

Oil Market Transformation

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Seven Ideas that May Define the Outlook

26th Oil & Money Conference

London

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The World Is Not Running Out of Oil

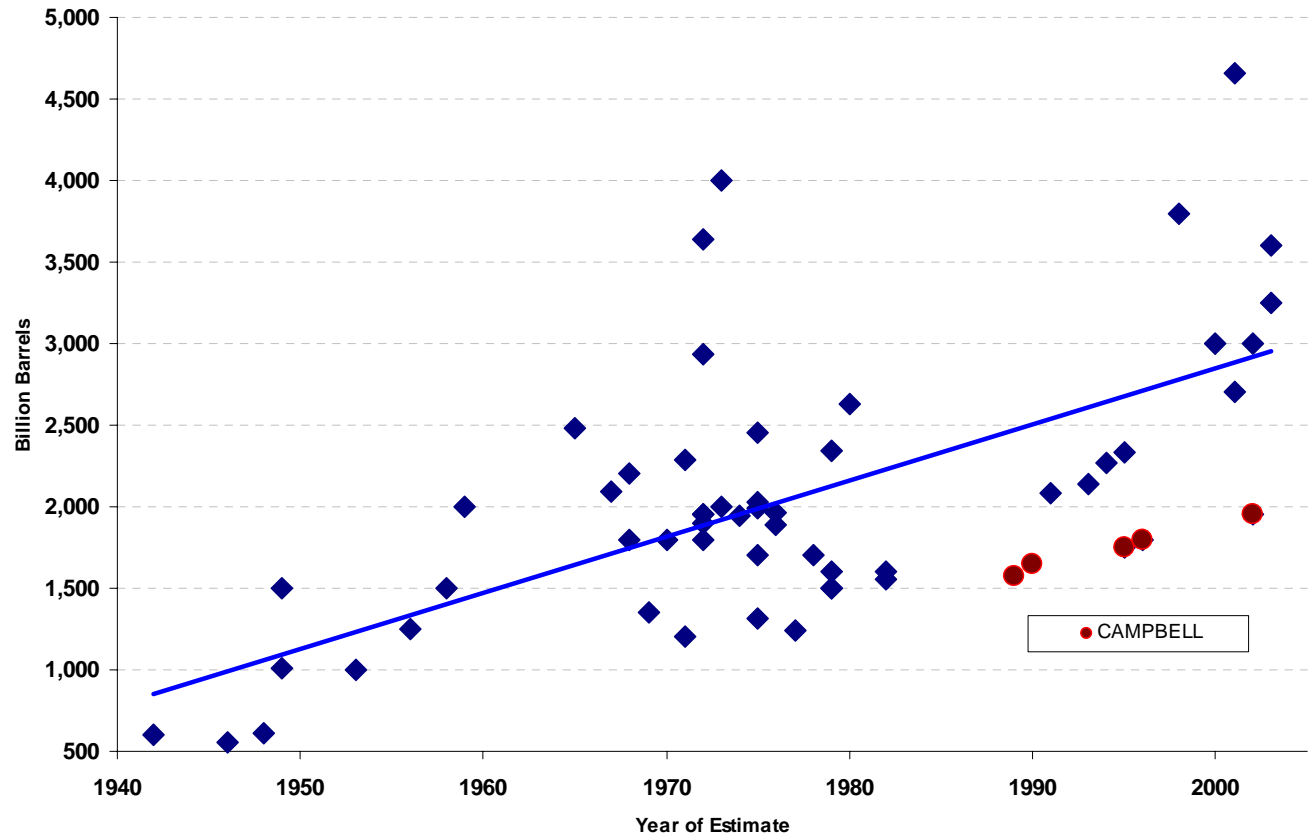
“Peak Oil” Requires a Fixed Value for Ultimately Recoverable Reserves but URR estimates have been steadily climbing for decades



