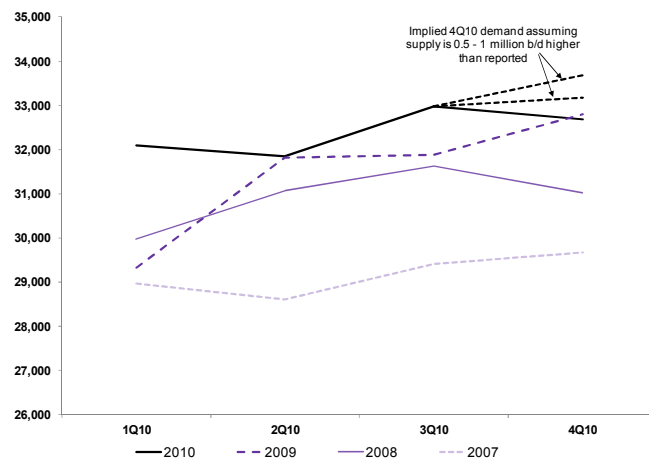
Taking this revised inventory data into account shifts the previously reported global surplus back into a seasonally adjusted deficit both in November and December (Exhibit 4). However, the resulting deficit of 300 thousand b/d in 4Q10 still marks a significant slowdown from the average 950 thousand b/d in the May-September period. While it could still be that the December inventory data will be revised down further, we reiterate our view that OPEC supply is likely higher than reported. Assuming that demand in the Emerging Markets ex China stayed robust in 4Q, OPEC supply could have been 0.5-1 million b/d higher than the official numbers currently suggest. This would be consistent with the weakening of the seasonally adjusted deficit from close to 1 million b/d to just 300 thousand b/d and it would also yield a much more reasonable implied demand number for the Emerging Markets ex-China (Exhibit 5).

Exhibit 4: The revised stock data points towards a continued global deficit in November and December
Seasonally adjusted deficit / surplus, thousand b/d



Source: IEA, GS Global ECS Research.

Exhibit 5: A drop in Emerging Markets ex-China demand in 4Q10 seems odd given the strength in these markets
Thousand b/d



Source: IEA, GS Global ECS Research.

...implying that OPEC spare capacity is significantly lower than reported

While such an increase in OPEC supply would, in the absence of the current supply disruptions in Libya, pose a risk to our view that global inventories will decline to normal levels over the coming months, it would also have significant implications for available OPEC spare capacity.

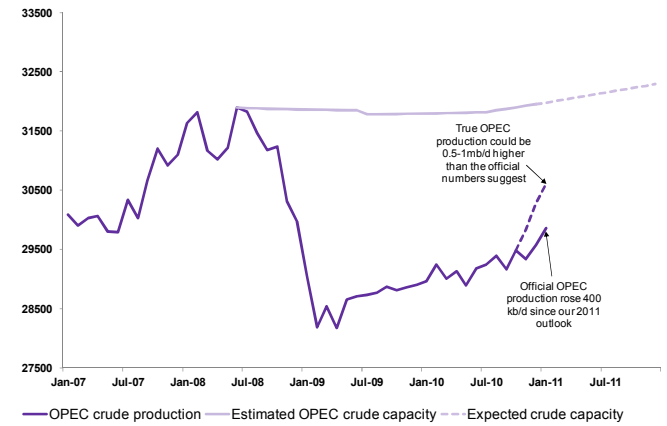
We have long held the view that OPEC spare capacity is significantly lower than is typically reported. Our view is based on the assumption that effective OPEC spare capacity was exhausted in June 2008. We believe that, since then, about 1.8-1.9 million b/d of new crude capacity has come on-stream, predominately from Saudi Arabia (1.6 million b/d) (Exhibit 6). The remaining additions have come from Nigeria, where effective capacity has probably risen by about 250 thousand b/d since 2008. However, this new capacity was largely offset by declines in existing production. On net, OPEC crude production capacity has likely only slightly increased since June 2008 (Exhibit 7). Consequently, we estimated in our 2011 Outlook (see *Energy Watch: 2011-2012 Outlook: The road to a structural bull market in oil*, December 1, 2010) that OPEC spare capacity stood at around 2.5-3 million b/d, while the IEA reported 5.7 million b/d (excluding Iraq, Nigeria and Venezuela) and market estimates were in the range of 3-6 million b/d. We believe that the market's view has already shifted closer in line with our view as a result of the recent release of diplomatic cables by Wikileaks, quoting the former head of exploration at Aramco as saying that maximum Saudi capacity is likely much lower than the 12.1 million b/d that is officially reported.

