

KEY ISSUES IN OIL INVENTORIES

Third IEA – IEF – OPEC Symposium on Energy Outlooks

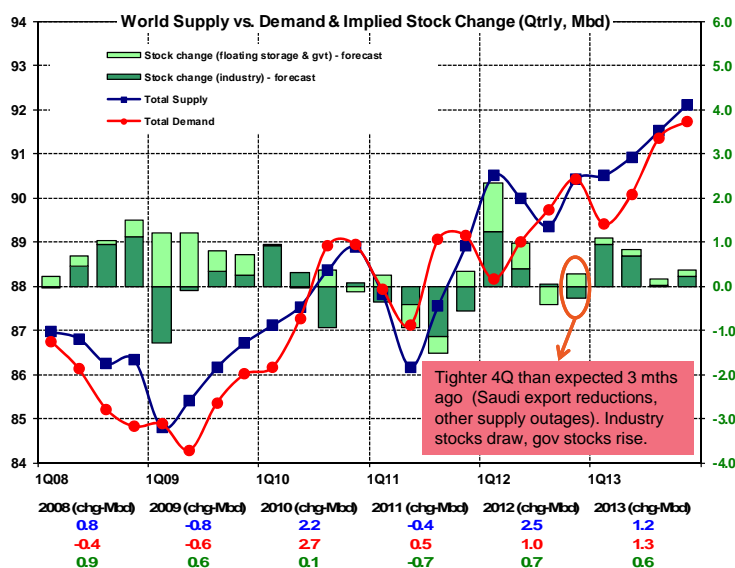
Riyadh, 22 January, 2013

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VP Market Analysis for Trading & Shipping – TOTAL SA

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WORLD SUPPLY/DEMAND BALANCE



2013

Seasonal pattern of **demand** (weak 1H vs. 2H, plus economic trend)
Steadily increasing **supply** (strong North American supply growth), offset by flat or falling OPEC supply trend (Iranian sanctions, gas penetration for power generation, export cuts) and by continued non-OPEC production issues (Sudan, Brazil, UK, etc.)

2012 Demand:

Seasonal trends: weaker 1H vs. 2H
In 1H, demand is compressed by weak economic growth as well as high & rising oil prices (impacts OECD demand mainly)
Recovery in 2H12 (seasonal trend) - demand averages 90 Mbd in 2H12

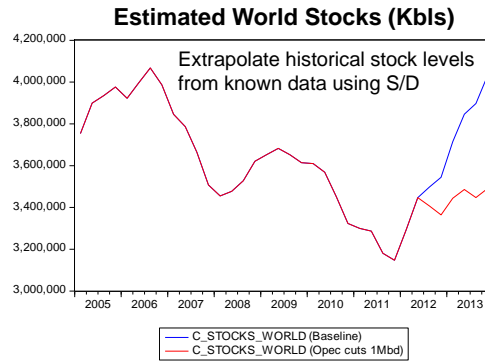
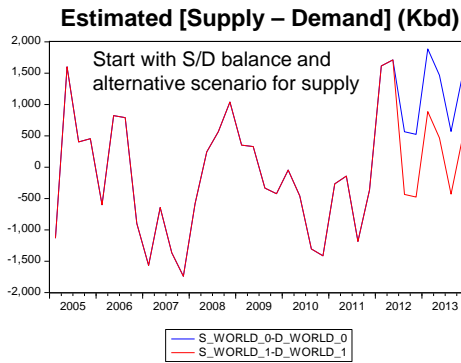
2012 Supply:

Strong overall OPEC crude production growth (+1.6 Mbd): sustained Saudi production (pledge to supply market), Libya recovery, new W.Af. fields, Iraq.
In 2H, Non-OPEC supply +0.6 Mbd, but Iran supply falls -0.9 Mbd,
3Q12 - heavy N.Sea outages
4Q12 - WAF outages, Kurdish losses, Saudi & Russian exports lower

