

The Current Crisis: Implications for the Oil and Gas Industry

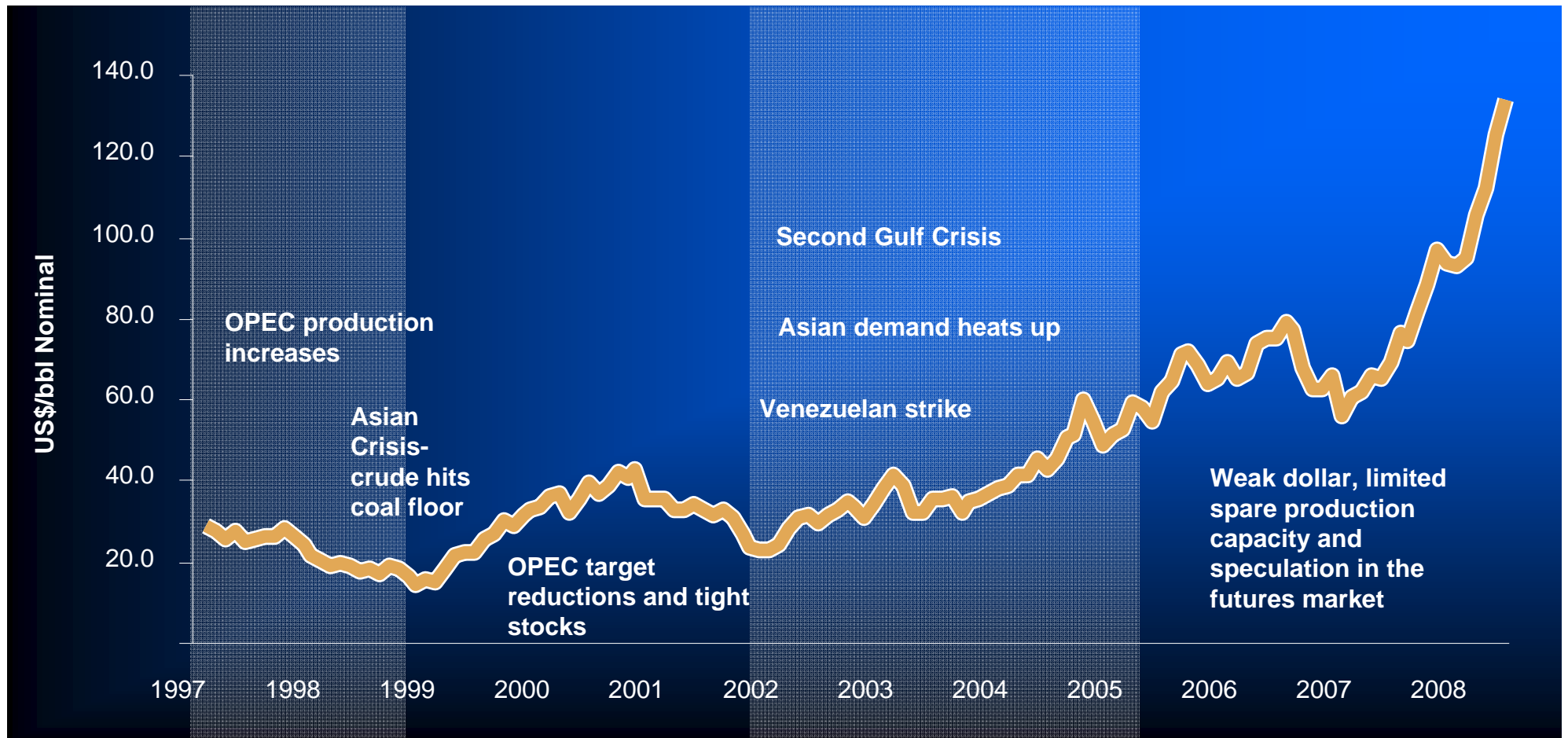
Presentation for the CAPA 2009 Energy Investment Forum
April, 2009

Wood Mackenzie
energy consulting



Then...