Exhibit 6: Large projects have added approximately 1.6 million b/d of new capacity in Saudi Arabia since 2008

Project	Thousand b/d
Khurais	800
Khursaniyah I	475
Shaybah I	200
Nuayyim	90
Total	1565

Source: GS Global ECS Research estimates.

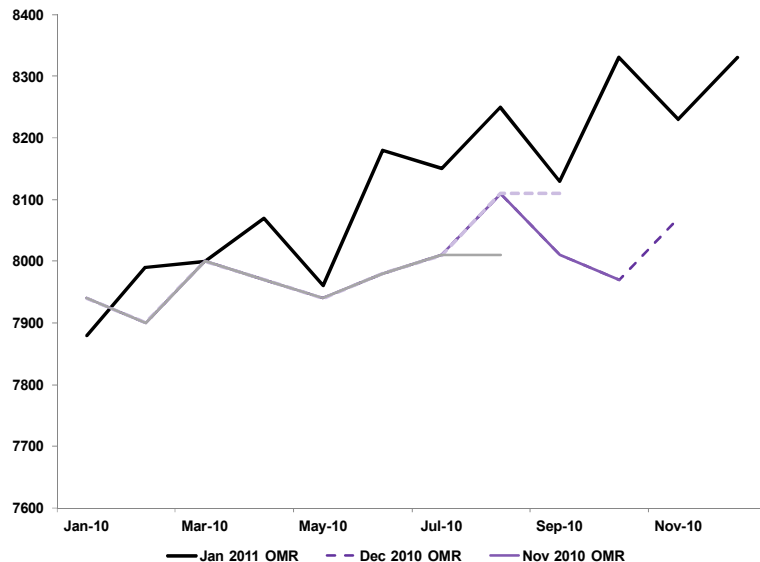
Exhibit 7: We believe that OPEC spare capacity is much lower than the official data suggests
Thousand b/d



Source: IEA, GS Global ECS Research.

However, some recent developments suggest that current OPEC spare capacity could be even lower than we had thought just three months ago. At the time when we published our outlook in early December, official OPEC production was reported at 29.2 million b/d, roughly 1 million b/d above the trough in April 2009. Since then, the IEA significantly revised up past OPEC production estimates in their January Oil Market Report (OMR), mainly driven by a reassessment of past Saudi production (Exhibit 8). In addition, OPEC increased production in January by an additional 300 thousand b/d. As a result, the latest official IEA estimates show OPEC production already at 1.7 million b/d above the trough (Exhibit 7). However, as we outlined earlier, we think that OPEC production could be 0.5-1 million b/d above these official IEA numbers. Consequently, this would imply that OPEC spare capacity could actually have dropped below 2 million b/d already.

Exhibit 8: The IEA significantly revised up historical Saudi production in their January reporting
Thousand b/d



Source: IEA, GS Global ECS Research.

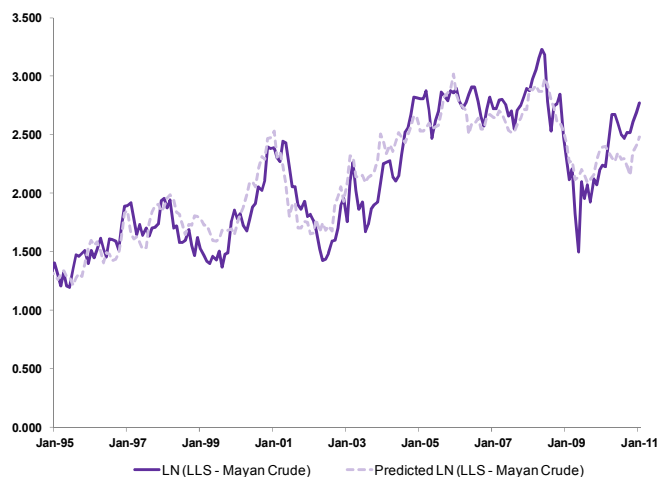
While under normal circumstances this additional supply would simply delay the drawdown of the global inventory overhang, it is currently absorbed by the shortfall in Libyan production. Consequently, inventories are now likely declining again at the same speed as before the supply increase, but substantial volumes of spare capacity have disappeared. The current developments in Libya have therefore brought forward the drawdown of OPEC spare capacity by about six months. While loss of supply might turn out to be short-lived as the Libyan fields are of the highest quality and very easy to operate, which suggests that once the current civil unrest settles down, production can be restored quickly with little or no long-term losses, the real risk is that the current spare capacity cannot accommodate another large production shortfall right now.

