



Oil Market Turmoil: Implications for the Refining Industry

Dr. Fereidun Fesharaki, Chairman

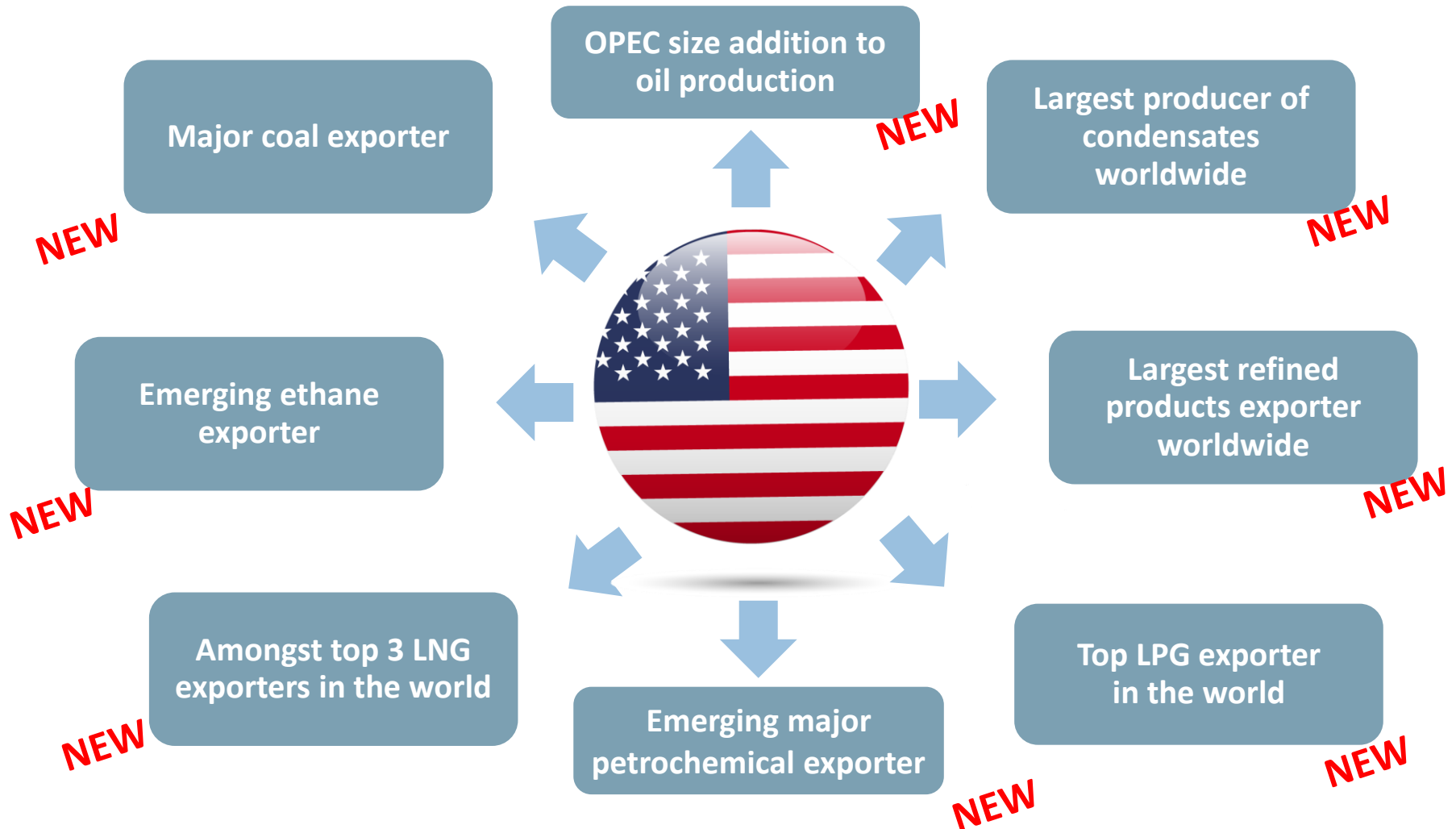
