

# OIL

## Medium-Term Market Report 2012



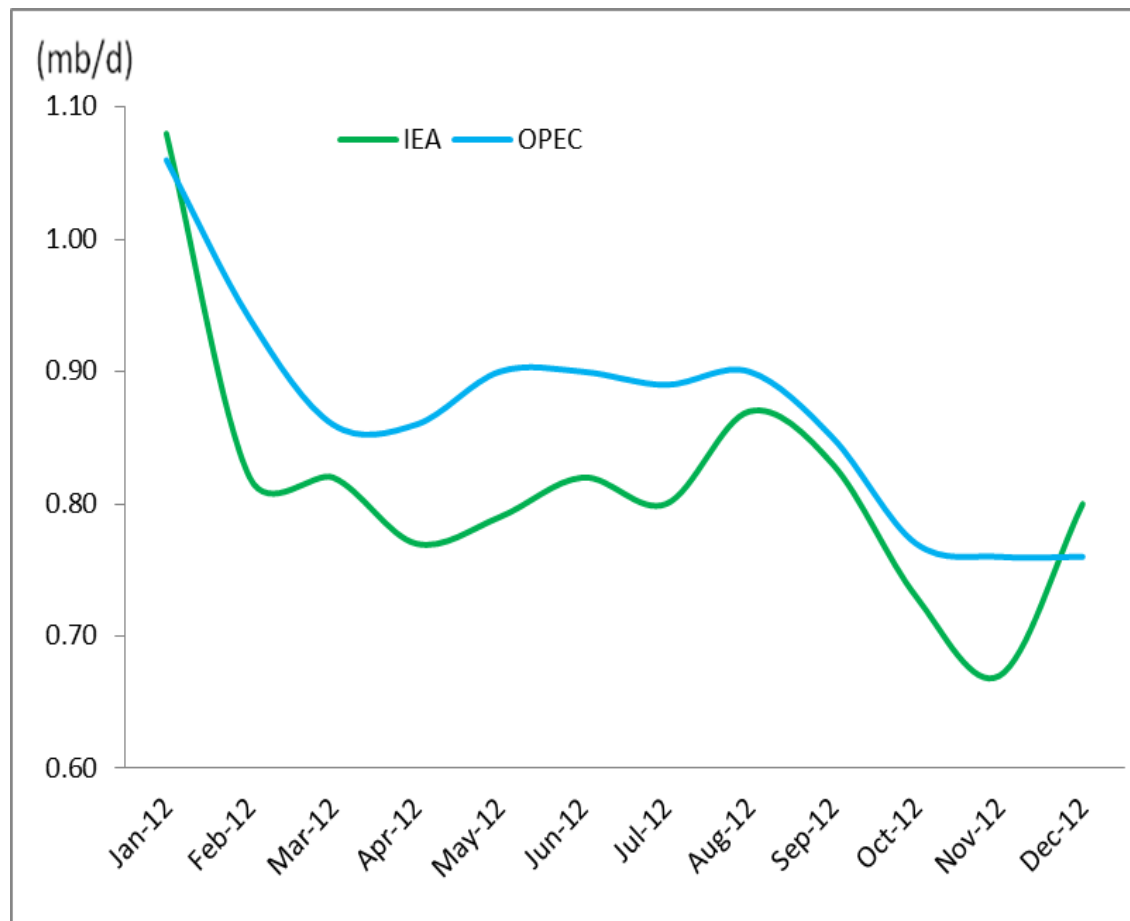
### Market Trends and Projections to 2017

Third IEA-IEF-OPEC Symposium on Energy Outlooks  
22 January 2013 Riyadh, Saudi Arabia

# Perils of convergence

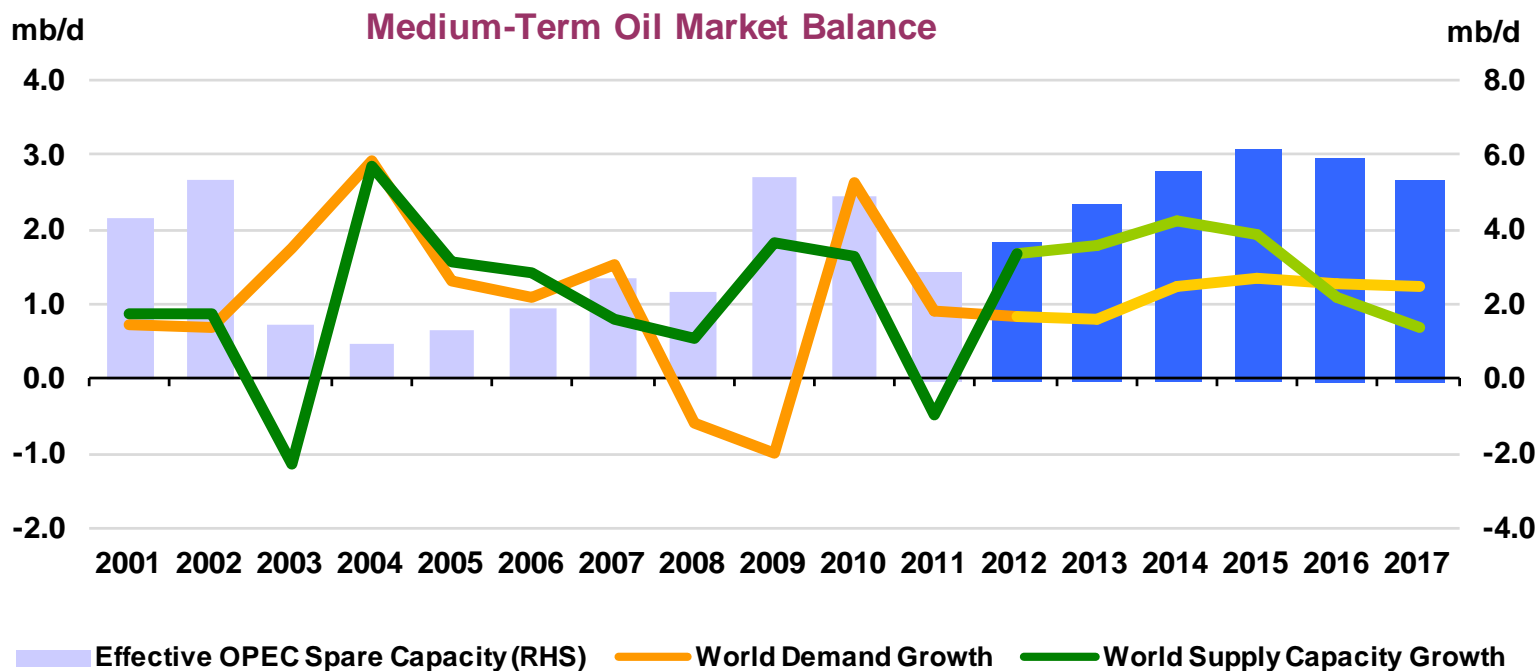
*Aligned forecasts not risk-free or revision-proof*