M. King Hubbert
b.1903 d.1989

Shell Oil & USGS

Geologist who first identified concept of bell curve “peak and decline” for oil

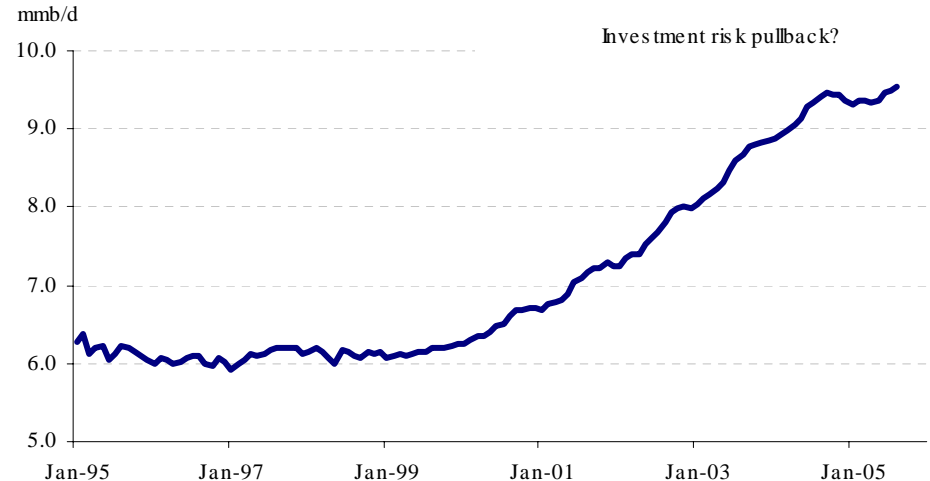
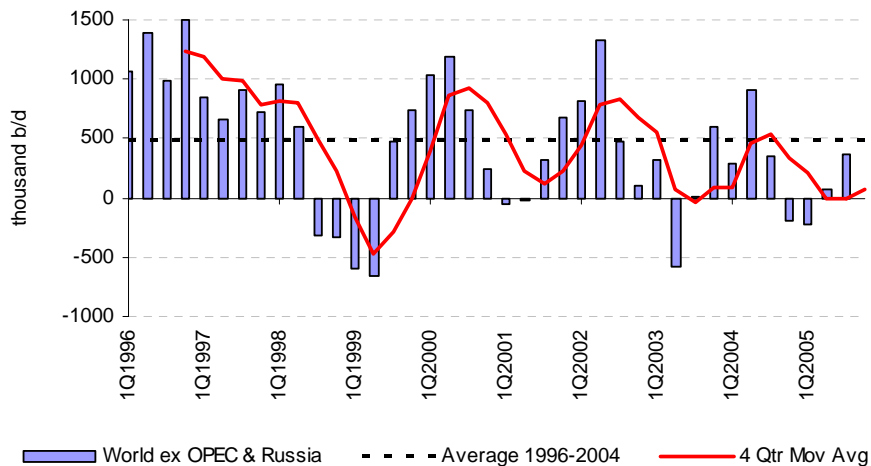


Source: Michael Lynch, Energy SEER Inc.



However, non-OPEC Supply Growth Looks Weak

...disappointing response outside of Russia
 ...rising taxes and new chilly investment climate in Russia



