



MEDIUM-TERM OIL MARKET REPORT

*Press launch & expert
seminar*

IEA, Paris – 29 June

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2009

David Fyfe

*Head, Oil Industry & Markets
Division*

INTERNATIONAL ENERGY AGENCY



MTOMR 2009 – Some key issues

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- **Economic recovery – ‘business as usual’ or subdued growth trend?**
- **Pace of demand rebound amid structural change - demand destruction vs. demand suppression?**
- **Impact of economic uncertainty & price volatility on investment - supply growth slower in future?**
- **Biofuel, NGL & non-conventional oil as a safety valve, amid weak conventional crude growth**
- **Refining sector boom and bust cycles**
- **Supply crunch, or easier capacity buffer? – the role of economic growth & government, consumer choices**
- **A role for governments:**
 - 1. stimulating investment plus energy efficiency;**
 - 2. enhancing market transparency to reduce price uncertainty without choking off liquidity;**
 - 3. joined-up thinking on fuel quality & emission standards**

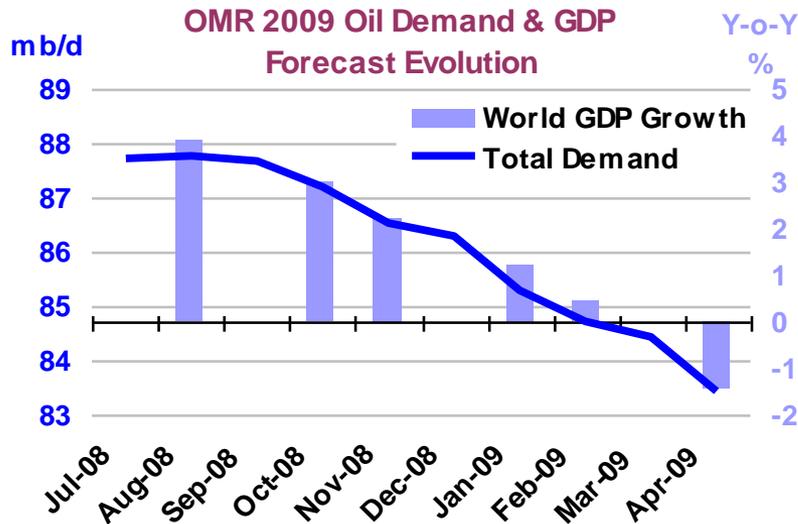


2009

Demand

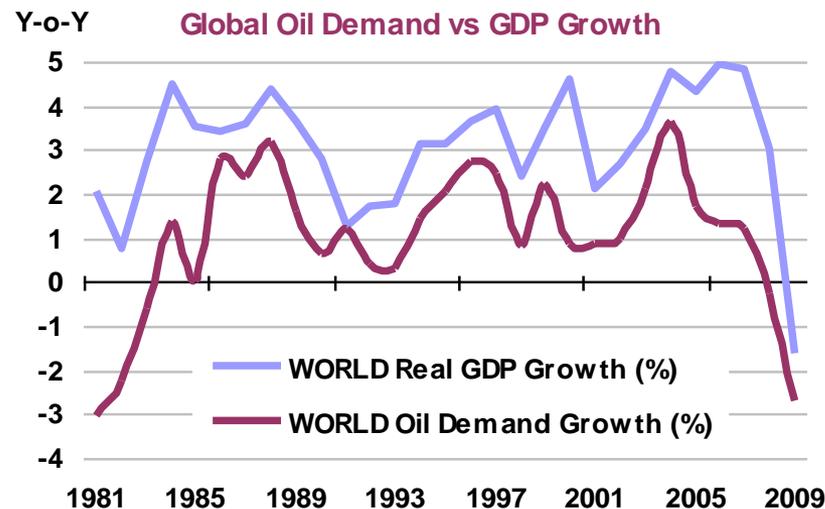


The global slump has hammered oil demand



- **GDP – and oil – demand forecasts cut sharply since mid-2008**

- **Oil demand is falling – even in non-OECD countries**



- **The short & medium-term outlooks are highly uncertain**

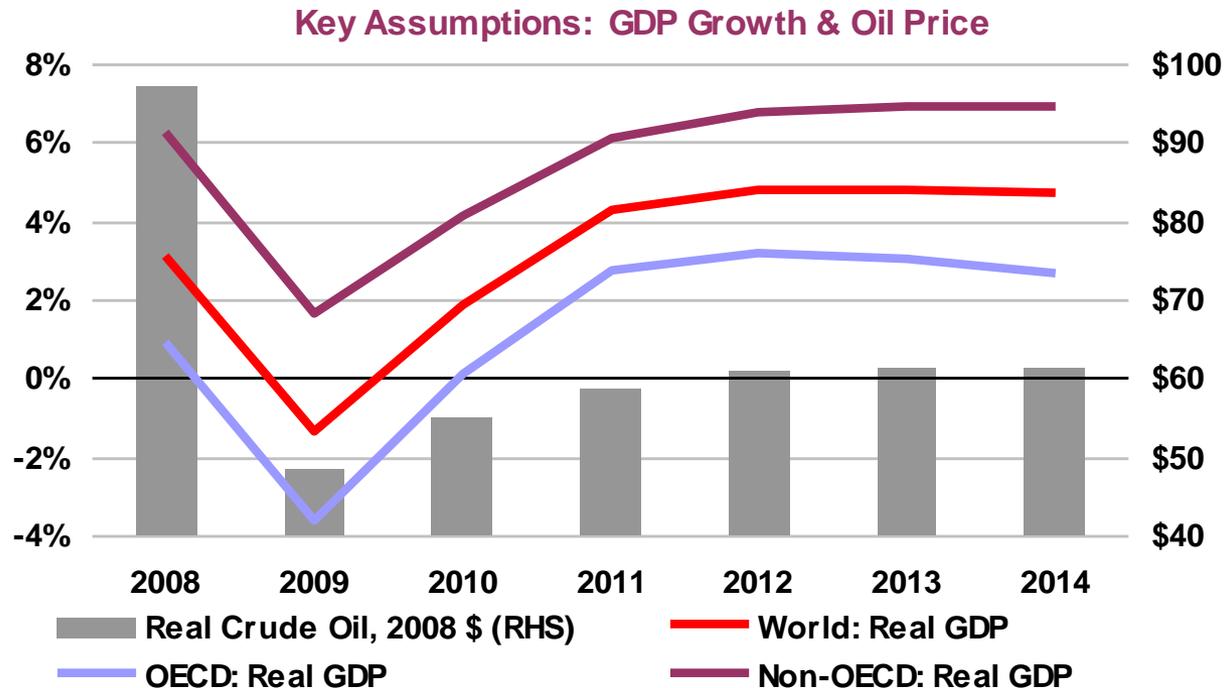
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Recovery expected from 2010: higher GDP case assumptions

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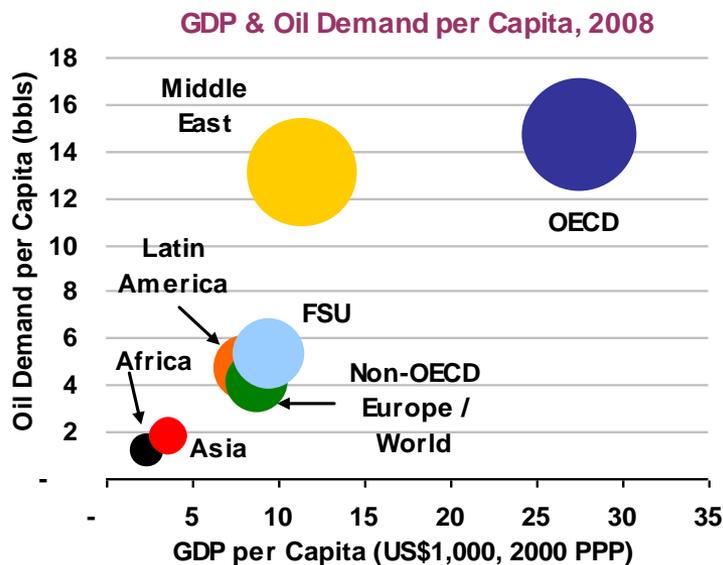
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- **Global economic recovery begins in late 2009/early 2010, leading to renewed oil demand growth**
- **Price assumption based on futures strip (not a forecast)**
- **The oil price recovers, but remains well below its 2008 peak and only slightly above current levels**

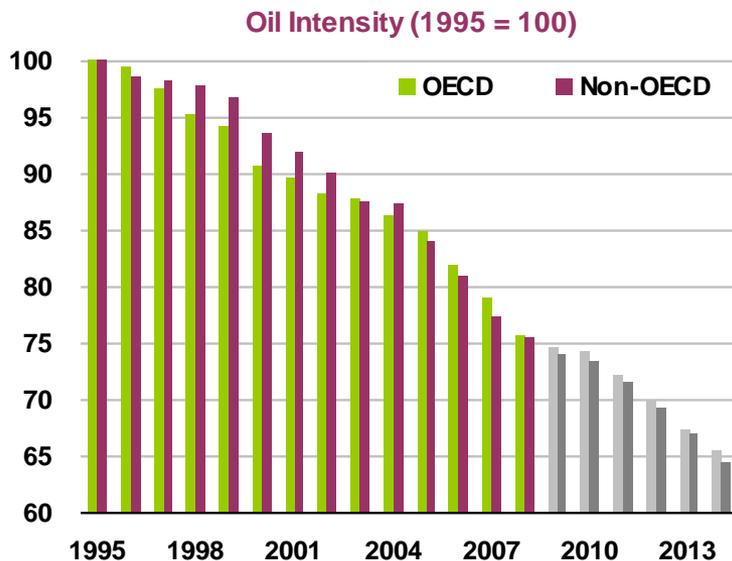


The efficiency conundrum: demand destruction v demand suppression



- Already-evident gains in road and air transportation efficiency, and interfuel substitution (gas) in power sector may prove durable