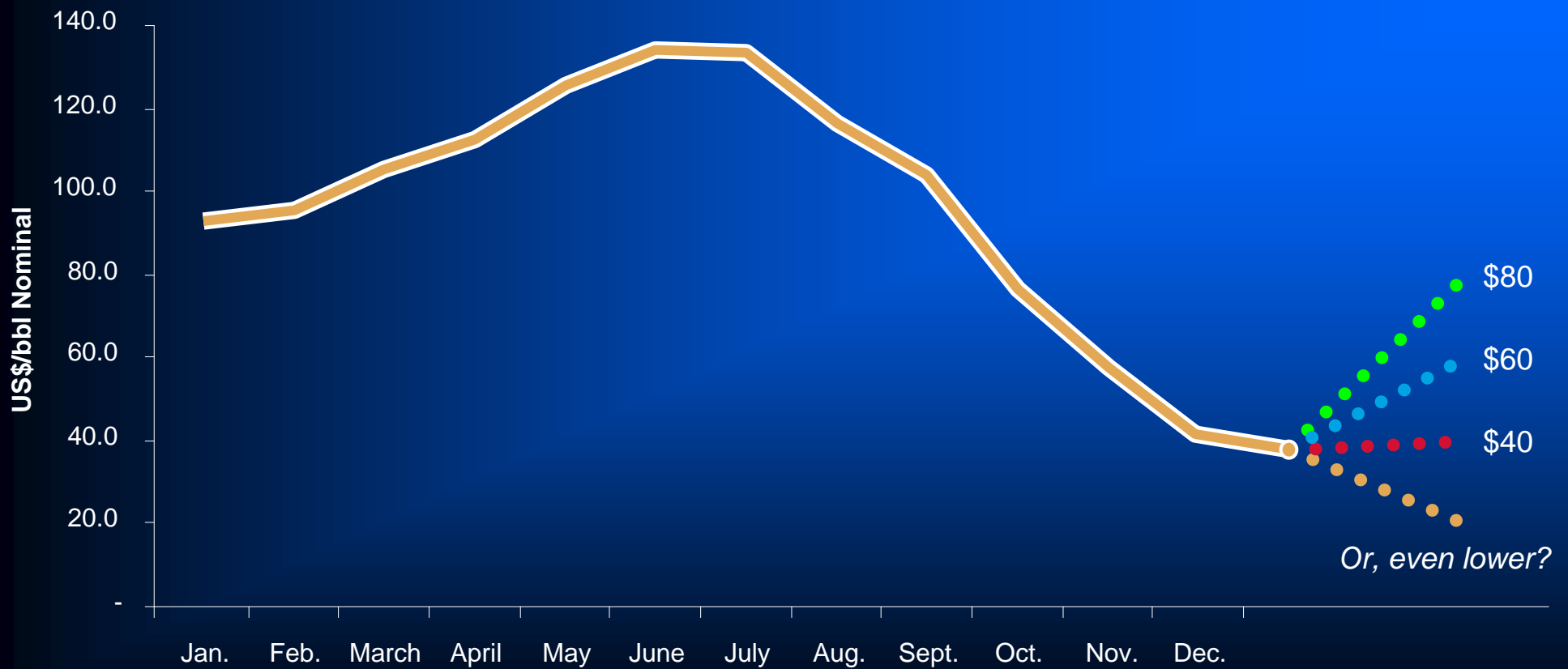
World Oil Price 1997-2008 Peak



Source: EIA

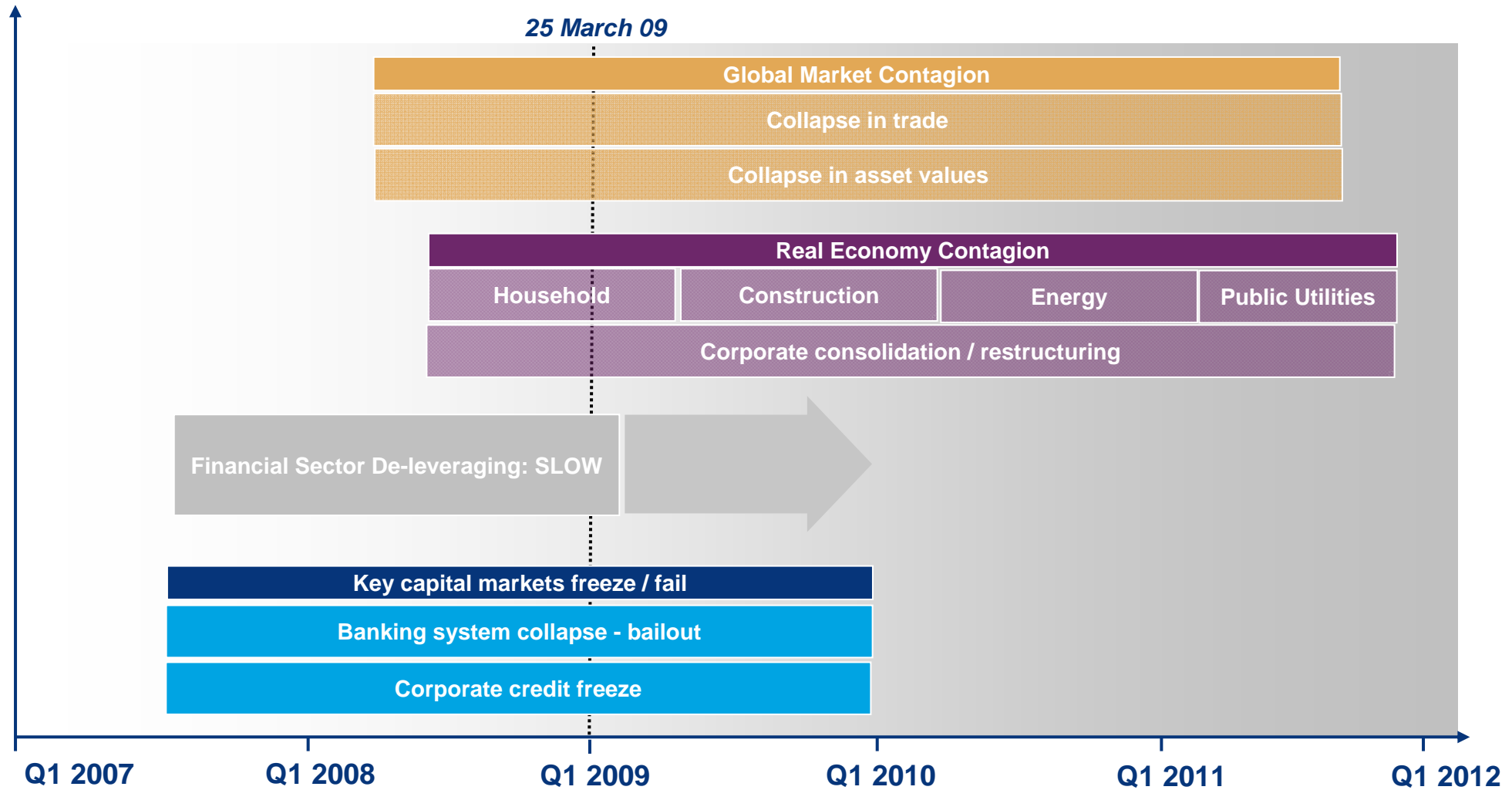
...And now

World Oil Price 2008-2009 YTD



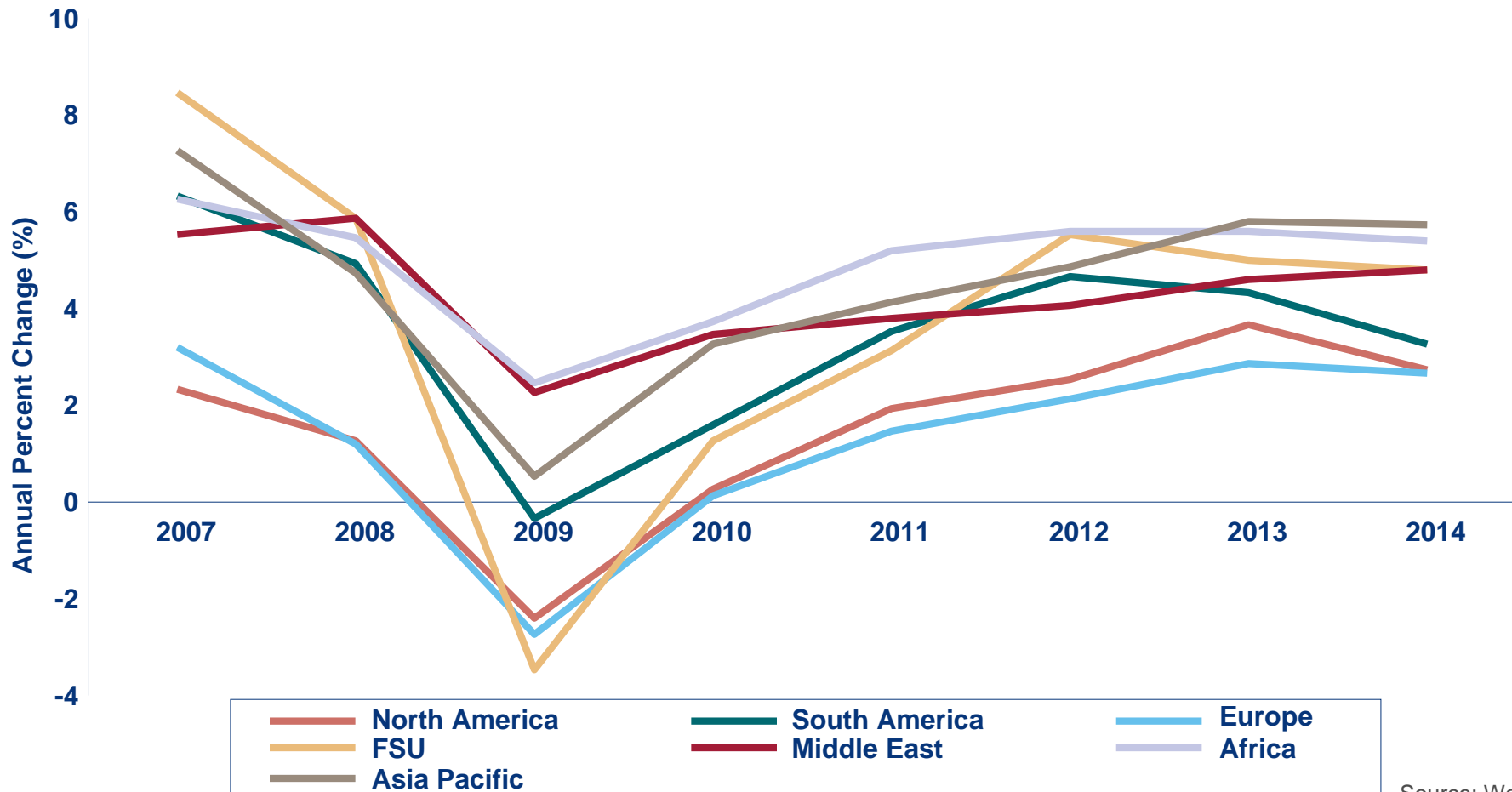
Source: EIA

De-leveraging will take time