## IEA & OPEC revisions of world oil demand growth projections for 2012





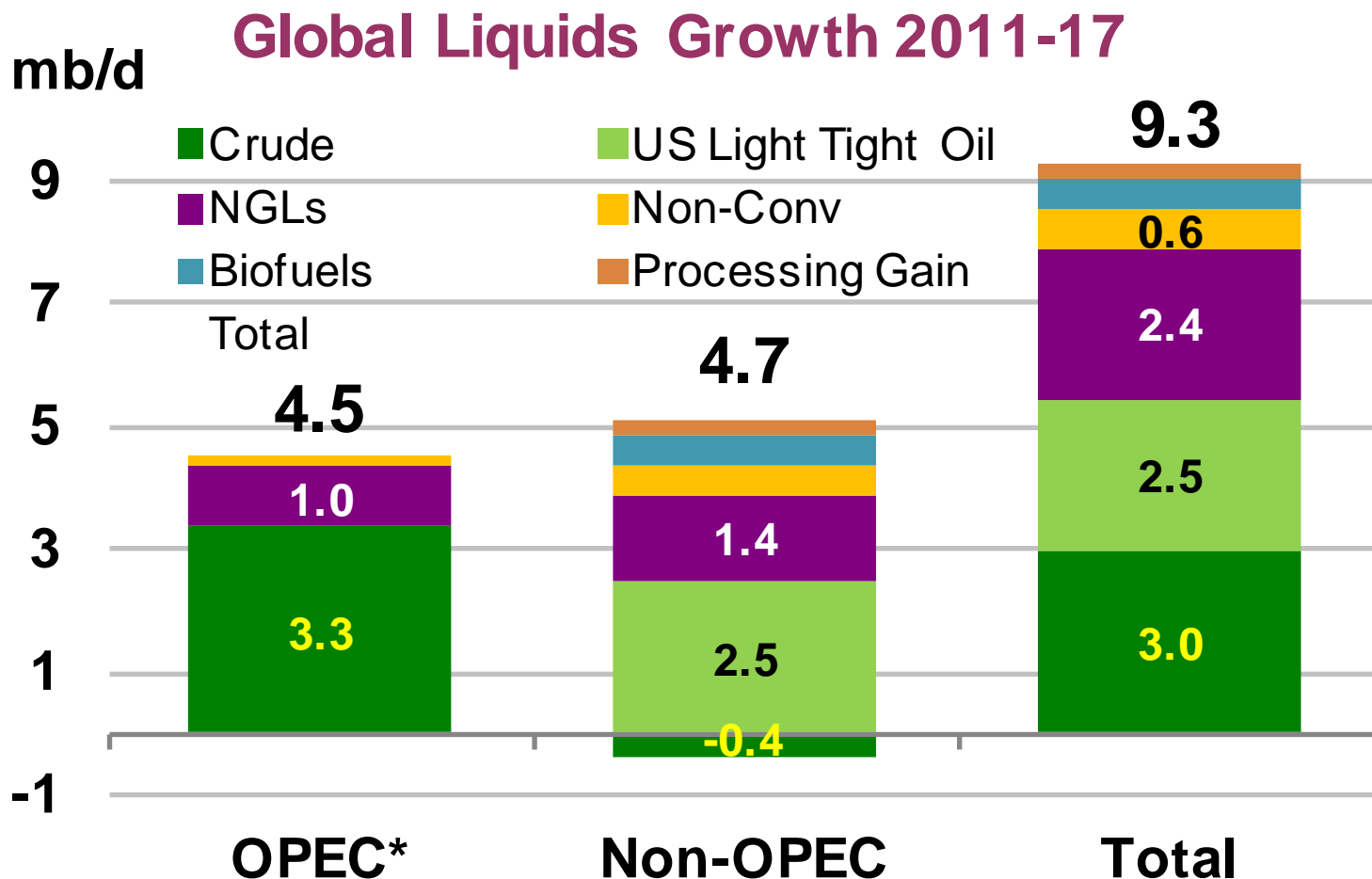
# Game changers or risk factors?



- Mid-term IEA forecasts a “new oil map”
- OPEC spare capacity seen back at 10-year highs
- Forecasts hinges on a handful of game changers:
  - N. American supply revolution
  - Non-OECD demand shift but China slowdown
  - Iraq supply takeoff
- Includes key points of IEA/OPEC divergence