- Extra impetus from airline rationalisation, CAFE standards, auto-industry restructuring, cap & trade



- Global oil intensity seen declining 2.4% per year (vs. 2.1% previous decade), despite regional differences – e.g. Mid.East

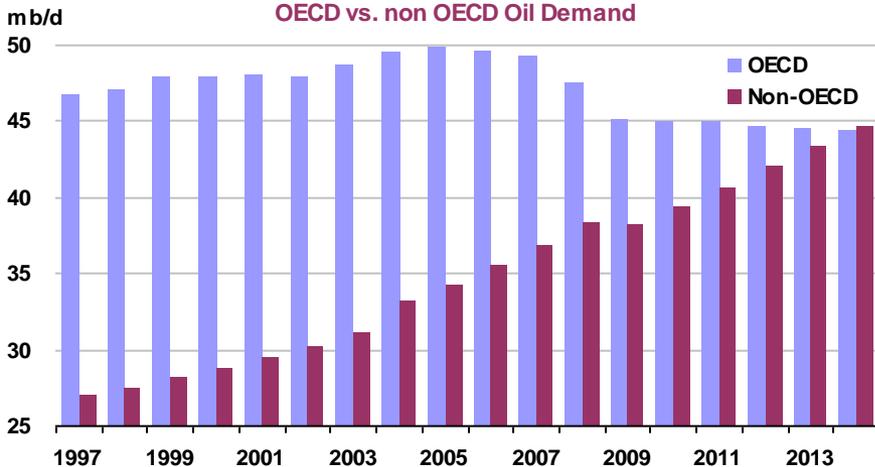
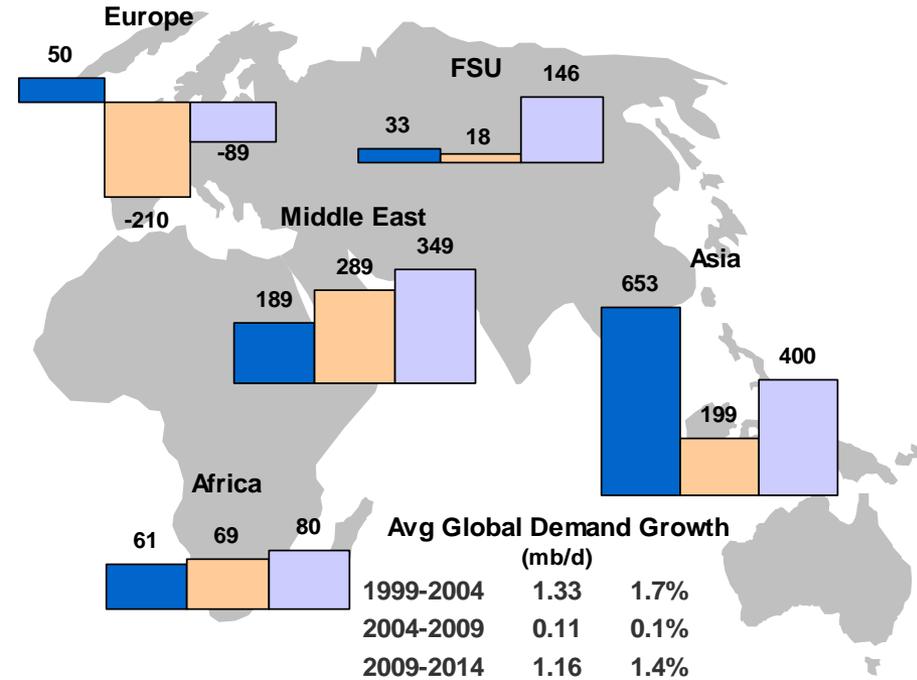
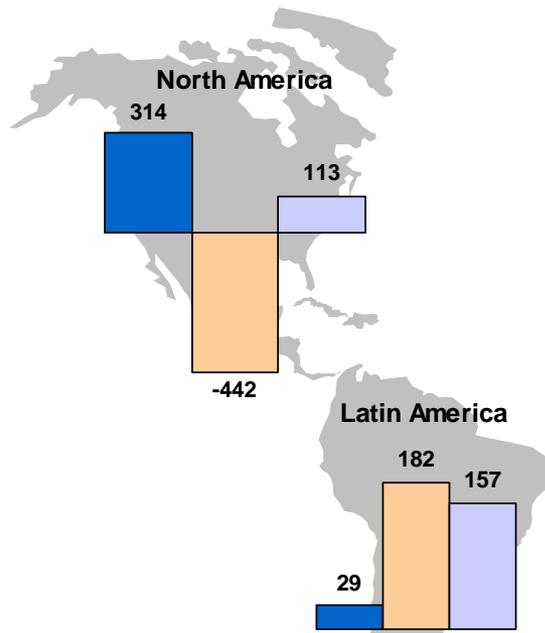
- Technological breakthrough or new policy initiatives (gasoline tax increases?) could *accelerate* the pace of efficiency improvements

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In the higher GDP scenario, re-emerging growth...

2009

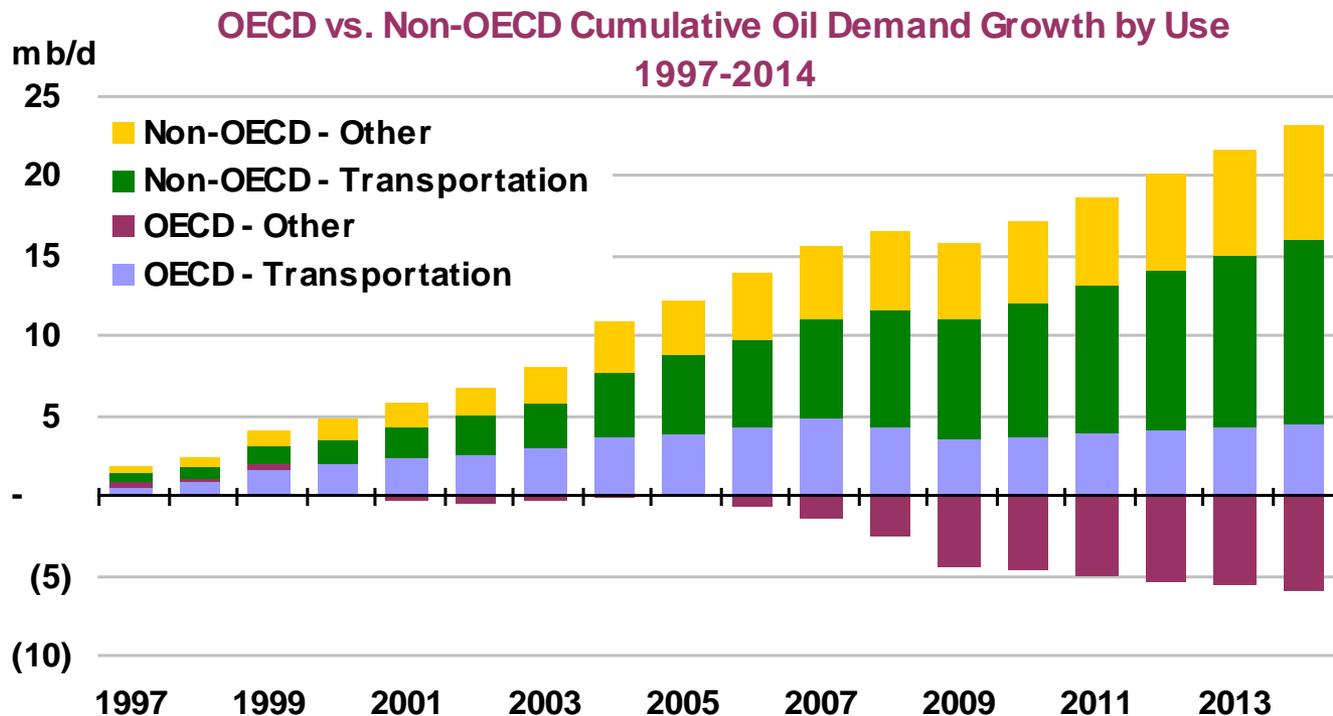
Average Global Demand Growth 1999-2004/2004-2009/2009-2014
thousand barrels per day



- Demand growth comes from emerging countries – >50% share by 2014
- Stronger GDP, higher income elasticity & sticky administered prices
- OECD economies will see demand stagnate => interfuel substitution & greater efficiency

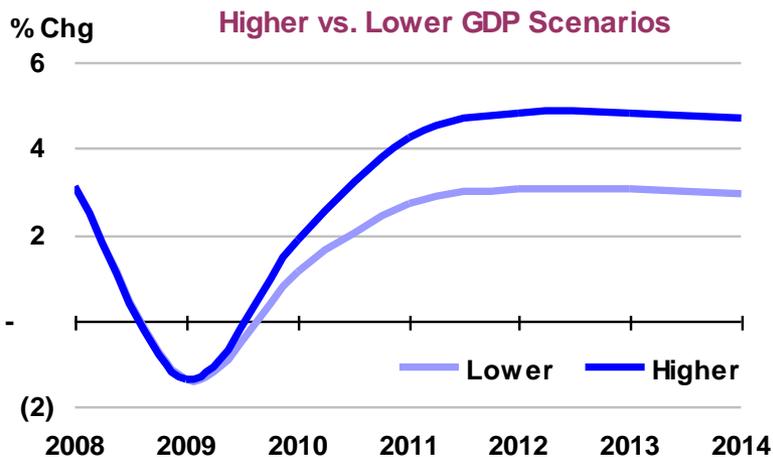
...with growth fuelled by transport and petrochemical sectors

