

The Energy Outlook

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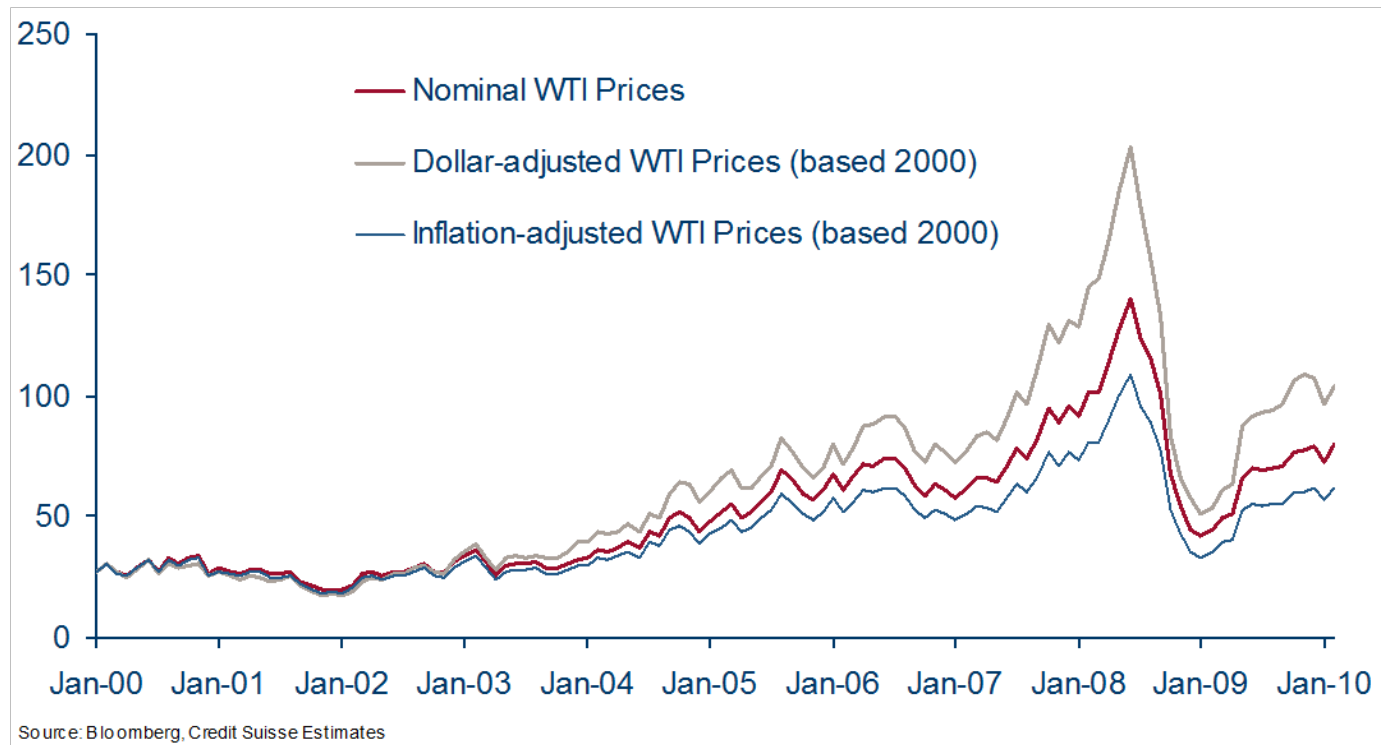
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CRUDE OIL OUTLOOK 2010-2011

An Extraordinary Decade: What happened? Why? and With What Consequences?

Oil prices crested exponentially, collapsed, and recovered

Real and Nominal WTI (2000-09 monthly average)



Why did prices rise?

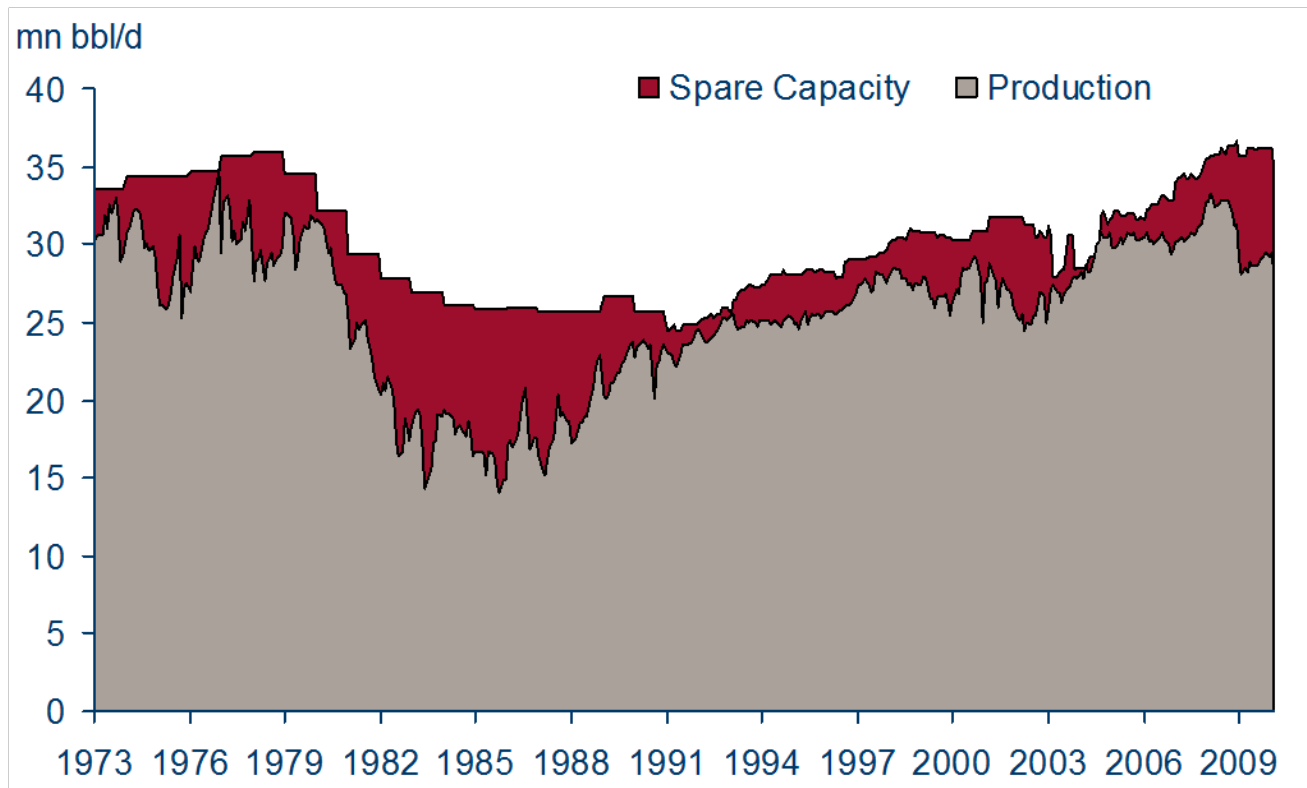
- Global demand for distillates tested the limits of global refining
 - Product prices pulled up crude oil prices
 - High margins led to massive investments in new refining capacity as did special deals in India, non-economic directives in China and Middle East, ushering in a long-period of adjustment globally
- Complex politics led to substantial losses of capacity
 - Iran, Iraq, Nigeria, Venezuela planned to expand capacity by 6.5-m b/d; in 2002-03 lost 6.2-m b/d for a while; by end of decade lost a total of 2.5-m b/d, producing 10-m b/d less than had planned
- Financial markets provided investor exposure to commodities, leading to speculative boom
 - Exchange traded crude oil futures and options exploded from 1- to 7-bil.bbls
 - Producers stopped hedging; new investor classes (indices, CTAs)
 - It was not just oil, but impacted all commodities

Where are prices heading?

- There are good reasons to believe oil prices will remain fairly range bound for next two or three years
 1. *OPEC has spare capacity*

Spare capacity at historic highs with declining demand and completed projects

There are good reasons to believe spare capacity will continue to grow



Where are prices heading?

- There are good reasons to believe oil prices will remain fairly range bound for next two or three years
 1. OPEC has spare capacity
 2. *Saudi Arabia wants to keep a lid on prices*

Saudi Arabia wants prices under \$80/barrel

■ Why?

