

What price

Oil in

● 2009



Risk Management

Agenda

- Insight to current high oil prices
- Short/medium term supply/demand for crude oil
- Price forecast short/medium term for crude oil
- Long terms expectations for crude oil
- Fuel oil supply/demand - Forward curve
- Fuel Oil – Barging costs
- OW Risk Management



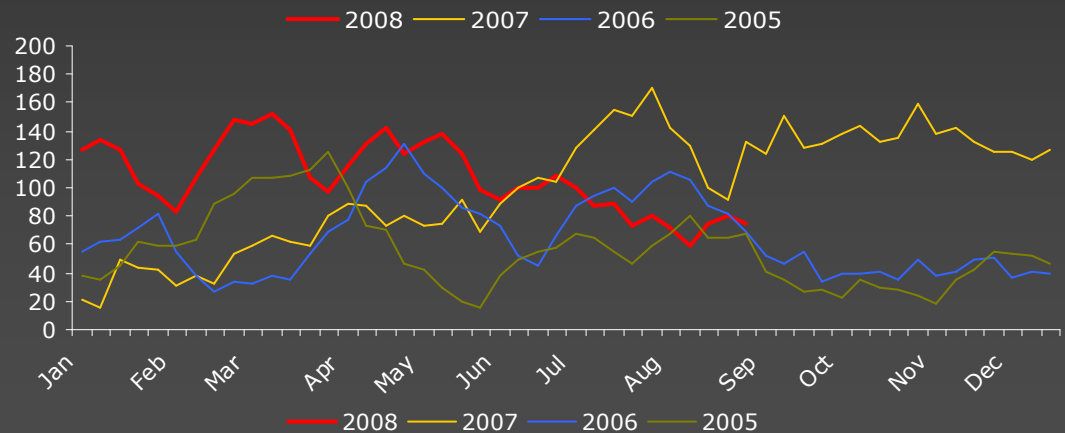
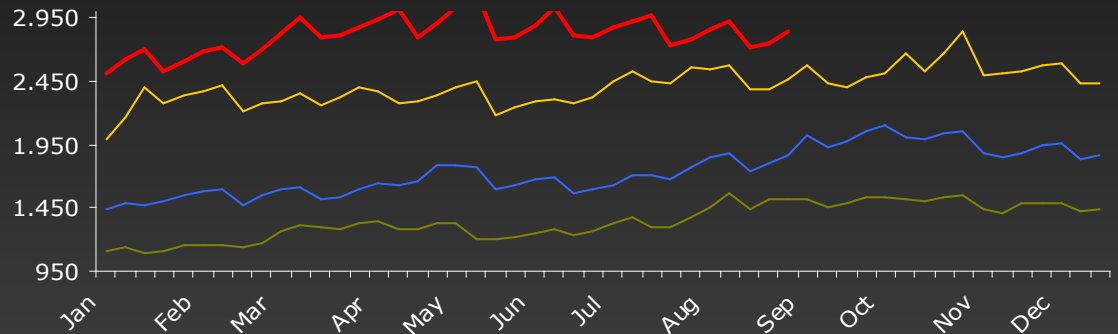
Current open WTI positions



HIGH OPEN INTEREST

- Total open interest in oil remains over 3 billion barrels and crude above 2.5 billion barrels
- Liquidity keeps increasing Funds positions increasingly important
- Non-commercial funds have app 145,00 open lots. Length have increased by funds mainly by two reason
 - High crude prices
 - Backwardation
- By rolling from front month to next – fund are earning return on capital.
- Funds buy front month – keep it – sell it and buy next front month at lower levels

1. Crude, open positions, 2. Open Fund interest
Source: NYMEX, OWRMS



Stock levels in US



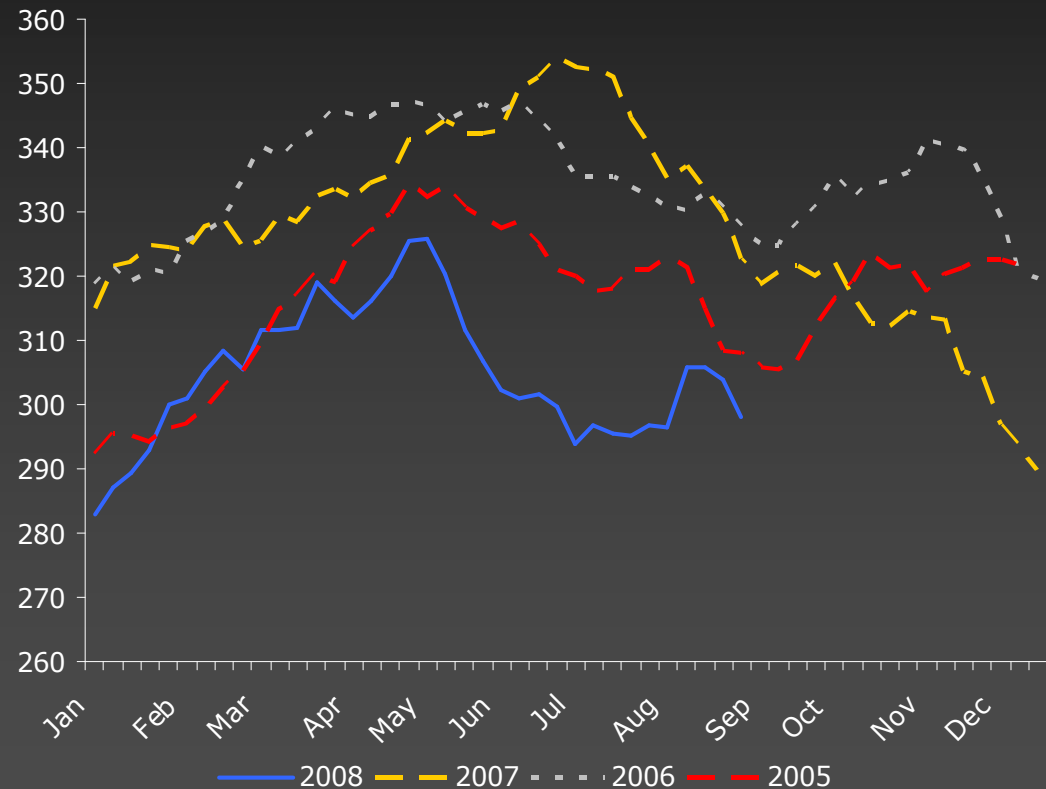
2007:

- After a build first half 2007 to record highs it was expected to see stocks draw
- Main reason for market to turn into backwardation
- A drop in stock is normal seasonal swing for sep-nov

2008:

- In Q1 build mainly due to slower demand, coming from warmer winter and less trade goods within US
- In part of Q2 and Q3 draw due to lower imports
- Stock levels are low now and more draws during autumn/winter should support prices.

US Crude oil Stocks
Unit: mbbbl, Source: DOE, OWRMS

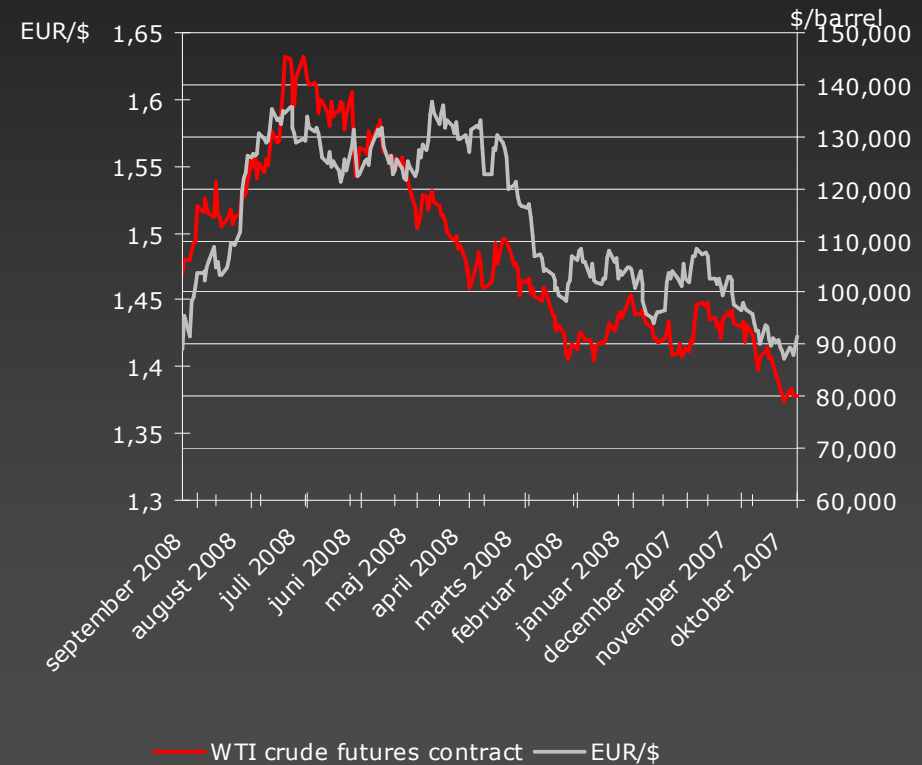


Is WTI correlated with US dollar



- Correlation between price of WTI and US dollar have increased significantly in 2007. Earlier the correlation have been low.
- Weak US dollar have pushed WTI as non US dollar currency countries have not been as strongly effected by increased oil prices
- US Interest rate have been decreased in order to keep the US economy on track. The US dollar have however set new low records
- Recently US dollar recovery and lower WTI