Higher OPEC production would be consistent with current heavy-light spreads

We believe that the widening of the heavy-light spreads provides further support to our view that Saudi Arabia had increased production long before the turmoil in Libya started. Our modeling suggests that the spread between Maya and LLS is strongly driven by OPEC supply and, to a lesser extent, by natural gas prices. Typically when OPEC curtails output, OPEC member countries predominantly cut their heavy crude oil production. As OPEC production comes back to the market, the supply of heavy crude oil rises and the spread widens. The LLS-Maya differential has widened significantly since the trough in May 2009 as OPEC spare capacity has come back to the market. However, the recent widening of the spread seems stronger than our modeling would suggest assuming the official OPEC supply numbers are correct.

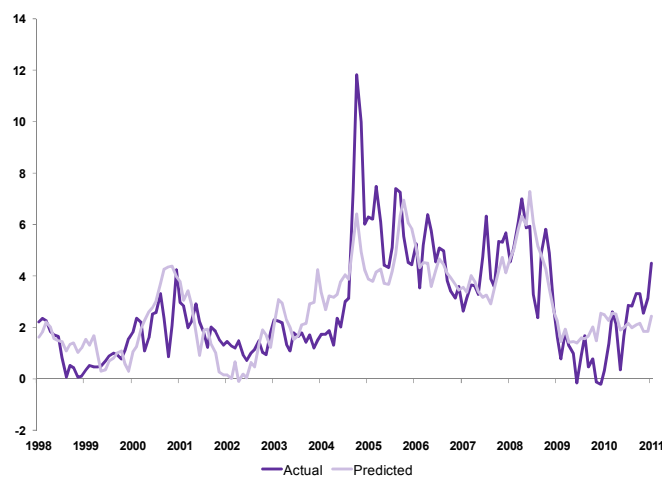
Consequently, should OPEC production be higher than the official data suggests, more heavy crude has likely come back to the market already, at the expense of the high quality light sweet crude from Libya, which could have widened the spreads of heavy to light crude closer to the levels predicted by our model (Exhibit 9). Further, this widening appears to have started long before the turmoil in Libya, indicating that a large part of the heavy crude has already come back to the market. In a similar fashion, the spread between Brent and Dubai crude is also driven by OPEC production, natural gas prices and freight prices. And, as in the case of the LSS-Maya spread, the Brent-Dubai spread is currently wider than predicted by the model (see Exhibit 10).

Exhibit 9: The LLS – Maya spread is currently wider than what is warranted by official OPEC production...
\$/bbl



Source: Goldman Sachs Global ECS Research.

Exhibit 10: ...as is the spread between Brent and Dubai
\$/bbl



Source: Goldman Sachs Global ECS Research.

Exhibit 11: Adjusted price forecast

	Unit	Forecasts							
		1Q11	2Q11	3Q11	4Q11	1Q12	2Q12	3Q12	4Q12
Crude Oil									
WTI	\$/bbl	90.0	99.0	100.0	101.0	102.5	104.0	106.5	114.0
Brent	\$/bbl	97.0	105.0	105.0	105.0	106.0	107.0	109.5	116.5
Product									
RBOB	cents/gal	2.6	2.8	2.7	2.6	2.7	2.8	2.8	2.9
USGC Heating Oil	cents/gal	2.8	2.9	2.9	2.9	3.0	3.0	3.1	3.3
NYHB Res. Fuel Oil	\$/bbl	91.0	94.5	94.5	95.0	96.0	97.0	99.5	106.5
London Gasoil	\$/bbl	109.5	119.5	121.0	122.5	124.5	126.0	129.0	137.0
Cracks									
RBOB	\$/bbl	19.20	16.50	13.40	8.20	10.90	13.60	11.10	7.80
USGC Heating Oil	\$/bbl	27.60	20.70	21.80	20.80	23.50	22.00	23.70	22.50
USGC Res. Fuel Oil	\$/bbl	1.00	-4.50	-5.50	-6.00	-6.50	-7.00	-7.00	-7.50
London Gasoil	\$/bbl	12.50	14.50	16.00	17.50	18.50	19.00	19.50	20.50