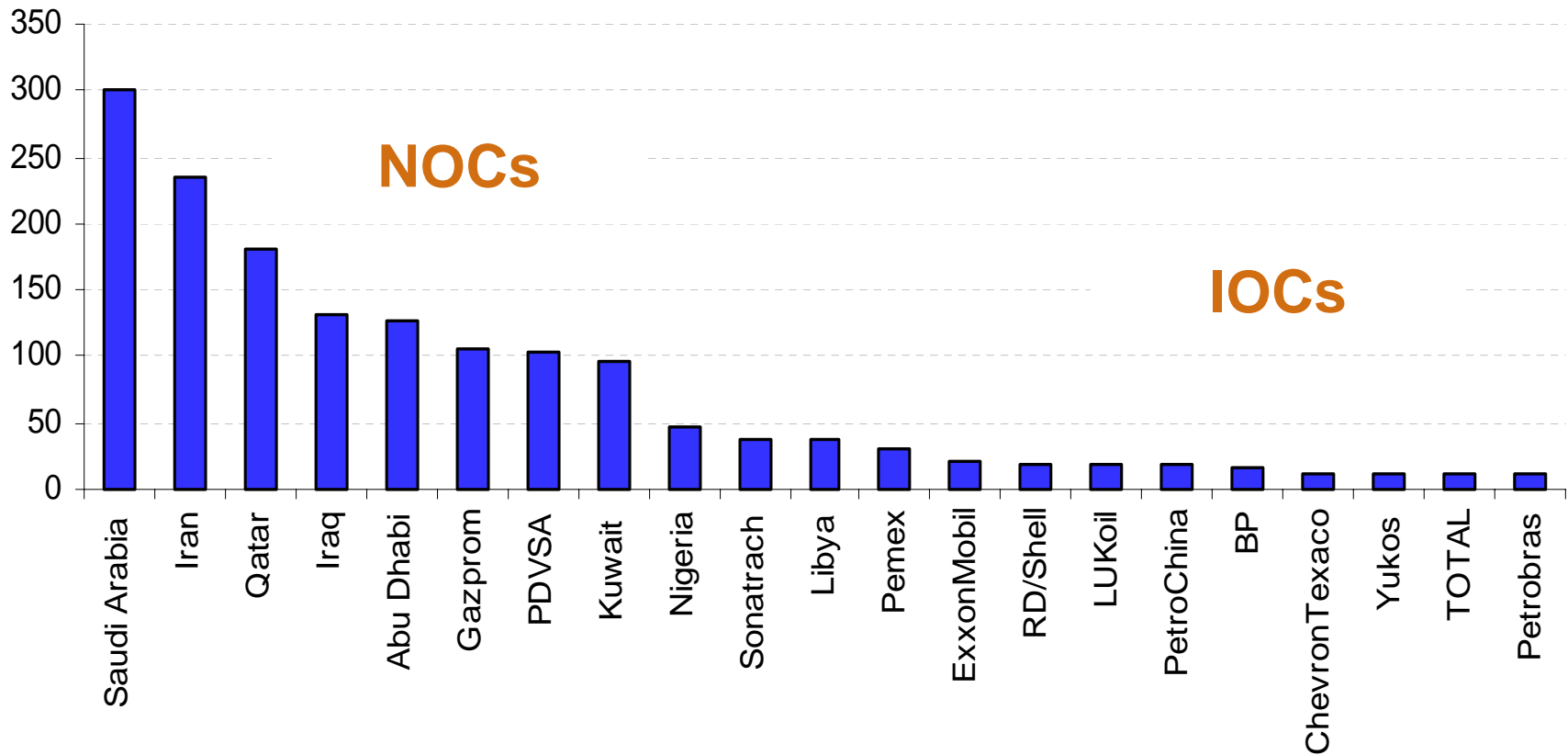
Source: IEA; Deutsche Bank estimates



Remaining Reserves May Be in Hands Bound by Politics

...what happens if investment lags requirements?