Is there a correlation between USD and WTI?
Source: CFTC, Nymex, OWRMS



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Short/medium term supply/demand



Historical demand development



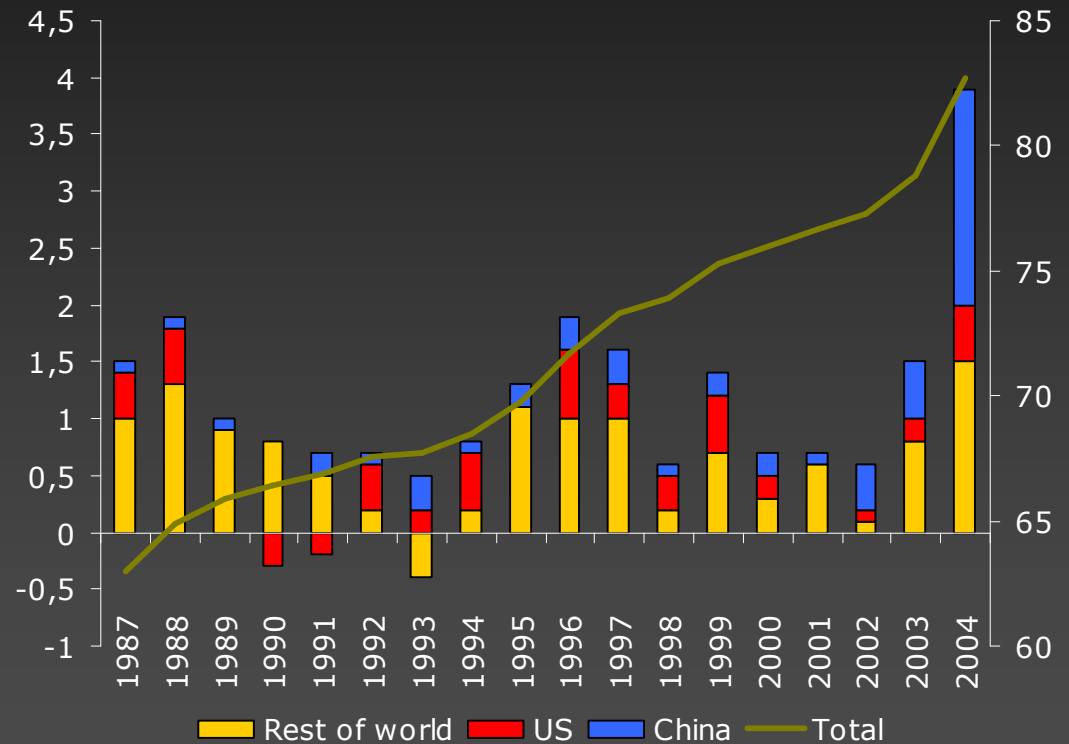
Demand from 1987 to 2006

- From 63 million barrels per day to 84.50 million barrels per day
- = 40 % increase

Reason for increase

- 2001 China became member of WTO
- Increased demand for transportation of goods – both onshore and in shipping

Demand growth
Unit: mbpd, Source: IEA, OWRMS

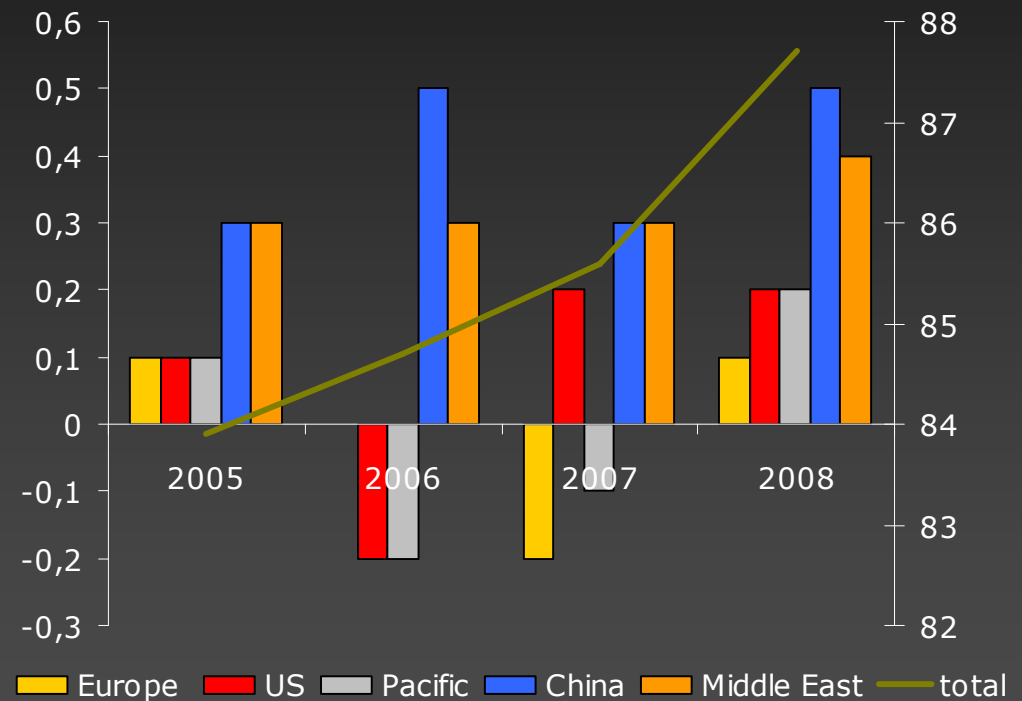


Short term demand / supply



- 2008 demand growth is likely to be stronger than forecasted
- Middle distillates still expected to have the highest increase with more diesel cars in Europe
- Asia / China still expanding and increasing industrial demand

World demand short term
Unit: Mbpd, Source: DOE, OWRMS

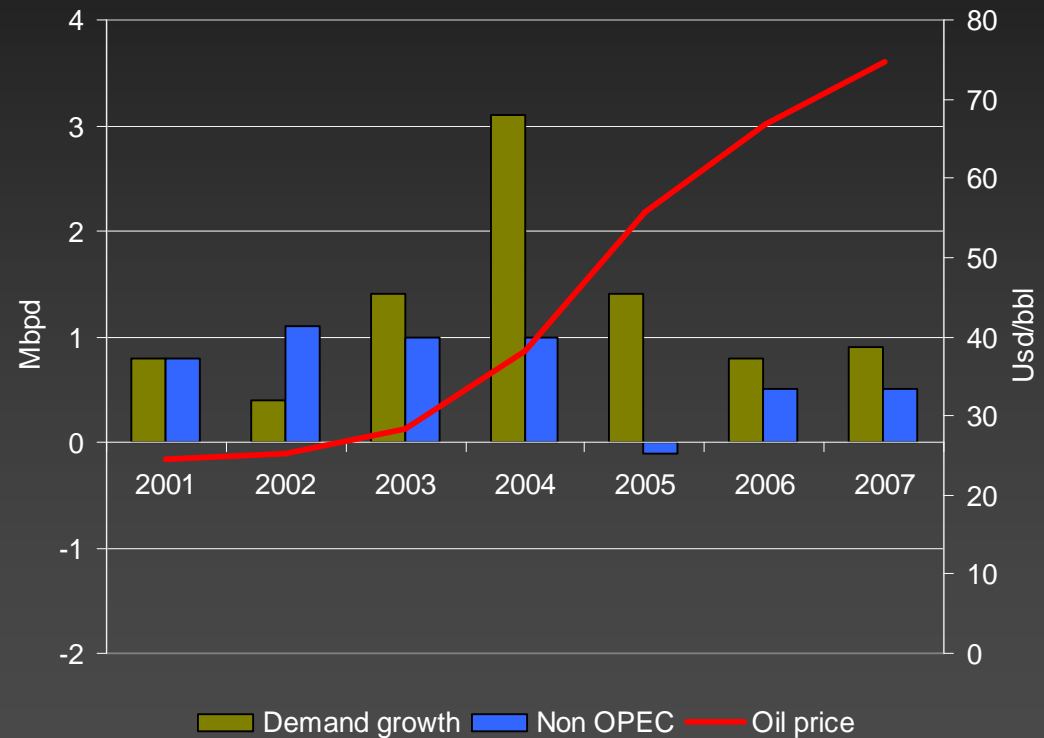


Short term demand / supply



- 2008 could be sixth year in row when global demand growth will outpace Non-Opec supply growth
- Increase in world crude oil price started when Non-Opec production yearly increase got lower than yearly increase of world demand
- Fundamental support to record high oil prices
- World demand will be even more depended on OPEC increasing their supply
- US stocks could decrease further if OPEC production does not increase