# Global supplies increase by 9.3 mb/d

*Iraq and US support growth in production*

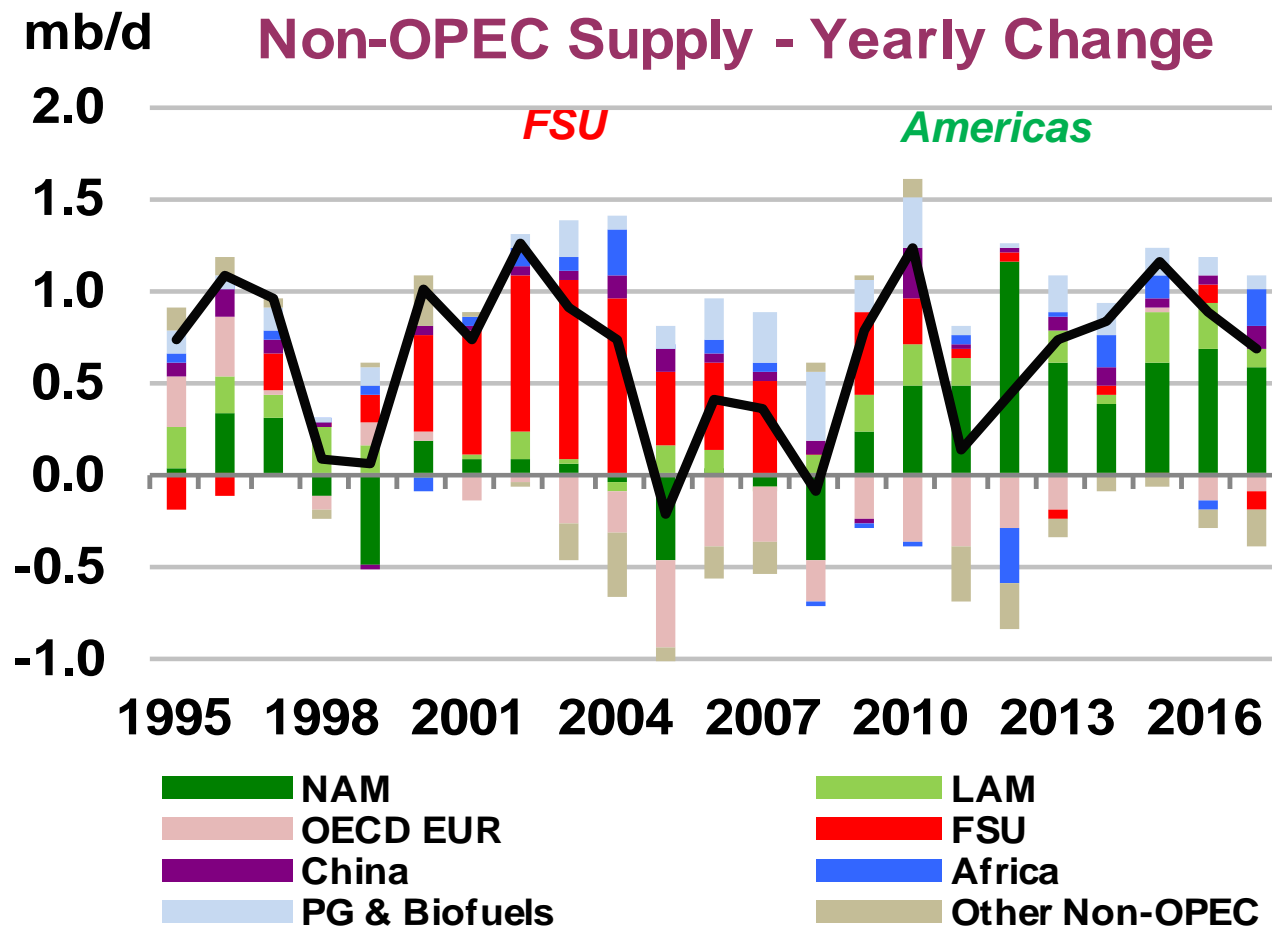


\* OPEC crude is capacity additions

Global Refinery processing gains included in Non-OPEC

# Americas dominates supply growth

*North America increases by 4.0 mb/d from 2011-17*

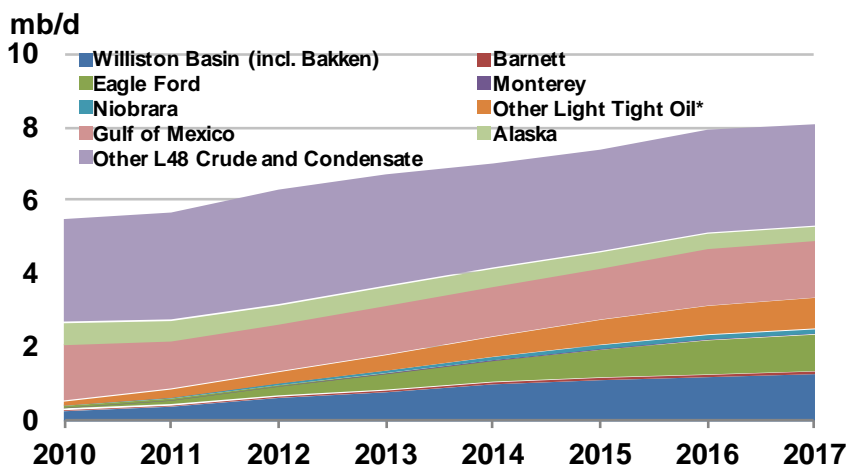


- From 2013-2017, growth expected to average 860 kb/d

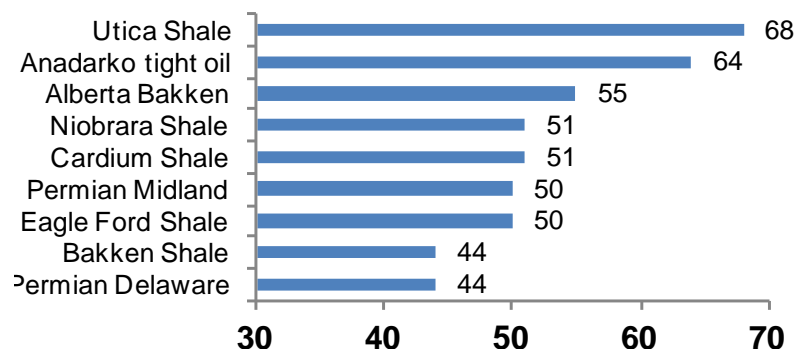
# US LTO up 2.5 mb/d by 2017

*Labor, infrastructure, legislation most acute constraints*

**US Crude and Condensate Production**



**North American Tight Oil Breakeven Prices (\$/bbl)**



**Source: Rystad Energy.** Breakeven price is the price that will give a 10% IRR for a given acreage position. Mature acreage positions with high production levels thus have a better breakeven oil price. Includes actual F&D costs (not including land costs), taxes, and royalties.

- US oil (incl NGLs) supply grows by over 3 mb/d.
- Crude and condensate output grows by 2.5 mb/d.
- LTO makes up 15% of supply in 2011, > 40% in 2017

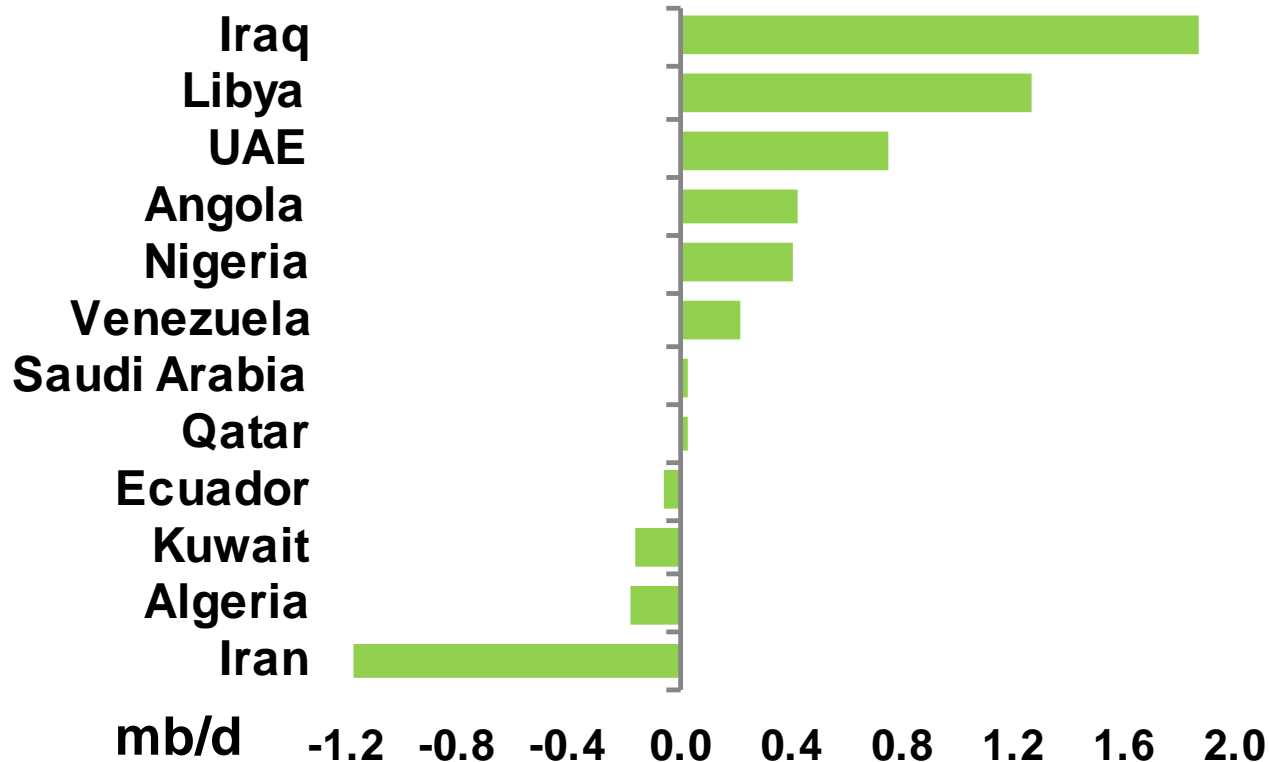
# North American supply risks

- All revolutions are inherently unpredictable
- The N. American supply revolution is no exception
- Uncharted territory
  - Too short a history to inform forecasts
  - Past performance is no guarantee of future success
  - Labor constraints
  - Land management
  - Financing
  - Takeaway capacity
- Political risk looms large
  - Misalignment of resources and regulations
  - Export restrictions steeped in the 1979 oil crisis
  - Export legislation could become top N American supply risk
  - De-optimisation of capacity - production and refining
  - Is supply moving faster than public opinion?
  - Workarounds and band-aids?