2012 Stocks:

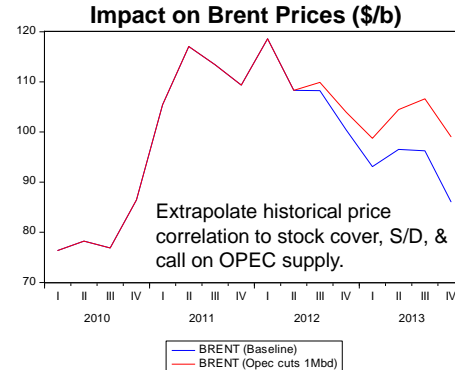
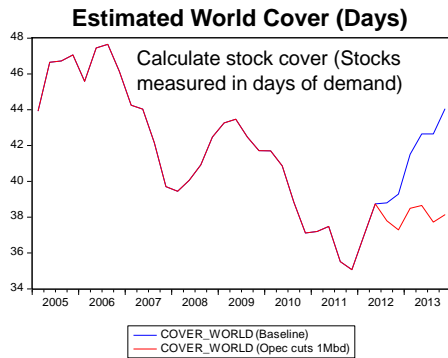
Overall stockbuild during the year due to massive 1H OPEC surge.
1H12 heavy stockbuild (in part floating storage / gvt) due to weak demand
2H12 stockdraw due to seasonal increase of demand and lack of Iranian / North Sea / WAF & other barrels

Analyzing Oil Prices vs. Stocks – historic stock data only help determine historic price relationships, but can help with forecasting



This is an example of use stock and S/D data.

Timeliness, accuracy, and completeness of data improve forecasting.



Today's prices reflect today's stocks and anticipations of those tomorrow

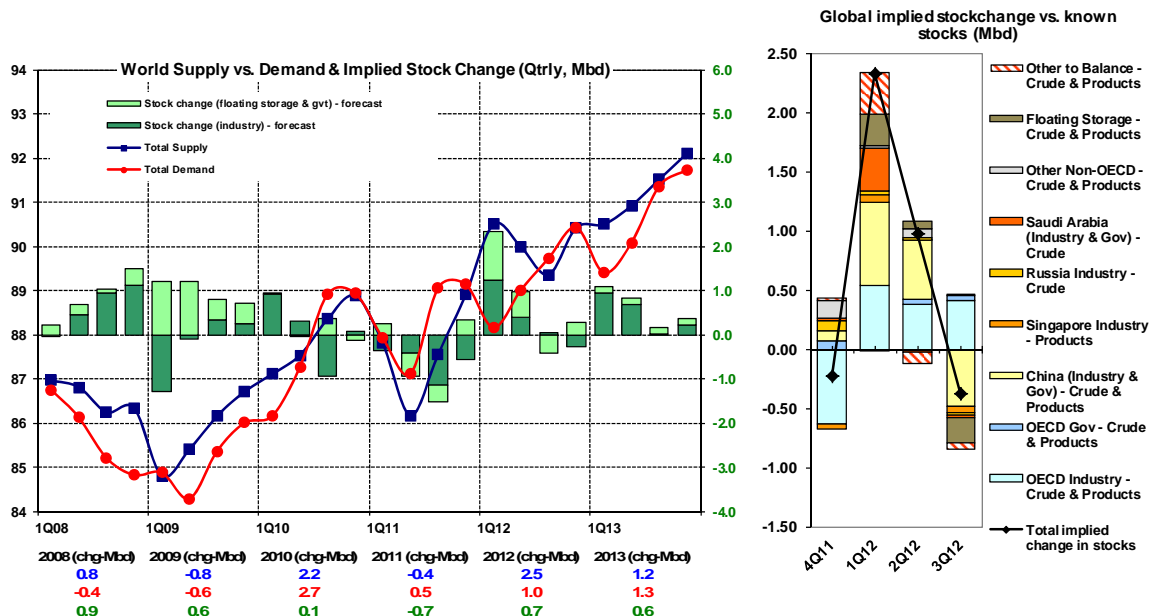
Up-to-date and high frequency data help refine this process.