World demand growth and Non-OPEC Supply
Source: IEA, OWRMS



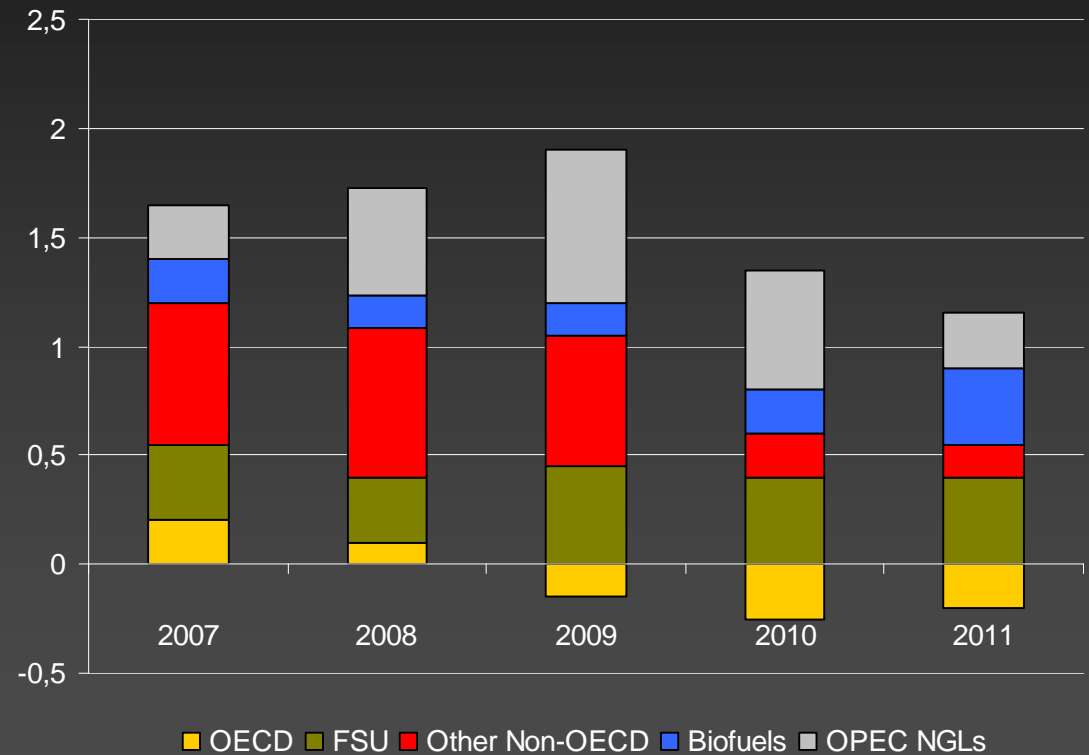
Medium term supply (Non-OPEC)



Supply forecast can be too optimistic

- 45% of the Non-OPEC increase to come from the FSU
- 25% from Africa (inc. Angola)
- In 7 of the last 11 years IEA supply forecasts have been over-optimistic (by an average of about 400 kbpd).
- For 2007 and beyond IEA state they have used a decline rate of 8% per year for Non-OPEC oil fields beyond plateau, which is towards the upper end of most industry forecasts.
- Recent years have shown less than expected production from Non-OPEC oil fields.

Increased Oil Supply from Non-OPEC
Unit: Mill Barrels/Day, Source: IEA, OWRMS



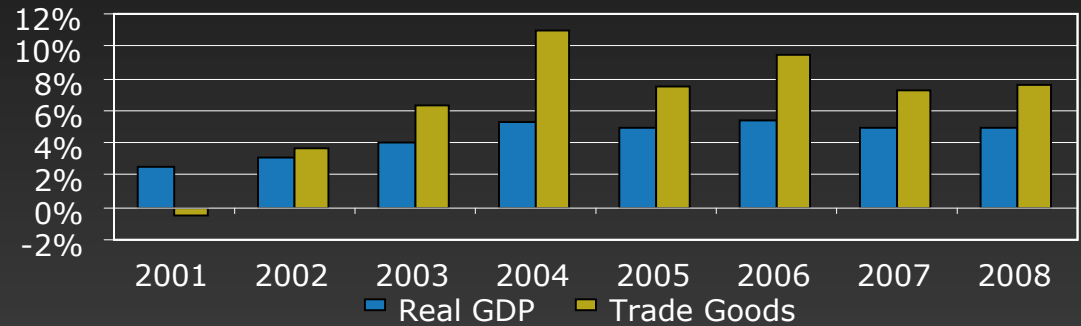
Oil Demand and Globalisation



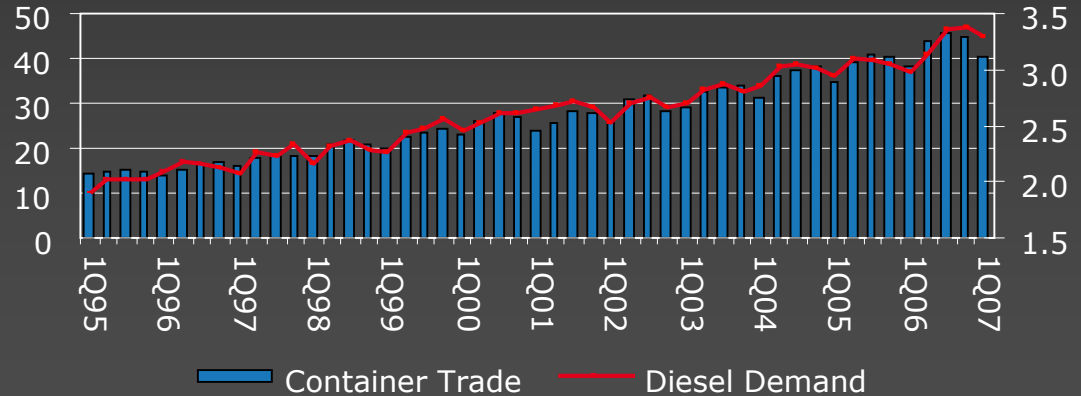
Globalisation leading to surging trade behind the strong transportation fuel demand growth

- China becoming a member of WTO December 2001
- The region becomes the global hub for production of manufactured goods
 - Surging oil demand growth 01-06
 - China annualised: 8.9%
- US transportation fuel demand remains strong
 - Goods distribution drives diesel demand
 - Strong economic growth drives gasoline demand

Annual Change Global GDP & Trade Goods
Source: Norweigen Energy



US West Coast Container Trade vs. Diesel Demand
Unit: TEUs / day, mbpd



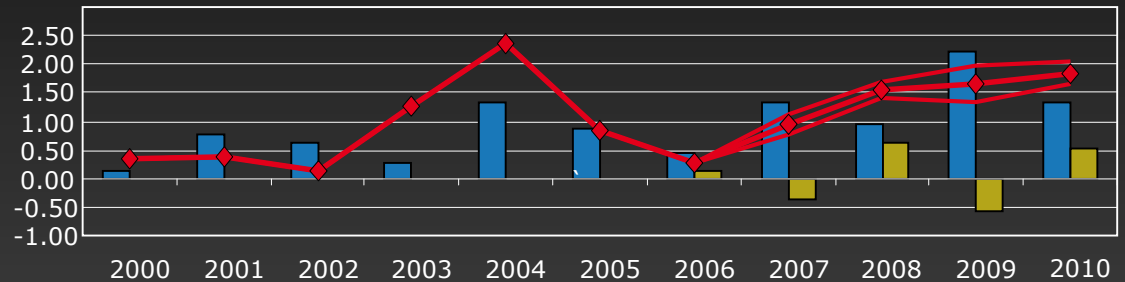
Has Crude Demand Capped?



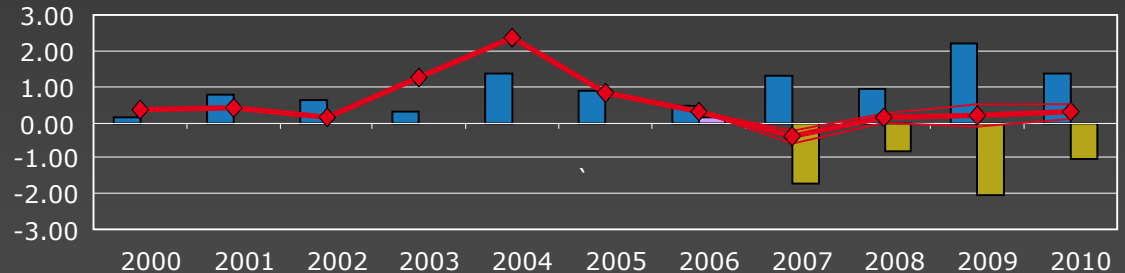
Should demand growth slow down drastically then new upgrading capacity alone will be enough to meet the incremental demand increase

- Refinery crude demand to remain close to unchanged
- But lack of feed (VGO / fuel oil) for the crackers may limit the downside to refinery throughput
- A return to more normal OECD refinery operations should cap refinery crude demand further
- Overall relatively less fuel oil to the market (feed for the crackers)

World New CDU Capacity vs. Refinery Crude Demand.
Base Case: 3% y/y Middle Distillate Growth; Unit: mbpd , Source: NE



Low Case: 1.5% Middle Dist. Growth y/y. Unit: mbpd, Source: NE



- Increase New CDU Utilization
- ◆ Increase in CDU Demand
- Marginal Crude Demand at Existing Refineries



**Price forecast
short/medium term
Crude oil**



Cost Development



Main cost is Development

- Most new production facilities are at remote areas leaving a much higher cost when developing a new production facility

