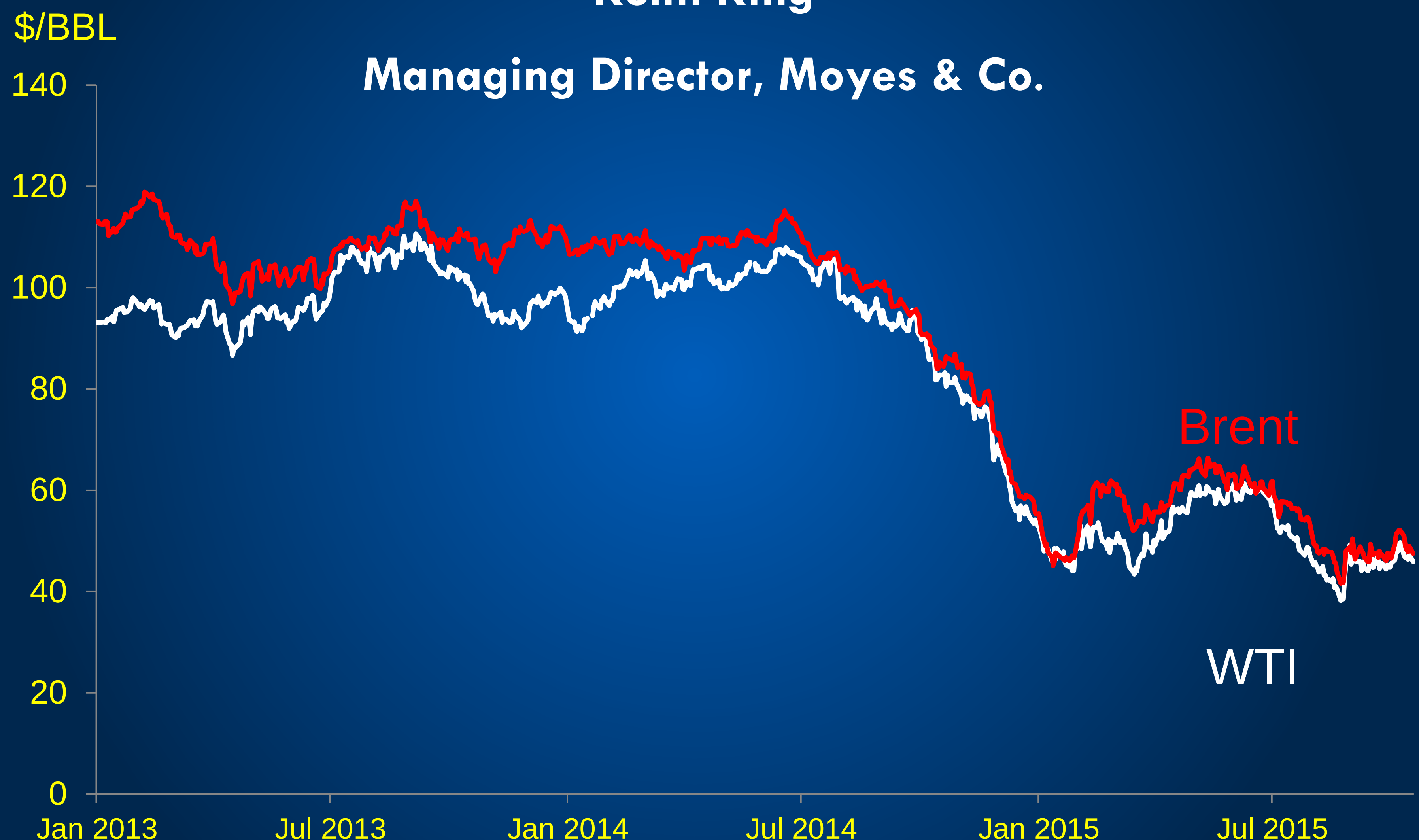
Oil: What's a Reasonable Price?

Keith King

Managing Director, Moyes & Co.



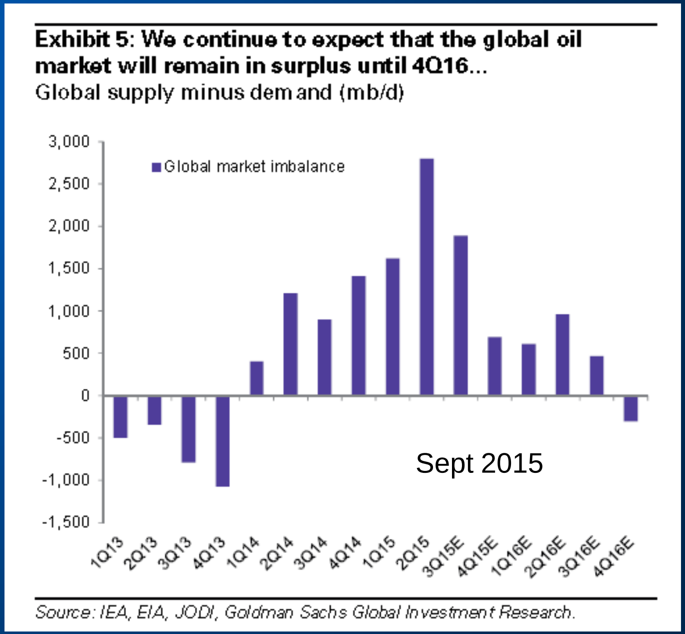
Main Points – Short Term Vs Long Term

Short Term – The Great “Glut”

- Price drop due to price war, OPEC reaction to US frackers
- World oil oversupplied by ~~2 to 3%~~ 1.5%