TS / Market Analysis

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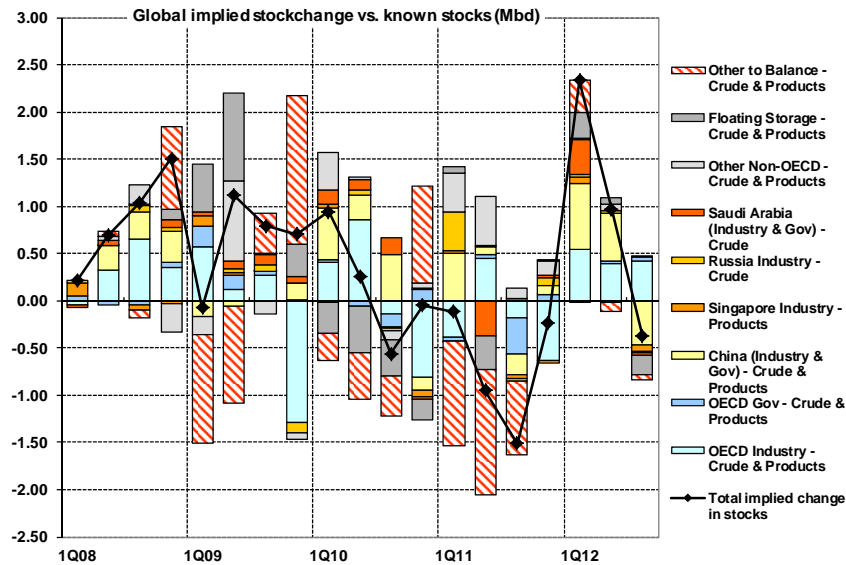
WORLD SUPPLY/DEMAND BALANCE VS. STOCK CHANGES



- Since 4Q11, compiled stock data has confirmed world oil supply/demand balance
- Non-OECD stocks have been a significant part of large global stock changes
- China alone has been the largest swing factor overall



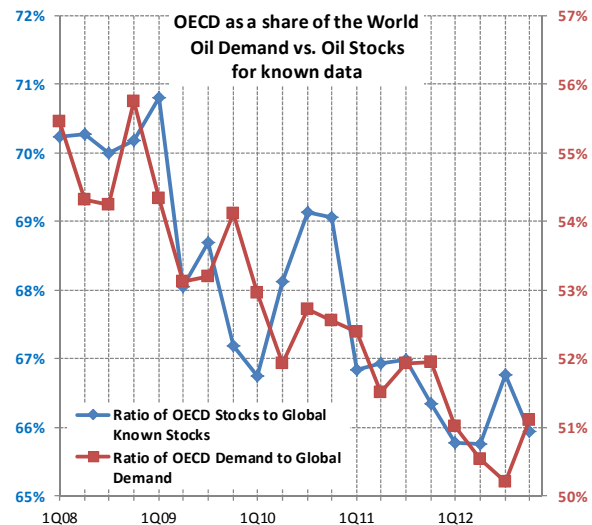
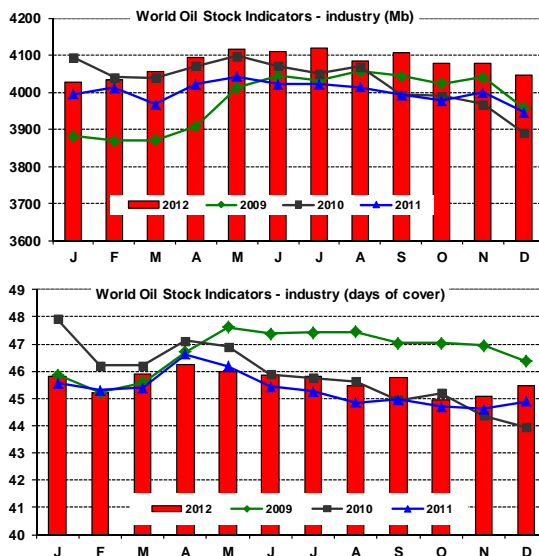
GLOBAL IMPLIED STOCKCHANGE VS. KNOWN STOCKS



- Good performance since 4Q11 is an exception, and not a typical situation
- Previous years show much larger deviations with no clear pattern
- Correct and complete data at all levels of the balance is still a long-term goal
- Improving JODI coverage of non-OECD countries is vital to this process