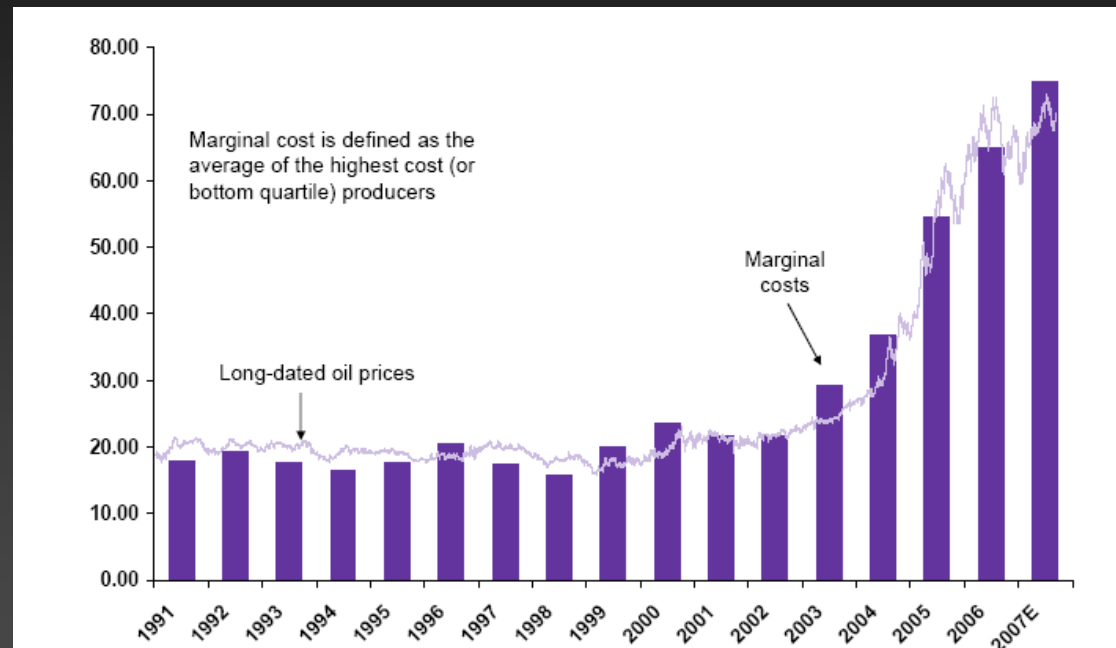
Production cost up

- With more expensive drilling and higher crude prices, production cost is increasing
- More economic to optimize production – getting the last barrel

Exploration cost expected to increase

- New production needed to meet future oil demand
- Need of finding new oil reserves

Higher marginal cost pushed prices higher
Usd/bbL Source: Goldman Sachs Commodities Research



Crude market expectations



WTI prices 2007: 71.95 usd/bbl

WTI prices Q407: 90.50 usd/bbl

WTI prices Q108:115.00 usd/bbl

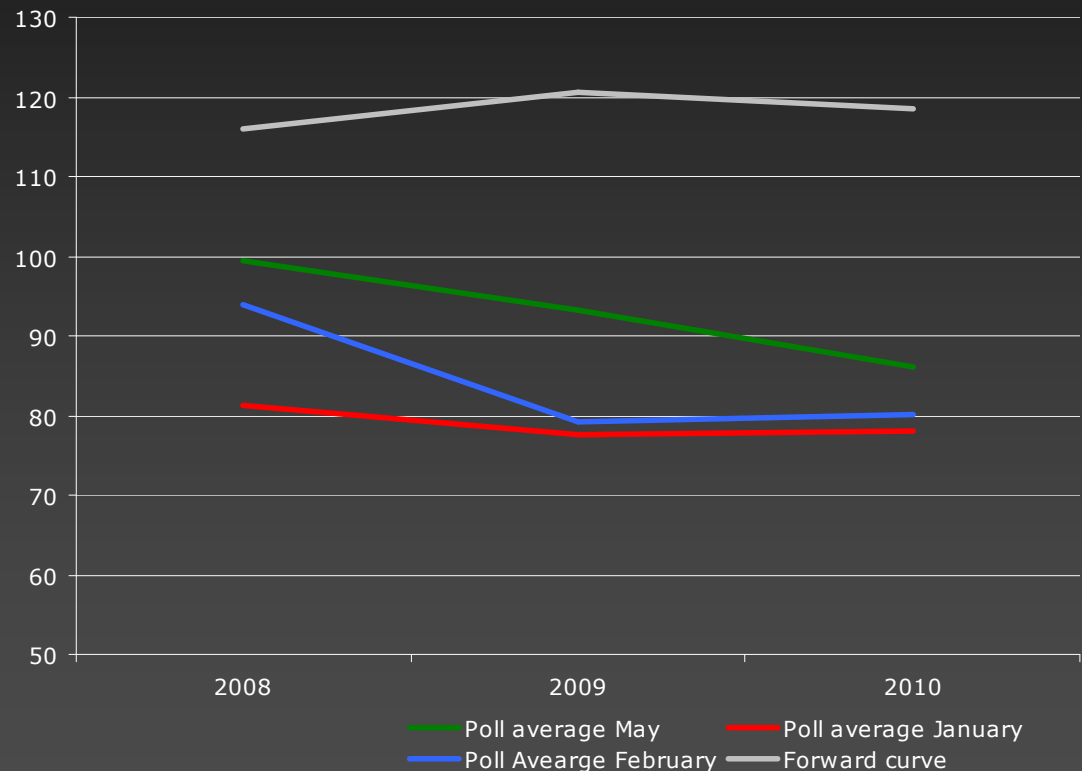
WTI prices Q208:137.00 usd/bbl

Latest predictions:

- Goldman Sachs predict WTI to reach 145.00 usd/bbl at the end of 2008.
- Reason:
 - Demand growth have been stronger than supply growth
 - Especially non-OPEC production have disappointed
 - Funds puts a floor to the low side of crude
- Market more product driven than crude driven
- Main reason for a drop in market is negative margin on refined product

Reuters polling (WTI)

Unit: usd/bbl Source: Reuters poll, OWRMS

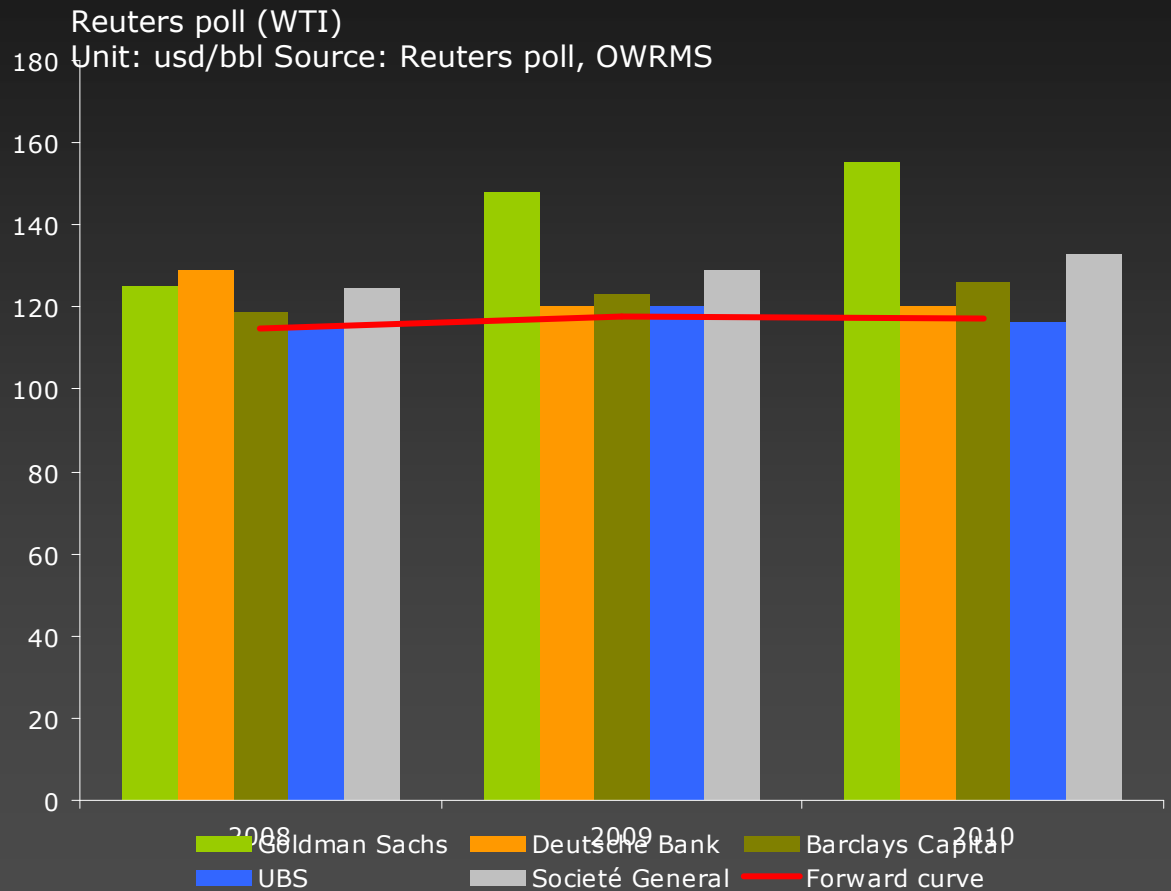


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Crude market expectations



- Since 1999, the poll have consistently under-estimated the crude oil price.
- Forecast have from 1999-2007 been off by 30 percent
- If 2008 forecast is of with 30 percent as well, average price will end above 130 usd/mt
- GS have been most aggressive on forecasting high oil prices. Mentioning 200 usd/bbl in 2010.
- MS have changed their forecast most dramatically of all from being Bearish to now one of top-three Bullish Investment banks.