Oil & Gas Reserves (billion boe)



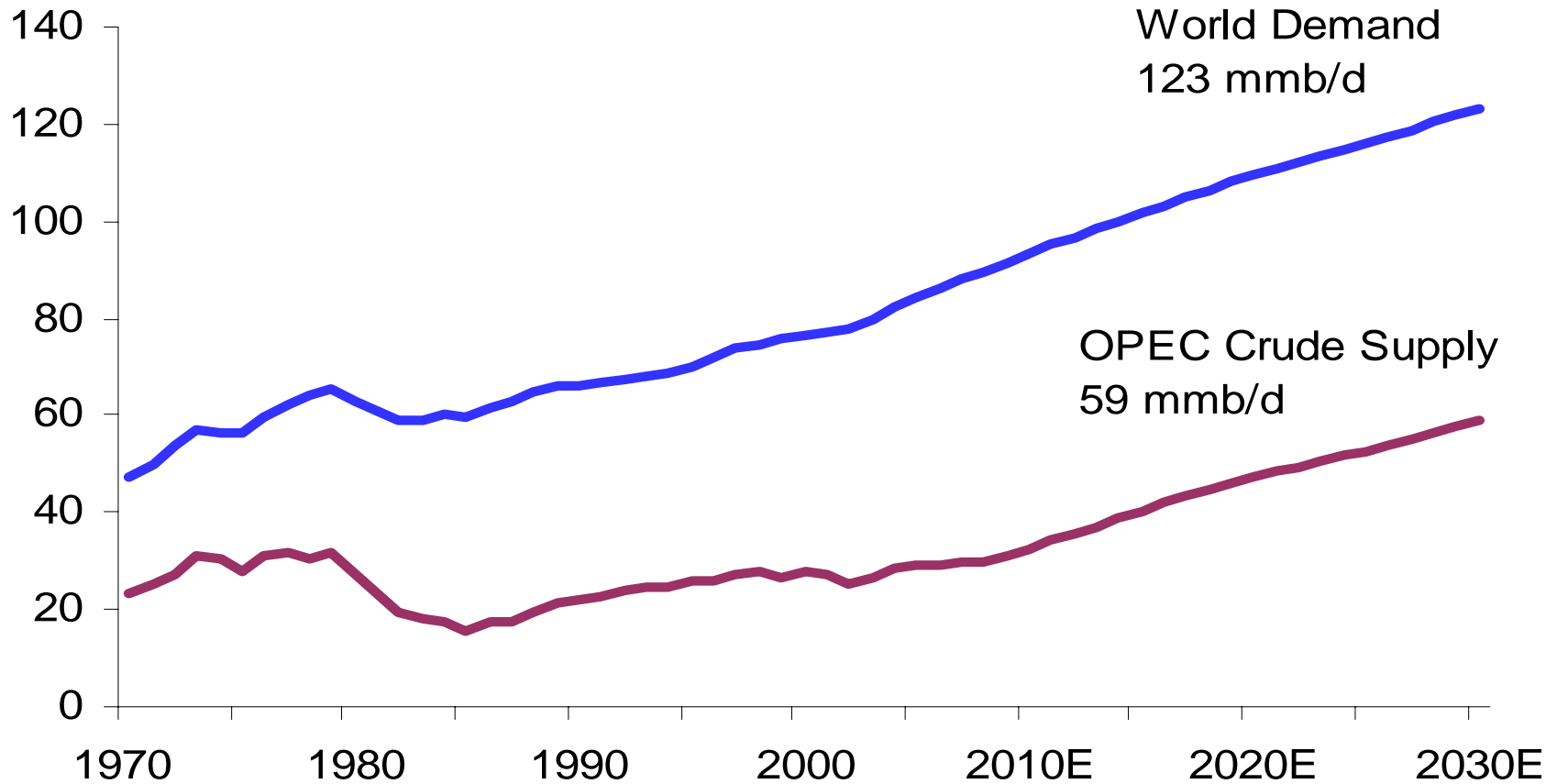
Source: Oil & Gas Journal; BP; IEA; Deutsche Bank estimates