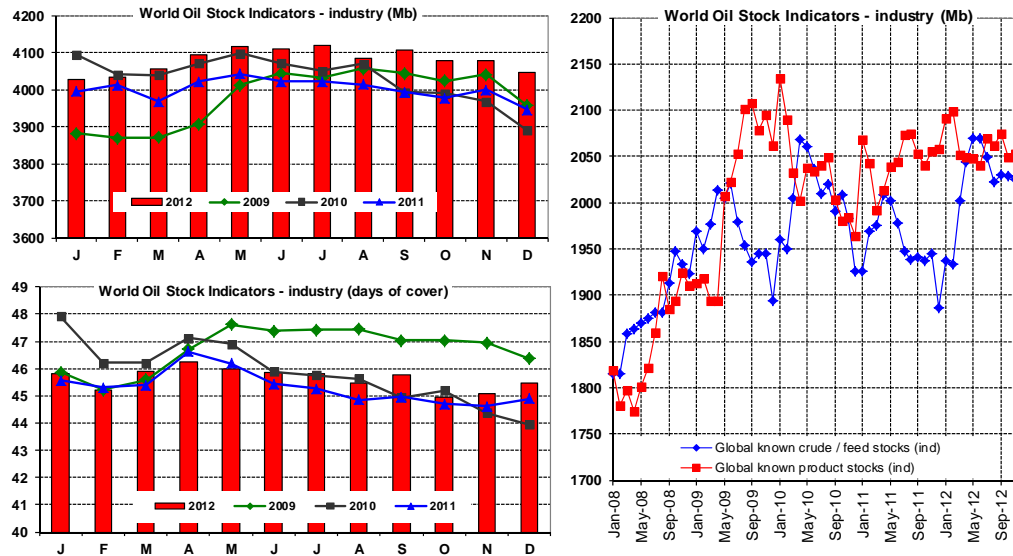
WORLD OIL STOCK INDICATORS – OVERALL AND BY REGION



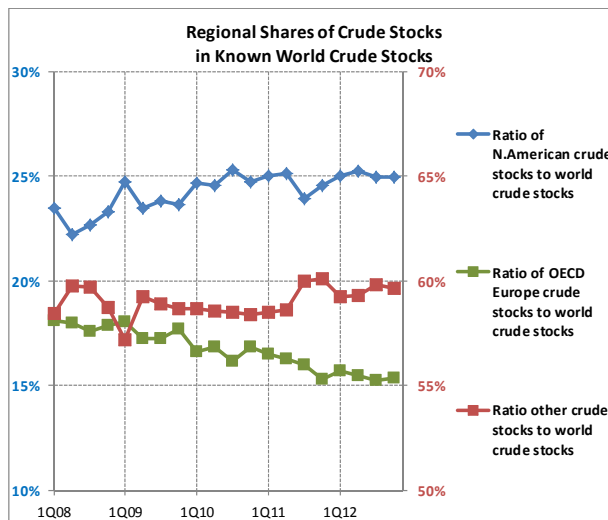
- As the OECD's share of world oil demand declines, so does its share of oil stocks
- Moreover, the shares appear to decline proportionally
- While coherent at an aggregate level, the experience on the ground is more ambiguous ... EU cutting stocks, US, China & Saudi Arabia building



WORLD OIL STOCK INDICATORS – OVERALL AND CRUDE VS PRODUCTS

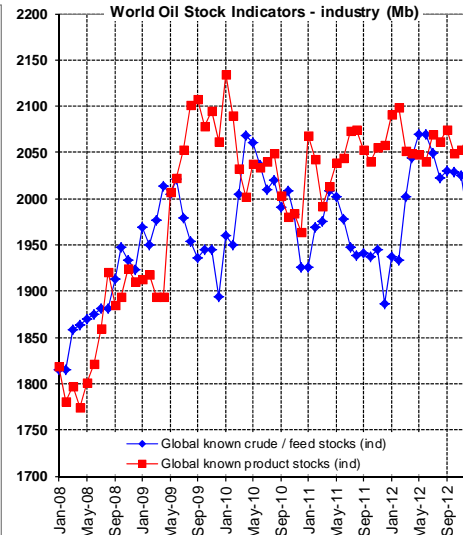
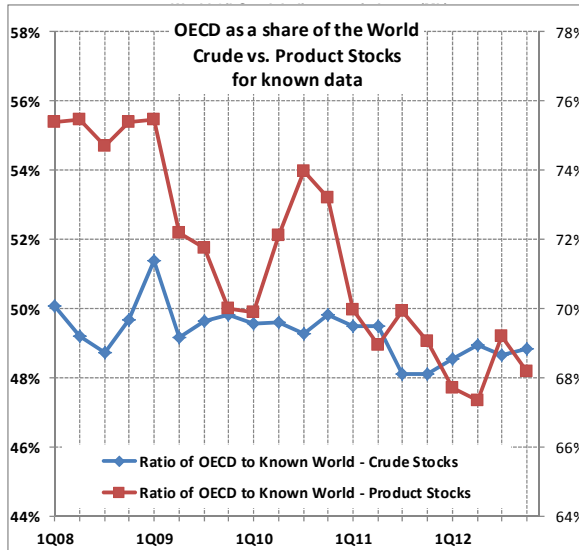