Long term expectations



The need for new production



Lower output

- Current production fields expected to drop with 123 mbpd from 2005-2030

High increase in demand

- Total demand will increase by 32.7 mbpd from 2005 – 2030 which is about 40 % (like we have seen from 1987-2006)

New production needed

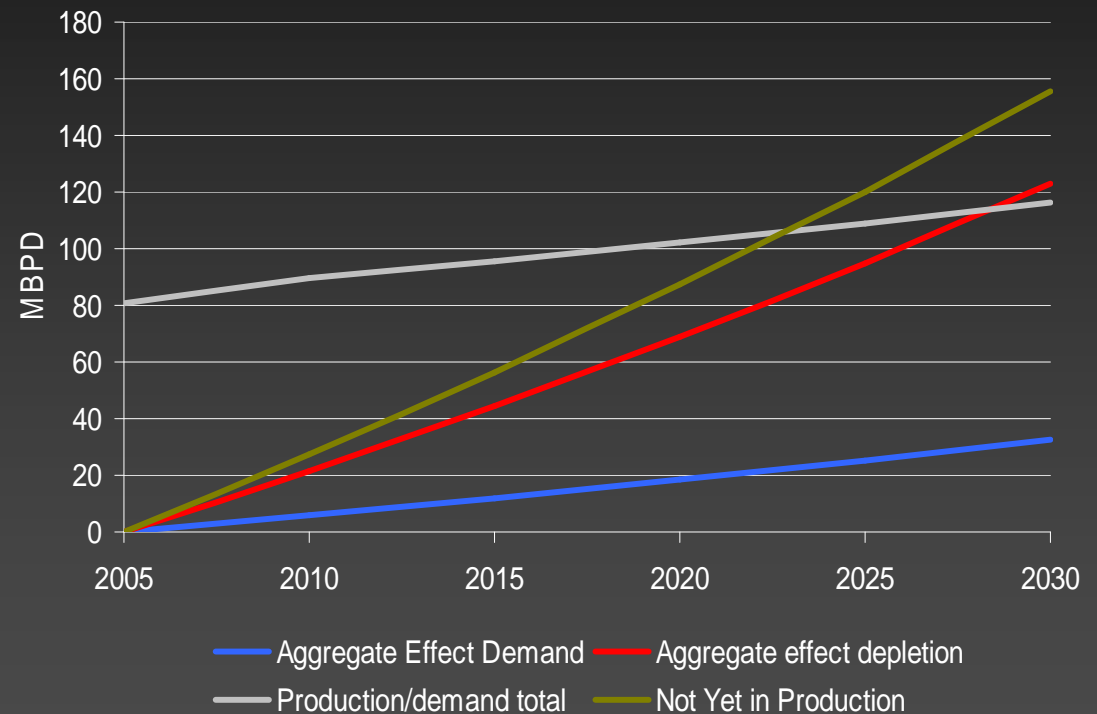
- A total of 155.7 mbpd is needed in order to fore fill both decrease in current production and increase in future demand growth.

Long term

- Production cost most likely to increase.

The need to find new production

Unit: million barrels per day, Source: IEA



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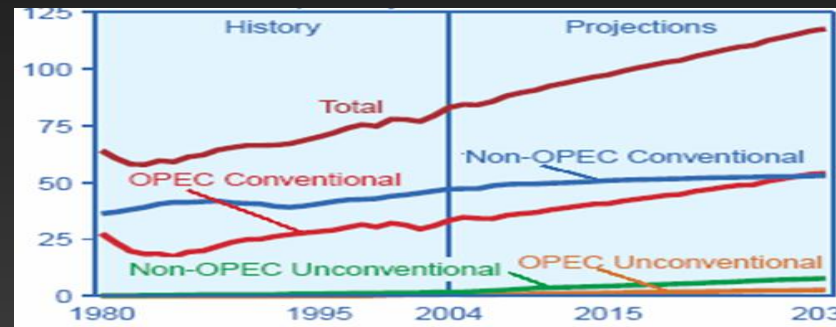
Long Term market expectations



Increased demand

- OPEC need to provide more than one-half of additional production
- World supply much more dependent on OPEC
- Above 60 percent of demand increase are to be found in the transport sector.

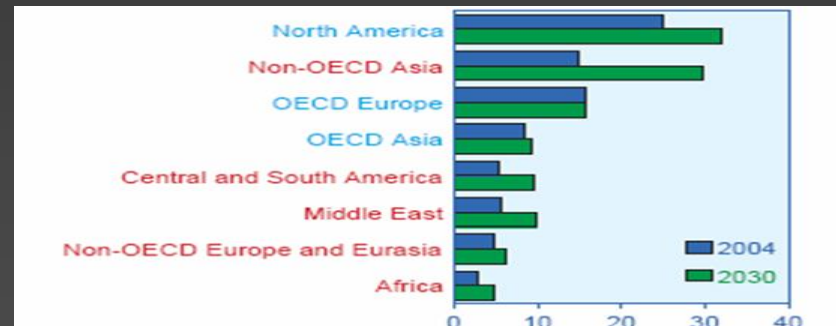
Daily production in BBL
Source: IEA




Oil reserves

- Total 1317 billion barrels
- Current production about 86 mbpd = 42 years
- New oil reserves
 - Last new oil reserve to increase dramatically was in Canada = 174 billion barrels)
- Major oil producing countries of OPEC have and R/P of 20-100 years

Consumption by Region million bbl/day
Source: IEA





**Fuel oil
supply/demand –
Forward curve**



World fuel oil consumption



Shipping highest potential demand increase

- Annually growth in Industry of above 5 % Y/Y
- No substitution energy source available
- Less demand could come from legalisation
- Change from HSFO to LSFO

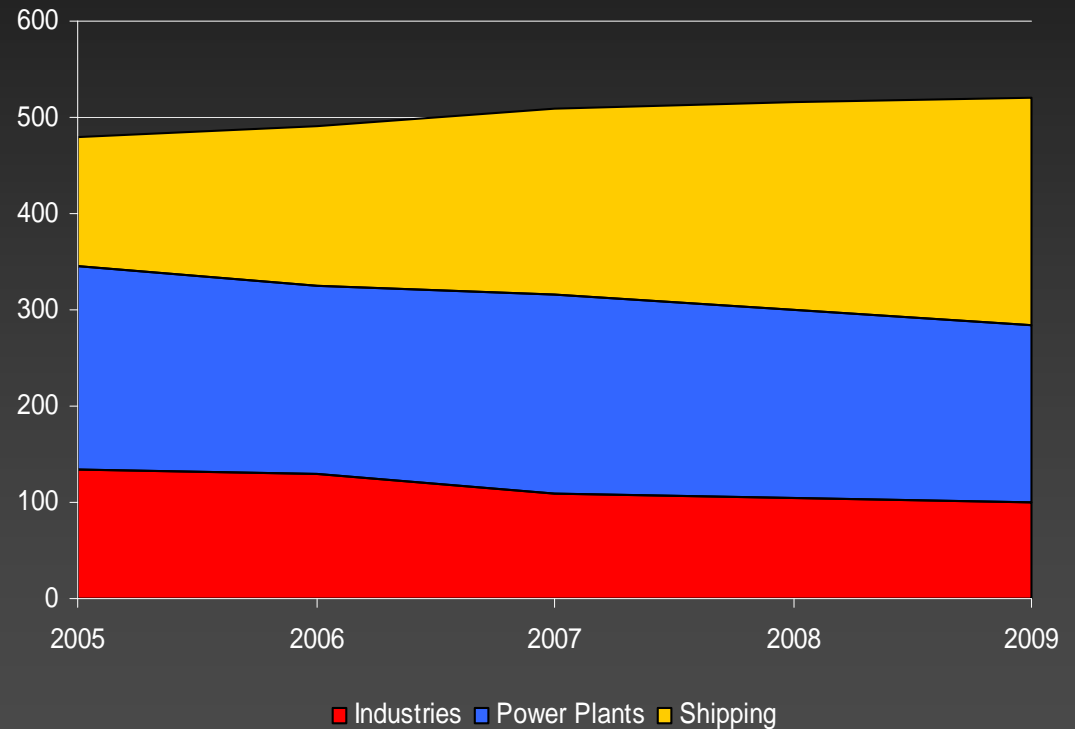
Power plants lowest demand increase

- Opportunity to switch to Natural gas as energy source.
- Breakeven within 5-7 years

Asia remains strongest area

- Increased production
- High demand for transportation
- Long term own refinery capacity

World fuel oil consumption
Unit: MT, Source OWRMS



Less fuel from Refinery



The marginal refinery used in the calculation of supply of middle distillate

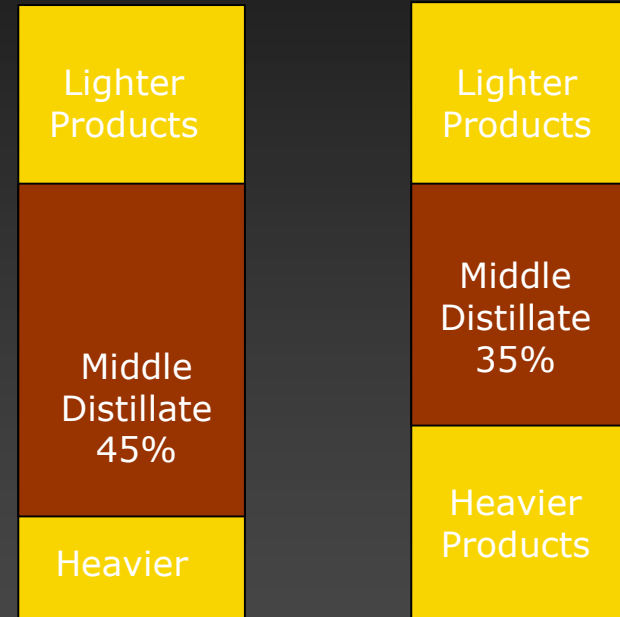
- In the base case new refineries have been given a middle distillate yield of 45%.