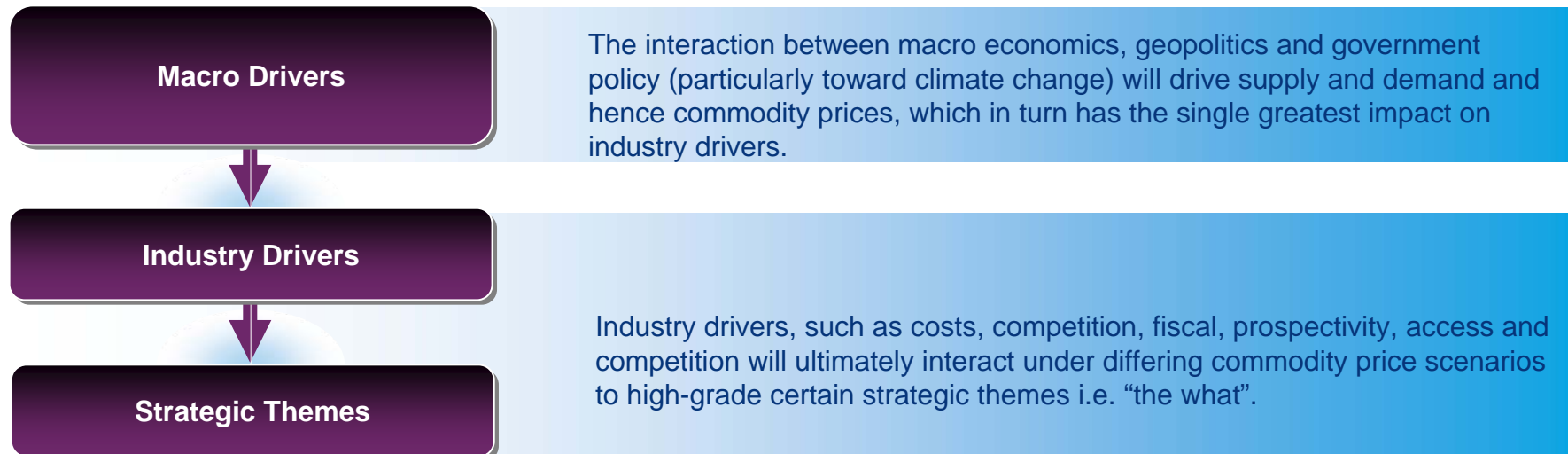
Deep global recession inevitable this year with prolonged recovery to 2013

Global GDP by Region



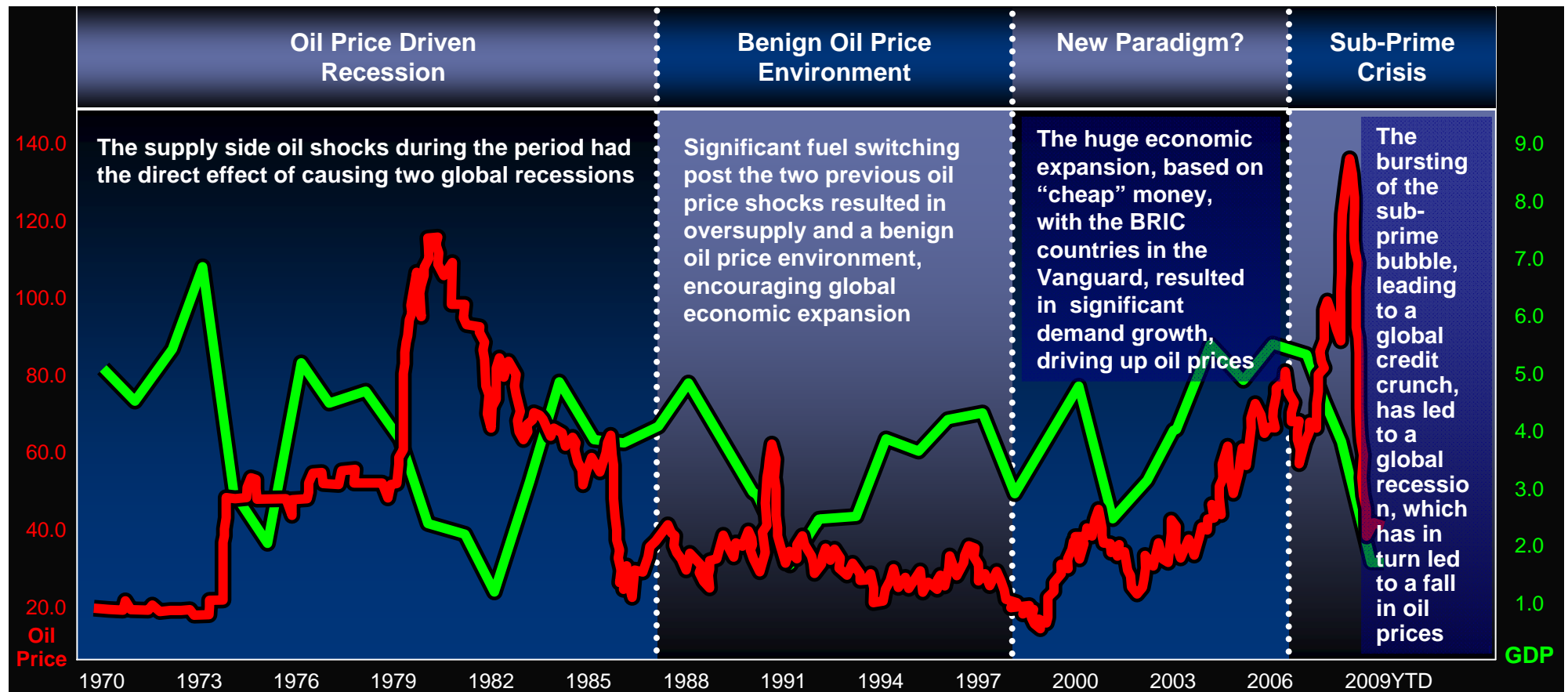
Source: Wood Mackenzie

Given these tough times, it important to focus on and monitor what drives the business?