World Oil Demand and Required OPEC Supply

...meeting this level of demand may not be easy

Million barrels/day

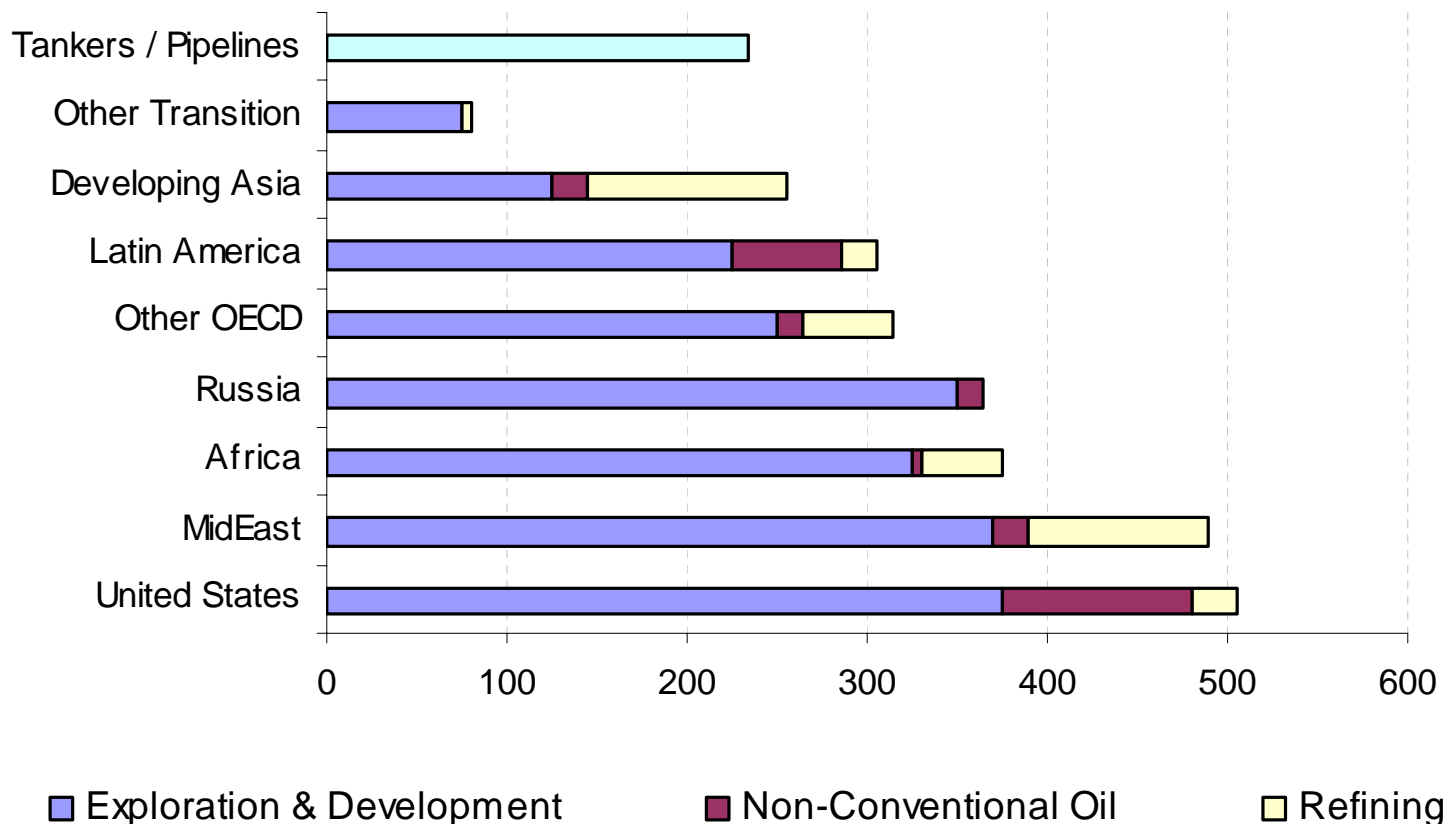


Source: IEA; Deutsche Bank estimates



Cumulative Global Oil Investment Required 2005-2030

...\$500 billion needed in the Middle East alone just for oil

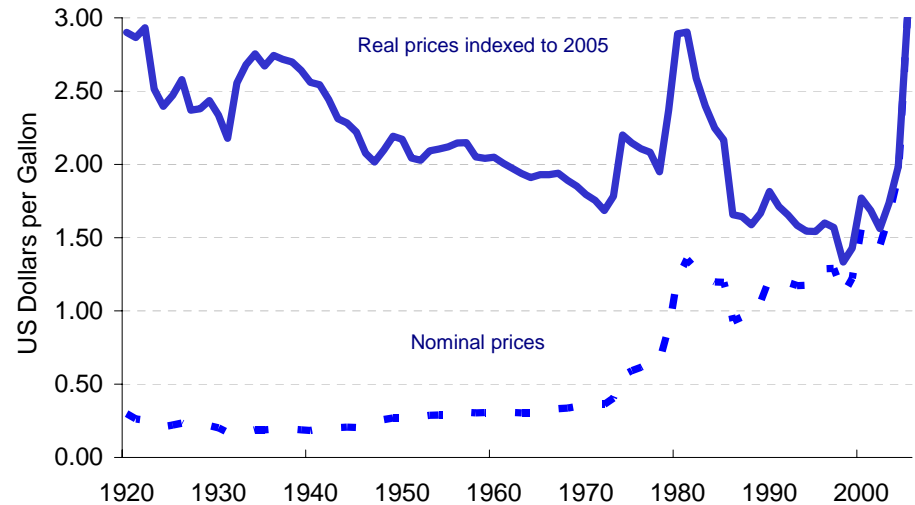
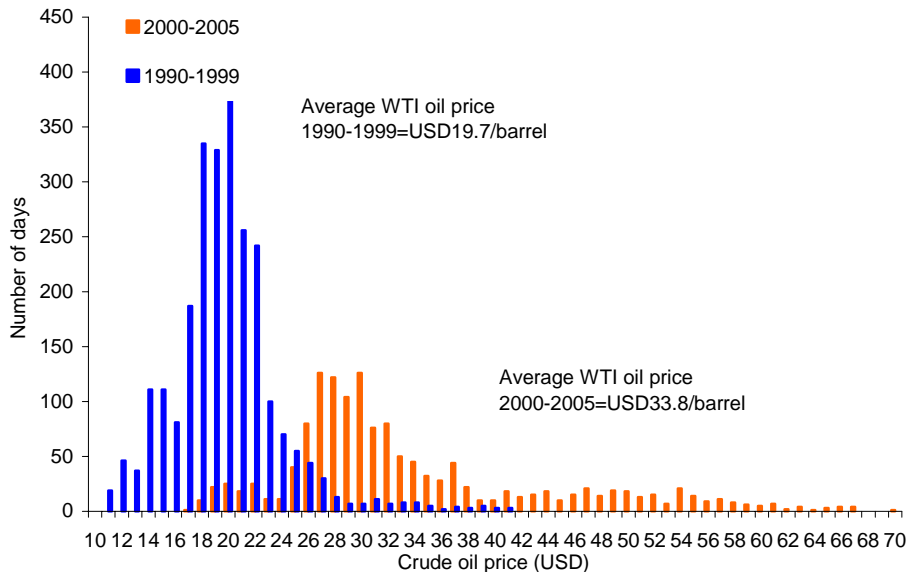