# Iraq leads OPEC crude capacity growth

*Libyan recovery contributes to 3.34 mb/d total increase*

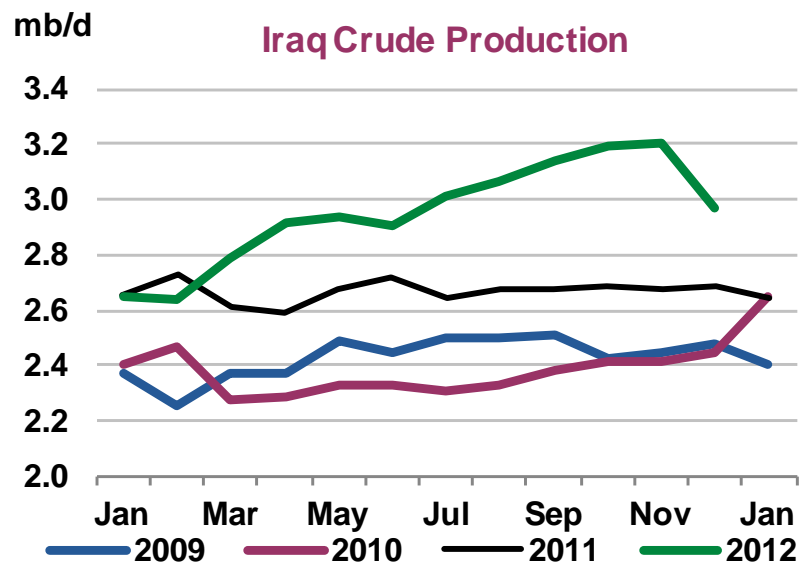
## Incremental OPEC Crude Production Capacity 2011-17



- OPEC effective spare capacity seen recovering to 5.3 mb/d in 2017

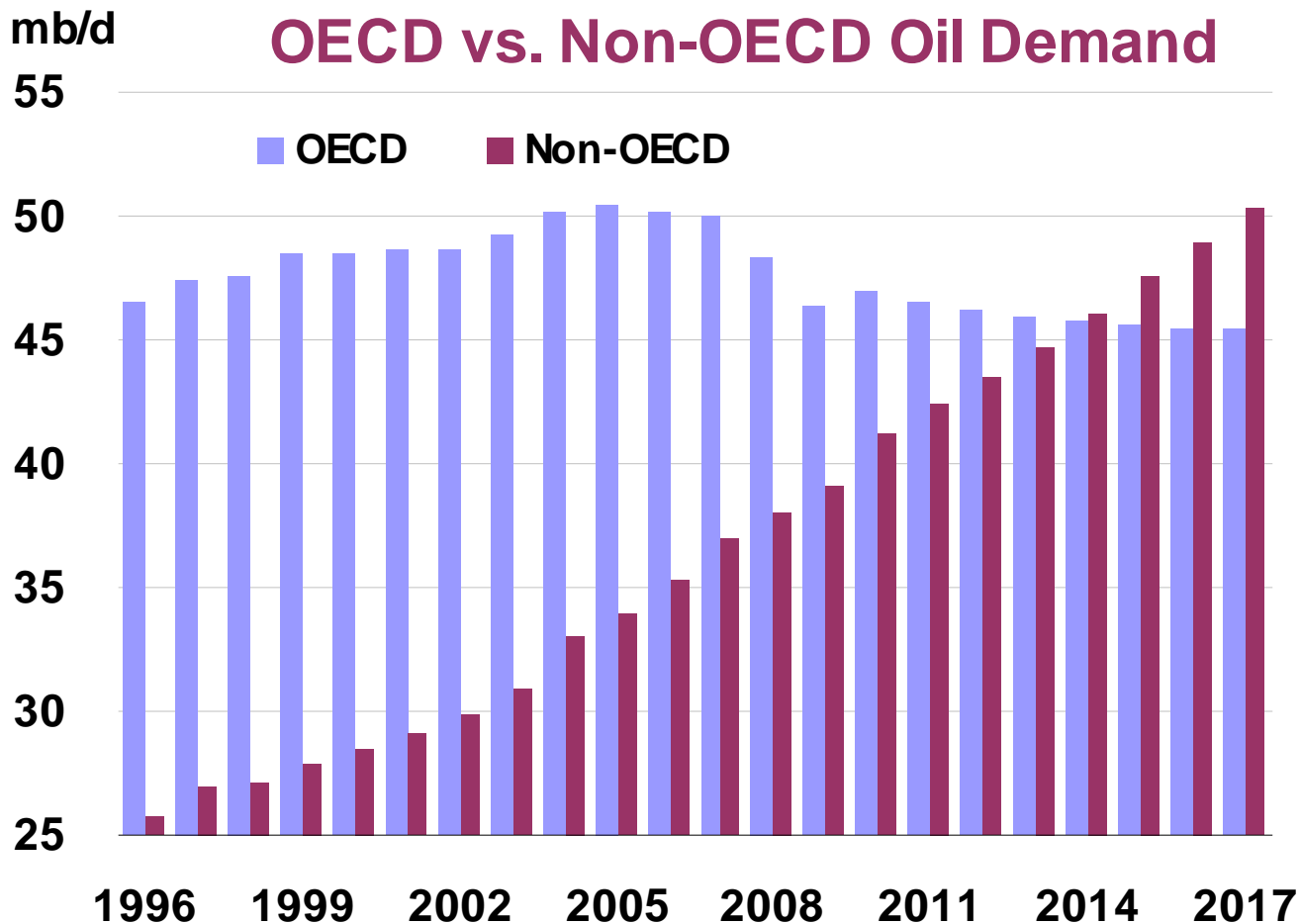


# ..but challenges abound



- Potential game changer, but risks are high
- Dec. production dip to 2.97 mb/d.
- Record highs in 2012, but below growth expectations
- KRG-Baghdad relations a key challenge