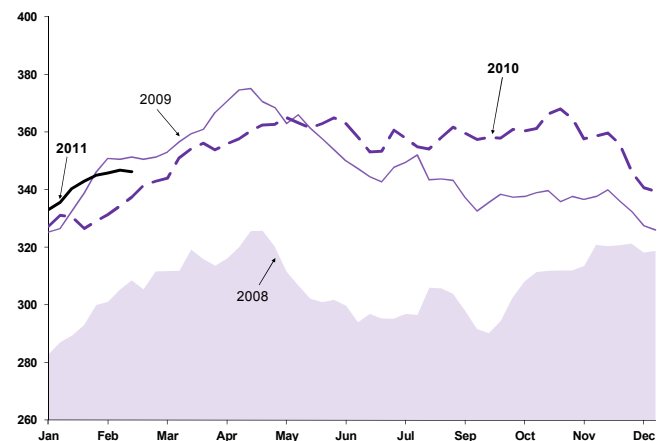
Source: GS Global ECS Research.

US oil stocks
Million barrels

Product	End-of-Week			Change	
	25-Feb-11	28-Jan-11	26-Feb-10	4Wk	Year
Total Petrol	1051.1	1074.9	1046.6	-23.8	4.5
Crude Oil	346.4	343.2	341.6	3.2	4.8
Total Product	704.7	731.7	705.0	-27.0	-0.3
Mogas	234.7	236.2	231.9	-1.5	2.8
Jet Fuel	40.8	43.8	43.3	-2.9	-2.5
Distillate	159.2	164.1	151.8	-4.9	7.4
Resid	37.1	40.1	40.0	-3.1	-2.9
Other	185.3	190.7	130.1	-5.4	55.2

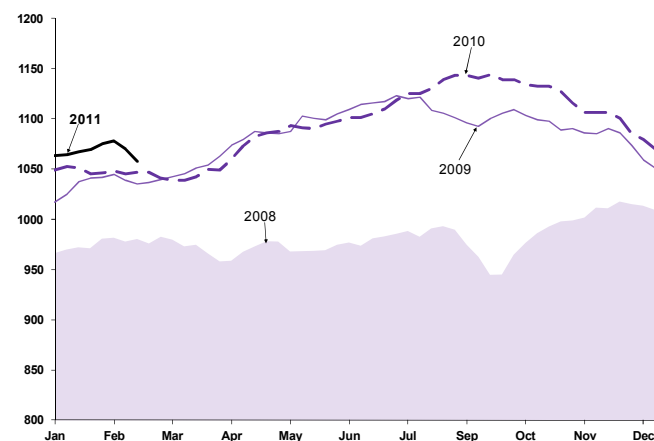
Source: DOE.

US crude oil stocks
Million barrels



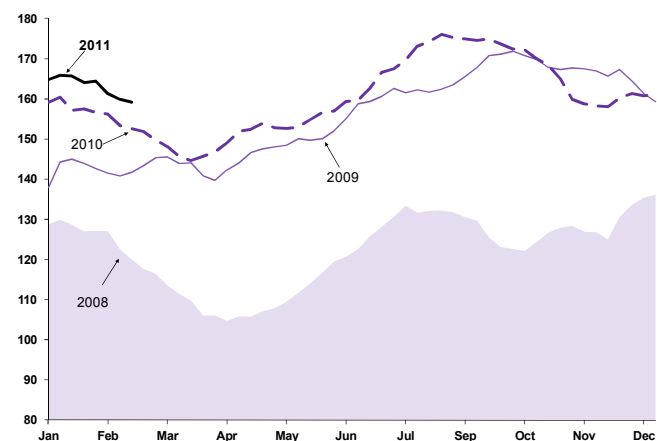
Source: DOE.