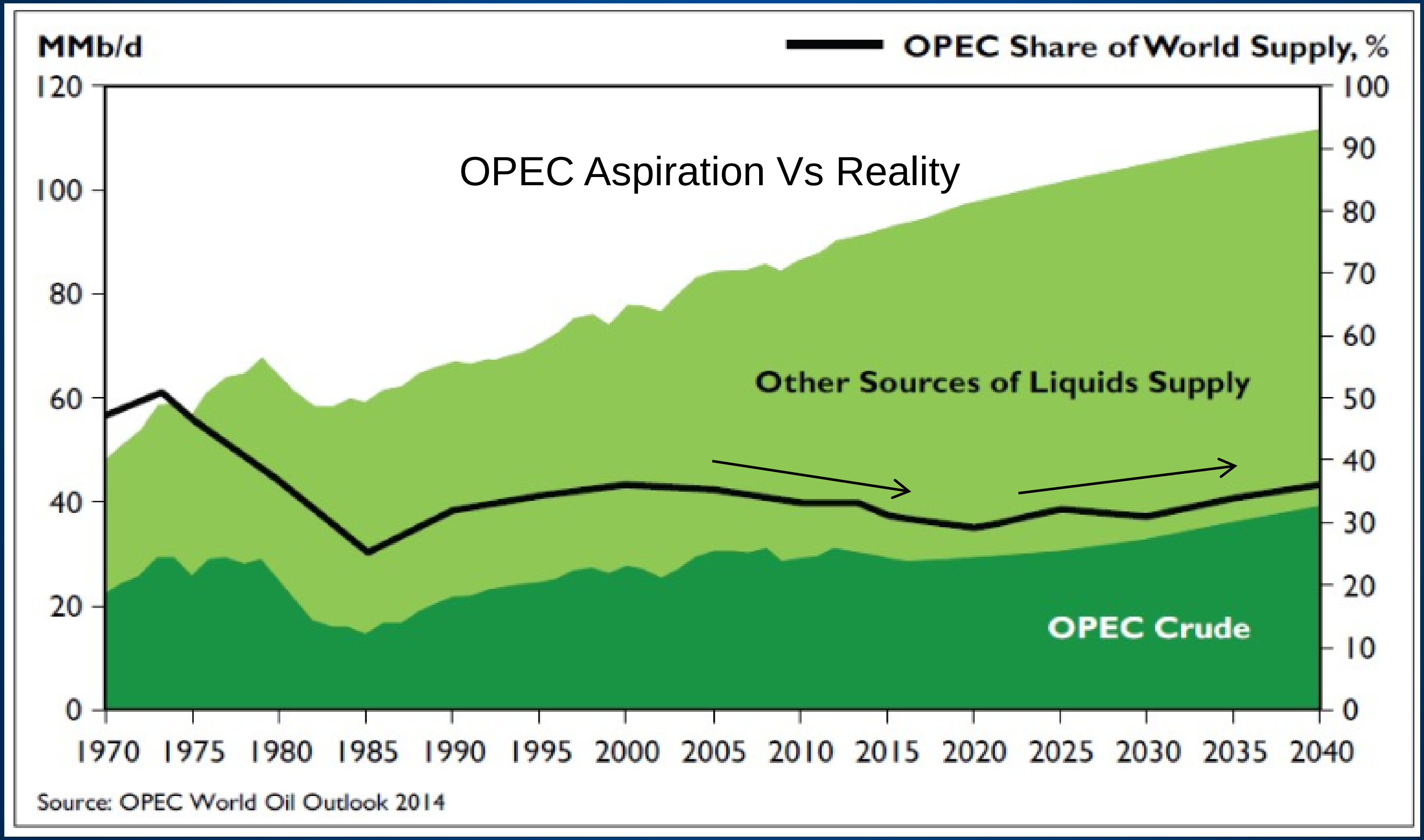
Long Term – Imbalances work themselves out

- Drilling and production lags behind price stimulus
- OPEC - historically low spare capacity, under stress
- New developments needed to replace 5% decline rate and accommodate 1+% demand increase
- Prices will increase to Marginal Supply Cost
- $70 in late 2016 (60%), over $100 in 2020 (80%)
- Long term challenge of meeting growing demand masked by short term “glut”



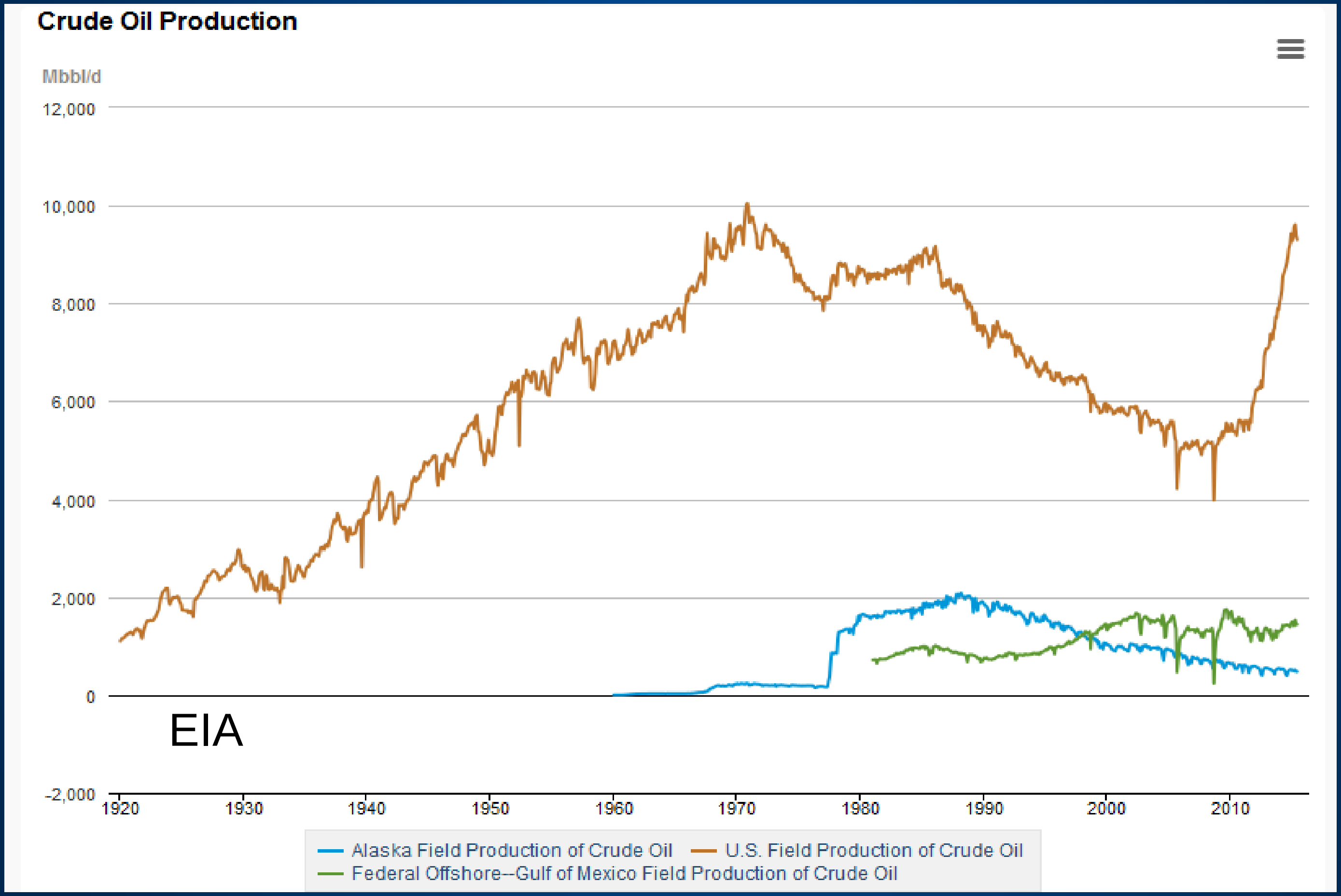
OPEC Aspires to Increase Market Share

- Increasing US production and other “expensive” production – Deep Water
- Flat to lower OPEC production



What Caused OPEC to Panic?