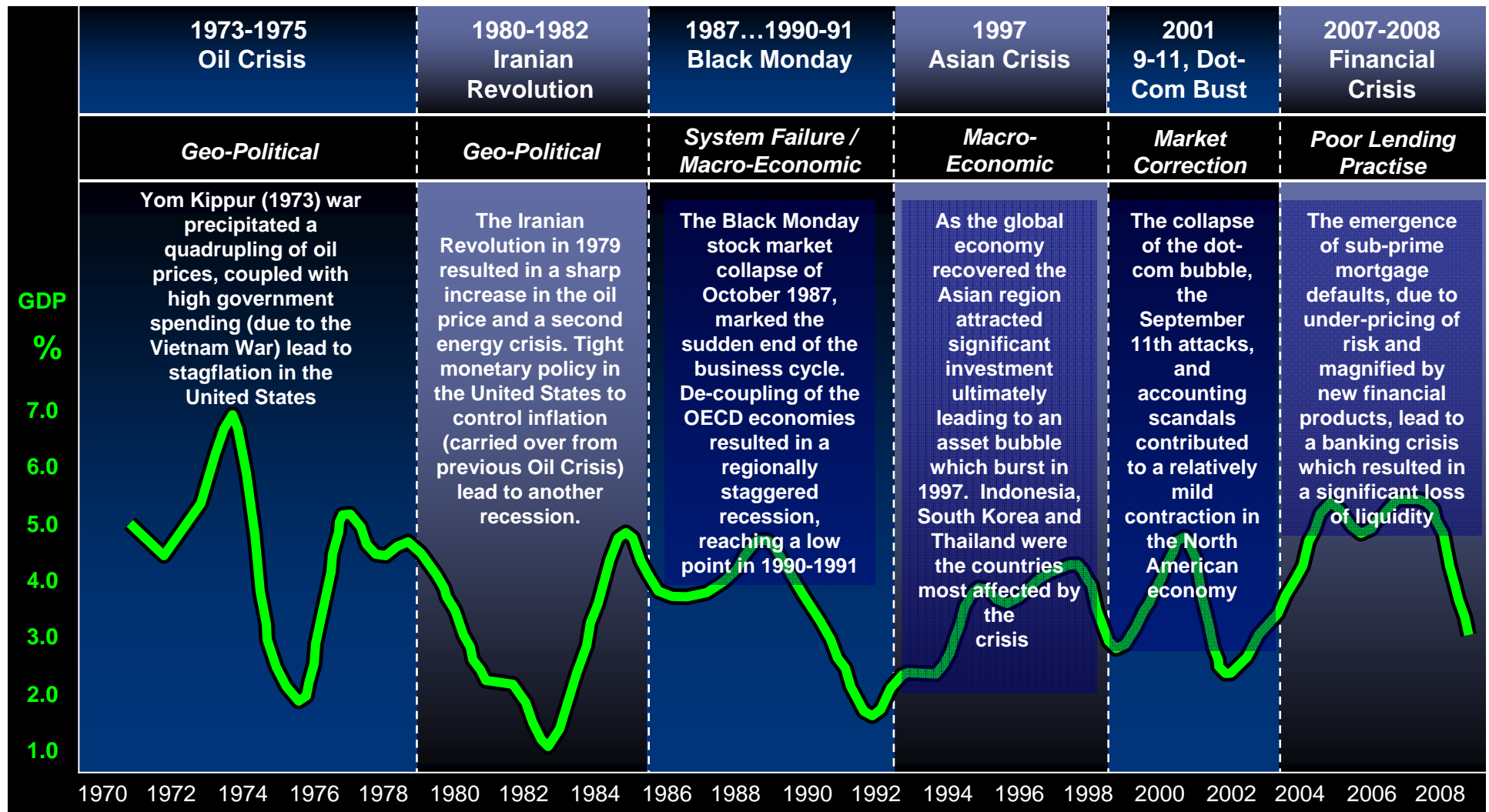
Macro Drivers

How have macroeconomics and oil price interacted?

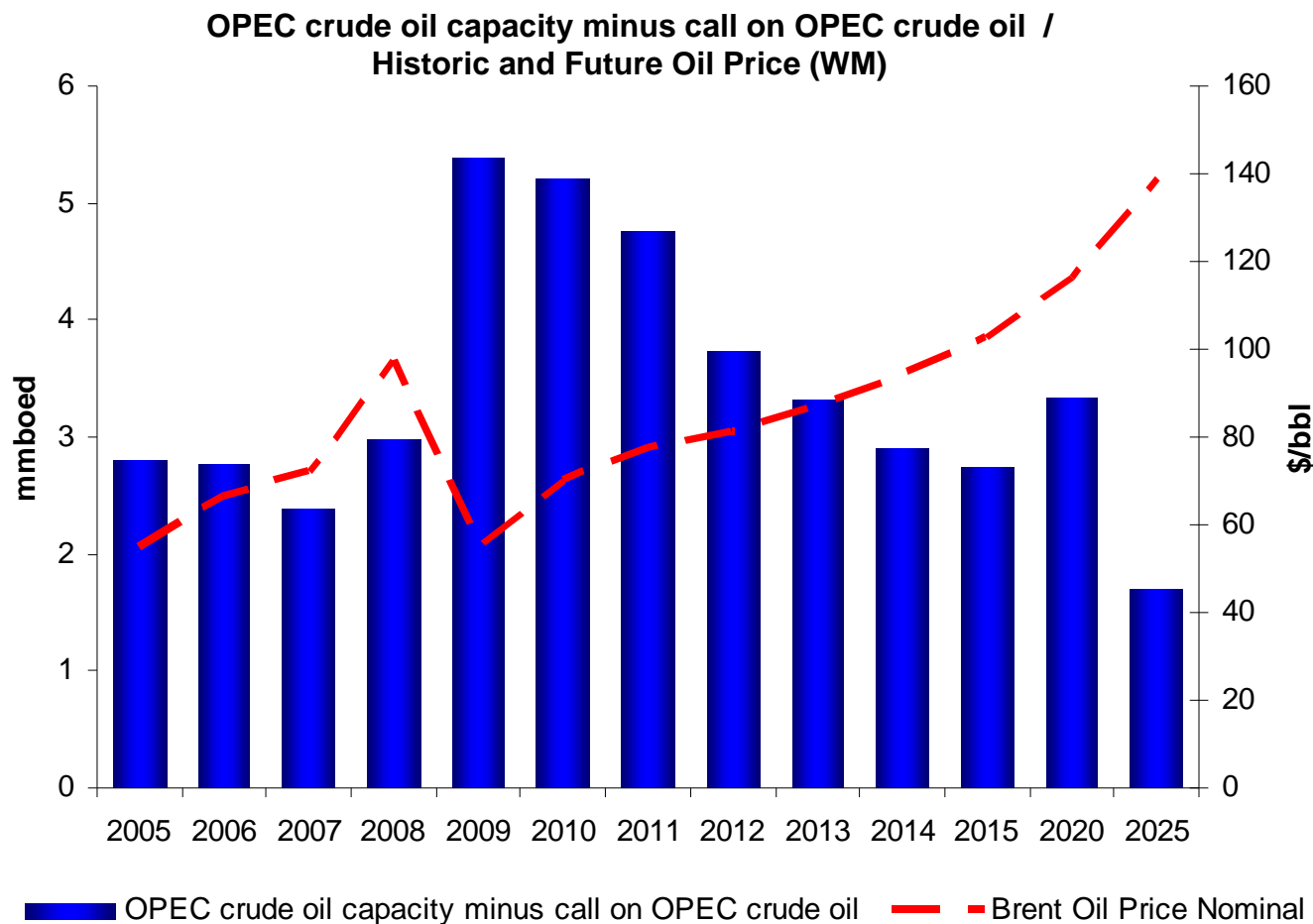


- › The energy business can both be the recipient of macro economics (as evidenced by the 2003 to mid 2008 global economic expansion and resultant high oil prices) and the driver of global macro economics (as illustrated by the 1970s oil shocks leading to global recessions)

What can we learn from past recessions?