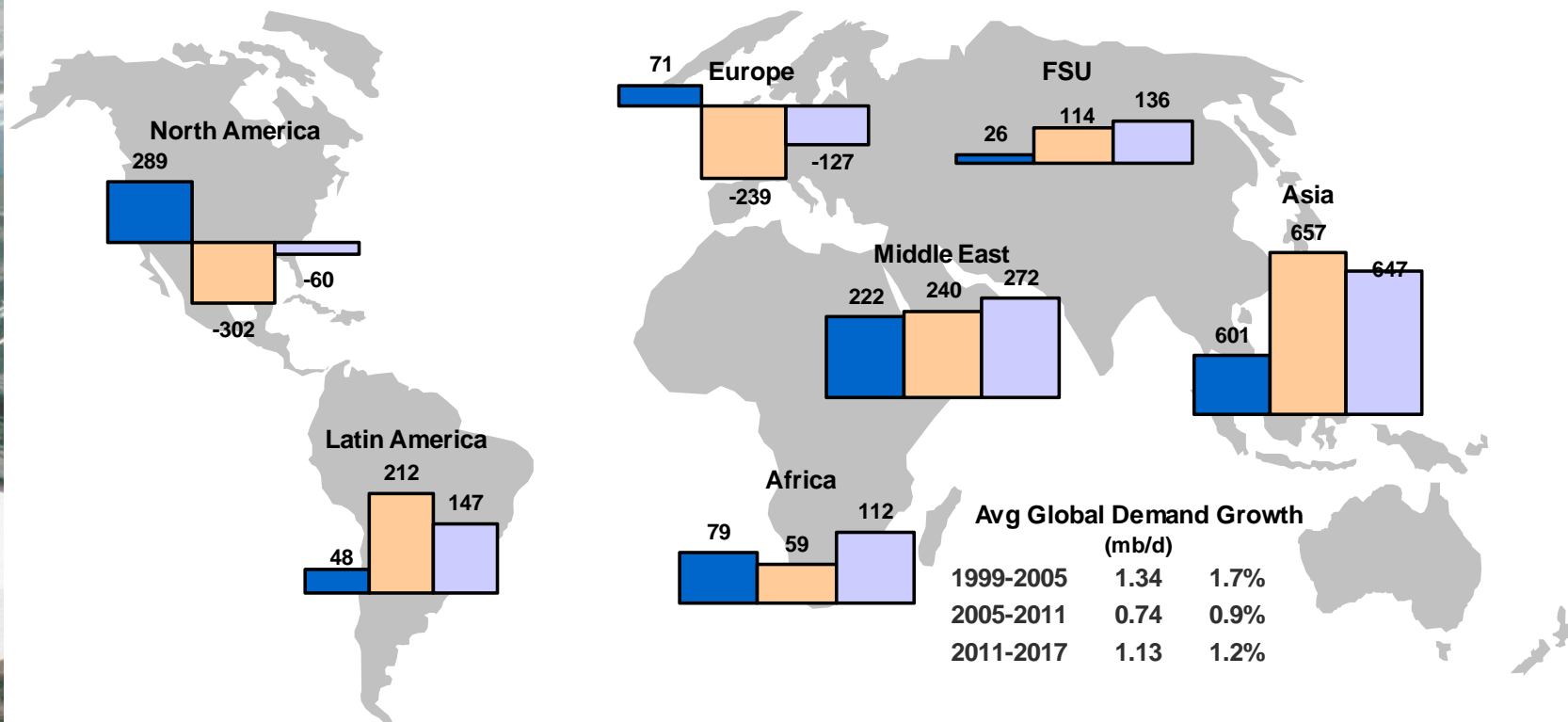
# Demand: Non-OECD overtakes OECD



- OECD contracts by 200 kb/d per year while non-OECD grows 1.3 mb/d

# Asia leads demand growth

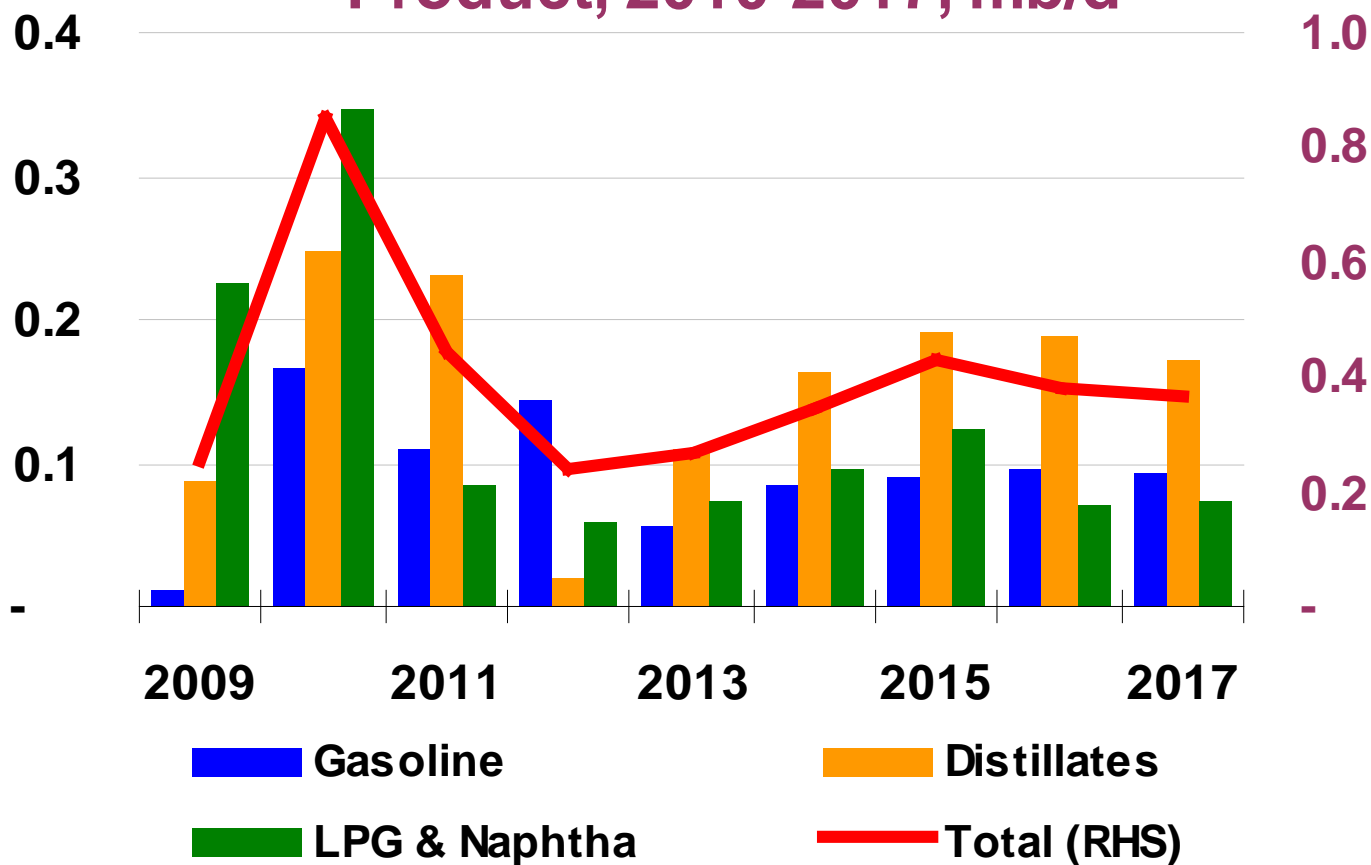
Average Global Oil Demand Growth 1999-2005/2005-2011/2011-2017  
thousand barrels per day



- Strong demographics, economic growth and subsidies support increase in non-OECD demand