US total hydrocarbon stocks
Million barrels



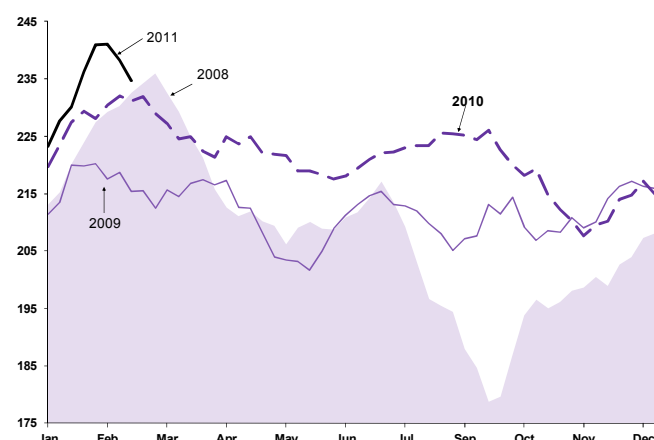
Source: DOE.

US distillate stocks
Million barrels



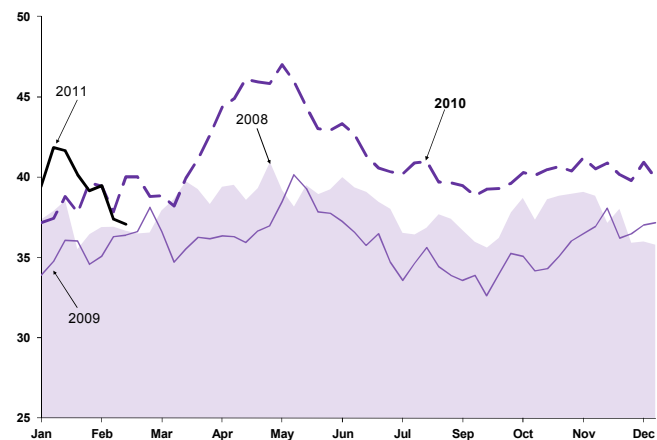
Source: DOE.

US motor gasoline stocks
Million barrels



Source: DOE.

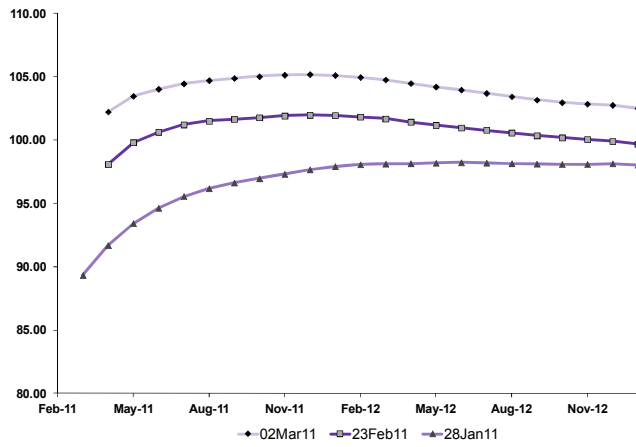
US residual fuel stocks
Million barrels



Source: DOE.

WTI forward curve

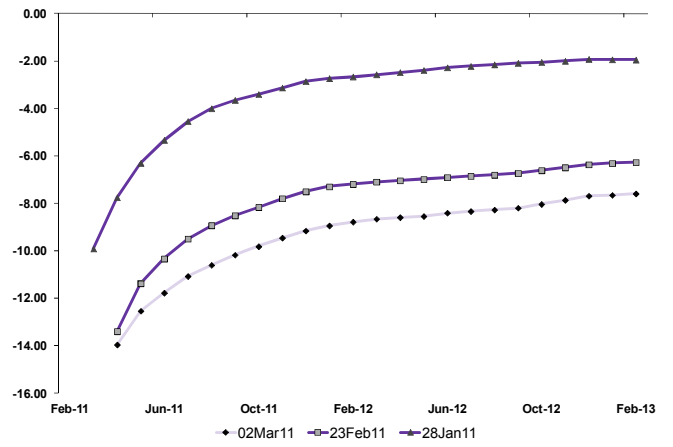
US\$/bbl



Source: Goldman Sachs Global ECS Research.