- Spur to global economic growth
- Provide decent incentive for investments, without encouraging alternative fuels (renewable)
- Deprive Iran/Russia of revenues to make it more difficult for them to spend within the region (Iran's budget deficit is >\$20-30 billion at this price)
- Saudi break-even budget is \$40

■ Can it control prices?

- With 4-m b/d of spare capacity, Saudi Arabia has returned to a comfortable position
- Spare capacity is the Kingdom's source of power globally, within OPEC

■ The “ideal, perfect price” is \$75

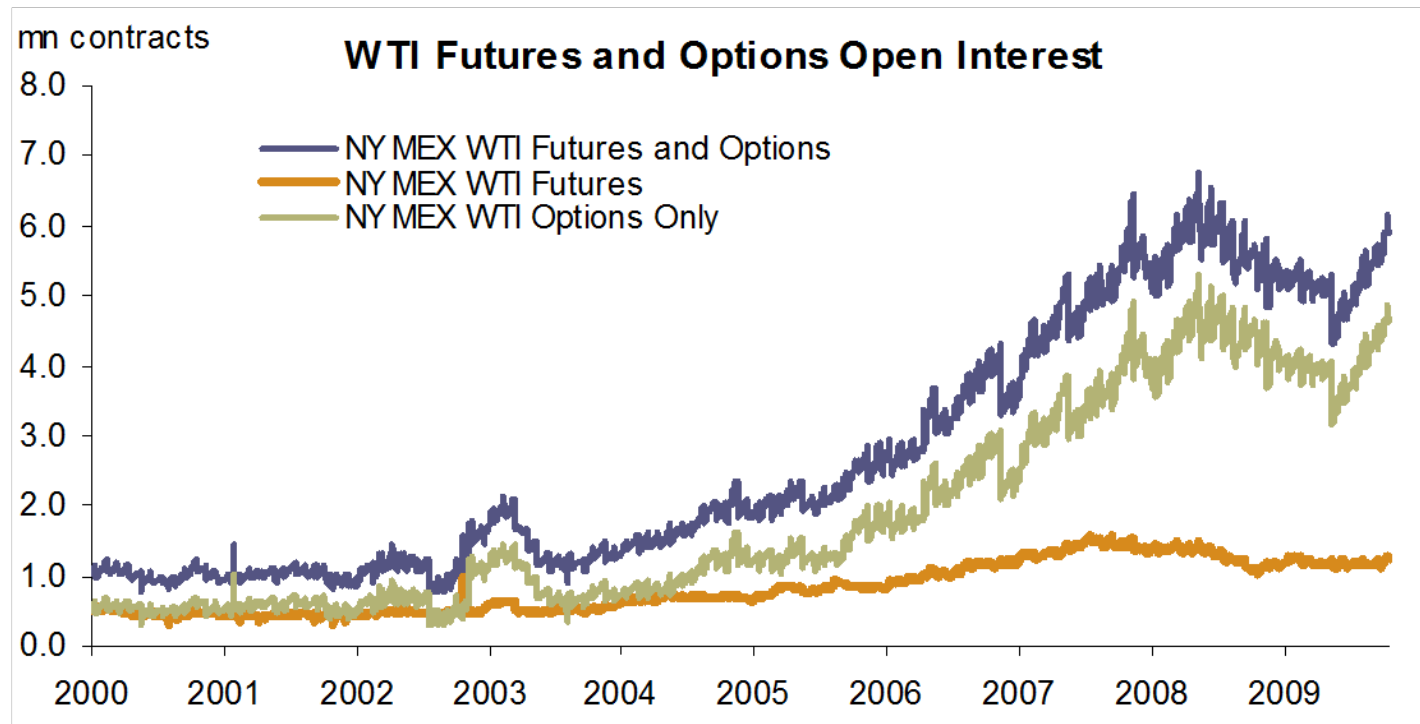
Where are prices heading?

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 3. *Financial flows provide good indications of a range bound market*

After 2008's over-leveraging/deleveraging, a return to normal

After 2H open interest growth of ~1.5mn contracts driven solely by increases in options rather than plain futures (total volume very high including swaps)

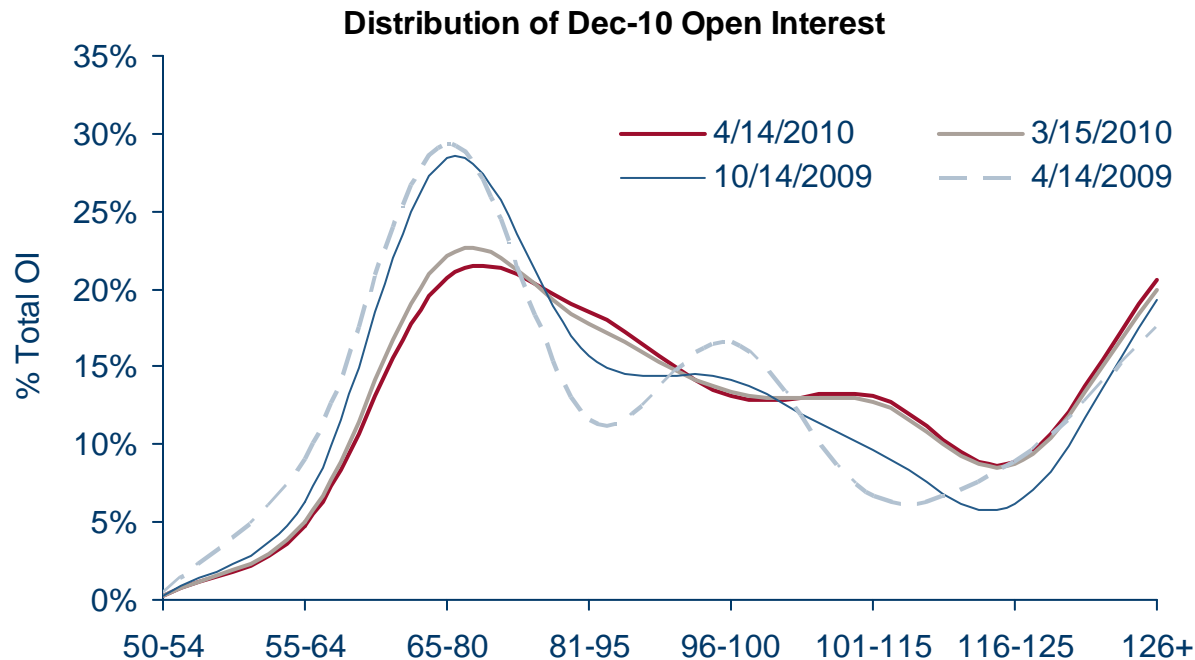
Daily Open Interest for Futures and Options in WTI Crude Oil on NYMEX



Call option profile has remained stable for a year

Investors have not changed their risk profile much over the course of 2009

Open Interest Shares for Dec-2010 WTI Calls by strike



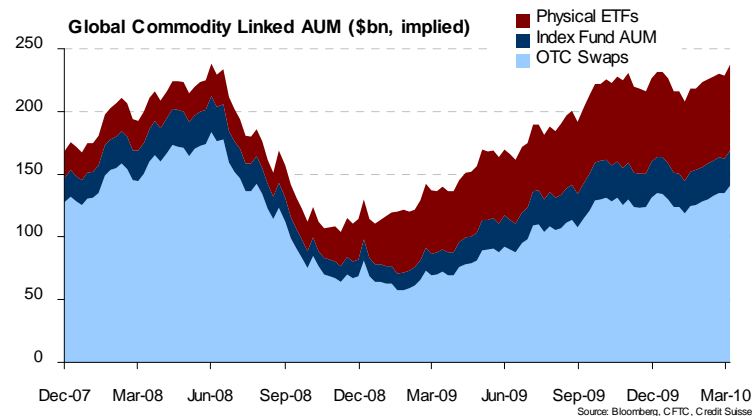
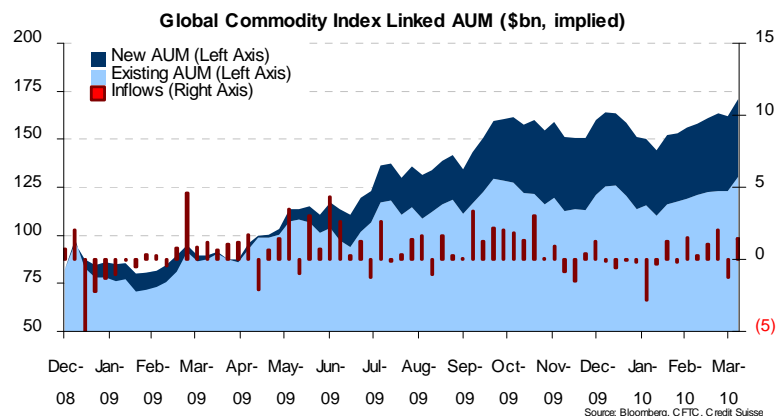
Sources: API, Bloomberg, Credit Suisse Global Commodities Research