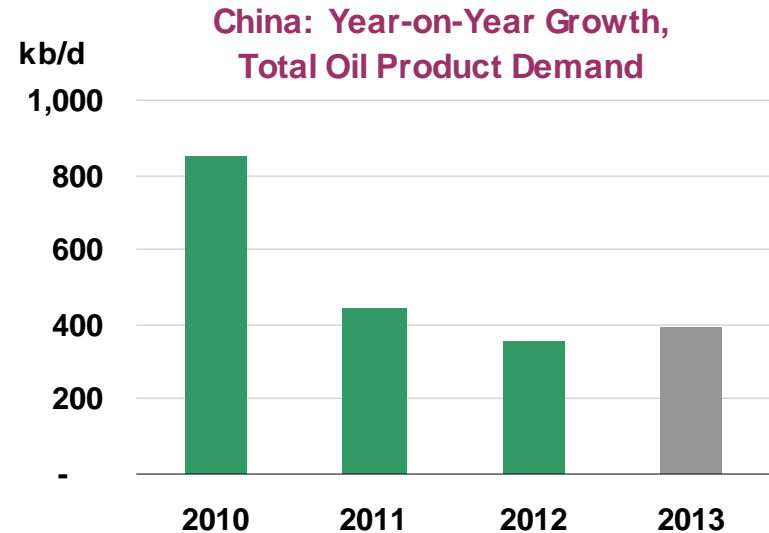
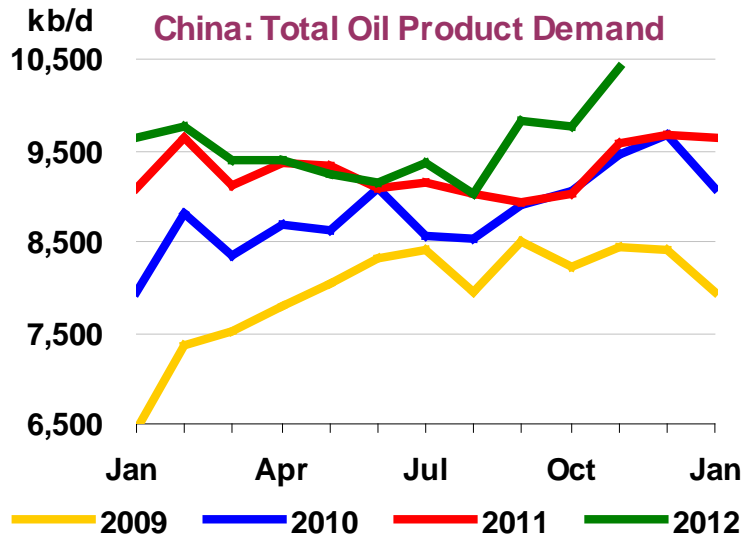
# Chinese demand seen switching gears...

## China: Oil Demand Growth by Product, 2010-2017, mb/d





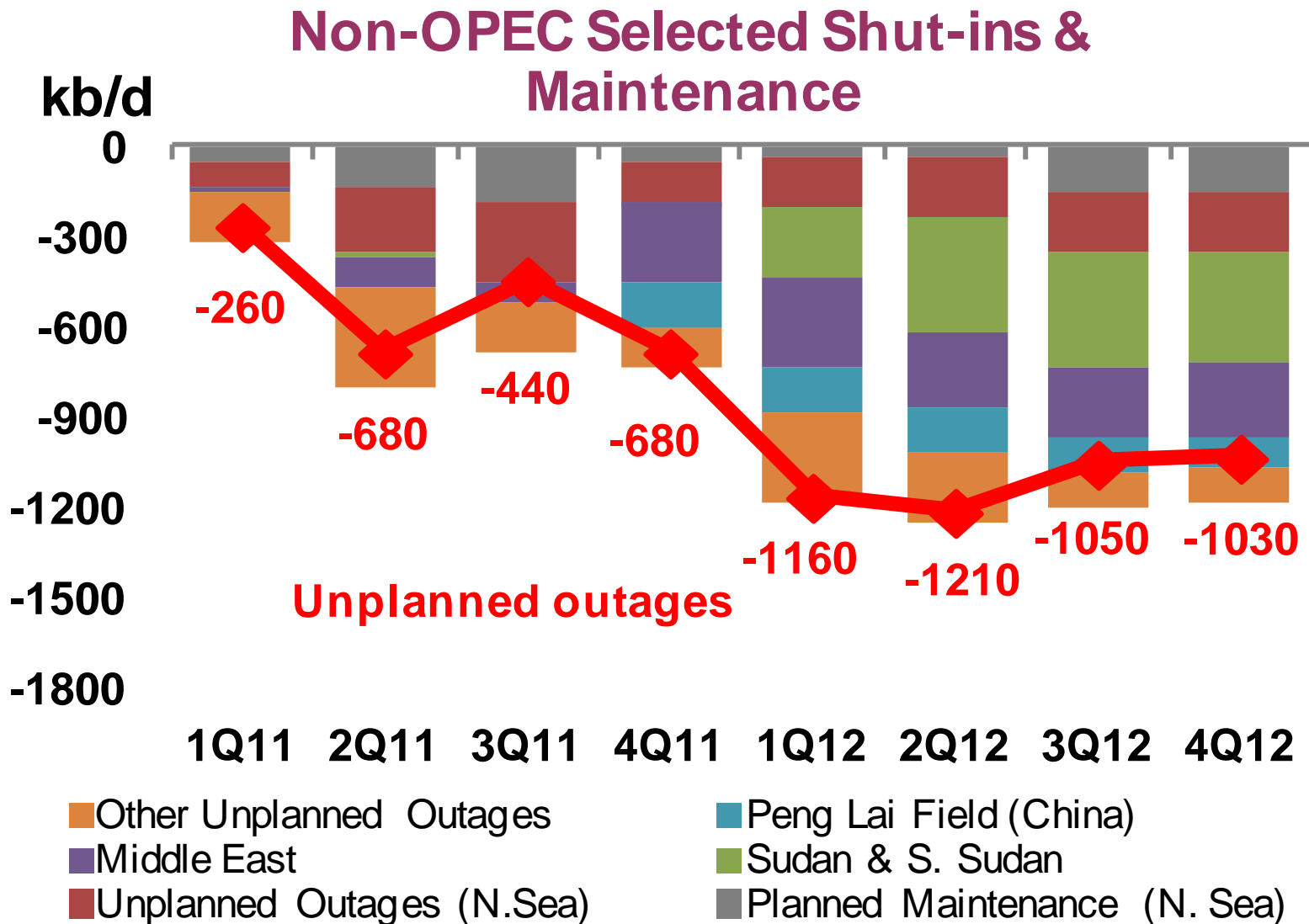
# ...but Chinese market only getting more opaque



- End of Sep 2011-Aug 2012 slowdown?
- 2013 growth forecast raised to 4%, to 10 mb/d
- One-off factors: tax change – borrowed demand?
- Refining capacity surge – jump in min. op. stocks?
- One-off product stock builds?
- Excess refining capacity injects a new layer of uncertainty in Chinese demand data