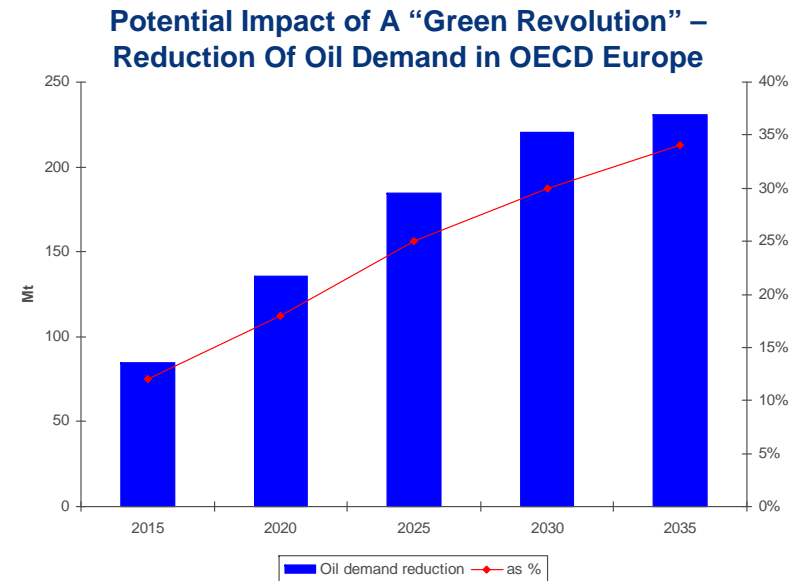
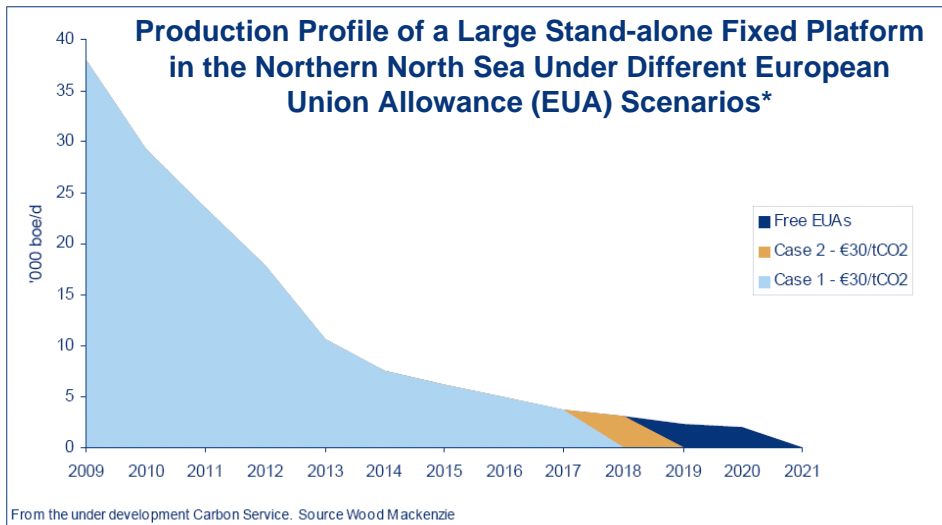
What is the crude oil supply/demand and price outlook?



- › Wood Mackenzie's current oil price forecast is predicated upon an improved macro economic environment as the world comes out of recession in 2010, driving increased oil demand

What could be the impact of government policy?

A reduction in crude supply but a larger potential for destruction of oil product demand?



- › Government policy has in the past (the Carter administration’s focus on energy efficiency had a material impact on energy demand) and will in the future have a material impact on oil supply and demand dynamics
- › With carbon legislation being in the vanguard of current government policy initiatives
- › All current carbon policy initiatives will have the direct and indirect impact of increasing Upstream costs

- › Governments take whatever measures are necessary to achieve carbon reduction targets, including
 - › increasing energy efficiency
 - › increasing use of renewable sources of energy
 - › increasing taxation levels on fossil fuels
 - › internalisation of external costs
 - › carbon or uniform energy taxation
 - › renewed growth in nuclear power
 - › technology R&D investment – hydrogen?

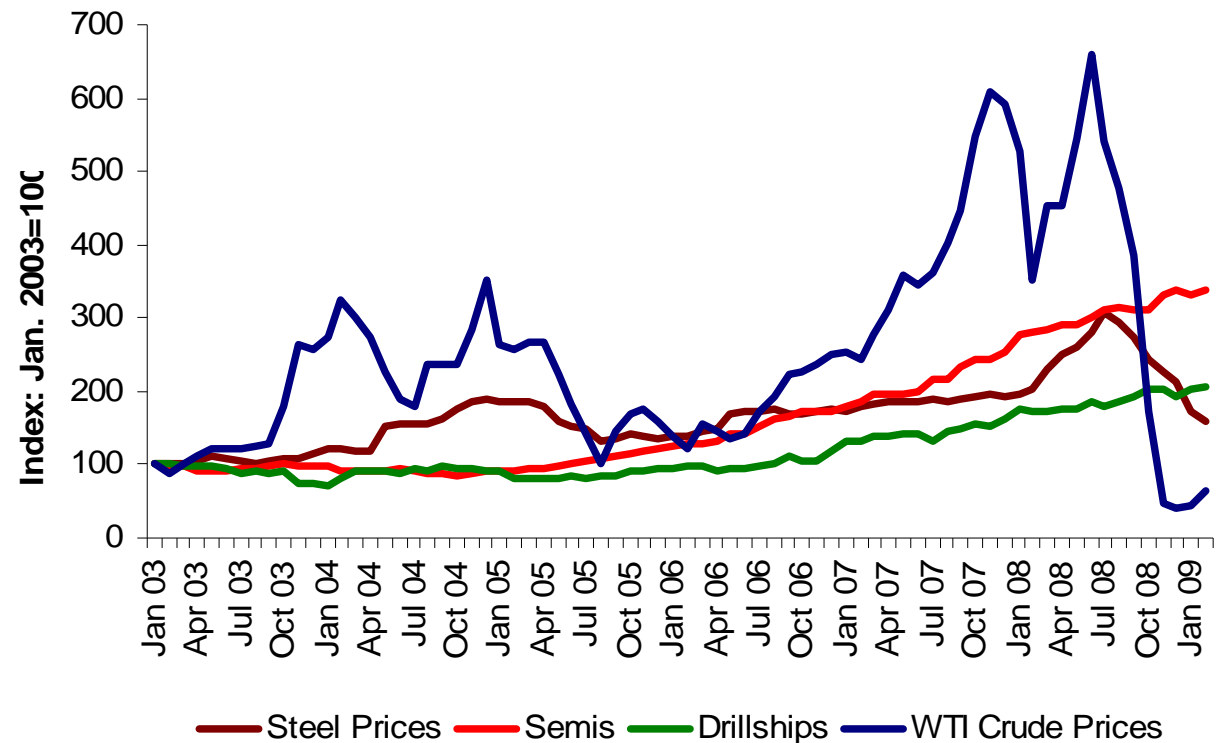
*Case 1: companies acquire via auction 60% of EUAs up to the allotted emissions cap in 2013 then gradually ramping up to 85% by 2020; Case 2: companies acquire via auction 50% of the required EUAs throughout phase III of the EU ETS up to the level of the emissions cap

Industry Drivers

How have costs interacted with oil prices?