Passive investor flows have stabilized

AUM and long-biased flow in WTI

- ◆ Passive commodity indices, providing beta exposure to large institutional investors saw total AUM grow rapidly in Q3 along with higher risk appetite for equities and along with search for hedge against inflation, US\$ depreciation
- ◆ 2010 has seen a (temporary?) end to the inflation/currency/commodity play and a decline in investor risk appetite

History of AUM and cumulative inflows into all commodity indices



Where are prices heading?

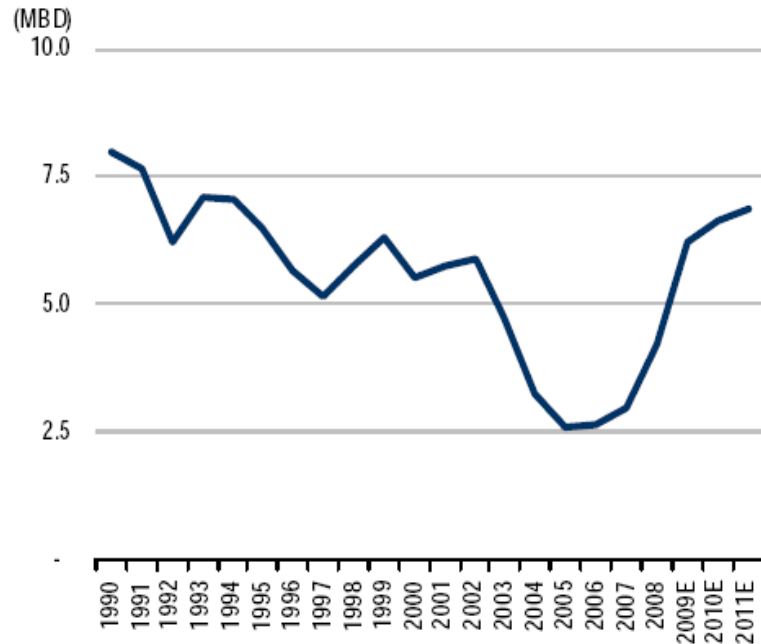
- There are good reasons to believe oil prices will remain fairly range bound for next two or three years
 1. OPEC has spare capacity
 2. Saudi Arabia wants to keep a lid on prices
 3. Financial flows provide good indications of a range bound market
 4. *The global refining system has moved rapidly to surplus capacity creating product market competition*

What's happened in global refining?

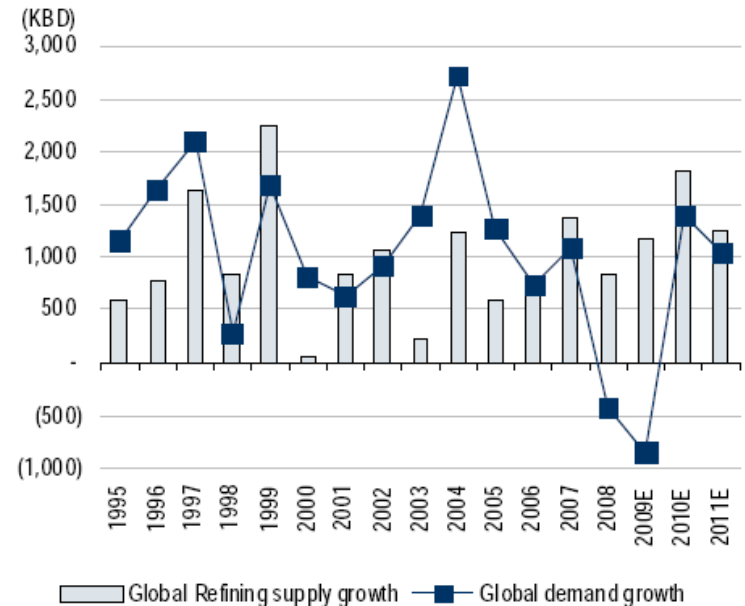
- Global refining saw no capacity growth from 1981-2003
 - 1981: 82-m b/d of capacity and demand falling from 66-m b/d to 60-m b/d
 - OECD refining shut as emerging market refining grew slowly
- By 2002, with distillate demand rising, margins exploded, providing incentives for new capacity
 - In every year from 1981 to 2007 capacity grew more slowly than demand
- With 3-5 year lead times, new capacity came on in 2008, just as global demand was collapsing
 - In 2007 the world was at capacity to make distillates; today there is surplus capacity of 7-m b/d in refining, >3.5- m b/d in distillate capacity
- Three areas of the world have non-economic incentives to build refining (India, China, Middle East)
- UPSHOT: No improvement in refining margins for 5 year (except for niche plays)

Refining Spare Capacity is back to 2001 levels

Global Refining Surplus Capacity



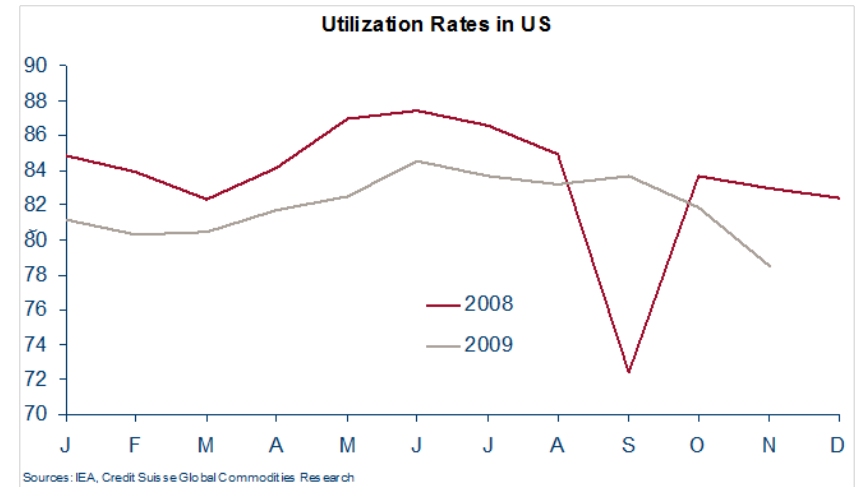
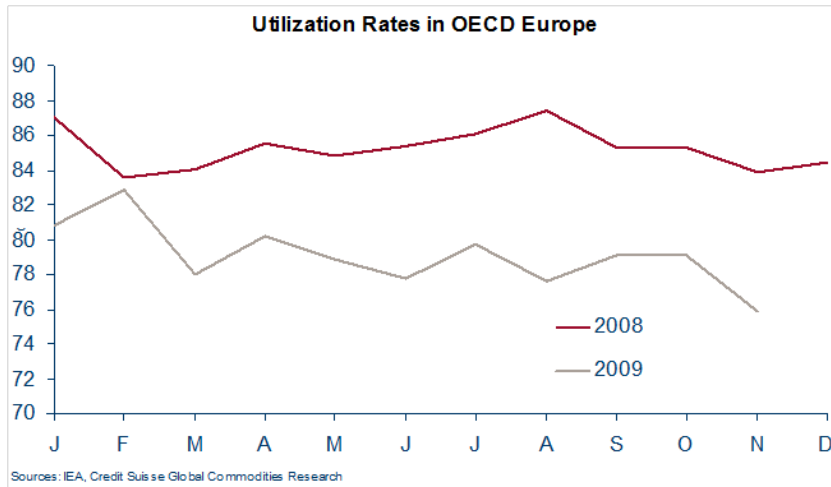
Global Refining Demand & Supply Growth



Source: BP Statistics, industry data, Credit Suisse estimates.