Source: IEA World Energy Outlook 2004; Deutsche Bank estimates

Cumulative oil (excluding gas) investment needed (billion constant 2000 \$)

The World Is Having To Learn To Live With High Oil Prices

- The WTI crude oil prices averaged just under USD20/barrel in the 1990s.
- In the current decade, the oil price has averaged over USD33/barrel.
- We expect oil prices will average over USD40/barrel during the current decade, or more than double the average of the 1990s.

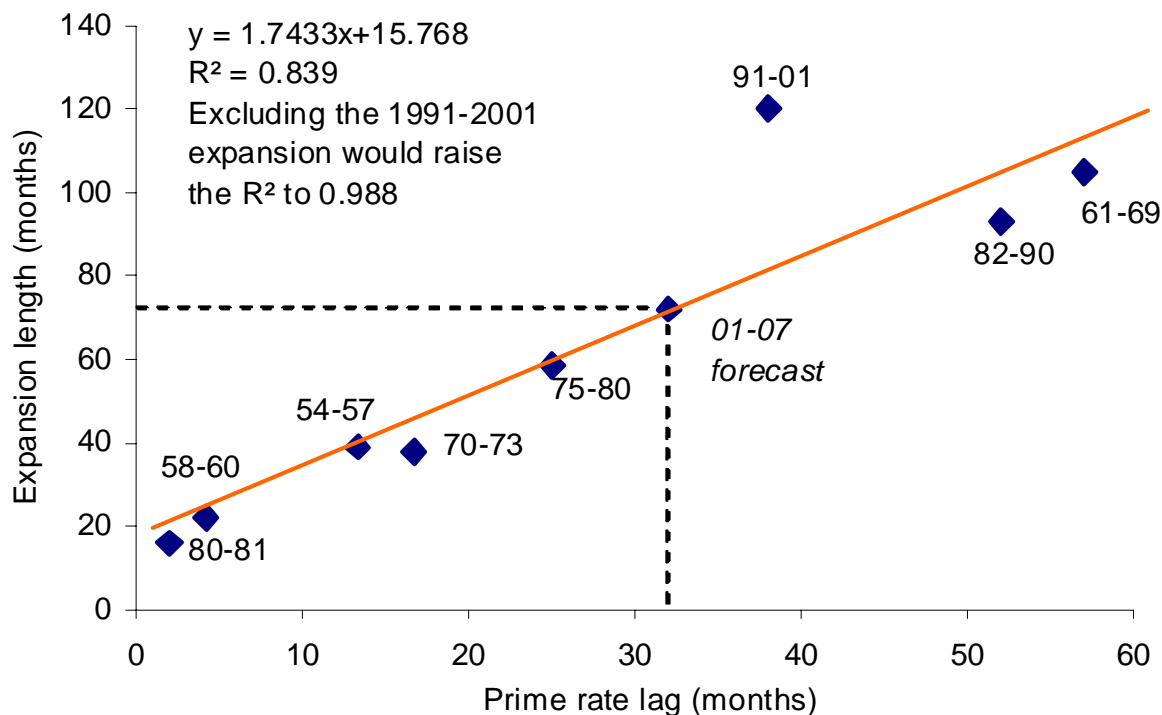


Source: Bloomberg; DB Global Markets Research



Timing The Next US Recession

- Since 1954 we find that the longer the US Federal Reserve keeps monetary policy on hold after a recession, the more durable the eventual US expansion
- The last US economic recession bottomed in November 2001, but the US prime rate did not start rising until June 2004 (32 months later). This would imply the next US recession will begin in 72 months after the US moved out of recession in 2001 or December 2007



Source: DB Global Markets Research, Columbia University



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