WTI-Brent forward curve

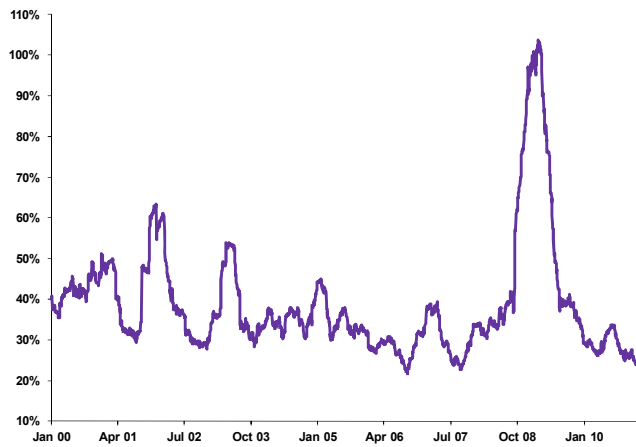
US\$/bbl



Source: Goldman Sachs Global ECS Research.

Historical realized WTI volatility

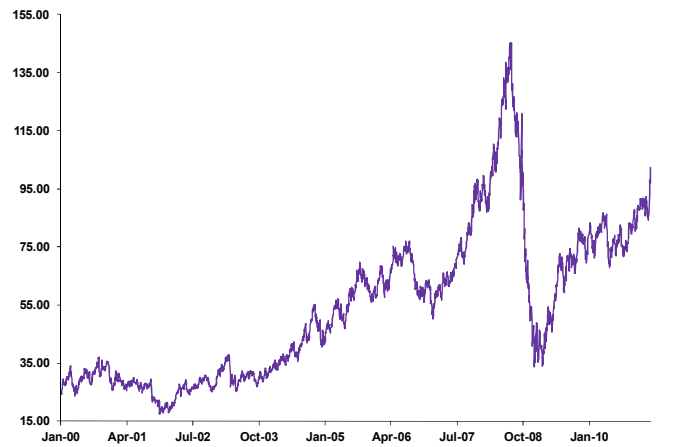
Percentage



Source: Goldman Sachs Global ECS Research.

Historical WTI prices

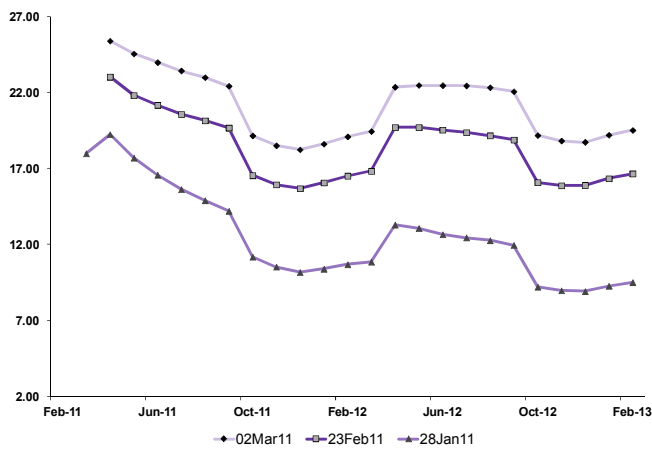
US\$/bbl



Source: Goldman Sachs Global ECS Research.

321 NYMEX forward curve

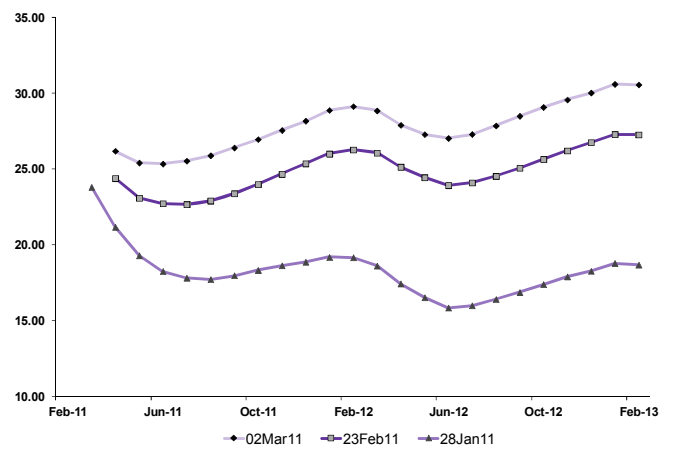
US\$/bbl



Source: Goldman Sachs Global ECS Research.