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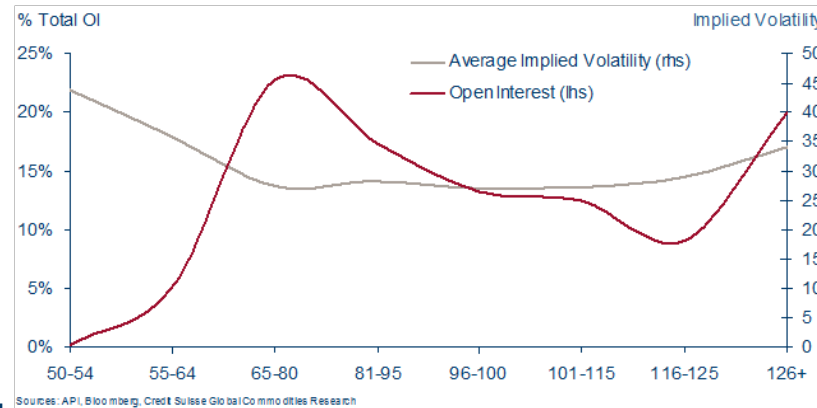
Utilization well below 5-yr averages (77.7% in US vs. 86% avg., 75.86% in Europe)



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 4. The global refining system has moved rapidly to surplus capacity creating product market competition
- The oil market appears to be more range bound than in past two years
 - In 2008 the range of Brent prices was \$111
 - The 2009 trading range was \$47
 - We expect 2010 to have a trading range of \$25 (\$65-\$90), with more downside than upside risk
- Market fundamentals unlikely to tighten before 2013

The volatility analysis is consistent with a \$65-80 price range



- Investors have a deeper interest in outstanding contracts namely WTI Dec '10 Calls within a \$65-80 price range.
 - Even though expensive crude oil barrel at \$100-115 remains however conceivable for some, we believe that a downside break has a slightly higher probability to happen.
- The volatility smile is skewed toward a higher likelihood of a breakout above the range than below the range
 - ATM implied volatility hits a low level of 30 and predicts a less volatile market for 2010

What are the risks to our base case?

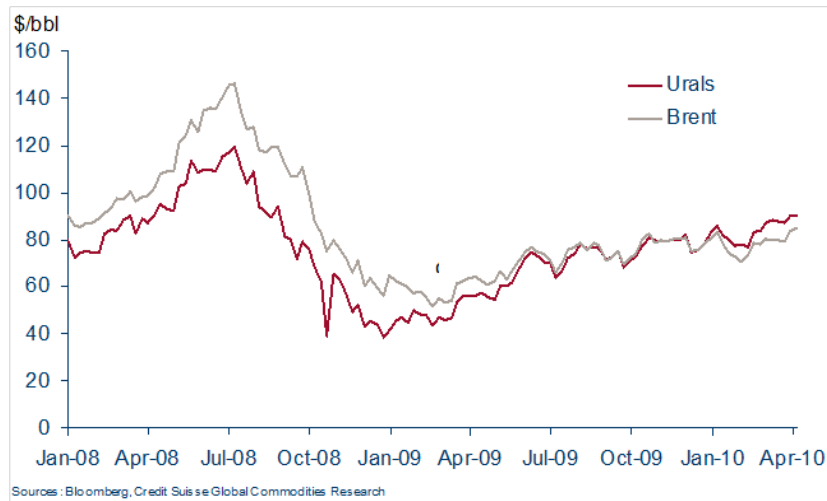
- We foresee WTI trading within a \$25 range between \$60-85, with weakness especially in Q2 (60% probability)
- Downward pressures on prices more likely (25%) than upward pressures (15%)
 - OPEC continues to reduce compliance (now 46% vs. 70% last February)
 - Saudi Arabia adamant about prices not exceeding \$75 for long; could also want lower prices depending on events involving Iran's nuclear quest
 - Iraq, Nigeria could add a combined 800k b/d to markets
 - Global macro picture remains uncertain, with higher probability of lower growth from China
- Upward pressures could be event driven (Iran, Iraq, Nigeria, Venezuela) or a result of higher growth (e.g. higher US product demand growth spurring higher runs, more pressure on prices)

SWEET-SOUR SPREADS

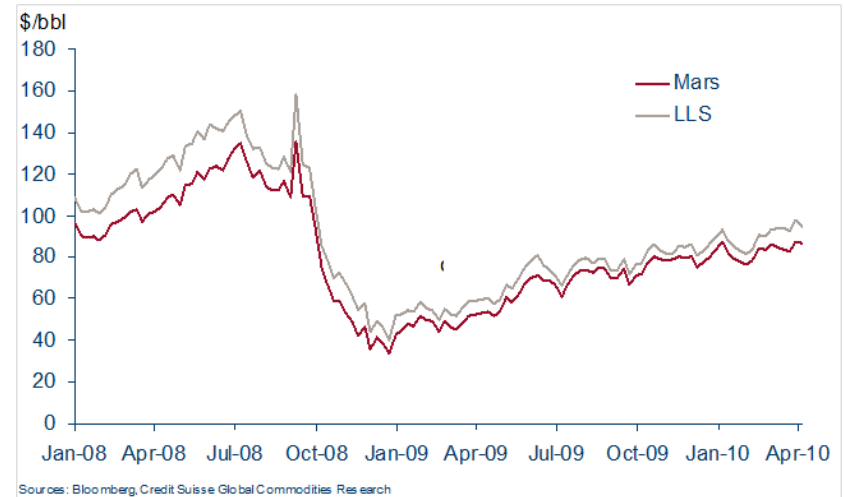
The Tightening of Sweet vs. Sour, Light Vs. Heavy Crude Oil Spreads is Likely to Return after Maintenance

Spreads narrowed in 2009 by \$7/bbl in Asia (to \$1/bbl), but came in less in the US (to \$4/bbl) due to large light sweet crude oil inventories; widened temporarily in Q1 '10