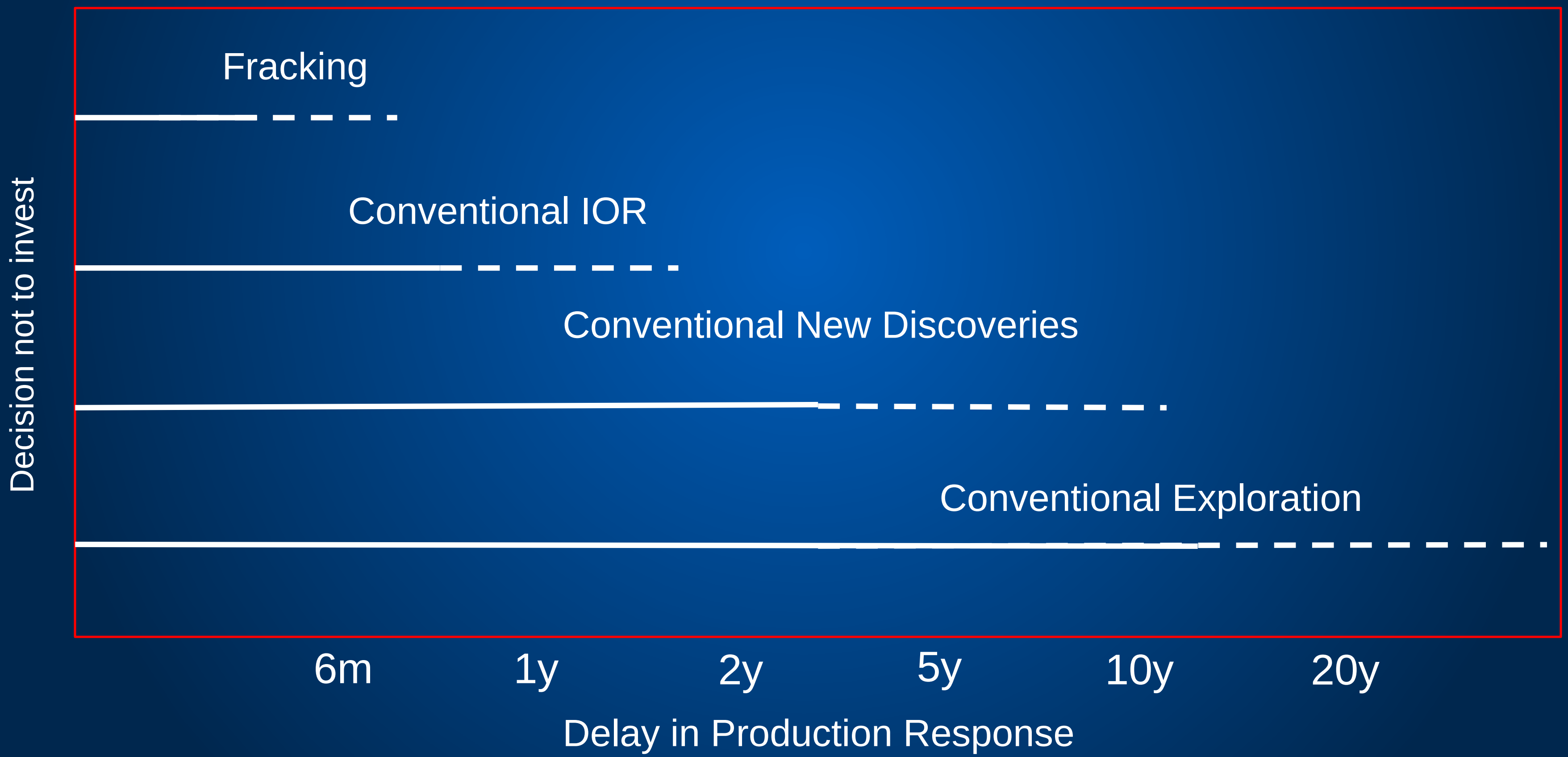
- 5 million bbls a day additional supply – 5% of global production
- World would be 2 to 3 mm/d undersupplied without US increase