2009



- **Transportation needs are expected to account for roughly 4/5 of total demand growth**
- **In the OECD, transportation demand will barely grow => saturation, efficiency improvements in the US**
- **Overall, projected 2013 demand is 3.3 mb/d lower than in December forecast**

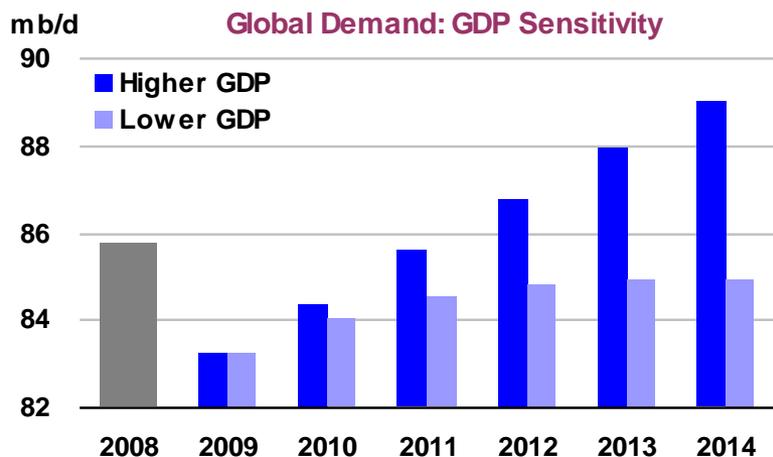
What if economic recovery is slower and weaker?



- This scenario entails a delayed recovery & lower long-term growth

- Purely illustrative, doesn't account for medium-term iterations – i.e., oil price changes & effects

- As such, *MTOMR* detailed downstream analysis is based on higher GDP case



- Lower case demand is 4.1 mb/d weaker by 2014 vs. high case (0.4% versus 1.4% annual demand growth)

- Many see this economic scenario just as likely as the 'business as usual' high case

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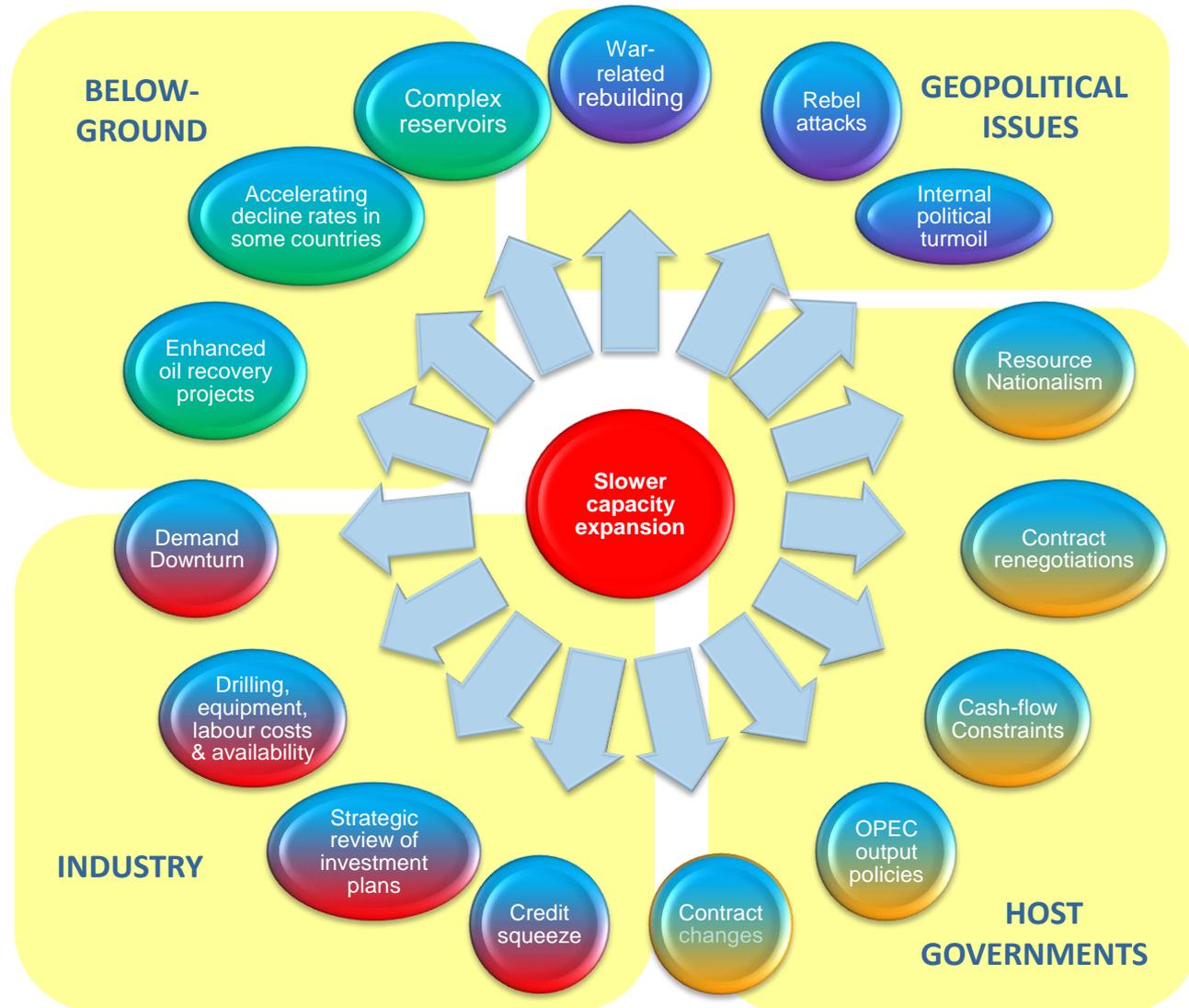
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Supply



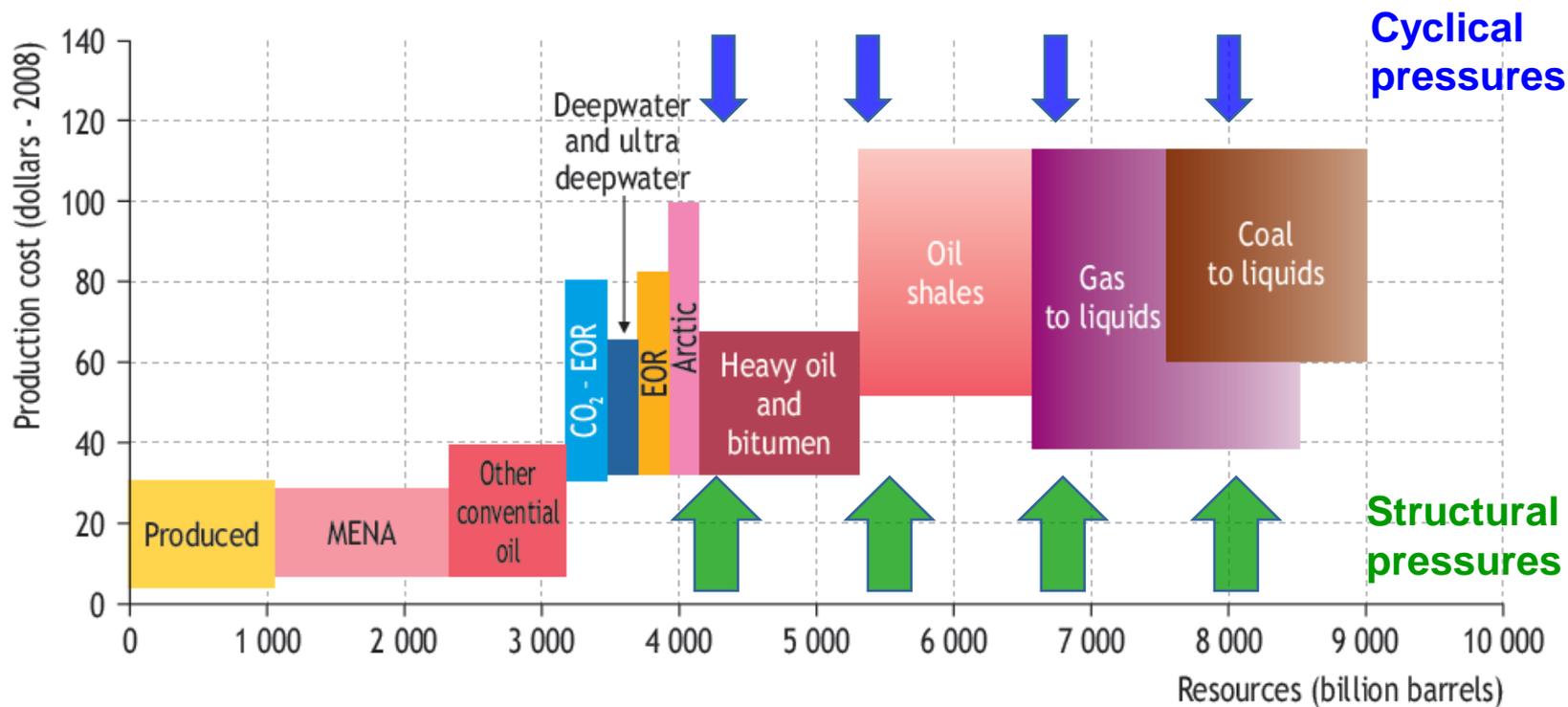
Slower supply capacity growth seems here to stay

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The resources are there, but how much to bring them to market?