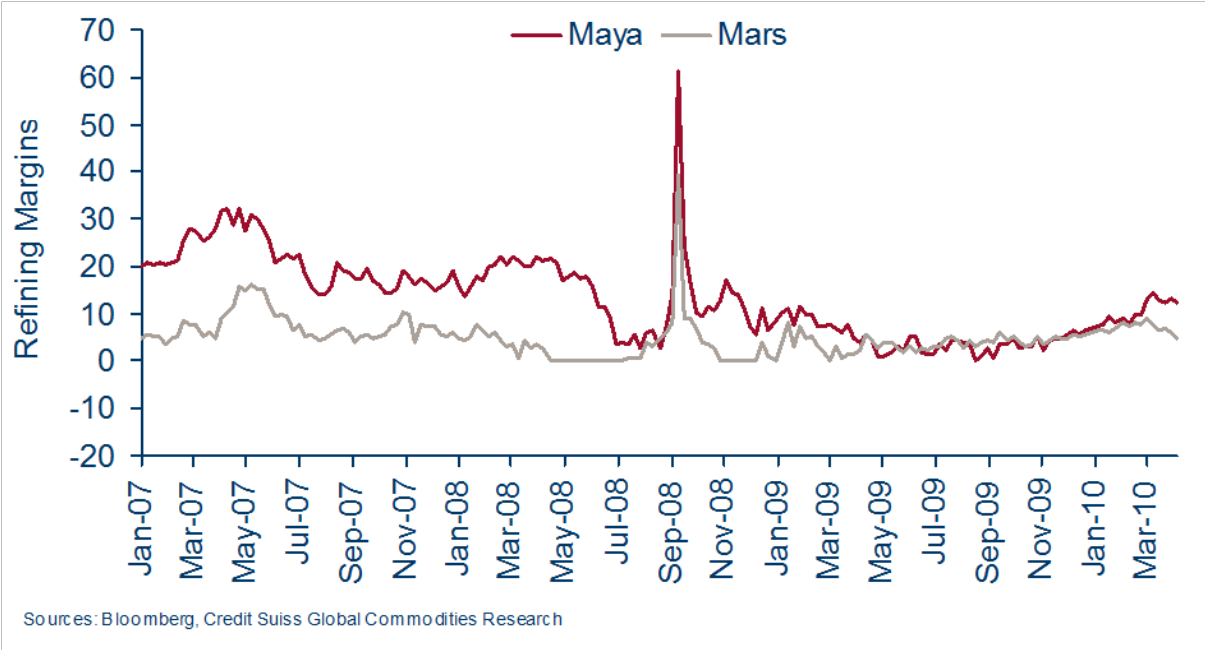
Brent Vs. Urals, 2008-present



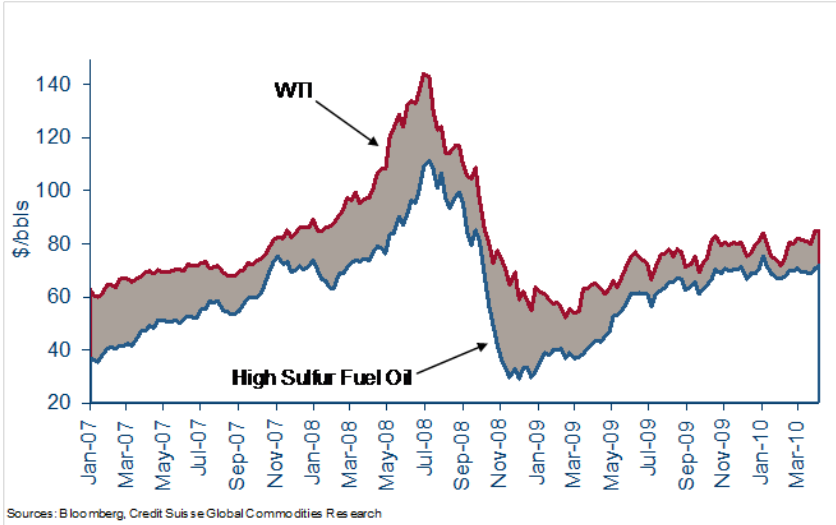
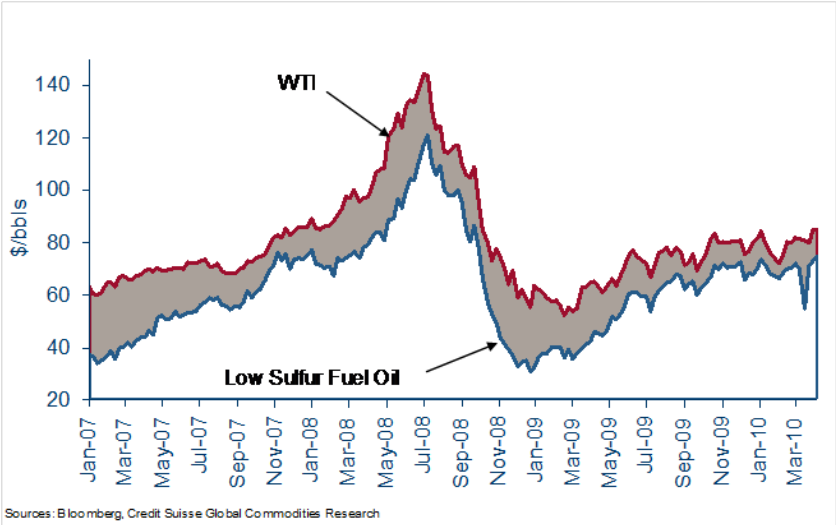
LLS Vs. Mars, 2008-present



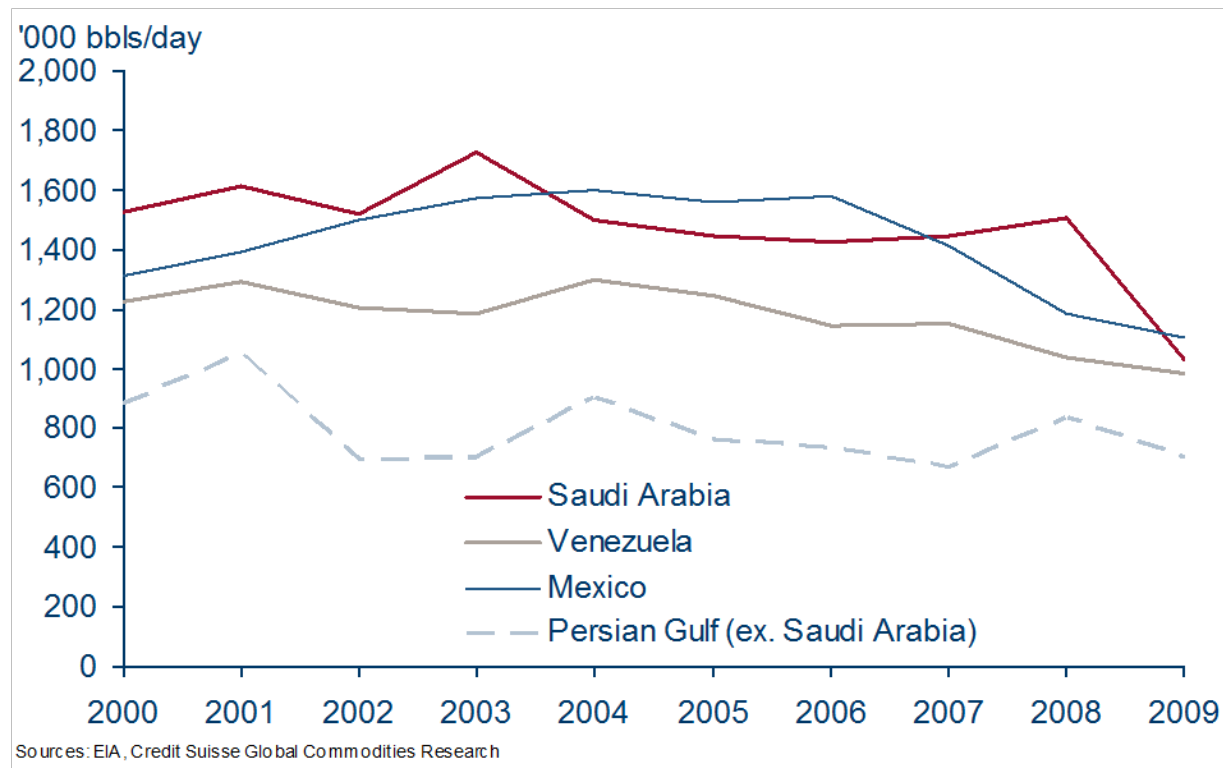
Bringing Relatively Stronger US Gulf Coast Cracks for Maya and Mars