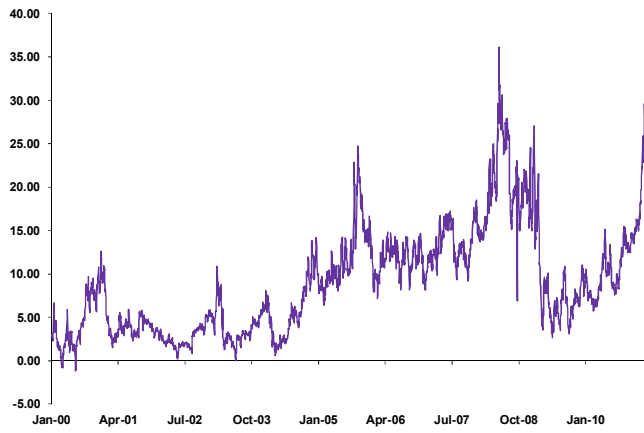
NYMEX heating oil crack forward curve

US\$/bbl



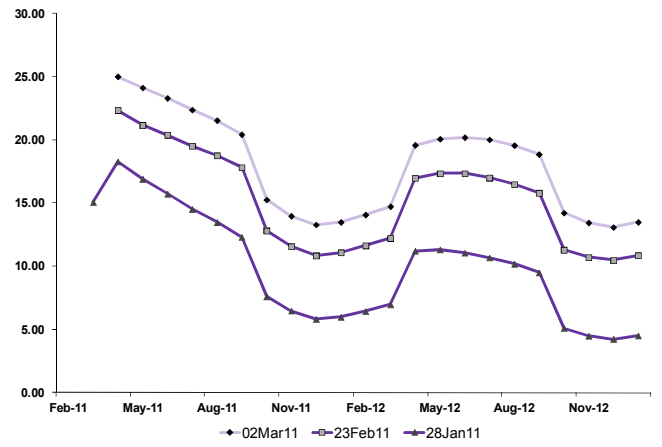
Source: Goldman Sachs Global ECS Research.

Historical NYMEX heating oil crack prices
US\$/bbl



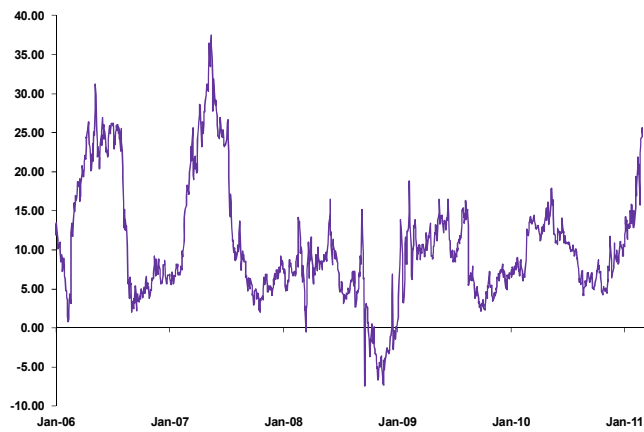
Source: Goldman Sachs Global ECS Research.

RBOB crack forward curve
US\$/bbl



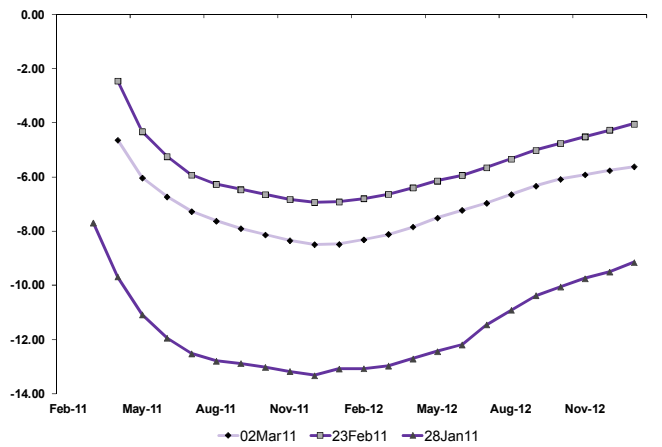
Source: Goldman Sachs Global ECS Research.

Historical RBOB crack prices
US\$/bbl



Source: Goldman Sachs Global ECS Research.

USGC 1.0 percent fuel oil crack forward curve
US\$/bbl



Source: Goldman Sachs Global ECS Research.

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