Marginal capacity existing refineries

- If marginal crude supply is heavier, then the marginal middle distillate yield will fall
- OPEC spare capacity is mainly heavy – Saudi Arabia's Arab Heavy
- New production is slightly lighter but more sour than the current average crude

New Capacity
Utilisation: 90%

Marginal
Existing
Capacity



Fuel Oil Flow

Relatively more Fuel Into the Market 2003 – 2005,
relatively less 2007+?



Fuel oil crack spread



Last crude rally have left crack spreads at all time lows

Historical crack spread for Q208-Q409
Source: ICE, Platt's, OW RMS

- More supply out of FSU as crude output have been positive
- FSU refinery fuel yield higher than average, leaving more fuel
- High stock levels of Fuel in both ARA and Singapore, leaving fuel oil trading in contango
- Industrial and power plant industry are slower on demand
- China have picked up term contract for supply of fuel from Venezuela, leaving lower overall demand in Singapore



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Factors affecting Fuel Oil prices in 2009



- **Growth in China, India and Middle East**
- **Health of US economy**
- **Demand / supply balance?**
- **OPEC has to produce more to fill any gap. But are they able and willing?**
- **Currently market is soft due to demand destruction in OECD and more supply from OPEC, will they cut in September?**
- **Watch the diesel Crack, a very important factor for Fuel oil**
- **The flow from funds, where will they invest in 2009?**



Our view on Fuel oil in 2009



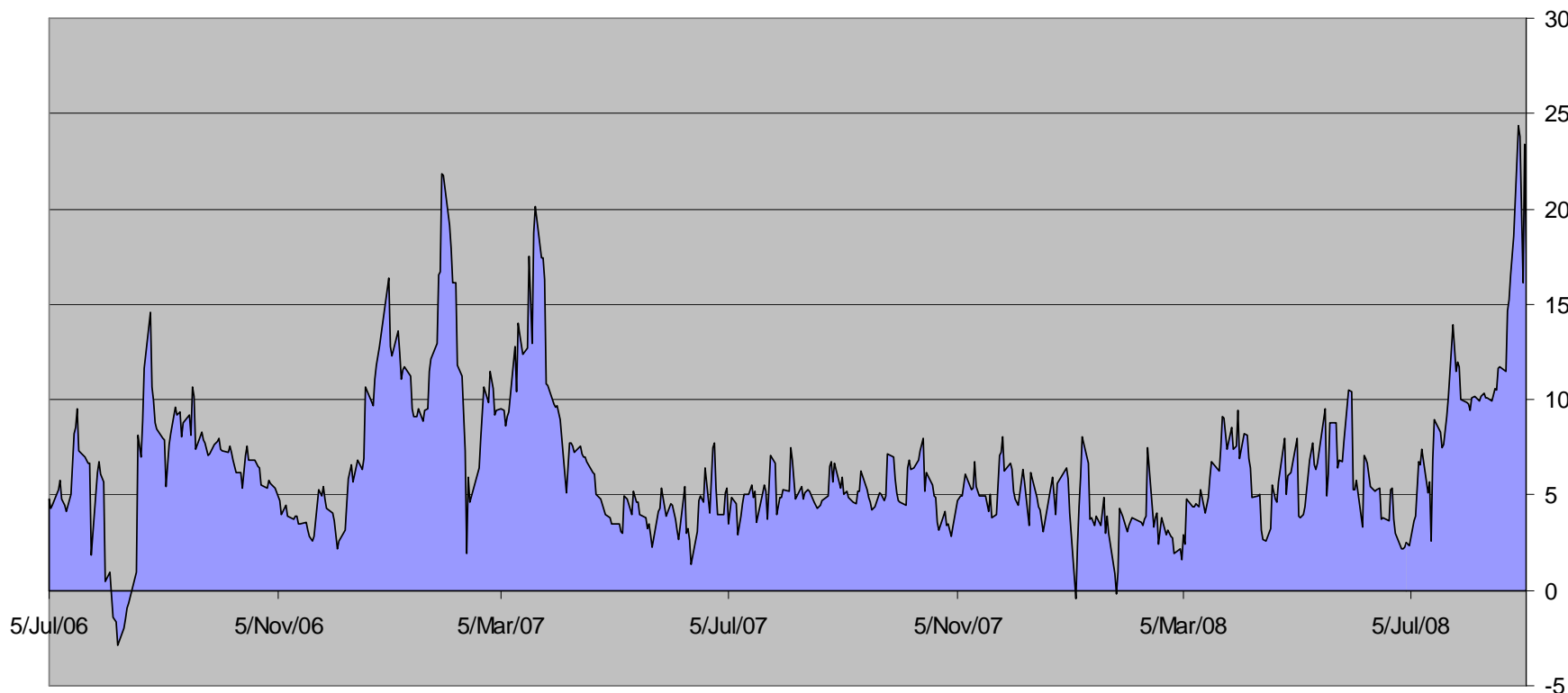
- **We believe fundamentals are supportive of a strong recovery in late 2008**
- **Thus the bottom for 2009 may be found in Q4 2008**
- **Higher barging cost due to new legislation**
- **Fuel oil prices for 2009 (3.5% barges FOB Rotterdam): \$650 average, leaving today's levels interesting**





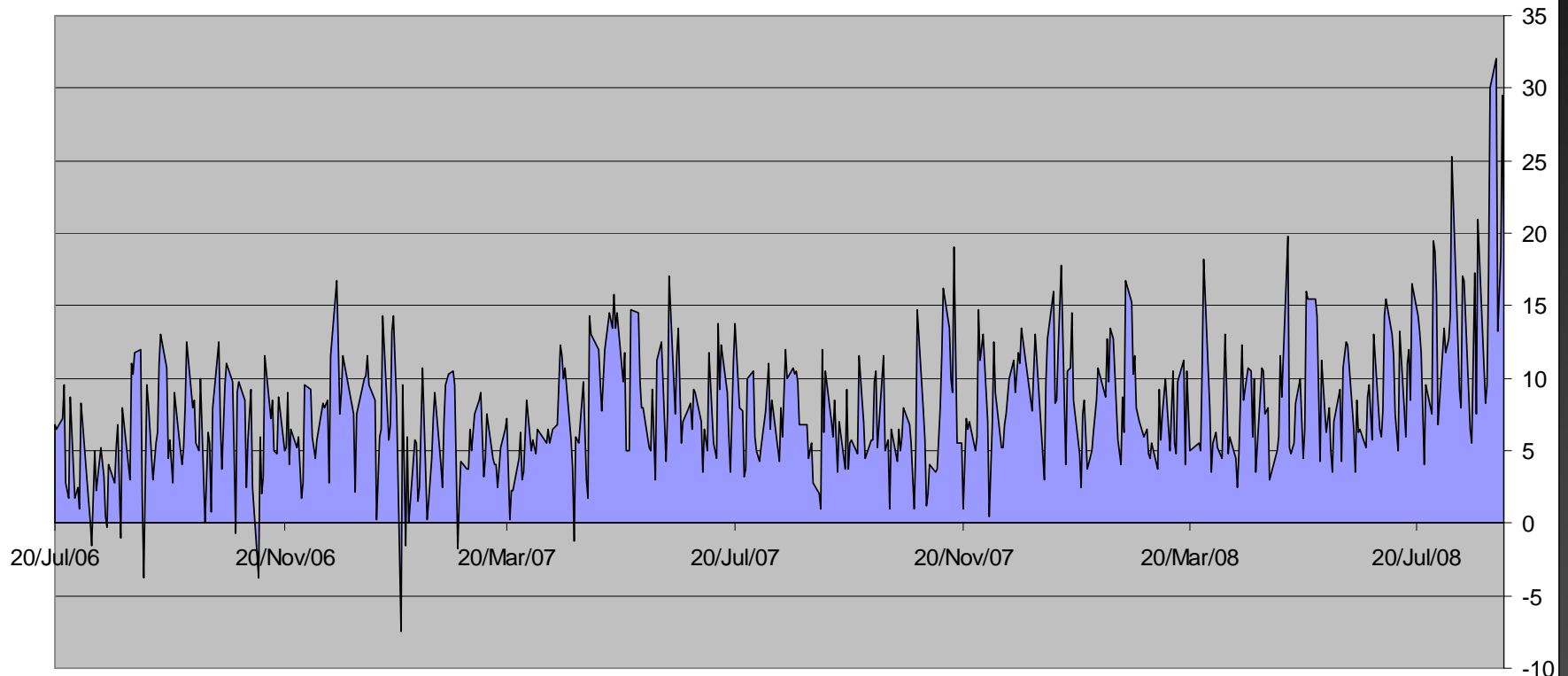
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Sing 380 cst VS Sing 380 Fob



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Rotterdam 380 cst VS 3,5% Rot Barges Fob