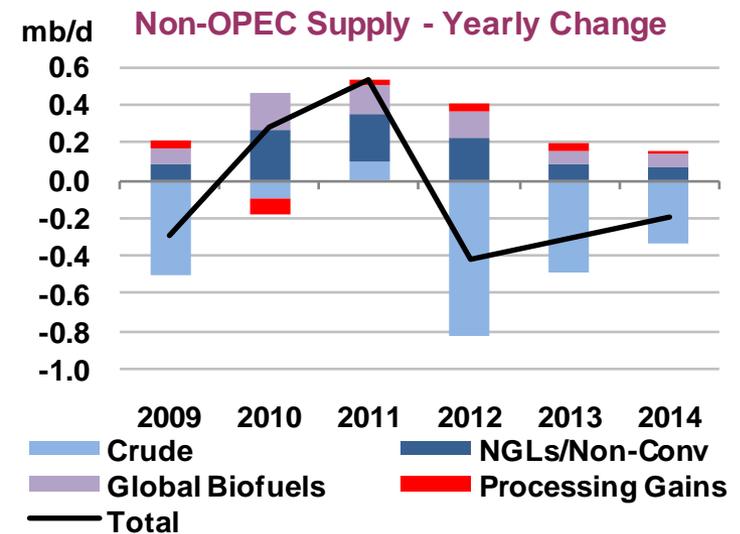
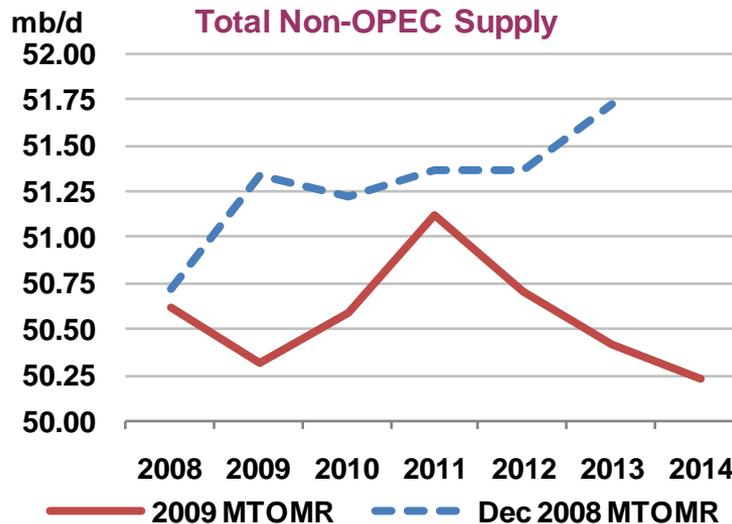
Figure 9.10 • Long-term oil-supply cost curve



- **Upstream capex cut 21% in 2009 - worsening field decline?**
- **Defers over 2 mb/d of short term capacity growth**
- **\$60-plus/bbl needed for oil sands projects & ultra deepwater**
- **But cyclical easing of cost inflation (-10-15% in 2009?)**
- **So scale of eventual supply impact from current crisis unclear**
- **Costs 'moving target' clouds calls for a managed, 'ideal' price**

2009

Non-OPEC supply now *declines* during 2008-2014



- Non-OPEC supply *declines* by 0.4 mb/d by 2014 (versus 1.5 mb/d *growth* in last MTOMR)

- Upstream projects delayed, deferred or cancelled - 2014 non-OPEC supply now seen at 50.2 mb/d
- IEA study for G8 shows over 2 mb/d postponed in 4Q08/1Q09 – and upstream investment down by 21%
- Conventional crude drops by over 2 mb/d 2008-2014, offset in part by non-conventional, NGL and biofuels

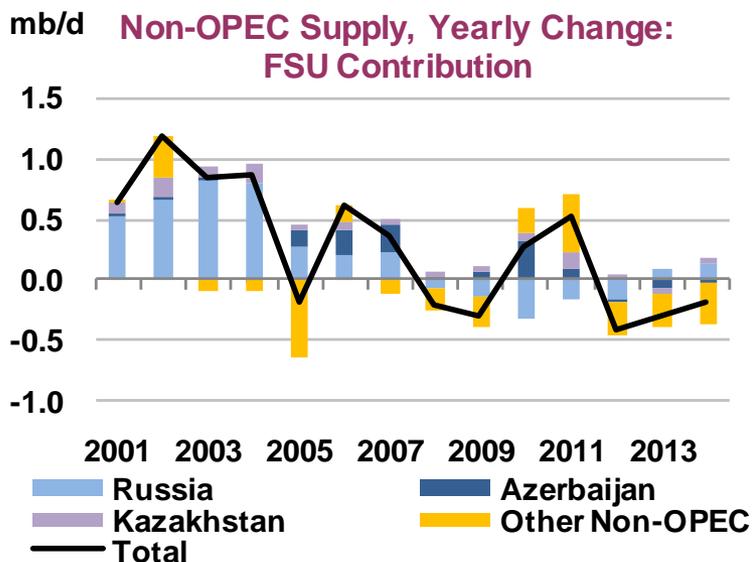
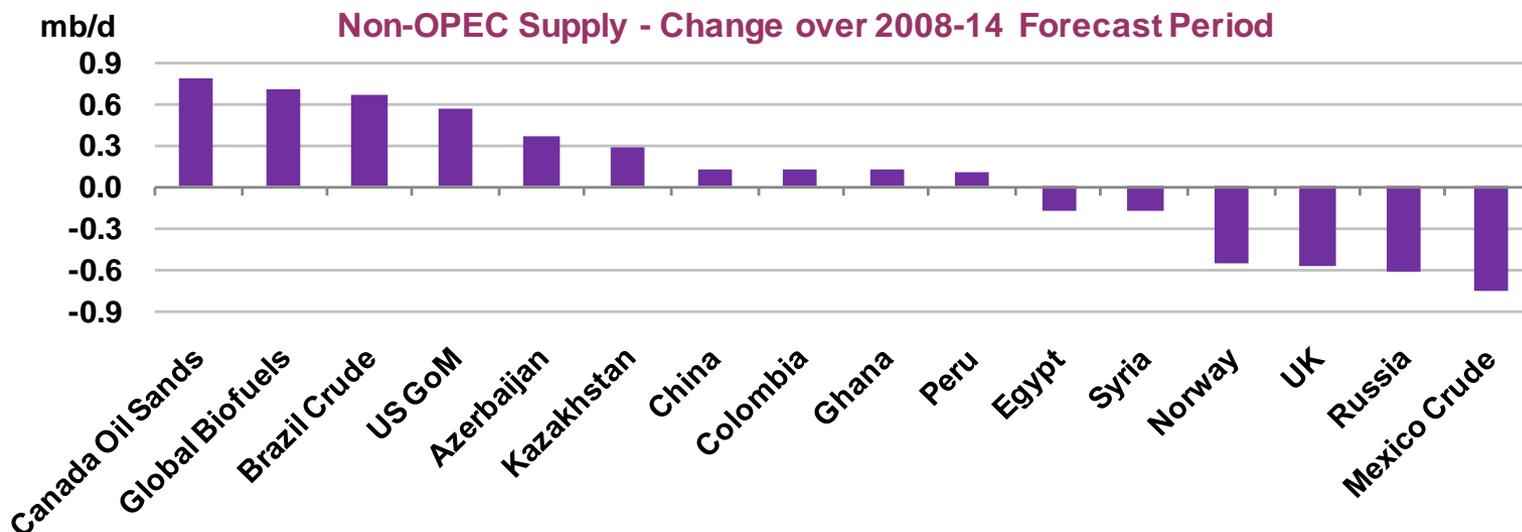
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Canada oil sands dominate growth, but FSU's earlier dominance fades