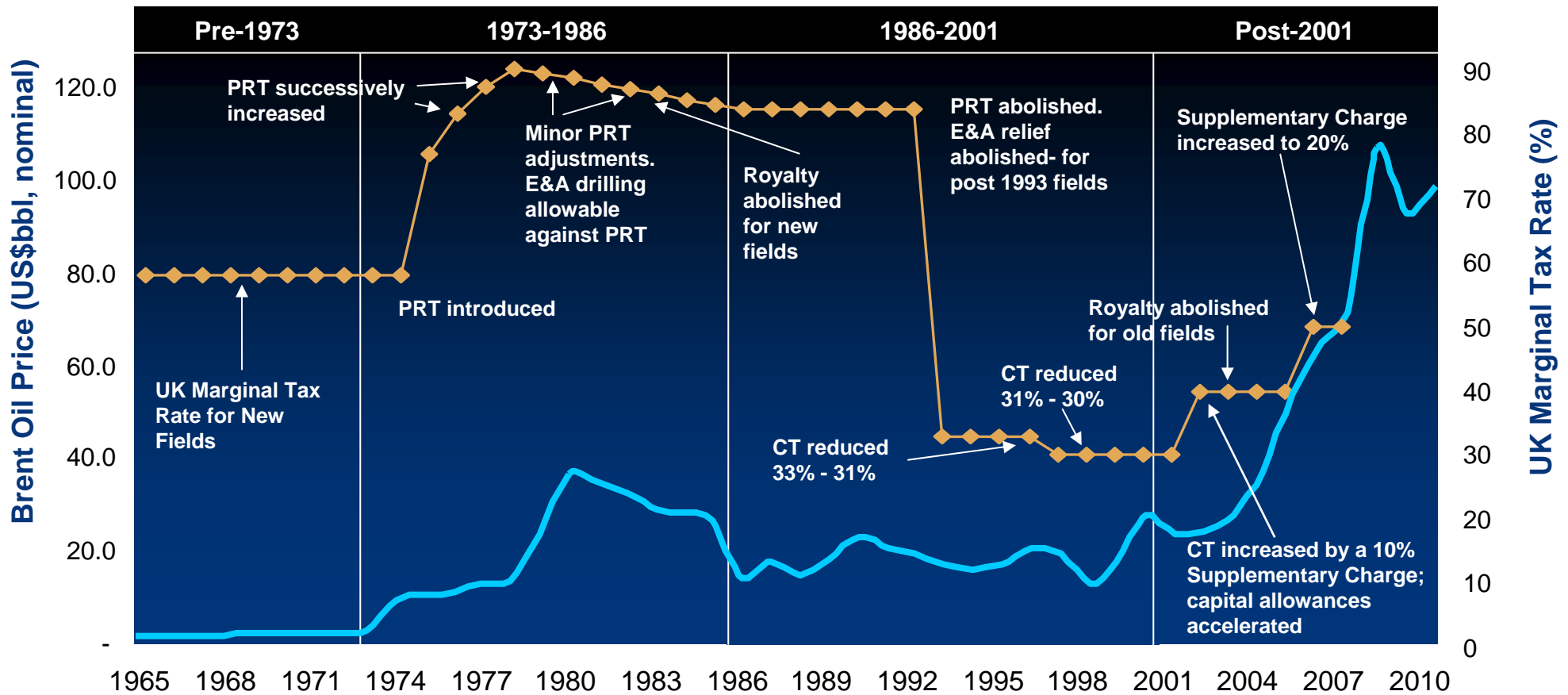
- › The upstream business, in common with many other businesses, has cost components which are driven by internal demand (e.g. rigs) and other components, where the upstream business is not the sole demand driver (e.g. steel costs)
- › The recent past has illustrated these two cost drivers; from April 2004 to July 2005, steel prices were largely driven by Chinese demand; the ramp up in rig rates from 2005 to 2008 was driven by the ramp up in oil price
- › In general, internally driven costs will track oil; however, uncertainty arises when considering timing, cost segment and degree of deflation (e.g. onshore US rig rates have decreased 25% since the start of the year, while deepwater drillship rates remain robust)

Costs Compared to Oil Price 2003- Jan. 2009



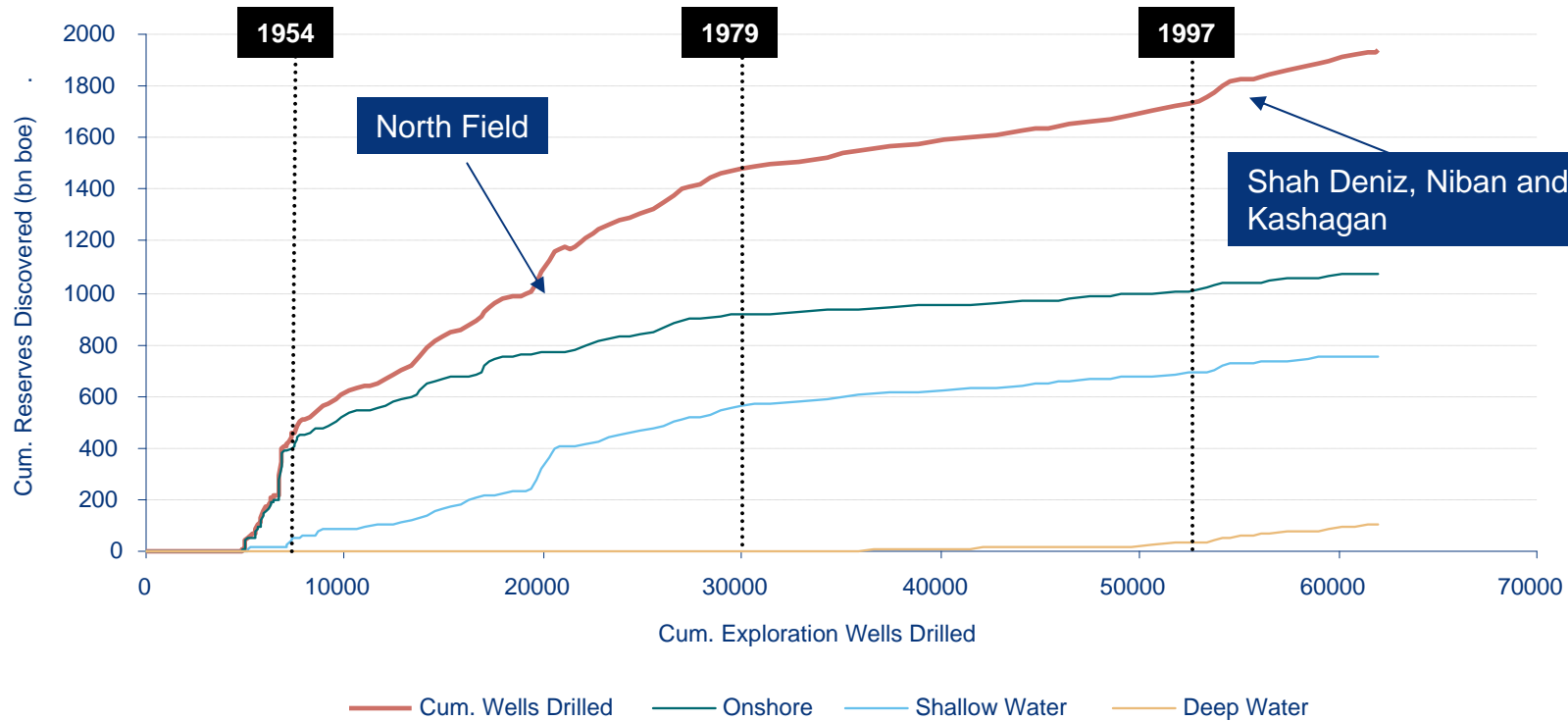
Brent Crude Current Month, FOB (Source: Datastream)
 Semi-submersible and Drillship day rates (Source: Rigzone Monthly Snapshot)
 Cold-rolled steel prices ex-works – Ruhr, Germany (Source: Datastream)

How have fiscal terms interacted with oil prices?