While Lower Refinery Runs Brought Tighter Spreads between WTI and Heavy Fuel Oil



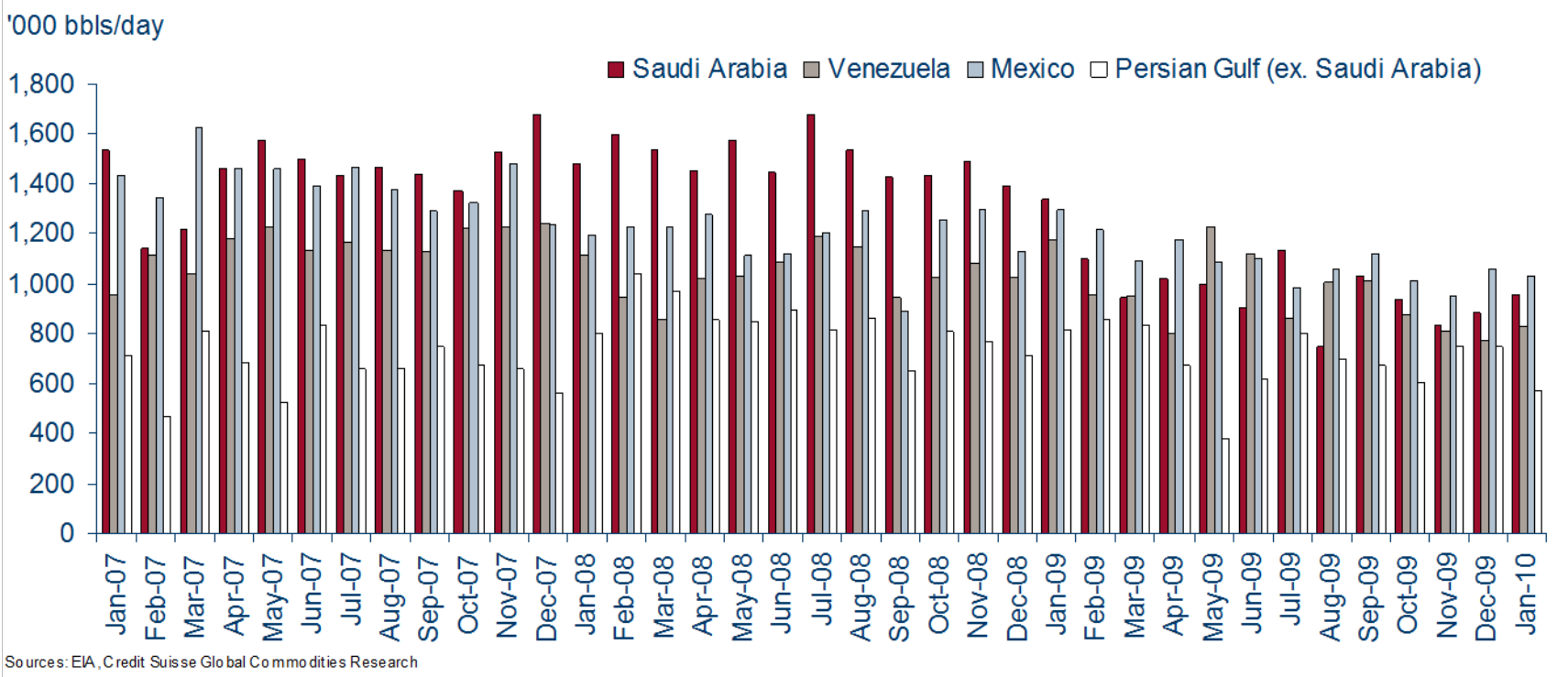
Two linked factors: lower output of heavy crudes; reduced exports to the US



What lies behind the tightening of crude spreads?

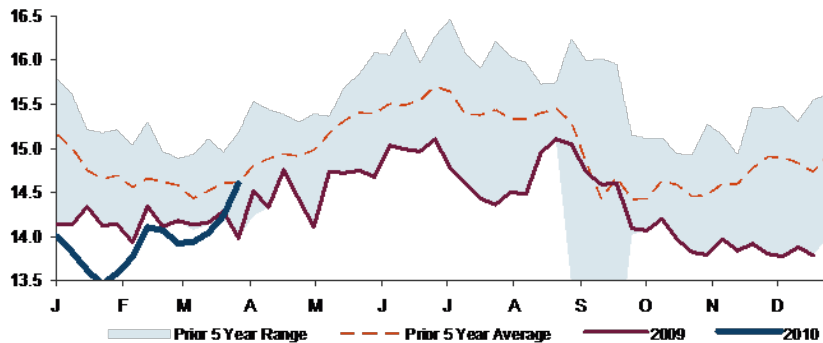
- OPEC cut 1.8-m b/d in 2008, mostly heavier, more sour crude
 - Mideast crude supplies of 2.34-mm b/d (23.9% of imports) in 2008 fell to 1.69-m b/d (18.6% of imports) in 2009
- US imports from heavy/sour suppliers fell for varying reasons
 - Saudi Arabia reduced exports to the US and boosted them to Asia as part of a long-term marketing shift involving about 500-k b/d, from over 1.5-m b/d for most of the decade to 1.02-m b/d last year
 - No longer need to have majors market for them
 - Ended US discount earning an average \$1.7-m/d on the shift
 - Other Mideast suppliers exported more of lower supplies to Asia as well
 - Mexican exports fell along with Mexican output, from an average of 1.7-m b/d in 2006 to an average of 1.2-m b/d in 2009
 - Venezuelan exports to US fell from over 1.6-m b/d in 2005-06 to 1.1-m b/d in 2009, with inconsistent output, new exports to Asia

The US import trend since mid-2008 looks likely to continue through 2010



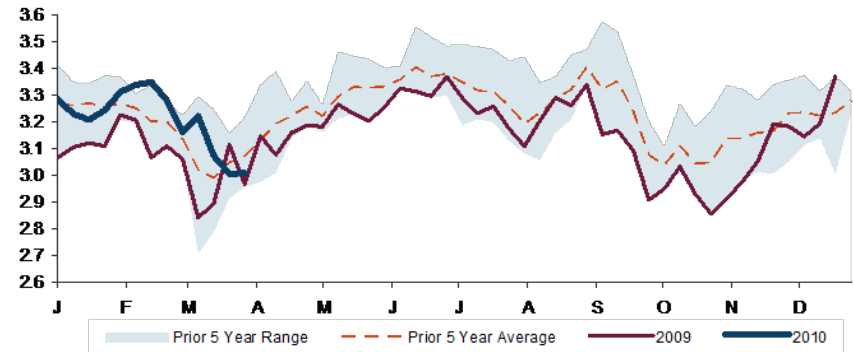
Meanwhile, US crude runs collapsed, increased with high margins, but product builds ahead mean they are likely to remain lower than normal

Total US refinery runs, 2005-2010



Source: EIA, Credit Suisse Global Commodities Research

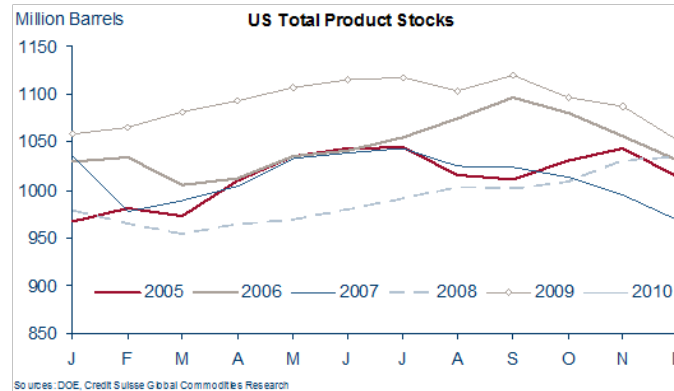
PADD III refinery runs, 2005-2010



Source: EIA, Credit Suisse Global Commodities Research

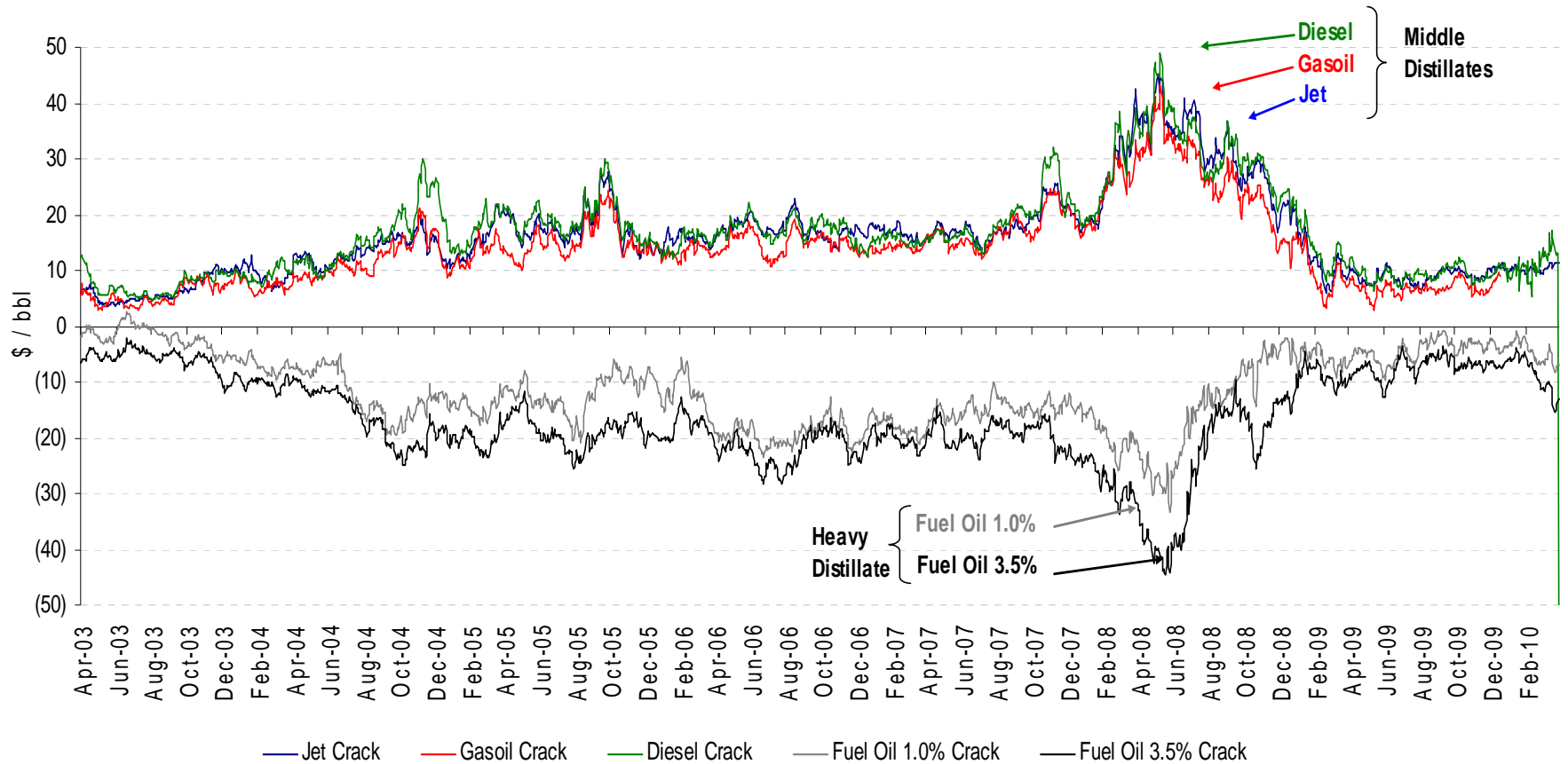
With high commercial inventories going into summer, US refinery runs will remain low