…lag between price and production

Price, Activity, Production Lag - Four Months to Decades

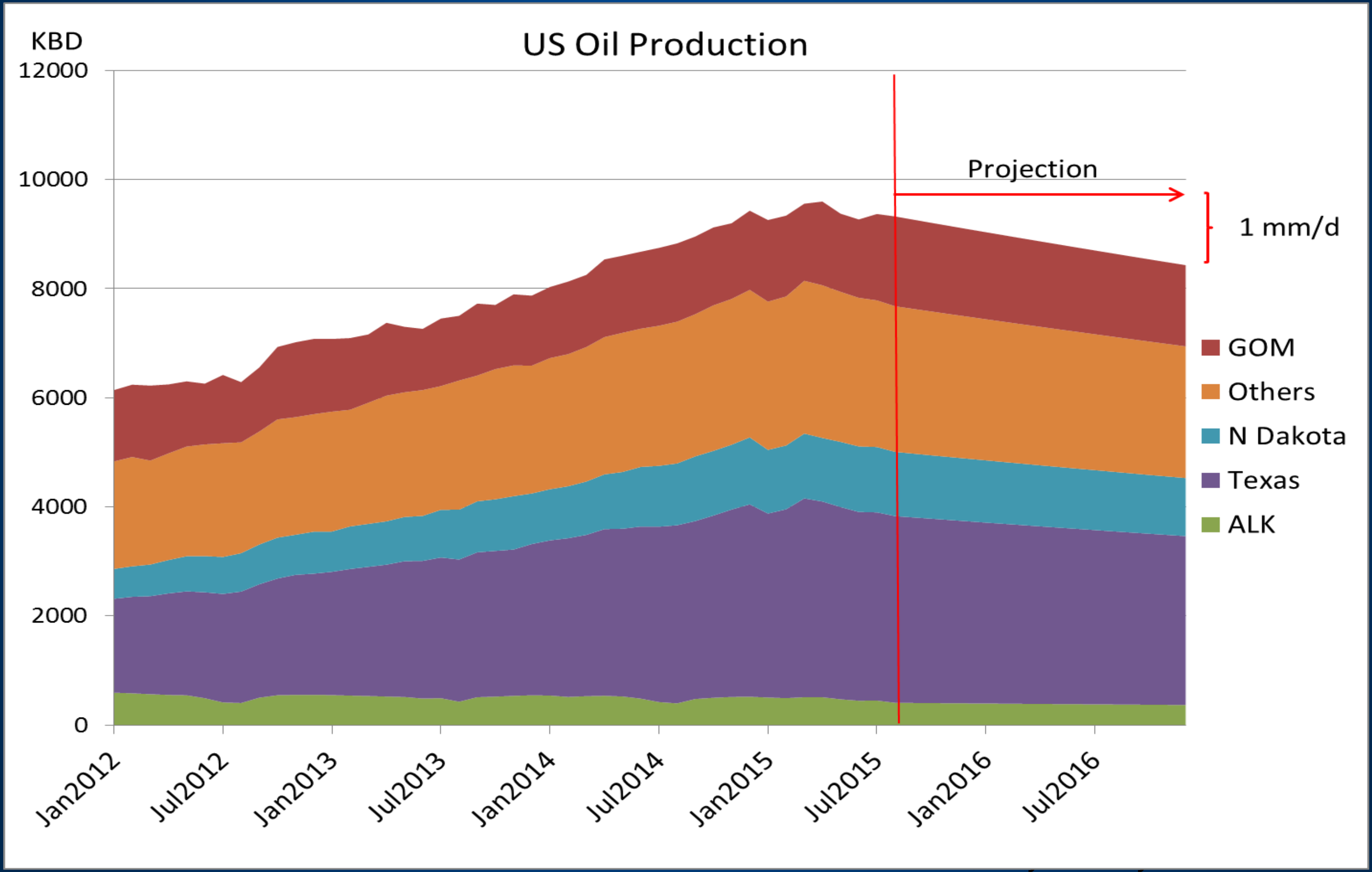
- Conventional discovery to first production -10 Years
- Conventional improved recovery – 6 to 18 months
- “Shale” (fracking) – 4 to 6 months



…fracking responds first

US Oil Production –Flattening, Declining?

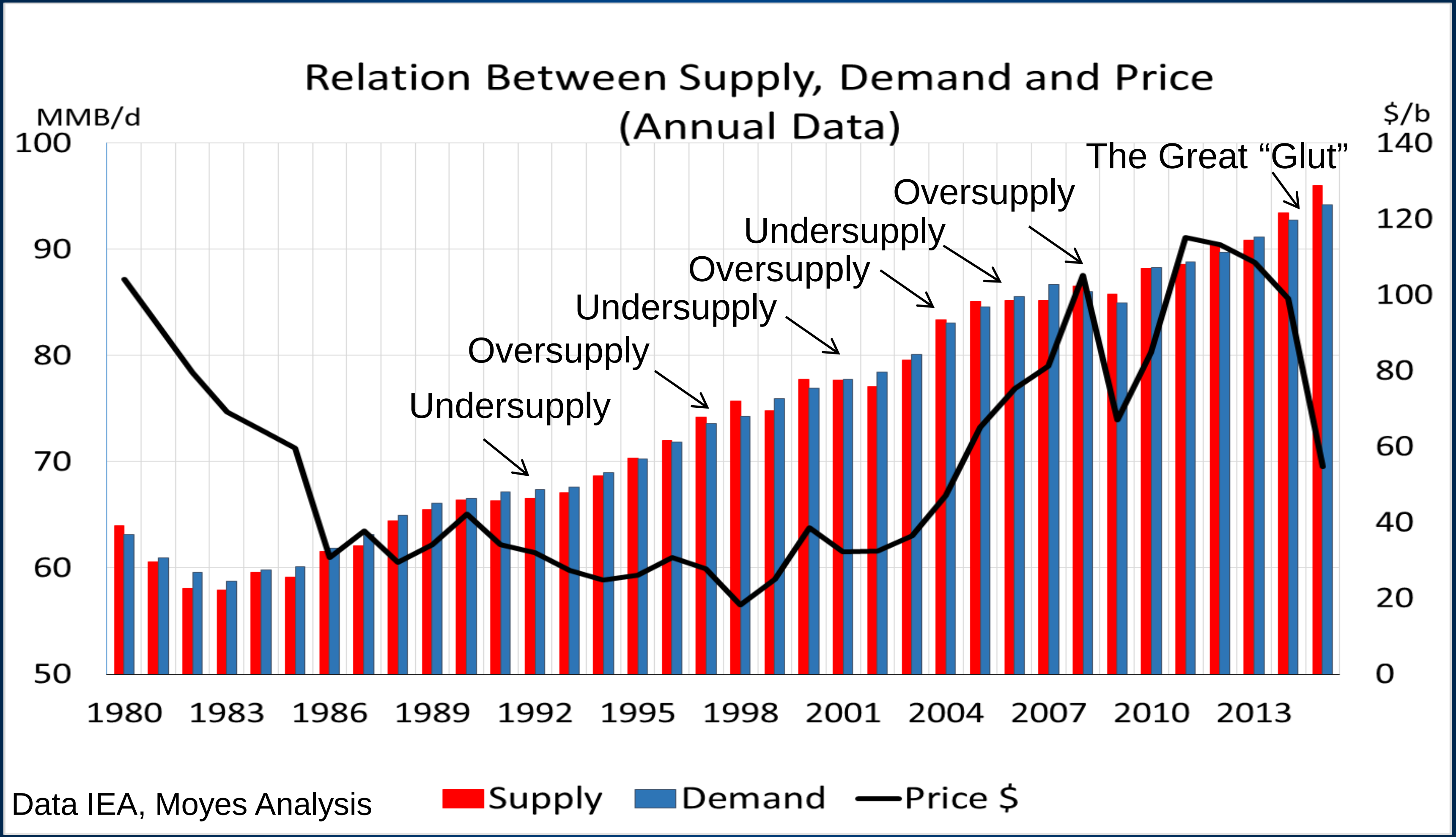
- Cure for low prices is low prices
- May thru Aug saw decreased production