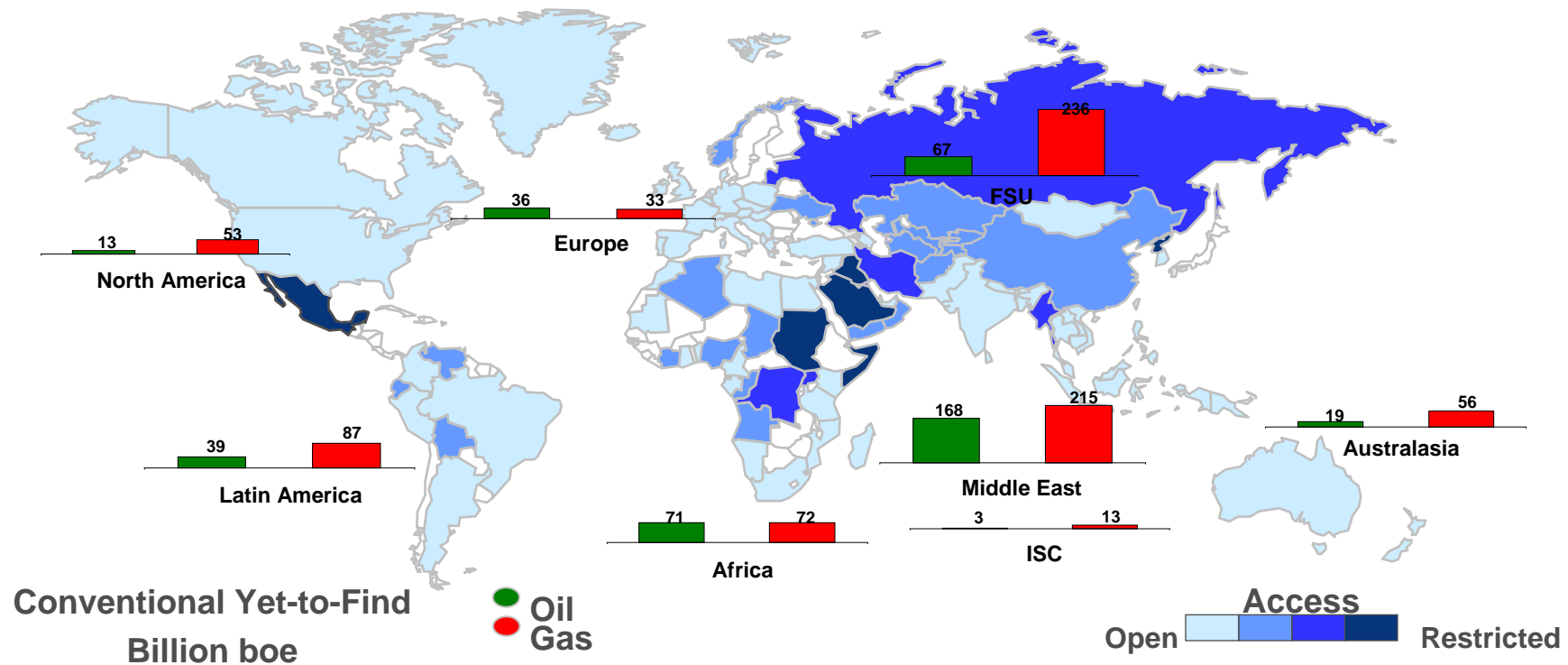
- › In general, governments and regulators will claim an increasing share of the economic rent through tightening fiscal terms as oil prices increase.
- › However, they are loath to give up these gains when oil prices soften – taking up to 5-10 years to respond

Is there material remaining prospectivity?



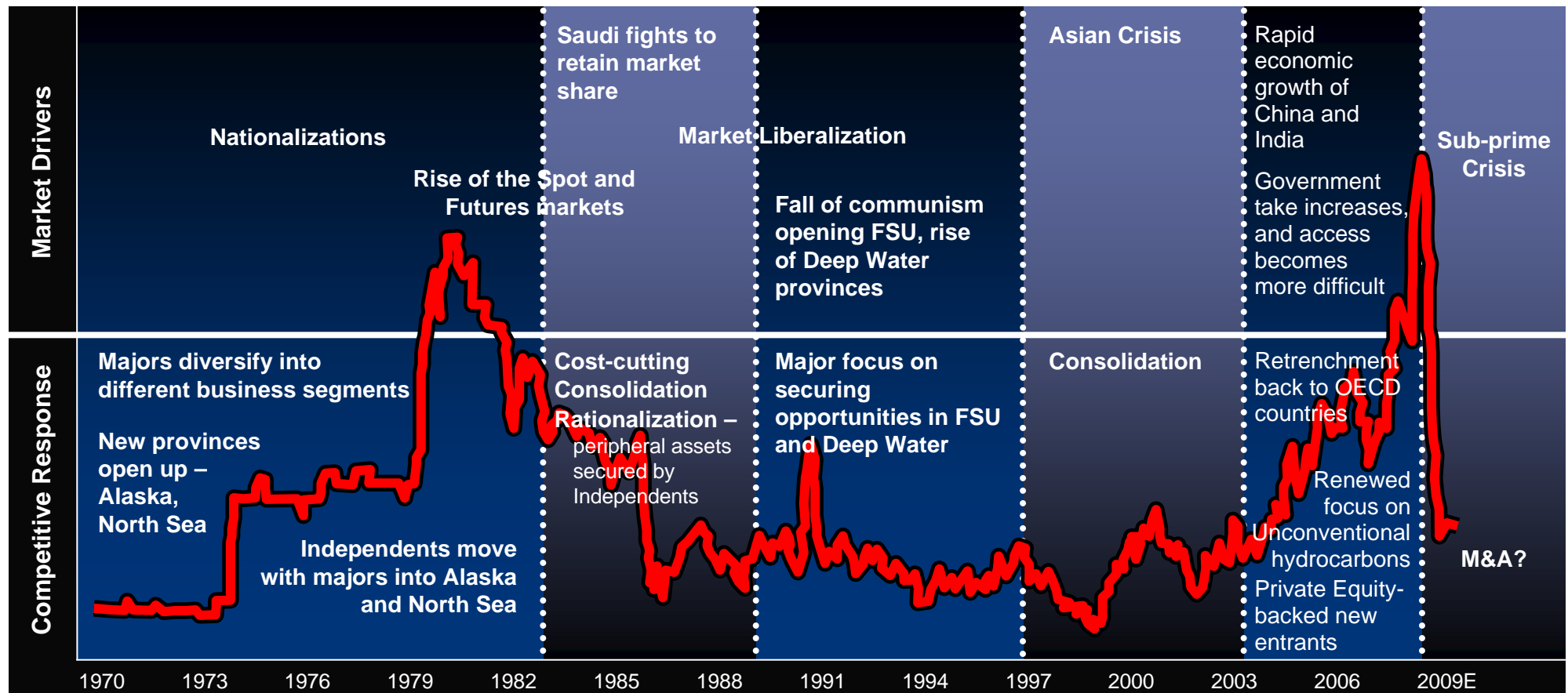
- › The “global” creaming curve suggests that there is remaining potential- continuing the trend from 2000, suggests the industry replacing on average ~15 billion boe per year (equivalent to 44 million boepd)

How has resource access changed with oil price?