Rdam Brgs 3.5% fob vs Rdam Physical



Rdam brgs 3.5% vs Rdam BW380

- Correlation from 2003: 99.83%
- Correlation from 2007: 99.53%
- Spread from 2003: 6.45
- Spread from 2007: 7.73

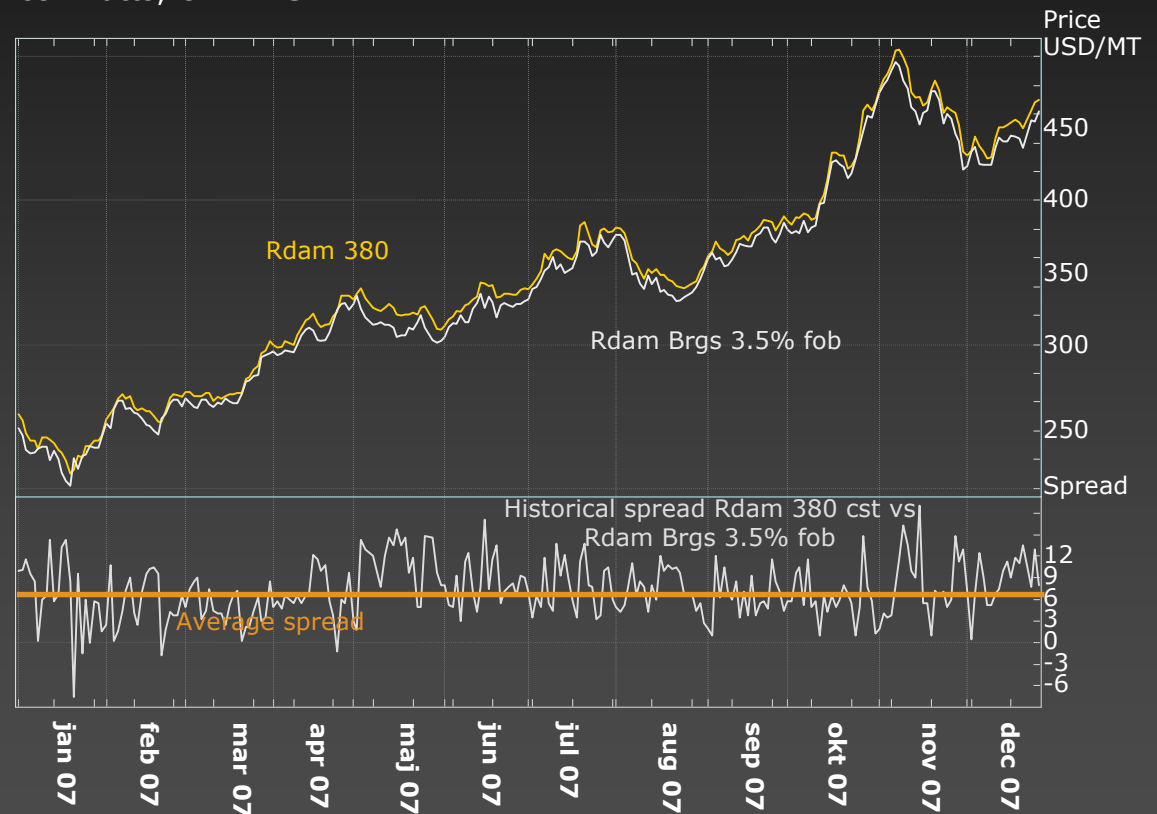
Comments:

- Demand in ARA area have been steady last years
- Barging cost have increased with new legislation and SECA area

Expectations:

- Upgrading of barge fleets and more demand expectation also means an increased barging cost in ARA.
- More Rdam barges 3.5% fob or Rdam BunkerWire floating contracts
- Contracts securing max sulphur content on all deliveries

Rotterdam Physical
Source: Platts, OW RMS



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Sing 380 Cargo Fob vs Singapore Physical



- Correlation from 2003: 99.75%
- Correlation from 2007: 99,84%
- Spread from 2003: -3.60
- Spread from 2007: -4.10
- Spread since Jan 1st 2008 -4.7

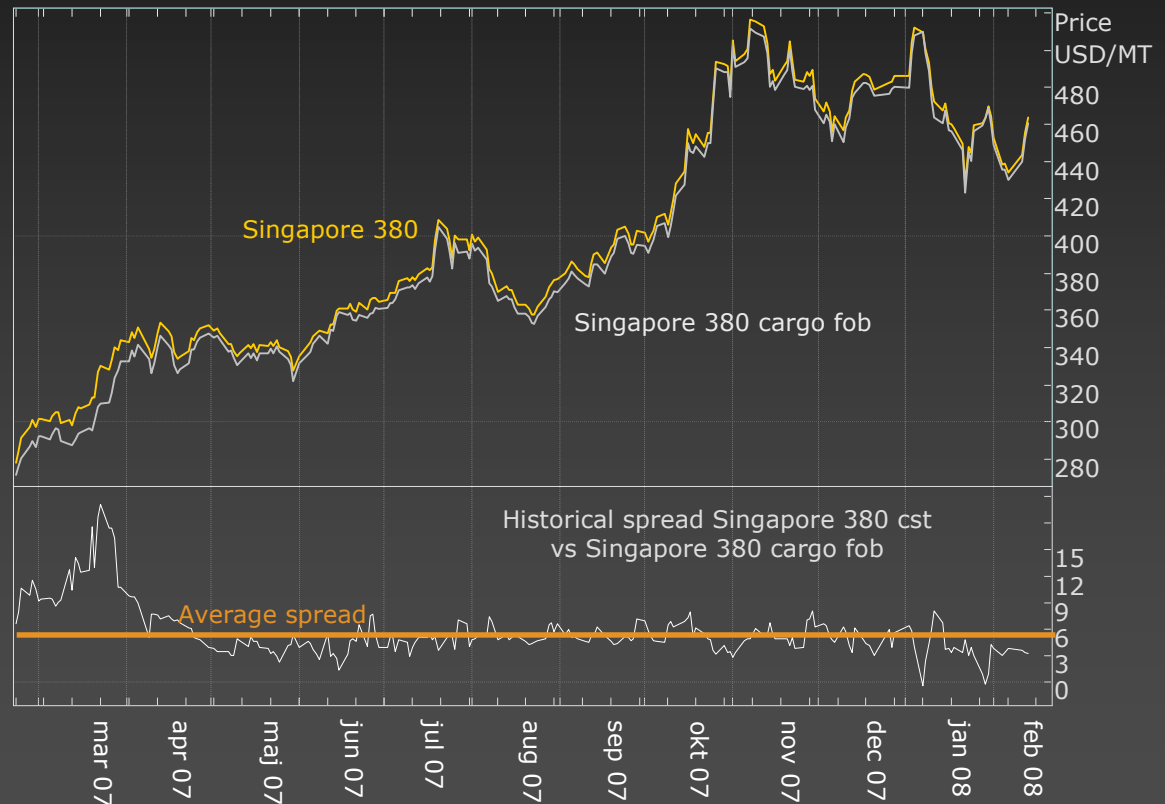
Physical Singapore
Source: Platts, OW RMS

Comments:

- Singapore physical bunker market have been increased in suppliers leaving more competition
- China have not increased demand as much on fuel as on other product leaving more product for bunkers in Singapore

Expectations:

- Singapore 380 delivered product is expected do decrease more against Singapore 380 CF
- Cargo from Europe and South America reach a price of almost 40 usd/mt. Widening the E/W spread.



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CIF MED 3.5% vs Gibraltar Physical



- Correlation from 2003: 99,56%
- Correlation from 2007: 99,51%
- Spread from 2003: 18.18
- Spread from 2007: 17.75

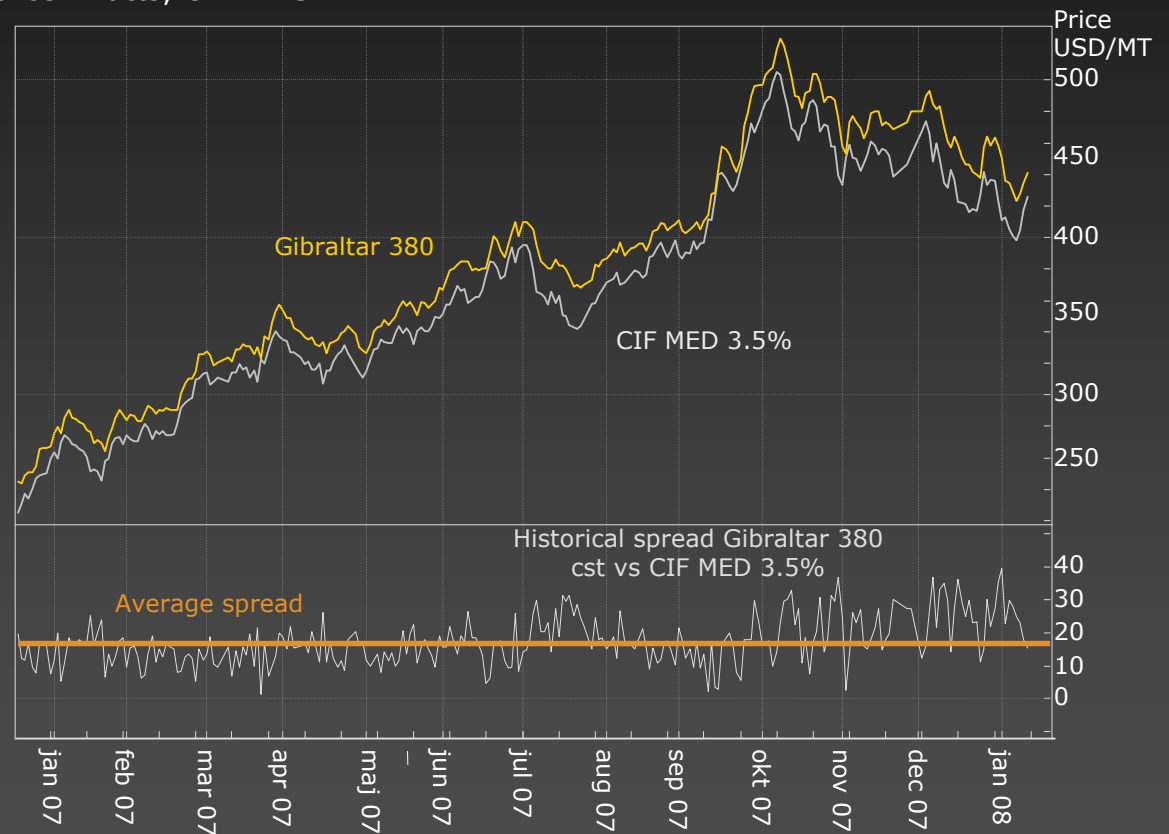
Comments:

- Gibraltar market changing into a key bunker hub for LSFO
- Physical bunkers have increased over CIF MED3.5% due to higher cost and more demand

Expectations:

- Less local production from refinery and more import leaving local prices stronger for local bunkers

Gibraltar Physical
Source: Platts, OW RMS



USGC 3% vs Houston Physical



USGC vs Houston 380

- Correlation: 99% both
- Spread from 2003: 12,63
- Spread from 2007: 15,60

Comments:

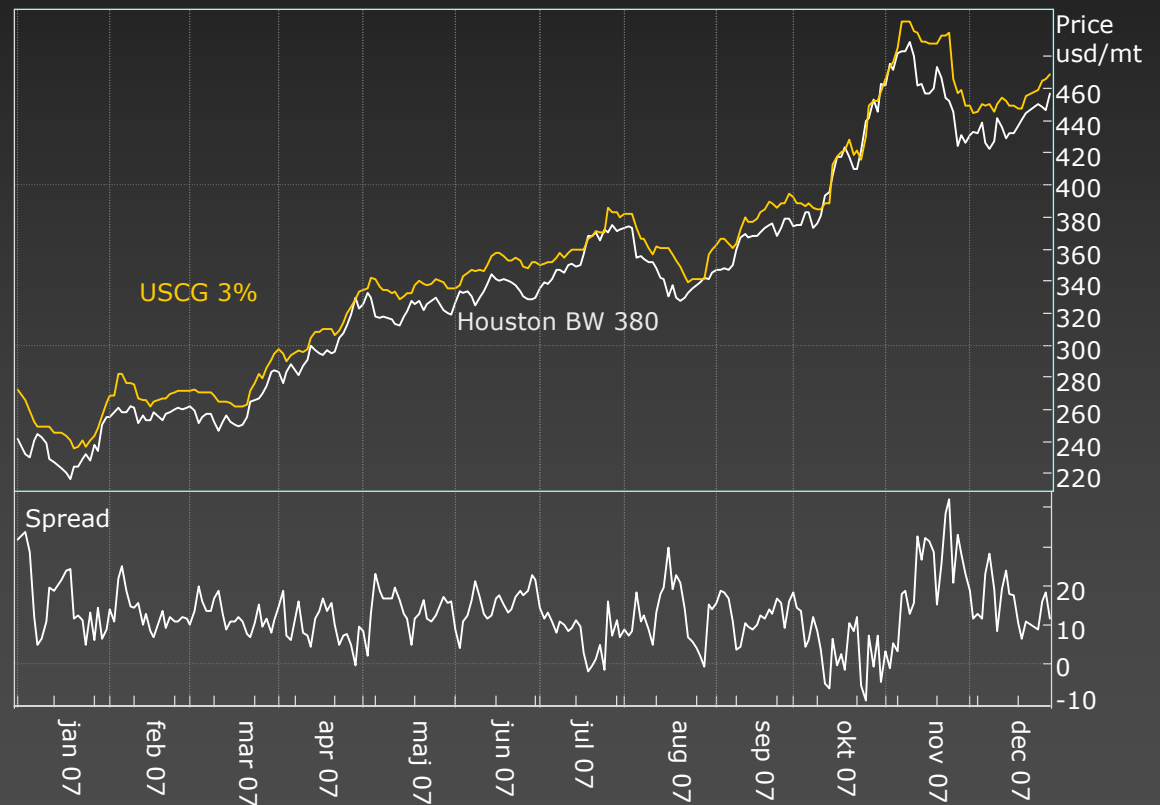
- Houston bunkers have increase due to:
 - Higher barging cost
 - Short on fuel oil in USGC

Expectation:

- Barging strengthening further
- More government control
- Expectation of LSFO regulation

USGC 3% vs Houston BW 380

Source: Platts, OW RMS



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Sing 380 Cargo Fob vs Rdam Barges



- Correlation from 2003: 98.99%
- Correlation from 2007: 98,14%
- Spread from 2003: 34.53
- Spread from 2007: 36.61

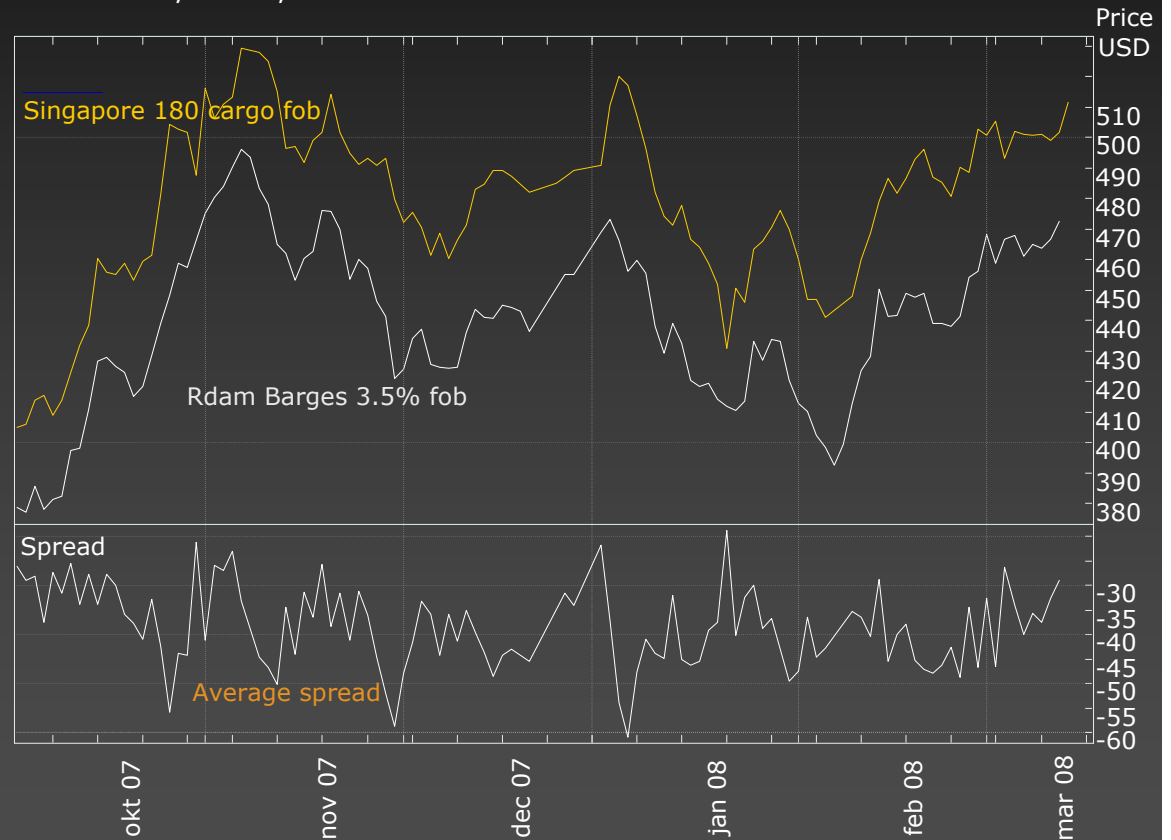
East/West Spread
Source: NYMEX, Platts, OW RMS

Comments:

- EW spread have increased due to higher:
 - Higher demand in Asia
 - Higher shipping cost

Expectations:

- AG is getting short on fuel oil, leaving competition between AS and Singapore for European product, putting pressure on EW
- China have cargo term contract with Venezuela on Fuel oil



Conclusion

High volatility

- Market very nervous – react's on every news story. Determined by:
 - Fundamentals
 - Funds
 - Weak USD
- Could change overnight from geopolitical issues
- Not many risk factors build into current commodities prices

“New” products:

- Fixed - / floating price
 - Combination of physical and financial
- Zero-Cost Option structures to benefit from volatile market

Market outlook

- Mid term we consider the market to be soft and strong recovery at the end of 2008.
 - Demand destruction
 - Lower stock levels
 - Tight supply
 - High costs for new Crude oil projects
- Front end more volatile than backend
 - Leaving a cal 2010 hedge less of a risk
- Fuel oil to strengthen further into 2009 with less supply and steady demand