■ Total product stocks US, 2005-present



- Reduction in US light-sweet crude inventories and lower runs should tighten spreads even further in 2010
- Steep contango in WTI in 2009 kept US spreads wider than rest of the world, boosting financial incentives to store crude; reduced contango, lower stocks should lessen WTI's premium
- Lower runs designed to reduce distillate stocks should continue to increase relative value of fuel oil, naphtha, boosting value of Mexican crude streams

Product crack development – a telling picture of economic reality



Asia should play a double role in keeping spreads tight

- Asian refinery demand for crude is growing faster than its appetite for products
 - In 2009, Asia added 1.6-m b/d of new refining capacity, more than 3-times greater than its product demand growth, with 1-m b/d in China and 600-k b/d in India
 - The pull in new Asian refineries is mostly for heavier, more sour grades
- Excess refining capacity is leading to a surge in Asian product exports
 - The excess availability of products is causing further stress to OECD refining margins; close to 2-m b/d of refining capacity was shuttered in Atlantic Basin in 2009
 - Product exports will likely keep US margins low in 2010, with no revival in refinery throughput until after product stocks are reduced

NATURAL GAS OUTLOOK 2010-2011

U.S. Natural Gas, How Low Can You Go?

- We have lowered our U.S. natural gas 2010 price forecast to reflect the possibility that the recent rise in drilling activity might lead to a yoy increase in domestic production
- However, there is a limit on how far gas prices will fall. Current low prices should not only stimulate more demand (mostly in the form of incremental fuel-switching) but should also limit LNG imports.
- Without the threat of hitting storage constraints, prices are unlikely to test 2009 lows (sub \$3 levels). Given the expansion in storage this year, we predict that supplies will fall far short of hitting physical system limits.

U.S. natural gas short-term forecast

Short-Term Henry Hub Natural Gas Price Forecast

\$/mmbtu

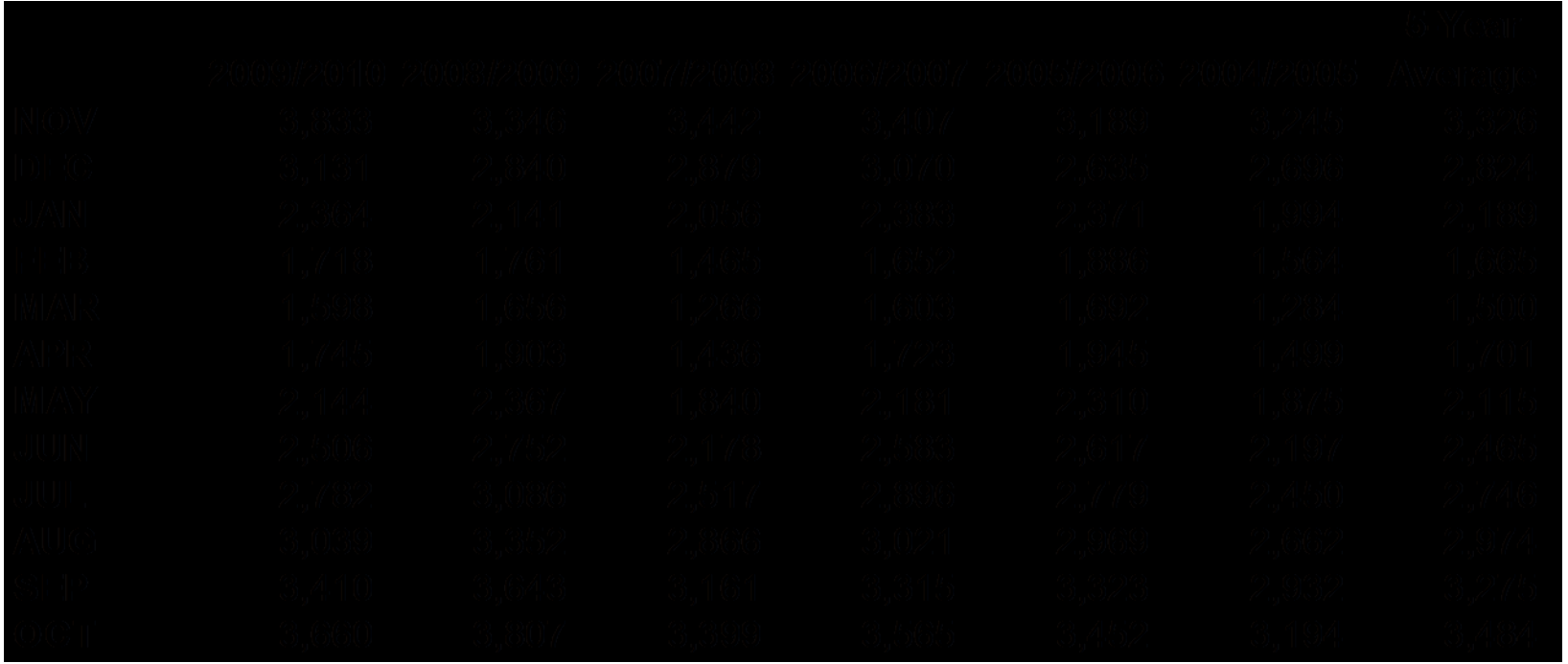
	2004	2005	2006	2007	2008	2009	2010	NYMEX 2010
Jan	\$6.150	\$6.213	\$11.431	\$5.838	\$7.172	\$6.136	\$5.814	\$5.814
Feb	\$5.775	\$6.288	\$8.400	\$6.917	\$7.996	\$4.476	\$5.274	\$5.274
Mar	\$5.150	\$6.304	\$7.112	\$7.547	\$8.930	\$4.056	\$4.816	\$4.816
Apr	\$5.365	\$7.323	\$7.233	\$7.558	\$9.578	\$3.631	\$3.842	\$3.842
May	\$5.935	\$6.748	\$7.198	\$7.508	\$11.280	\$3.321	\$4.360	\$4.086
Jun	\$6.680	\$6.123	\$5.925	\$7.591	\$11.916	\$3.538	\$4.470	\$4.177
Jul	\$6.141	\$6.976	\$5.887	\$6.929	\$13.105	\$3.949	\$4.520	\$4.290
Aug	\$6.048	\$7.647	\$7.042	\$6.110	\$9.217	\$3.379	\$4.540	\$4.370
Sep	\$5.082	\$10.847	\$6.816	\$5.430	\$8.394	\$2.843	\$4.580	\$4.416
Oct	\$5.723	\$13.907	\$4.201	\$6.420	\$7.472	\$3.730	\$4.660	\$4.534
Nov	\$7.626	\$13.832	\$7.153	\$7.269	\$6.469	\$4.289	\$4.970	\$4.891
Dec	\$7.976	\$11.180	\$8.318	\$7.203	\$6.888	\$4.250	\$5.150	\$5.319
Year	\$6.138	\$8.616	\$7.226	\$6.860	\$9.035	\$3.967	\$4.750	\$4.652