# Have supply outages become a fact of life?

*Outages reached 1.2 mb/d in 2Q12*

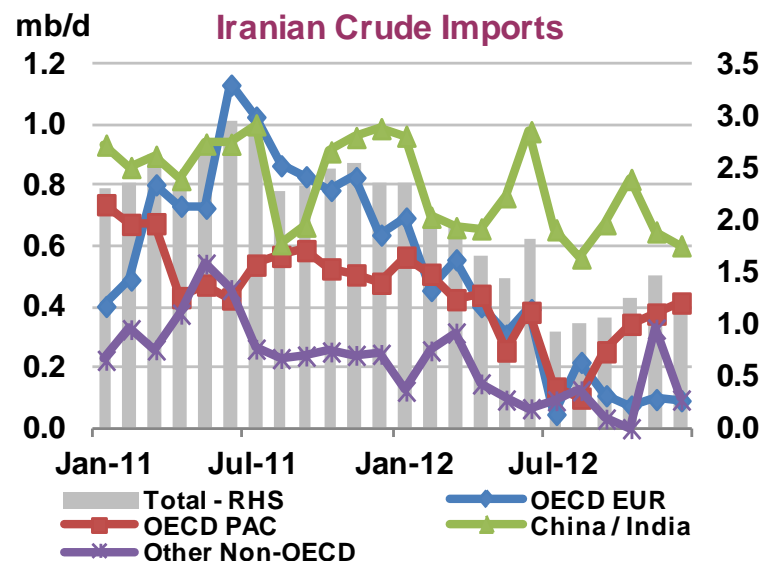
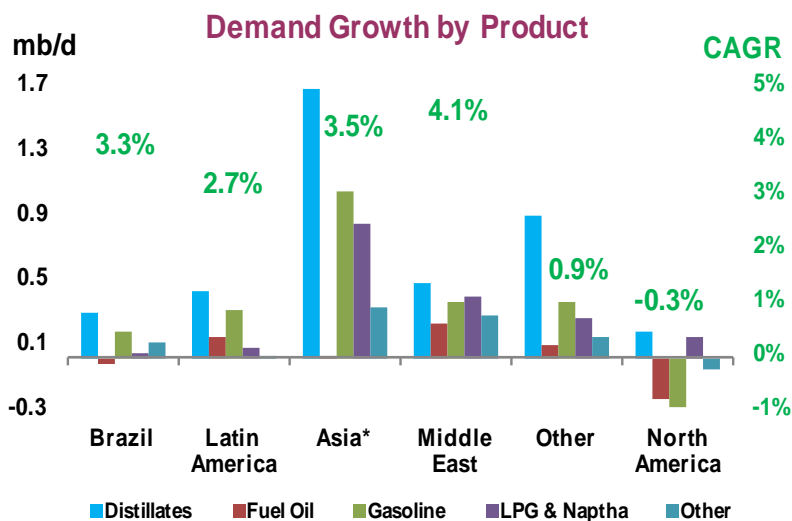


# Other blind spots and risk factors

## ■ Non-contested demand issues hide other major blind spots:

- African demand
- Off-grid diesel power generation demand
- Marine bunkers

## ■ Iranian supply

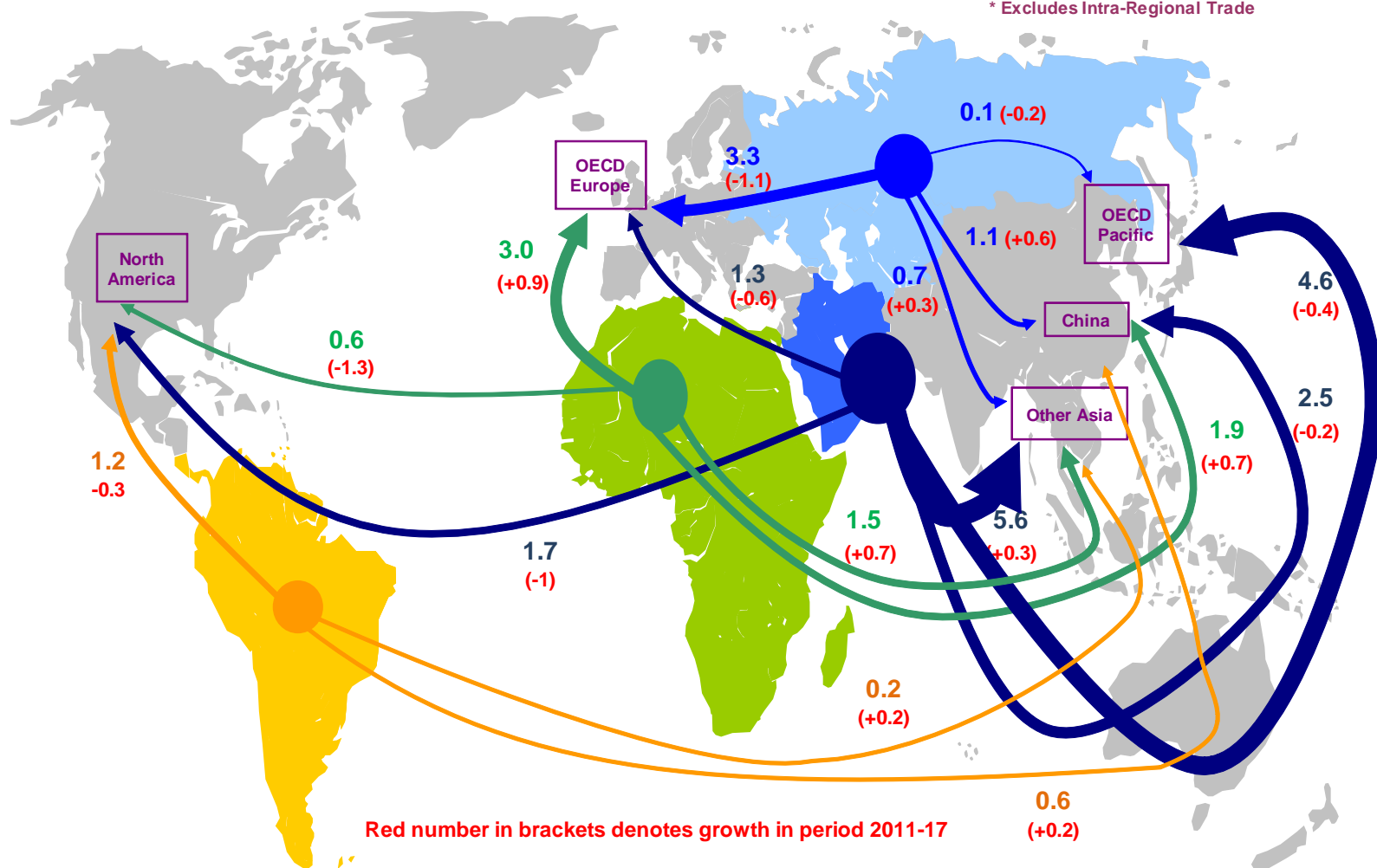


# Beyond supply and demand: a new crude trade map

## Crude Exports in 2017 and Growth in 2011-17 for Key Trade Routes\*

(million barrels per day)