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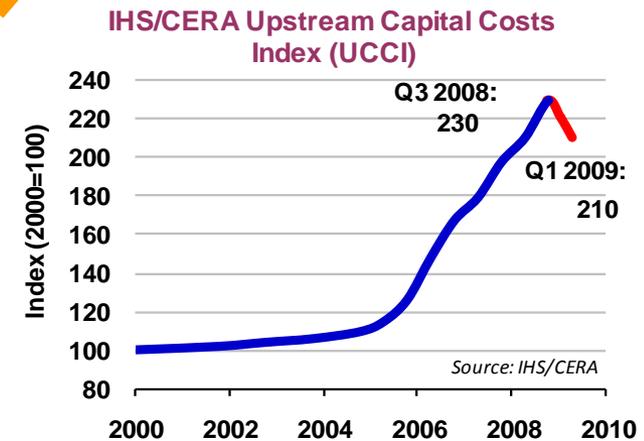
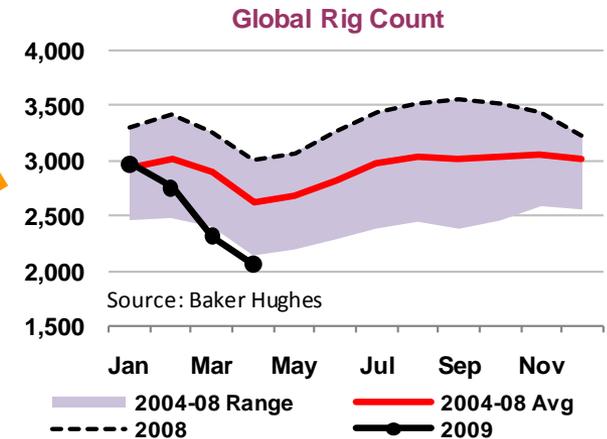
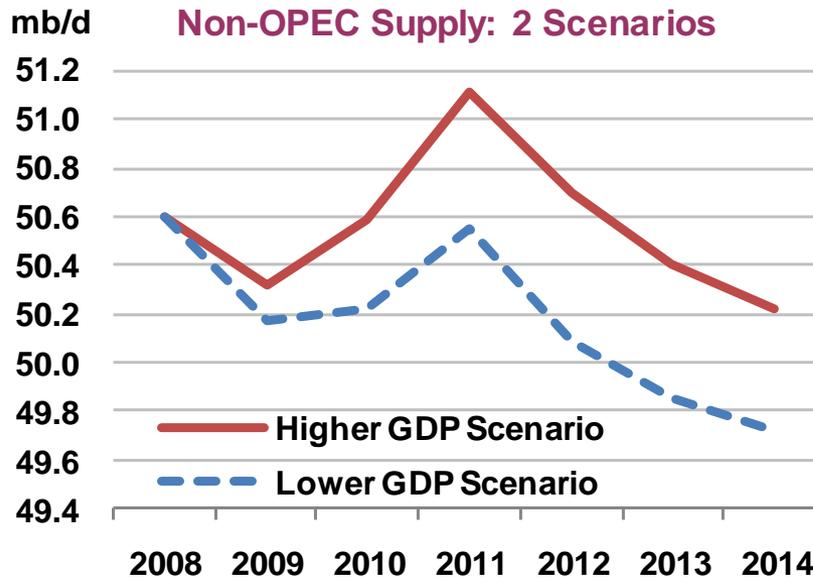
2009



- Despite delays, Canadian oil sands are the single largest source of growth
- Conv. crude: Only Brazil, US GoM, Caspian likely to grow (but also biofuels, NGLs)
- Latin America the only *region* with ongoing growth (1.2mb/d)
- Mexico, Russia, UK, Norway all see steep contraction
- Project deferrals & Russian mature field decline, dilute FSU's contribution



Scenario: protracted spending curbs could shave another 0.5 mb/d



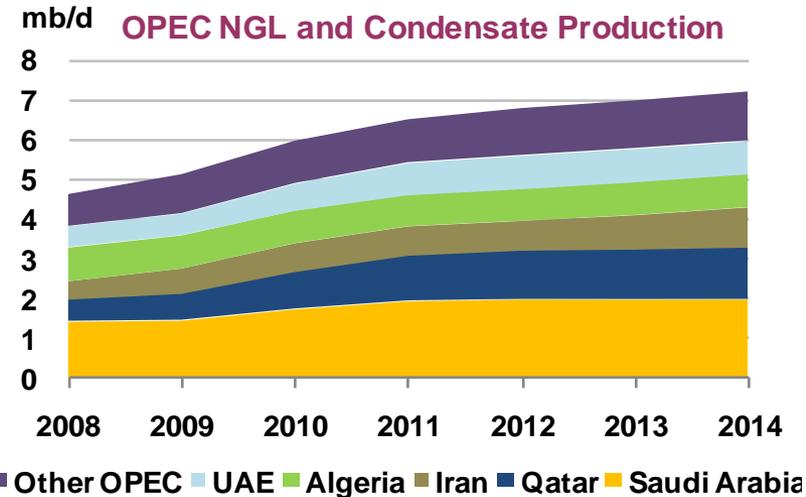
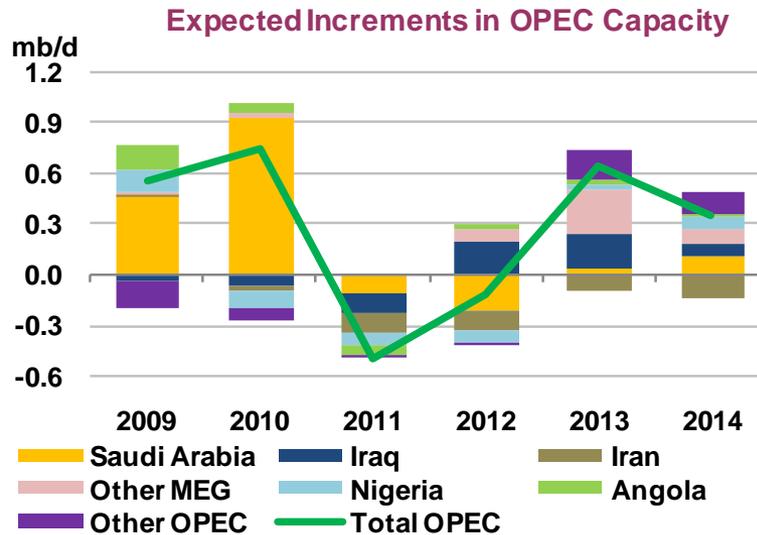
■ Analogue to *lower GDP scenario*, models potential impact of protracted lower upstream spend

- Risk of further 0.5 mb/d on average shaved off projected non-OPEC supply
- Impact greatest in mature OECD countries: US, Mexico, UK, Norway
- But intense debate whether lower spend and activity levels will be offset by reduced costs and upstream efficiencies

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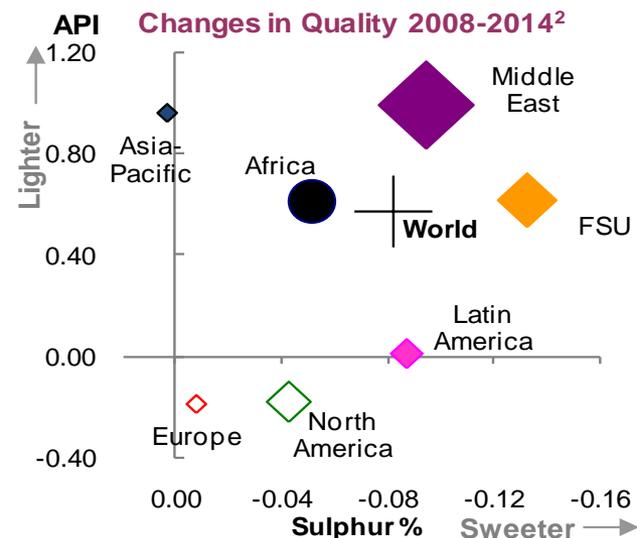
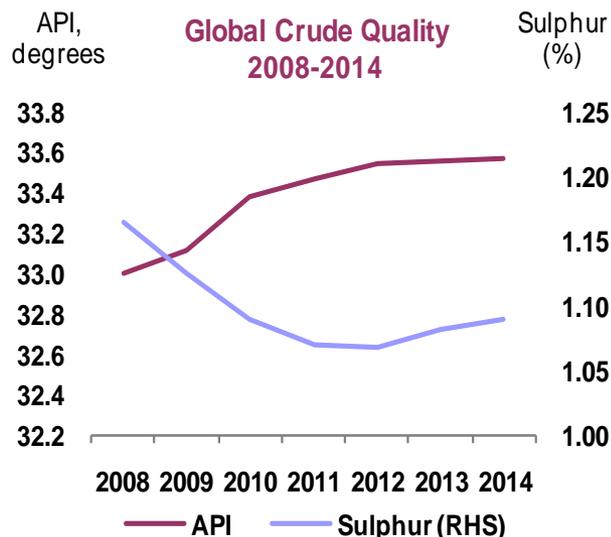
OPEC crude capacity growth derailed, but gas liquids still going strong



- Crude capacity +1.7mb/d, to 35.8mb/d (-47% from prev.forecasts)
- Project delays reflect:
 - strategic reviews of investment plans (demand)
 - contract renegotiations as costs decline
 - reduced cash flow – lower output targets and prices
 - resource nationalism & geopolitical turmoil (Iraq, Nigeria, Iran?)
- But NGL +2.6mb/d: gas for power, petchem and re-injection
- Gas liquids attain 17% of total OPEC output in 2014 from 12% today

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Crude quality: a trend towards lighter and sweeter...for now