- › In the recent high oil price environment, IOCs have found it increasingly difficult to secure and maintain access to much of the world's conventional oil and gas resource.
- › In response, they have turned to more challenging plays, such as deepwater and unconventional hydrocarbons within OECD countries
- › Based on historic experience, countries and provinces who have severely restricted access to the IOCs can take up to 15+ years to reopen, even then access is limited to the most technically and economically challenging projects

How has the competitive environment responded to oil price?



- > The oil price has been both a key stimulus and impediment to the development of a new entrance to the business
- > The recent ramp up in oil prices has heralded a new spectrum of industry players, ranging from private-equity funded new start-ups through to industrial conglomerates wishing to enter the business
- > As has occurred during other periods of oil price softening, will we see another period of consolidation as the established players buyout the new entrants and each other?

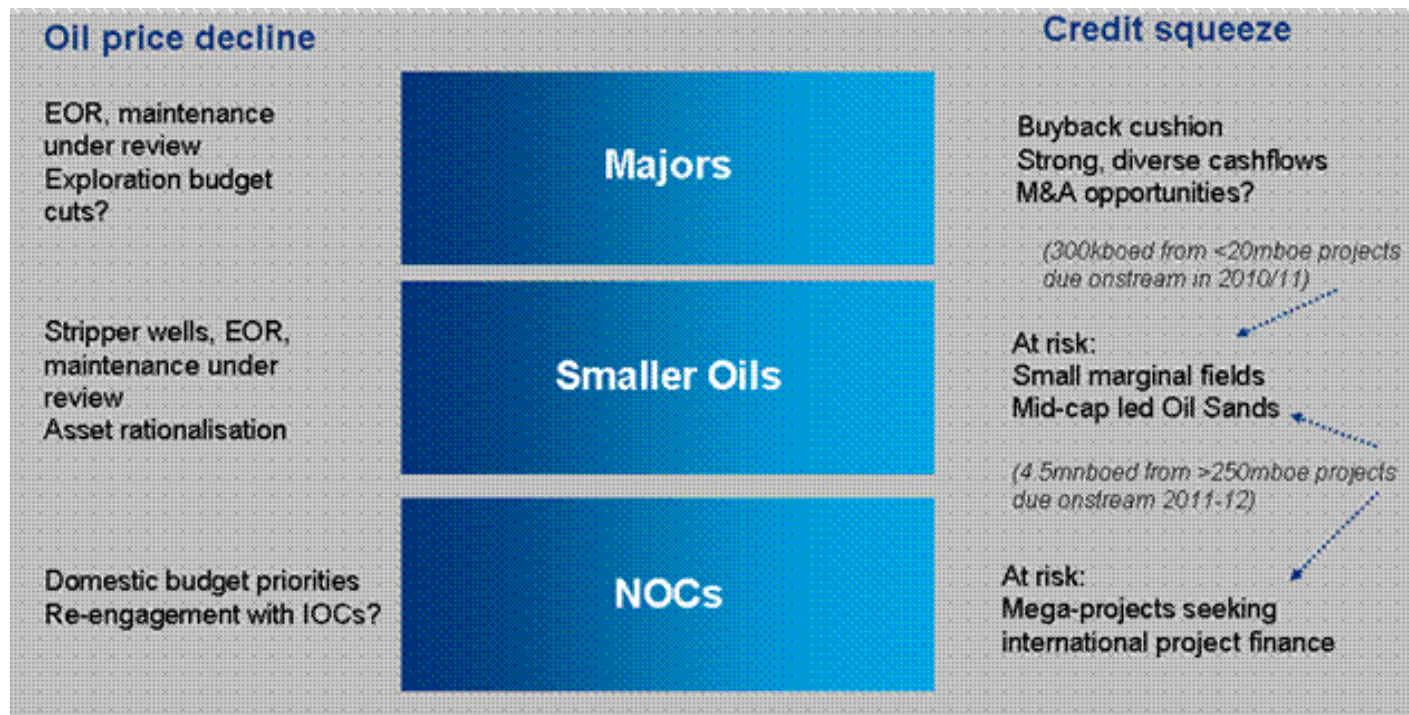
The winners in this market are those with cash in the short-term, and moreover those that can strengthen their portfolio now for the long-term

› Challenges in accessing capital

- impacting companies' ability to deliver on new business development projects
- restricting even ongoing business operations for some, due to capital commitments

› Softening oil prices

- constraining company cash flows, dragging some even into the negative
- delivering unattractive or even uneconomic returns for some field developments



How could the industry drivers under different oil price scenarios?

DRIVERS	Costs	Fiscal Stability	Prospectivity	Access	Competition
High (>\$100/bbl)	Strong demand for complex developments sustains internal costs. Cost inflation increases.	Increasingly harsh terms and aggressive bidding for tier 1 opportunities. Change to existing terms.	By virtue of the sustained high oil prices many hydrocarbon resources become economically viable	Greater resource nationalism. IOCs limited to technically and economically challenging opportunities	The competitive space becomes very crowded (Majors, NOCs, Independents, New Entrants).
Mid (\$60-\$70 bbl)	Internal costs ease as supply tracks with demand. External costs continue to inflate in line with global economic growth	Some new terms introduced for future licensing. Could be more changes to existing terms.	Same as HIGH, with the exception of challenging projects (e.g. marginal uncons) and harsh areas, e.g. the Arctic	Trend for resource nationalism continues. IOCs retrench to OECD and frontier international.	Competitive market, but limited new plays opening up to broaden the playing field. Opportunistic M&A.
Low (<\$50/bbl)	Demand falls and internal costs fall off. Service sector over-capacity leads to reduced project costs.	Stalled investment – eventual reduction of government take. Bid terms may be renegotiated.	Uncons and frontier plays are sub-economic.	MRHs more risk adverse as oil revenues fall – more open to IOC partnering for high risk projects (also reduce capex)	Significant consolidation triggered by lack of opportunity. Conglomerates and new entrants exit.

Key success factors for today and beyond

› To be successful in the current environment companies must focus on the following key areas:

- **Long term oil/ gas price view**
 - The fundamentals of supply and demand support a return to US\$60+ per barrel.
 - Current enterprise values reflect a sub-\$60/bbl world and the uncertainty around when demand will come back
 - This disconnect represents the potential to create value through acquisition

- **Understanding of capex flexibility and picking the bottom is key**
 - Capital costs are yet to readjust to the prevailing commodity price environment
 - Varying capex flexibility by sector means that onshore costs will readjust first (and are doing so already), followed by offshore shelf and finally the frontier plays, ultra-deepwater, oil sands etc.
 - The ability to pick when costs will bottom-out in each sector is key to correctly assessing opportunities

- **Strong balance sheet**
 - Reduced access to debt finance and increased costs (bonds recently issued by Chesapeake have a 10% yield) make funding acquisitions and financing projects more difficult
 - Companies with strong balance sheets and positive cash flow are ideally positioned to manoeuvre in this environment

What opportunities are emerging for companies in the current market?

› New business opportunities

- corporate acquisitions
- acquisitions of subsidiaries
- asset acquisitions
- JVs

› New exploration ventures

- farm-ins/outs of exploration blocks
- subcontracting of rigs
- evolving NOC perspectives on IOC market entry

› Portfolio optimisation

- asset swaps
- divestments
- adjusted stake in current fields

Thank You.