34th JCCP International Symposium

January 28, 2016

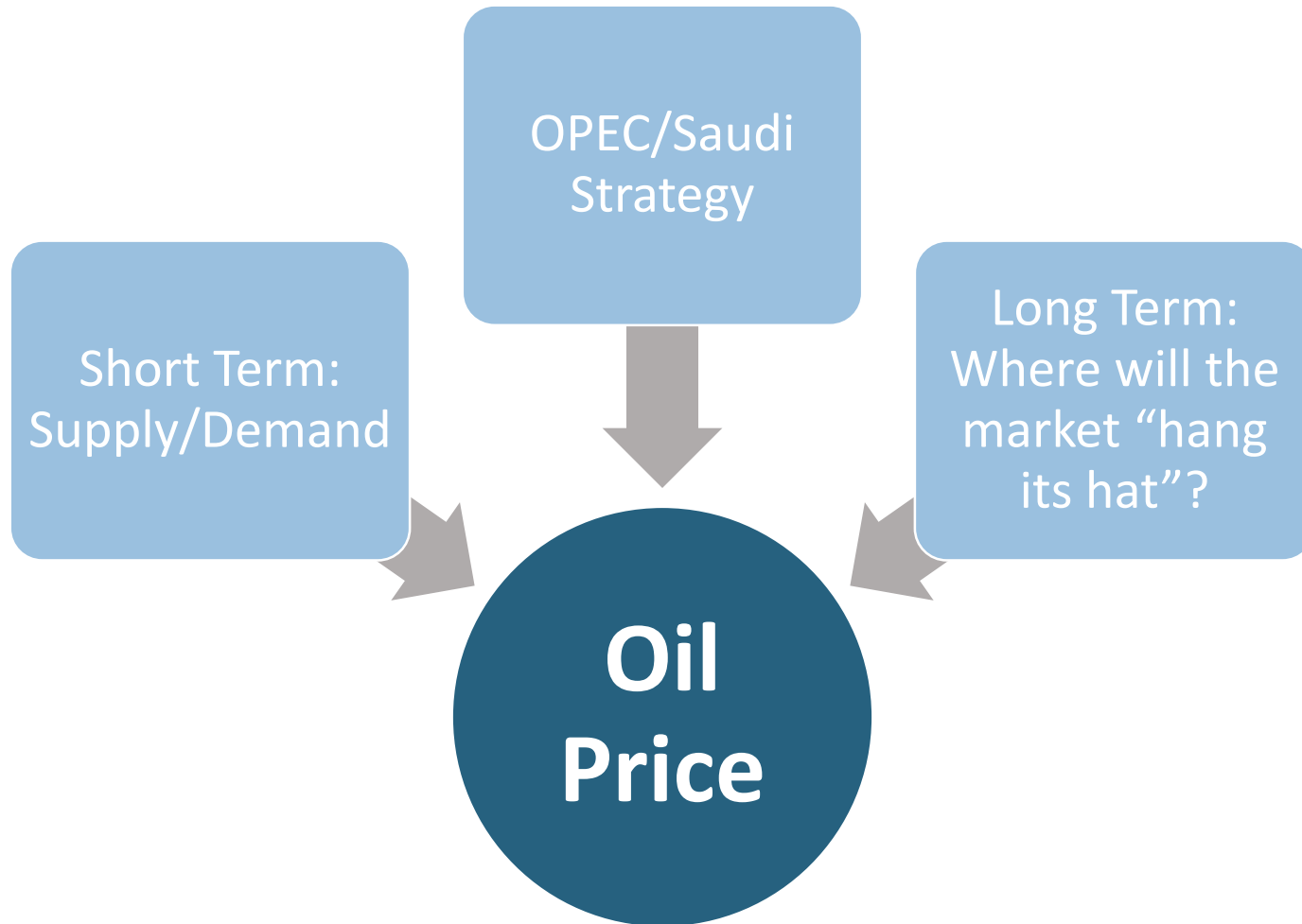
Tokyo, Japan

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