WORLD OIL STOCK INDICATORS –CRUDE STOCK TRENDS



- Crude stocks are tightening in the key international price setting market
- Largely linked to refinery closures ...but is this also reducing market flexibility?
- Crude stocks loosening in the N.American market, but linked to new infrastructure

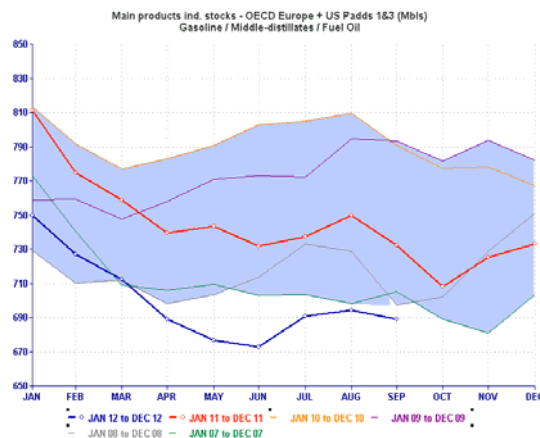
WORLD OIL STOCK INDICATORS – OVERALL AND CRUDE VS PRODUCTS



- OECD share of world oil product stocks is declining while that for crude is stable
- At the same time, product stocks have shown greater volatility than crude
- This has contributed to surprising tensions on refinery margins



REFINERY ENVIRONMENT HAS CHANGED ... IN TERMS OF PRODUCT STOCK MANAGEMENT



Consequences

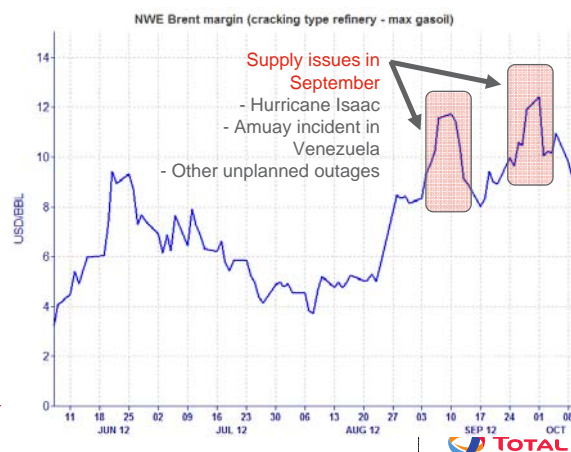
- Backwardation on product prices becomes steeper than that on crude as refiners can't keep up with market requirements
- Strong, but temporary, improvement in refinery margins, particularly due to tension on gasoil supply

Change of economic environment

- With low margins seen in past years, high cost environment and financing difficulties, refiners have tightened their product stocks

Impact

- Lower product stocks => no cushion to absorb supply issues
- Upside spikes increase with events (Hurricane Sandy, Venezuela refinery outages, etc.)



CONCLUSIONS

- Worldwide structural changes in stocks reflect changes in the underlying markets
- Non-OECD stocks are increasingly important to the market because they represent a rising share of the overall stock volumes
- Stock trends in the key price setting markets continue to dominate oil market concerns
- However, with more Atlantic Basin crude moving east, Asian stock data will become increasingly pertinent to the Brent market
- Current prices reflect immediate stock levels and future expectations of stocks – historical stock data explains past prices but not today's prices – timely (high frequency), accurate, and complete stock plus S&D data allow us to better test price scenarios for the future