…we have seen this before

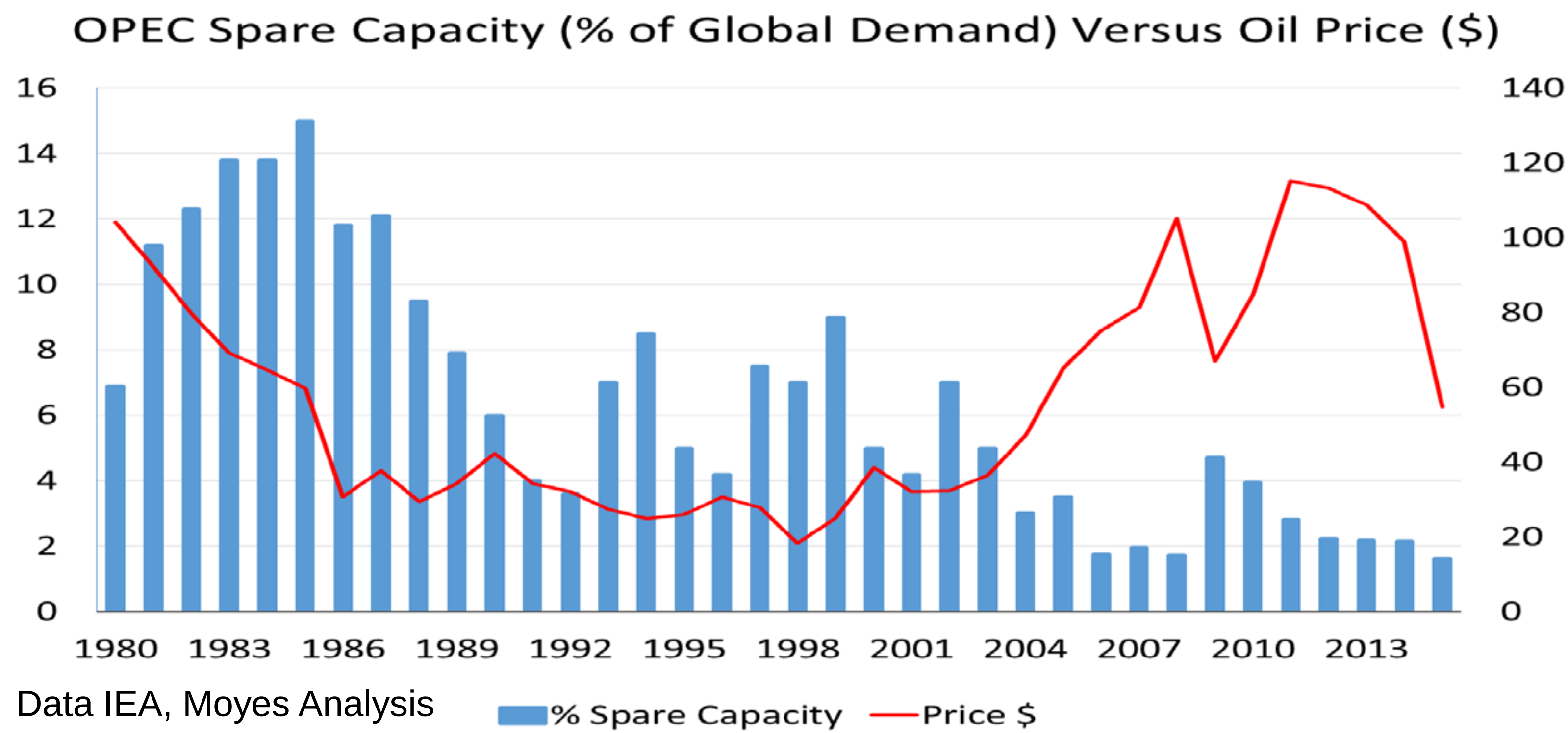
The Longer Term Perspective

- Imbalances self correcting – imbalances short lived



OPEC Spare Capacity Now At Multi-Year Low

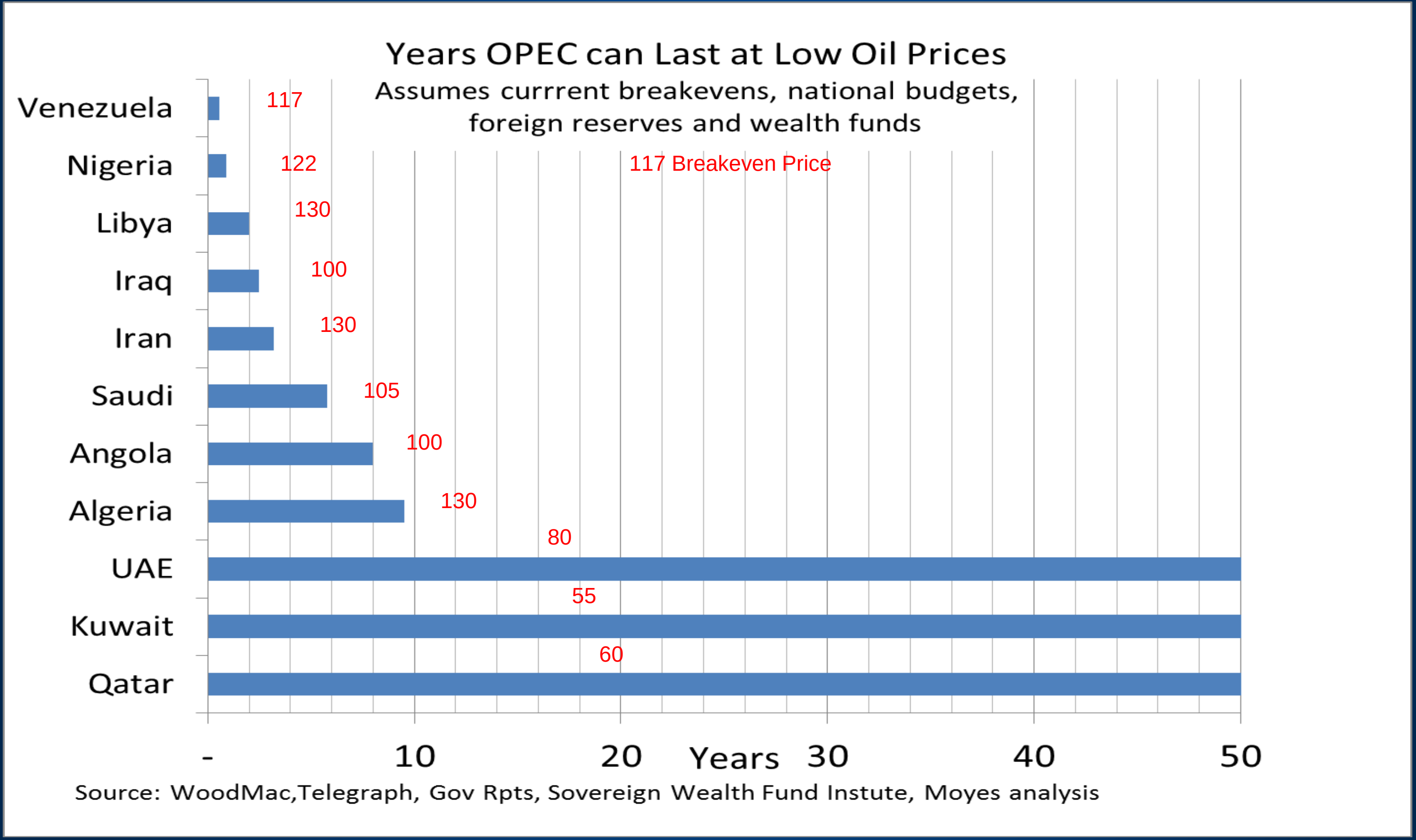
- Saudi increased production to 10.6 mmb/d to gain market share
- Low OPEC Spare Capacity associated with rising price
- OPEC - 2 mmb/d over quota