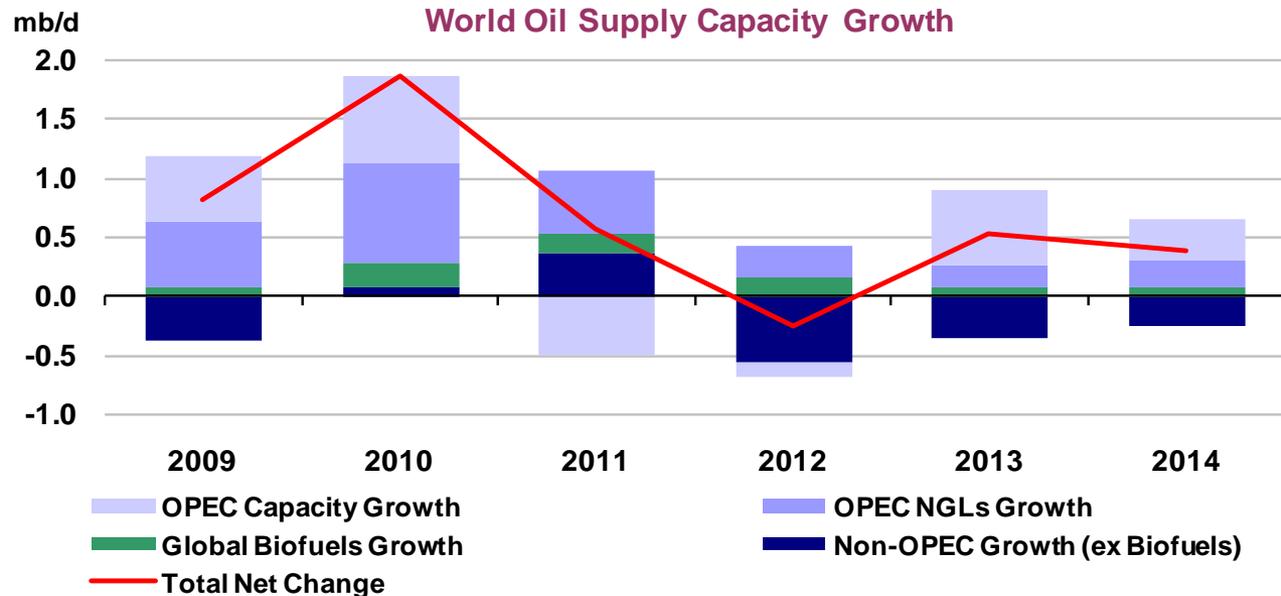


- Average crude quality lightens from 33° to 33.6° API in 2008-2014, while barrel sweetens from 1.16%S to 1.06%S
- Rising condensate volumes exaggerate the trend but their exclusion doesn't change the overall picture
- FSU, Africa, Mid East drive the trend, offset by heavier Canadian mix
- Could have a profound impact on refinery upgrading economics
- Longer term, swing back to heavier/sourer barrels is likely

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Global capacity outlook curbed on recession, lower investment

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- **Total supply capacity growth in 2008-14 trimmed to 4.0 mb/d (1.5 mb/d lower than 2007-13 growth in last *MTOMR*) due to:**

- **Impact of global recession/lower demand**
- **Lower oil price environment**
- **Credit constraints & contract renegotiation**



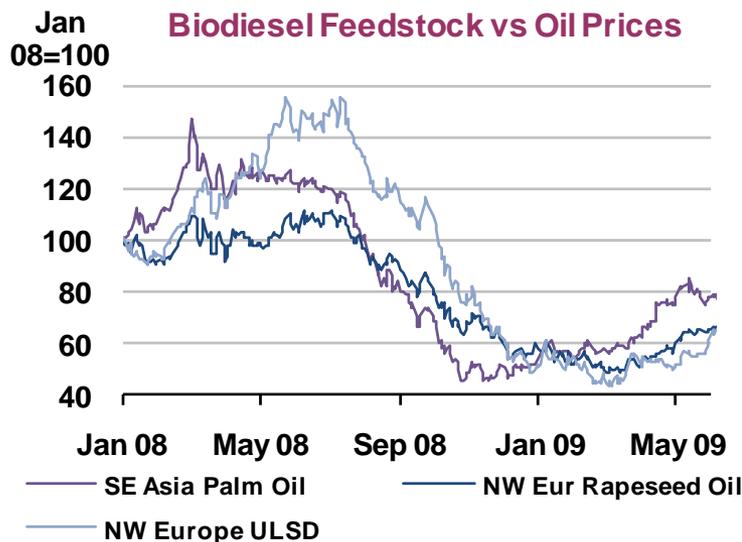
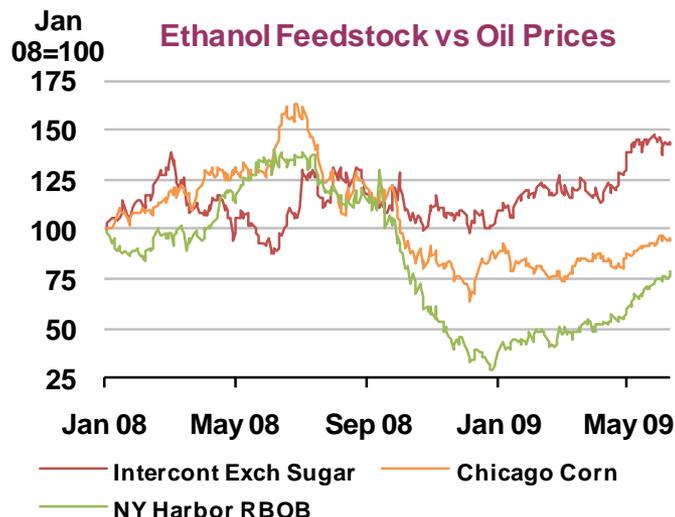
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Biofuels

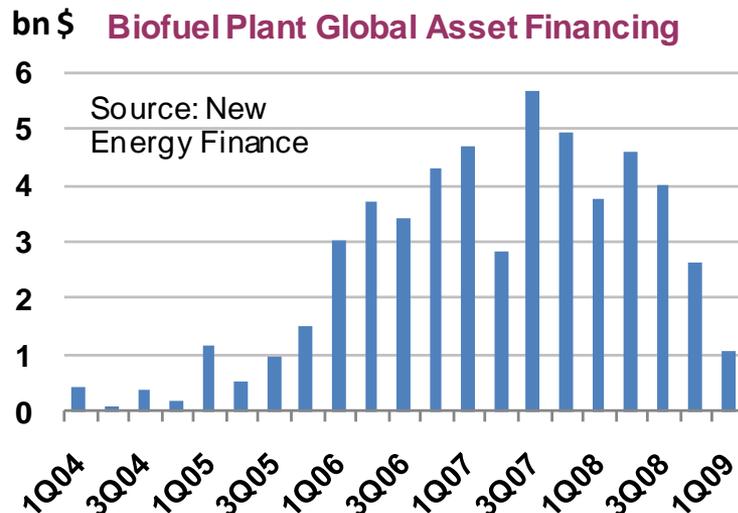


Lower oil prices and credit crisis hurt the biofuels industry

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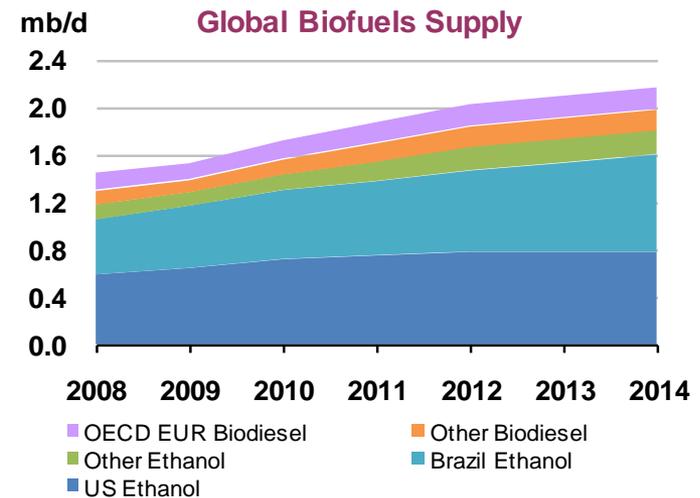
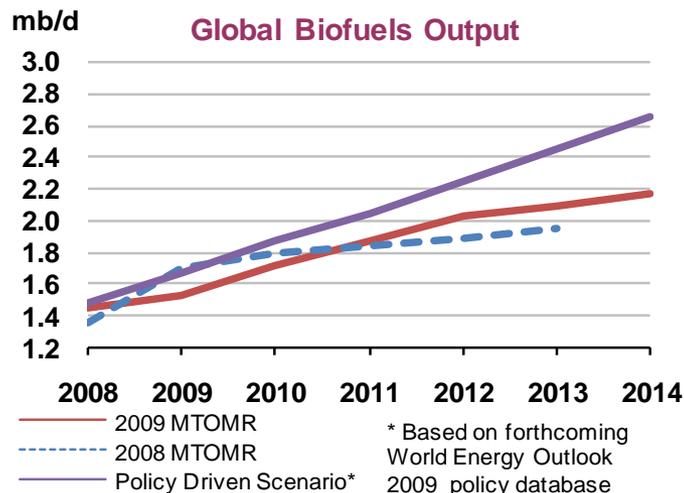
- oil prices fell more than agricultural feedstocks, undermining biofuels margins
- plant utilisation has fallen
- access to credit has dried up for over-leveraged producers
- Expected 2009 new mill start-ups for Brazil, US and Europe off by as much as 50%



But medium-term production forecast remains robust

- **Despite near-term problems, strong biofuels supply growth expected through 2014**
- **Output can respond quickly to changing market conditions**
- **Sector consolidation suggests a transition to more economically sustainable production**
- **Low cost producers such as Brazil will continue expanding strongly..**
- **..and OECD blending mandates provide a floor for growth**
- **Total supply rises to 2.2mb/d from 1.4mb/d, meeting 15% of incremental gasoline & gasoil demand**
- **An oil market relief valve from otherwise sluggish non-OPEC supply**
- **Brazil and USA generate 80% of this growth**