\* Excludes Intra-Regional Trade

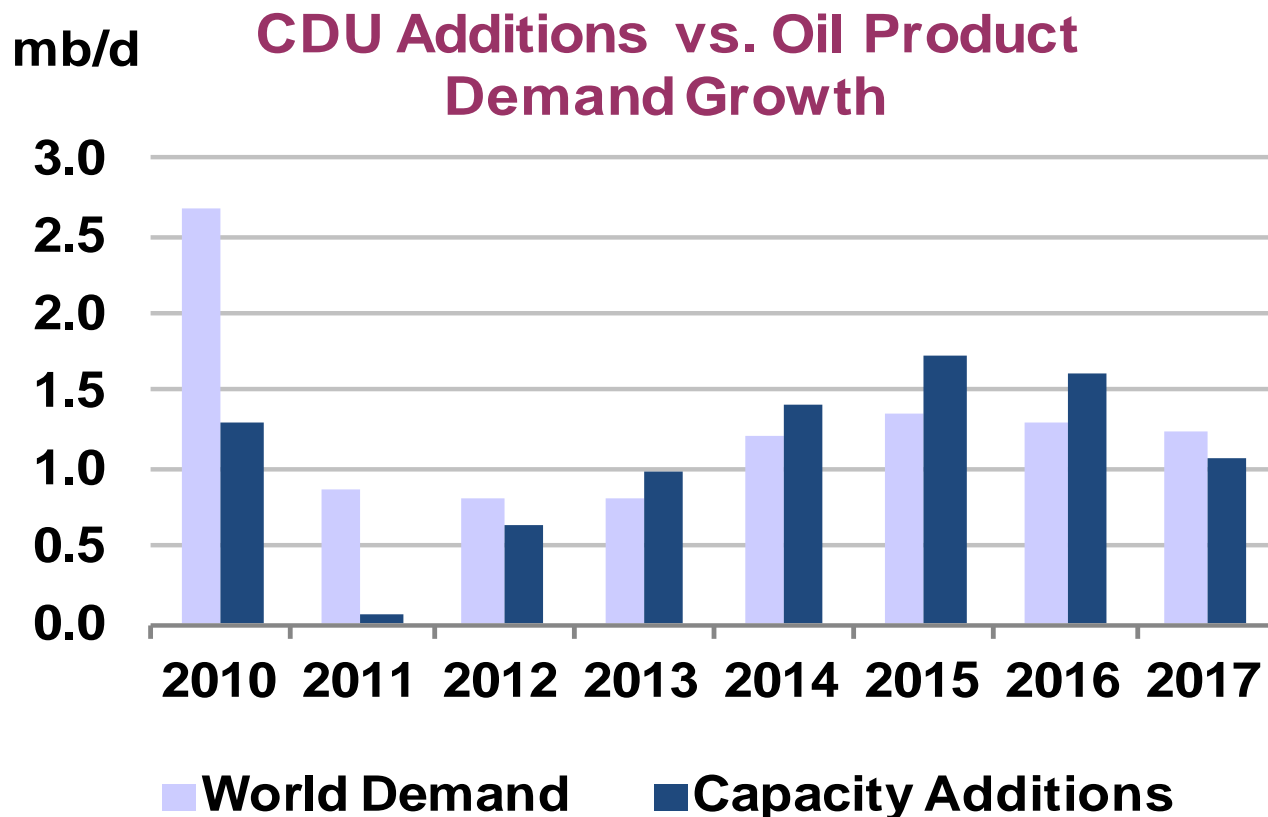


Red number in brackets denotes growth in period 2011-17



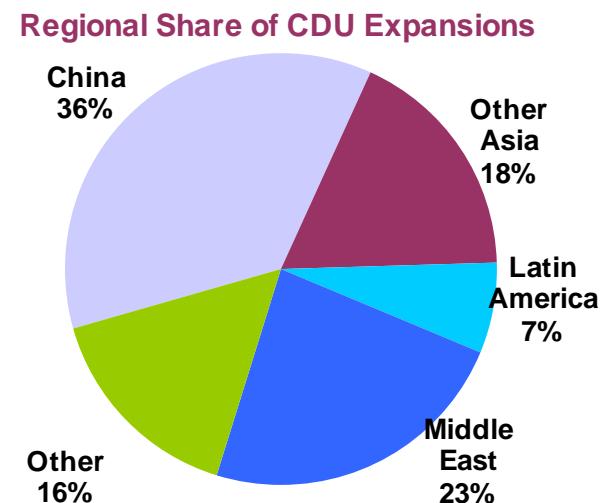
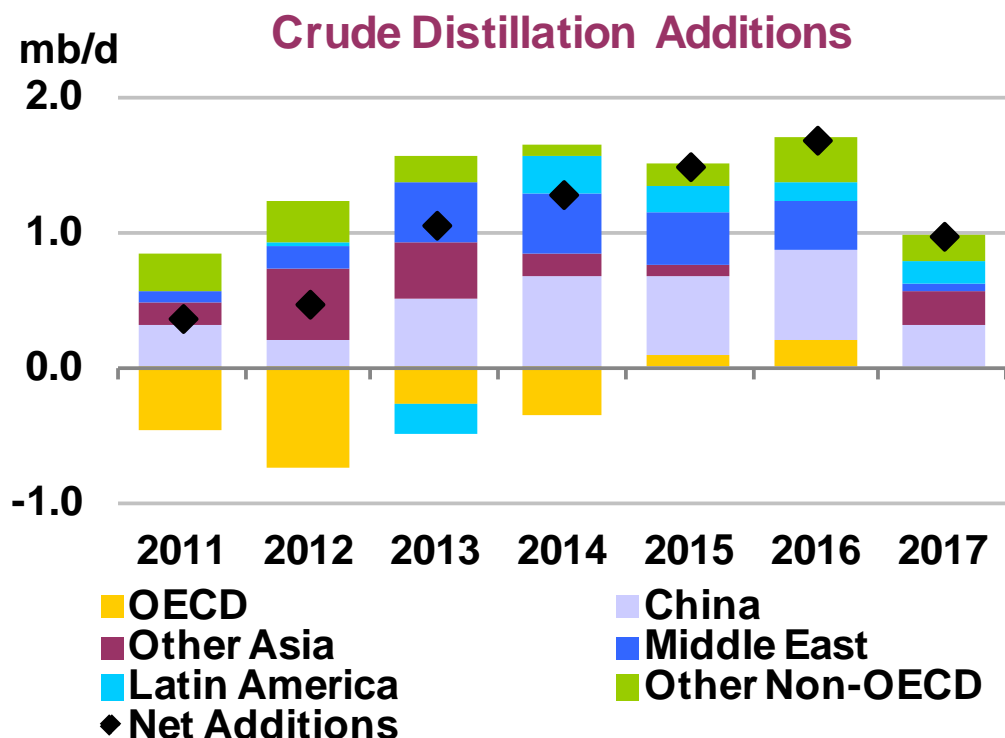
# Refining expansions again outpace demand

*4.4 mb/d capacity needs to shut to return to pre-crisis utilization rates*



- Refinery profitability to be pressured unless closures, delays, cancellations are announced.

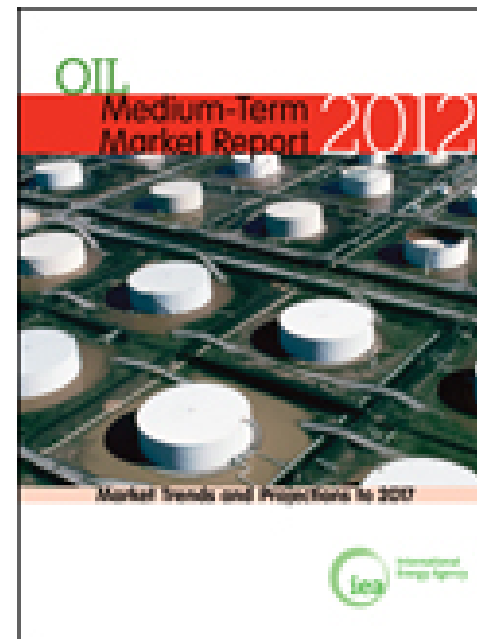
# All refining capacity growth from non-OECD countries



- 7 mb/d of net capacity additions by 2017
- OECD industry consolidation continues
- Upgrading and desulphurisation capacity adds 5.9 mb/d and 5.4 mb/d respectively
- OECD contraction, Europe – 1.7 mb/d 2008-12

# Thank you

[www.oilmarketreport.org](http://www.oilmarketreport.org)



- The benchmark oil market report since 1983, with extensive, up-to-date, statistical data plus 12-18 month global fundamentals outlook
- Detailed, up to the minute market analysis underpins the IEA's emergency response mandate
- Seventh edition in October 2012 of this annual outlook looking five years ahead
- Closes previous gap between short-term OMR and long-term World Energy Outlook ('WEO')