Data IEA, Moyes Analysis

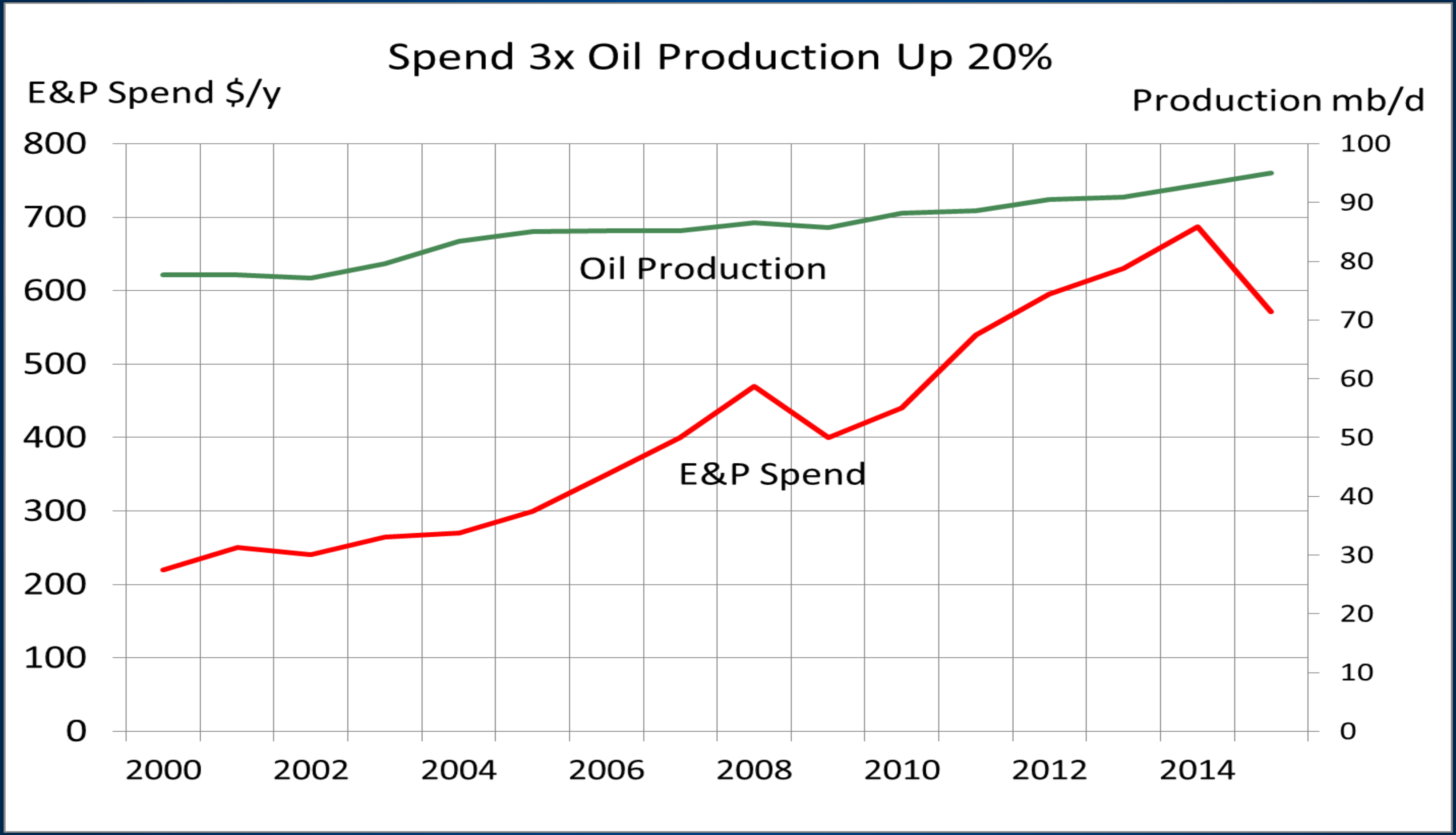
OPEC Countries Not Sustainable at Low Prices

- For most producers the question is not cost of production
- It's supporting the national economy