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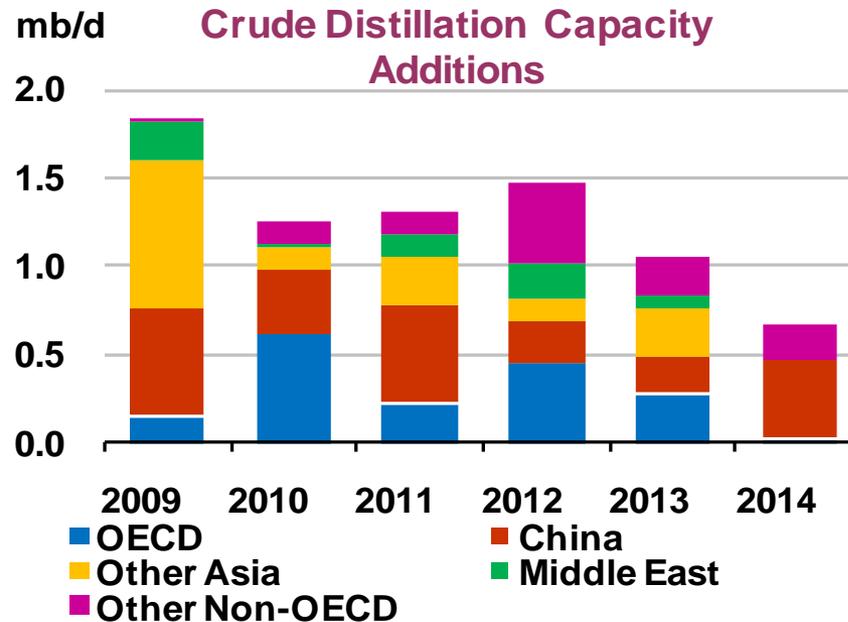
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Refining & Product Supply



Primary capacity additions +7.6mb/d

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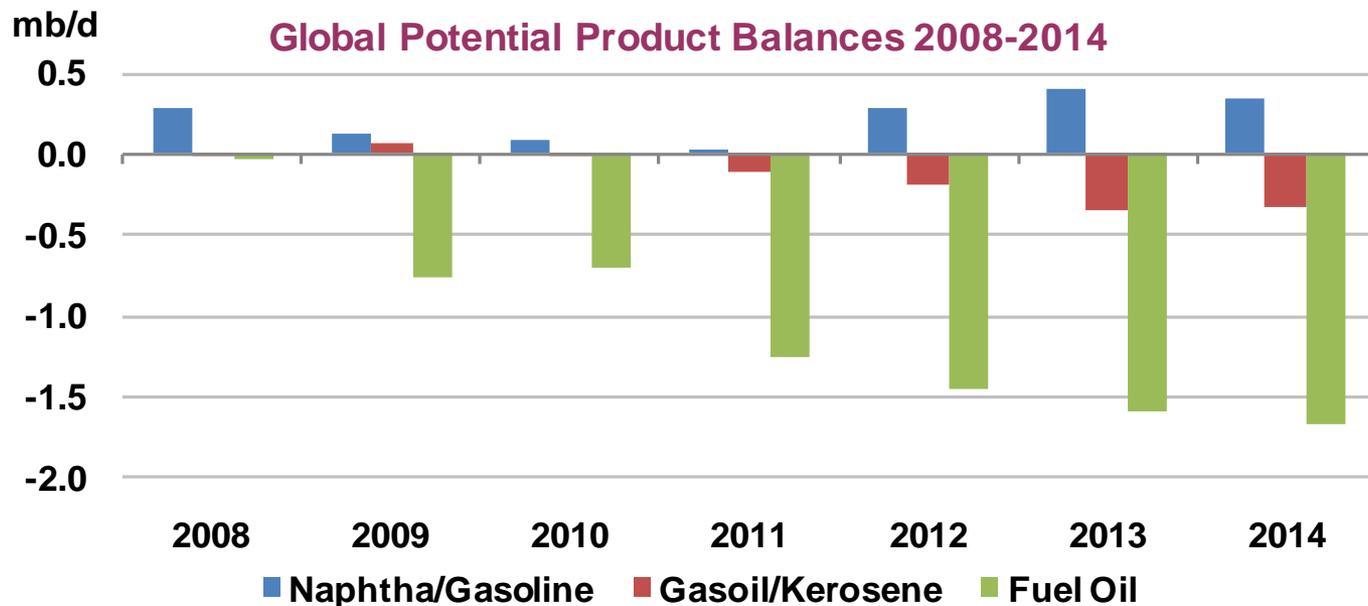
- Weaker demand, financial constraints have seen widespread slippage & cancellations downstream too (OECD & M.East)
- But 7.6mb/d of crude distillation capacity still expected to be added for 2008-2014 (also +6.5 mb/d upgrading)
- Growth dominated by Asia – more than 50% – with China accounting for nearly a third of the total.
- The OECD accounts for 20% – mainly North America
- The Middle East share drops below 10% - project slippage

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Tightening fuel oil balance is likely

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- **Fuel oil projection shows significant (and untenable) tightening, requiring a price, investment or throughput response**
- **Naphtha/gasoline – surplus re-emerges post 2011**
- **Middle distillate tightness to re-emerge post 2010, as strong demand growth outruns refinery additions**
- **Remember 2007/2008 – imbalances downstream can affect crude price levels**

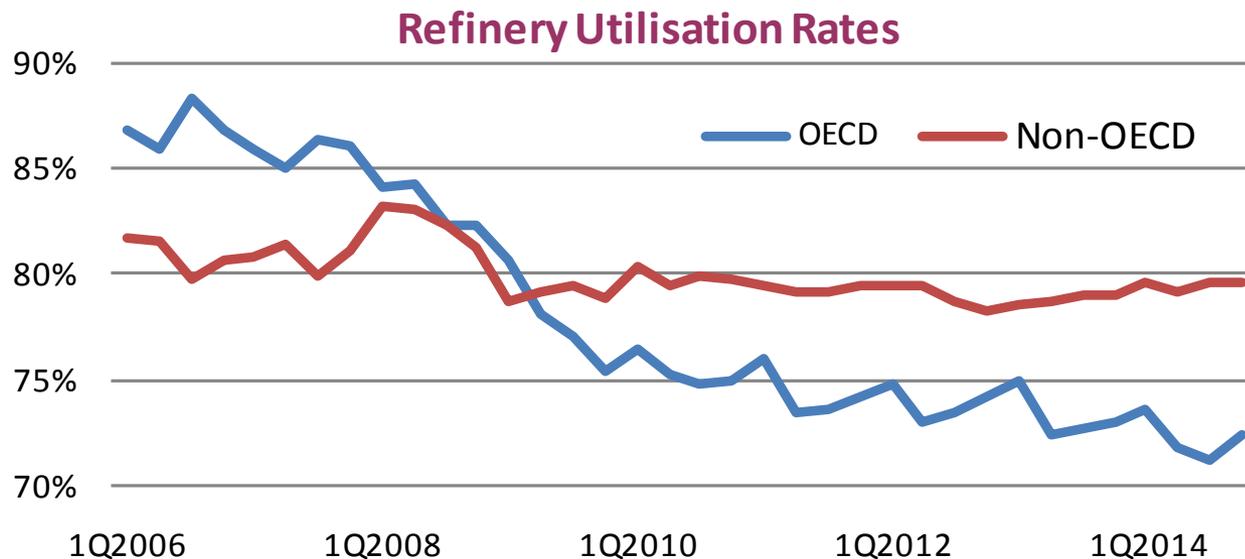
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Downstream, something's gotta give...

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- **Lower demand and sustained capacity growth point to an overhang of spare capacity & weaker utilisation**
- **Non-OECD regions are assumed to retain utilisation rates in line with historic averages**
- **Commercially sensitive operators in the US, Europe and Japan are assumed to bear the brunt of the run cuts**
- **Capacity closures look inevitable in some OECD regions, particularly as ongoing, mandatory environmental spend confronts squeezed margins**



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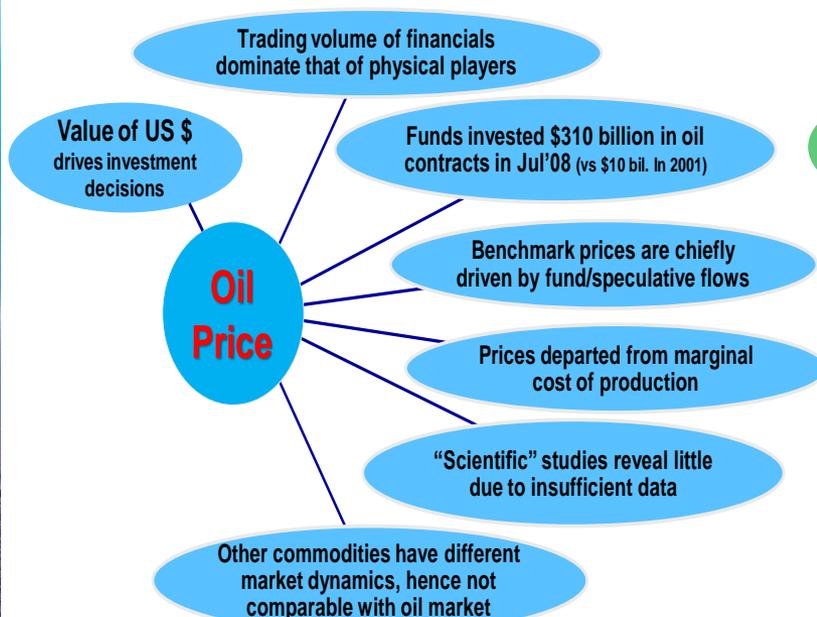
Price Formation