Source: NYMEX and Credit Suisse estimates (NYMEX estimates as of April 1, 2010)

The industry will likely match last year's end of Oct storage levels

U.S. Working Gas in Storage, End-of-Month Balances

(Bcf/d)



Source: EIA and Credit Suisse estimates

Possible Growth in Supply Will Keep a Lid on Natural Gas Prices

U.S. Supply/Demand Balances, Annual Averages

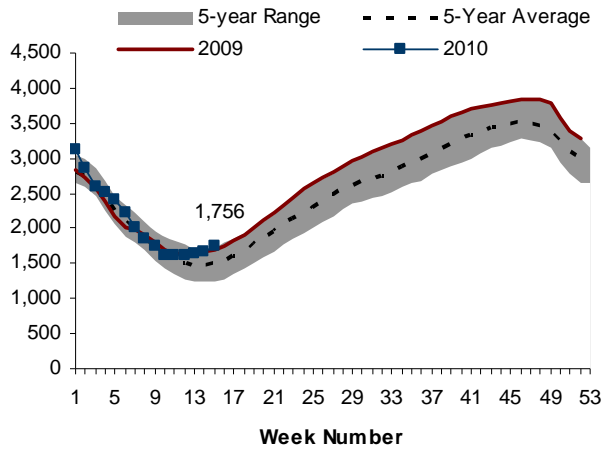
(Bcf/d)

	Dom Prod	CAD Imports	MEX Exports	LNG Imports	Net Storage	Core Demand	Ind Demand	Pwr Demand	Other Demand	Total Demand
2007	52.47	9.00	(0.65)	1.97	0.66	21.84	18.17	18.71	5.00	63.72
2008	<u>55.82</u>	<u>8.21</u>	<u>(0.88)</u>	<u>0.82</u>	<u>0.15</u>	<u>22.54</u>	<u>18.10</u>	<u>18.20</u>	<u>5.19</u>	<u>64.03</u>
YOY Change	3.35	(0.79)	(0.23)	(1.15)	(0.52)	0.69	(0.07)	(0.51)	0.20	0.31
2008	55.82	8.21	(0.88)	0.82	0.15	22.54	18.10	18.20	5.19	64.03
2009	<u>57.73</u>	<u>6.97</u>	<u>(0.86)</u>	<u>1.14</u>	<u>(0.78)</u>	<u>22.74</u>	<u>16.85</u>	<u>18.80</u>	<u>5.34</u>	<u>63.73</u>
YOY Change	1.91	(1.25)	0.03	0.33	(0.92)	0.21	(1.25)	0.60	0.15	(0.30)
2009	57.73	6.97	(0.86)	1.14	(0.78)	22.74	16.85	18.80	5.34	63.73
2010	<u>57.63</u>	<u>6.18</u>	<u>(0.72)</u>	<u>2.12</u>	<u>(0.45)</u>	<u>22.92</u>	<u>17.29</u>	<u>19.28</u>	<u>5.26</u>	<u>64.75</u>
YOY Change	(0.10)	(0.79)	0.14	0.97	0.33	0.17	0.45	0.48	(0.08)	1.02

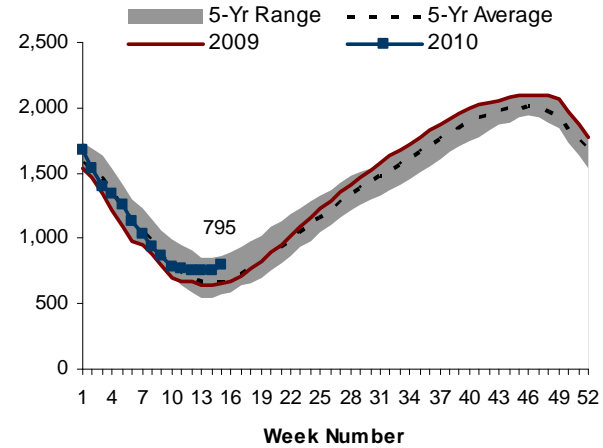
Source: EIA and Credit Suisse estimates

Storage Levels are High– Ignore Possible EIA Production Revisions

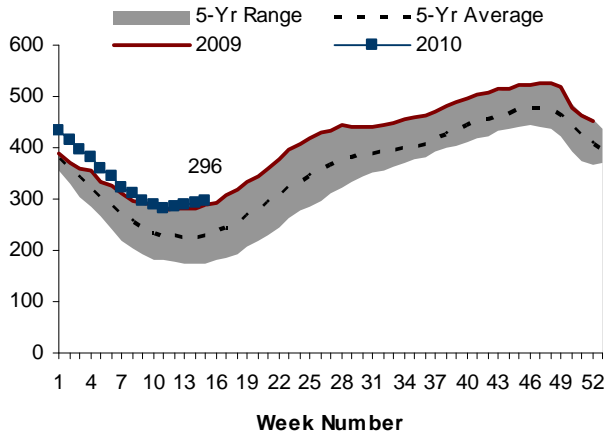
Total U.S. Storage



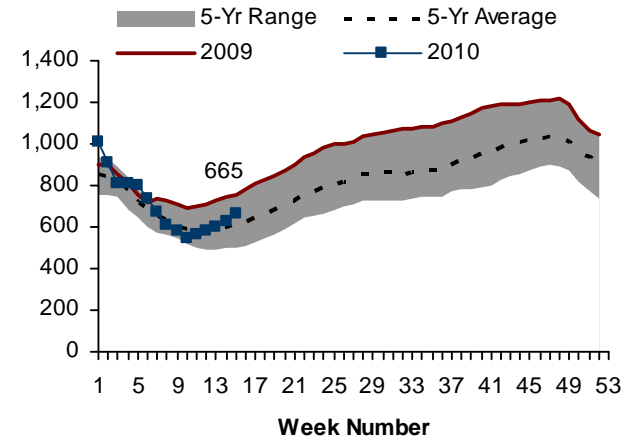
East



West



Producing



Summary and Conclusions

- Crude oil markets look likely to be range bound and less volatile in 2010 with WTI fluctuating between \$60 and \$85 per barrel
- Seasonality should return to markets, with prices weaker in Q2
- Downward pressure on prices more likely than upward pressures or spikes
- Refinery demand for crude in the US, Europe, Japan should remain weak, continuing to tighten spreads between fuel oil and distillates, making fuel-oil rich crude streams more valuable relative the gasoline-rich crude streams
- Quality spreads between heavy and light, sour and sweet crude streams should remain tight, with average spreads in the Western Hemisphere becoming even tighter.
- Oversupplied US gas market is likely to keep a lid on prices while LNG continues to favor European shores

Disclosure Appendix

Analyst Certification

I, Edward Morse, certify that (1) the views expressed in this report accurately reflect my personal views about all of the subject companies and securities and (2) no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.

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Buy: Indicates a recommended buy on our expectation that the issue will deliver a return higher than the risk-free rate.

Sell: Indicates a recommended sell on our expectation that the issue will deliver a return lower than the risk-free rate.

Corporate Bond Fundamental Recommendation Definitions

Buy: Indicates a recommended buy on our expectation that the issue will be a top performer in its sector.

Outperform: Indicates an above-average total return performer within its sector. Bonds in this category have stable or improving credit profiles and are undervalued, or they may be weaker credits that, we believe, are cheap relative to the sector and are expected to outperform on a total-return basis. These bonds may possess price risk in a volatile environment.

Market Perform: Indicates a bond that is expected to return average performance in its sector.

Underperform: Indicates a below-average total-return performer within its sector. Bonds in this category have weak or worsening credit trends, or they may be stable credits that, we believe, are overvalued or rich relative to the sector.

Sell: Indicates a recommended sell on the expectation that the issue will be among the poor performers in its sector.

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Disclosure Appendix cont'd

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