Long Term Oil Gets More Expensive

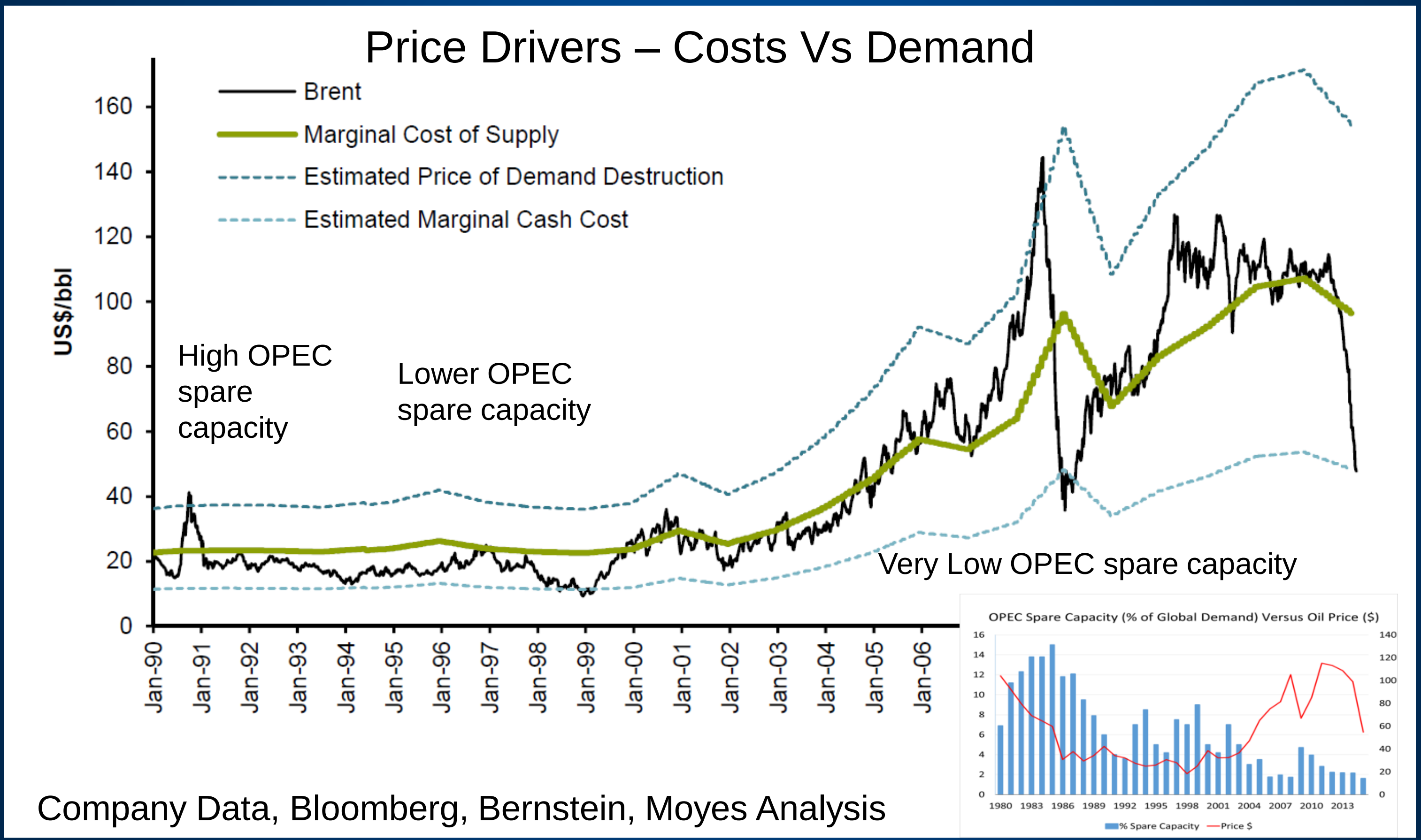
- Technology enables new production and may lower costs in the short run



…supply cost trends

Cost and Price Increase With Time

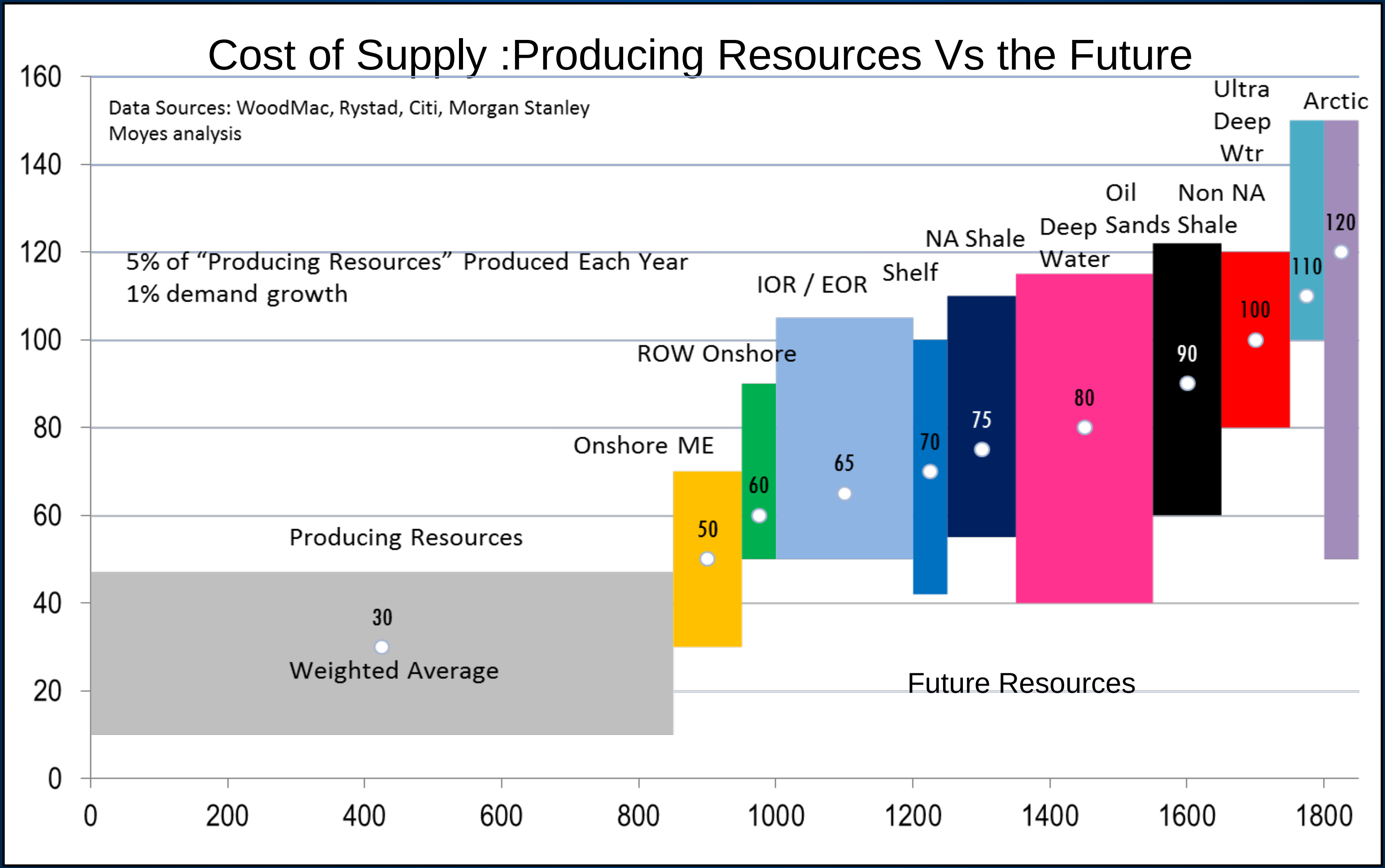
- MCoS allows production maintenance/ growth
- MCoS may drop briefly, not permanently
- Delayed new production could drive prices higher than MCoS