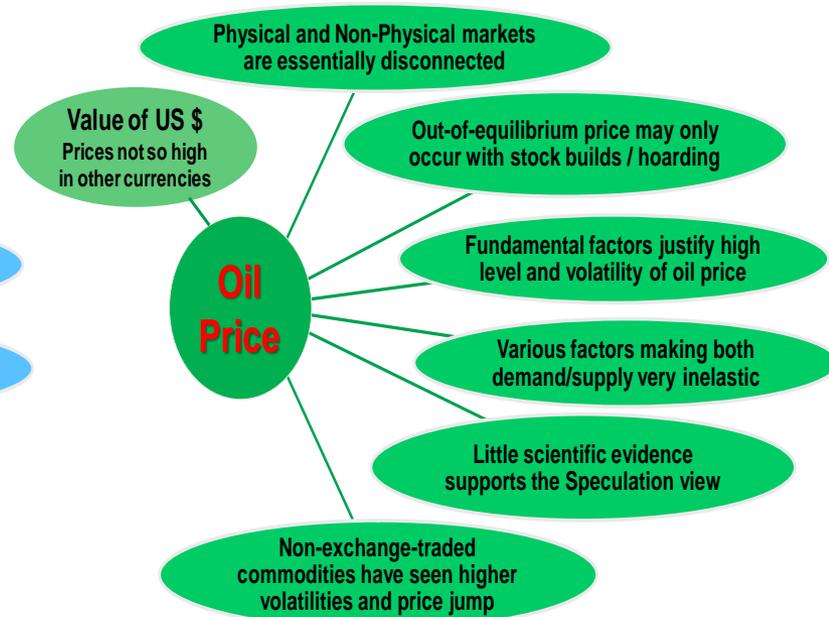
Making sense of oil prices

- Polarised debate over the importance of speculative vs. fundamental price drivers
- The reality is that both play a role
- But while inelastic supply and demand allow other factors to influence short term prices, 'sustainable' price level is likely determined by fundamentals

The "Speculation View"

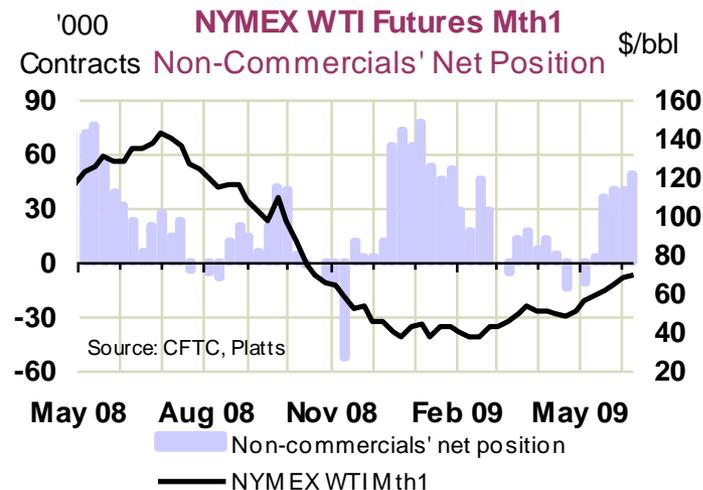
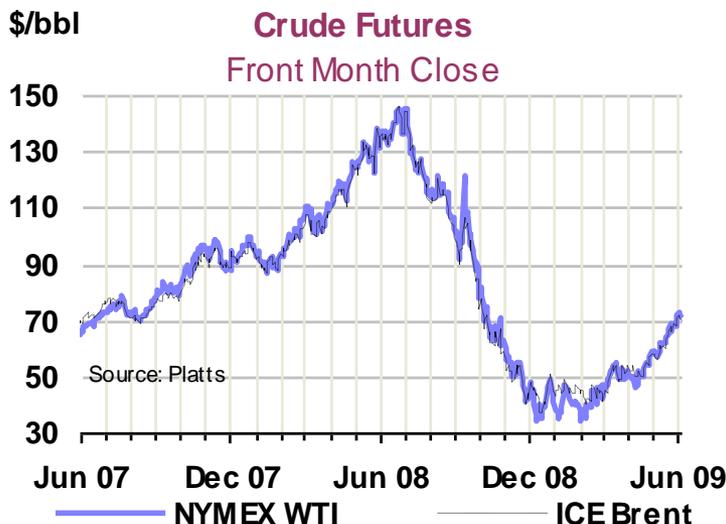


The "Fundamentals View"



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Greater visibility could help flatten the oil price roller coaster



- Surge in prices until July 2008 on tight fundamentals, highly inelastic supply and demand, weak dollar & investor influence
- 75% fall by year-end on collapsing demand outpacing cuts by OPEC
- Fundamentals alone can't explain post-February 09 rise...
- ...and concerns too sharp a rise now could derail economic recovery
- But net non-commercial positions don't correlate well with prices either
- Prices drivers are manifold, and their relative influence varies over time

- Better visibility on non-OECD demand/inventory, and more granularity on futures market (notably OTC derivatives) trades would deepen insight into price dynamics

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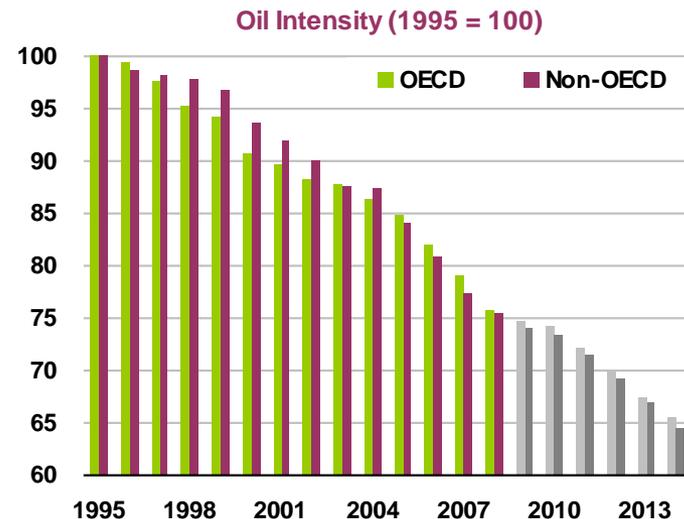
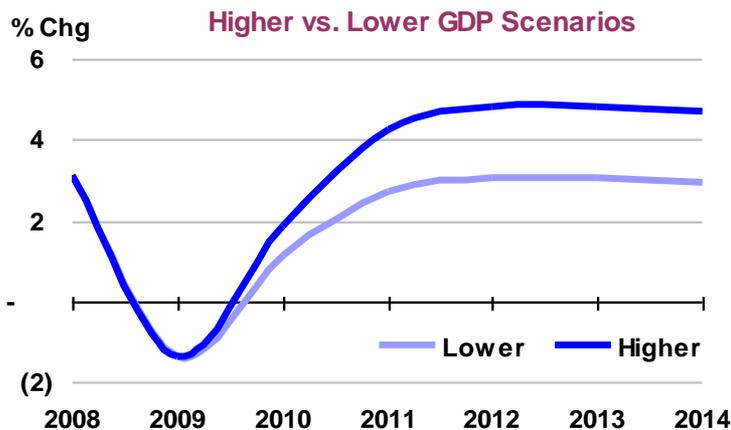
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Summing Up



Outlook depends on shape of economic recovery & efficiency trends

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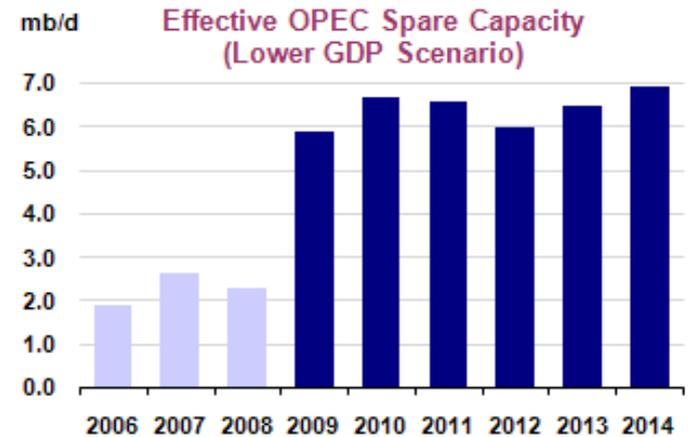
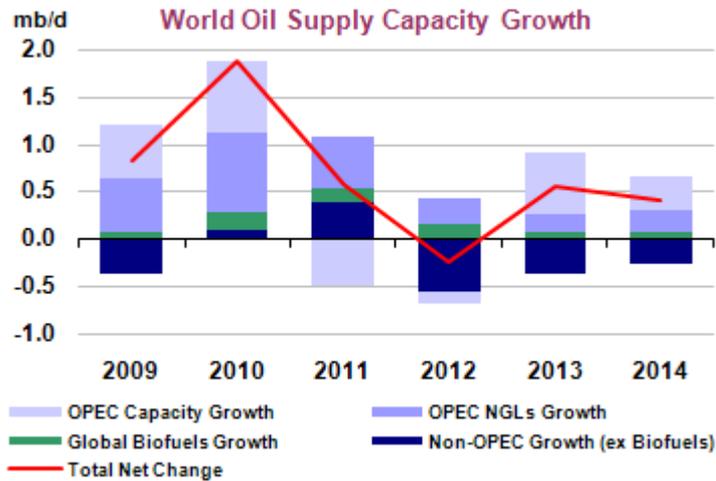


- Oil market turned upside down since last summer
- Timing & extent of economic recovery is highly uncertain
- *MTOMR* presents two oil demand scenarios this year to reflect that uncertainty (diff=4.1mb/d)
- It also identifies clear signs that there have been structural changes in the way oil is used

2009



But don't forget the supply-side of the equation



- Spending cuts & project delays have intensified, despite easing cost pressures
- Supply growth now looks anaemic post-2010
- Whether we see a supply crunch mid-decade depends on economic trends & efficiency..
- ..but consumer & government choices can also affect the future buffer of spare capacity

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Thanks for your attention

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David.fyfe@iea.org

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