Company Data, Bloomberg, Bernstein, Moyes Analysis

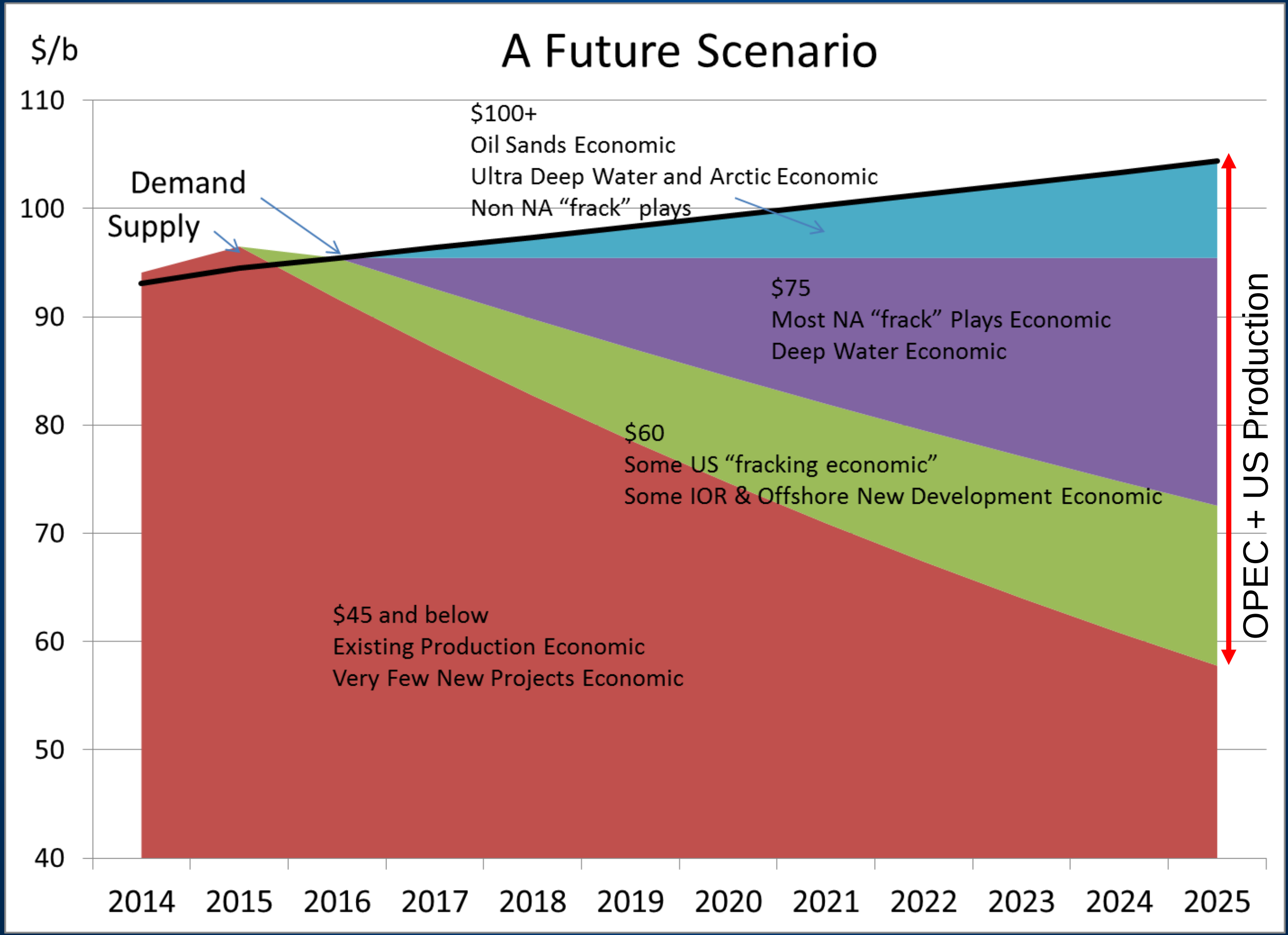
Future Projects Not Economic at Today's Prices

- Existing Production not significantly affected at current prices
- Future production is crushed at low prices!



Without Higher Prices – Production Will Decline

- World needs OPEC + US + production by 2025



Summary

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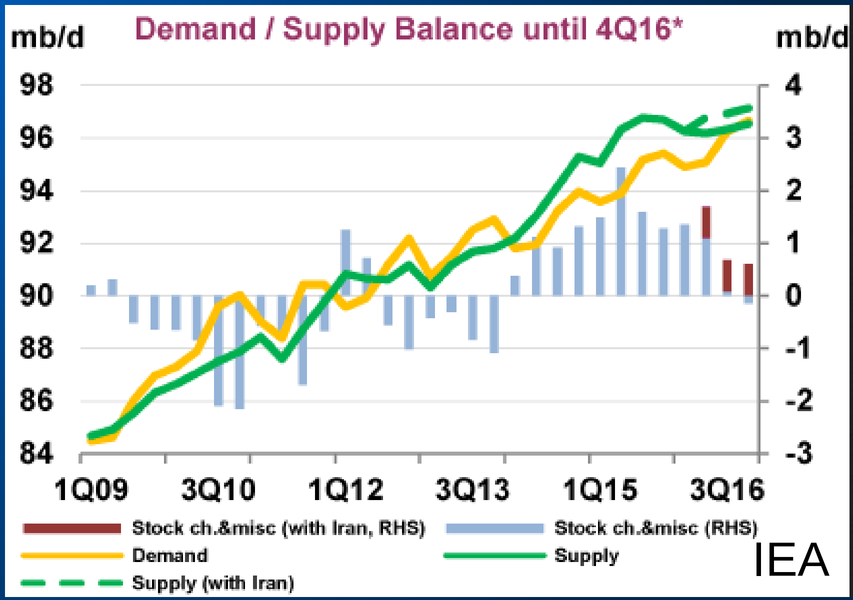

Many Moving Parts

Supply demand balance
- Production
- Storage
- Consumption

Cost of existing production versus cost of new supplies
Technology
Resource size, distribution, access, cost
Lag times
Producer stability (politically, financially)
OPEC objectives
Iran sanctions (smuggling, cannibalizing)
US frackers financial stability, hedging, breakevens
Gov't take
Product substitution
China (and other emerging economies) growth
$ strength
And things I have not through about

Questions- and is there something I may not have noticed?