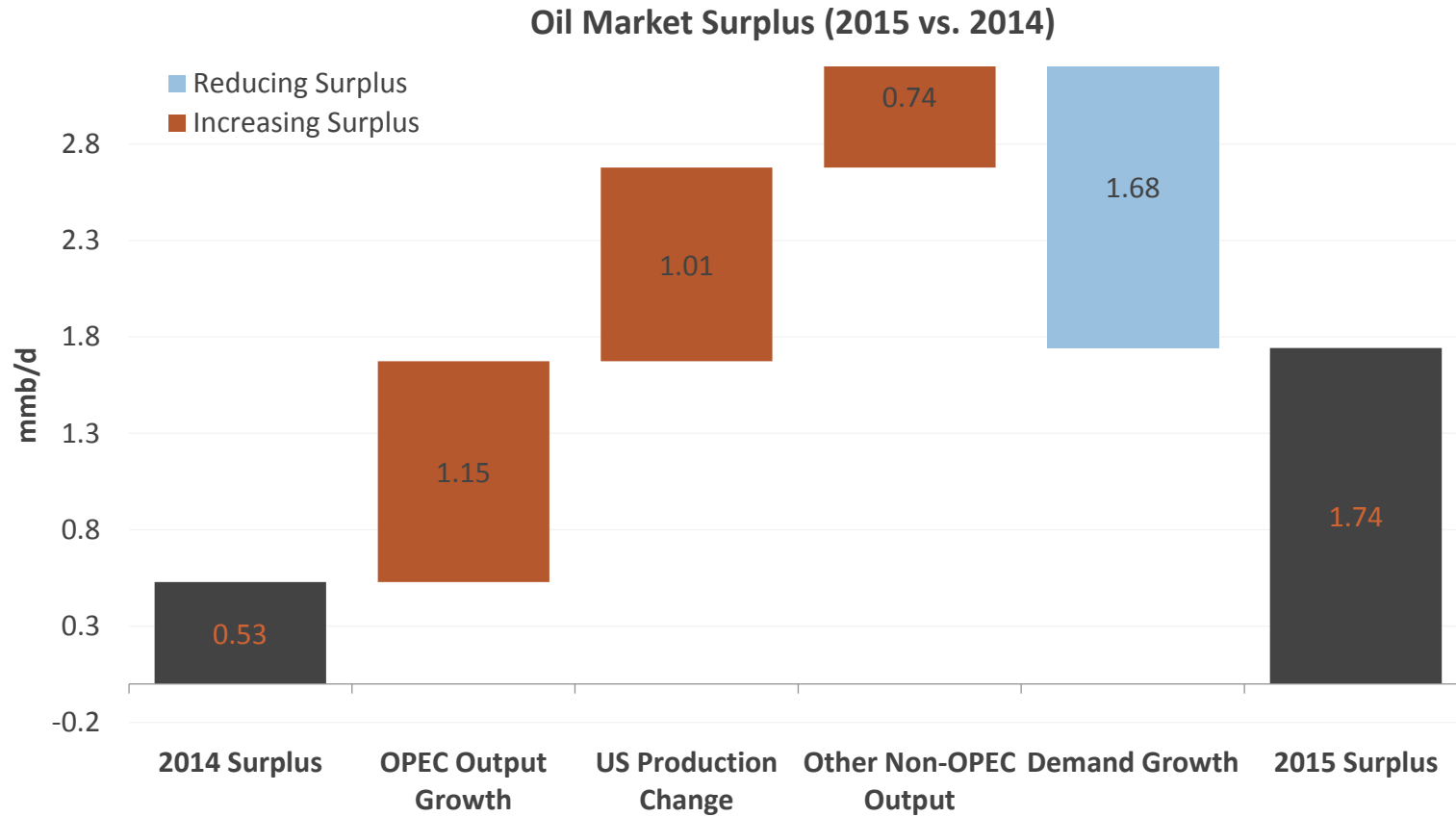
The US as an Energy Superpower



Oil Price Outlook: Three Critical Legs

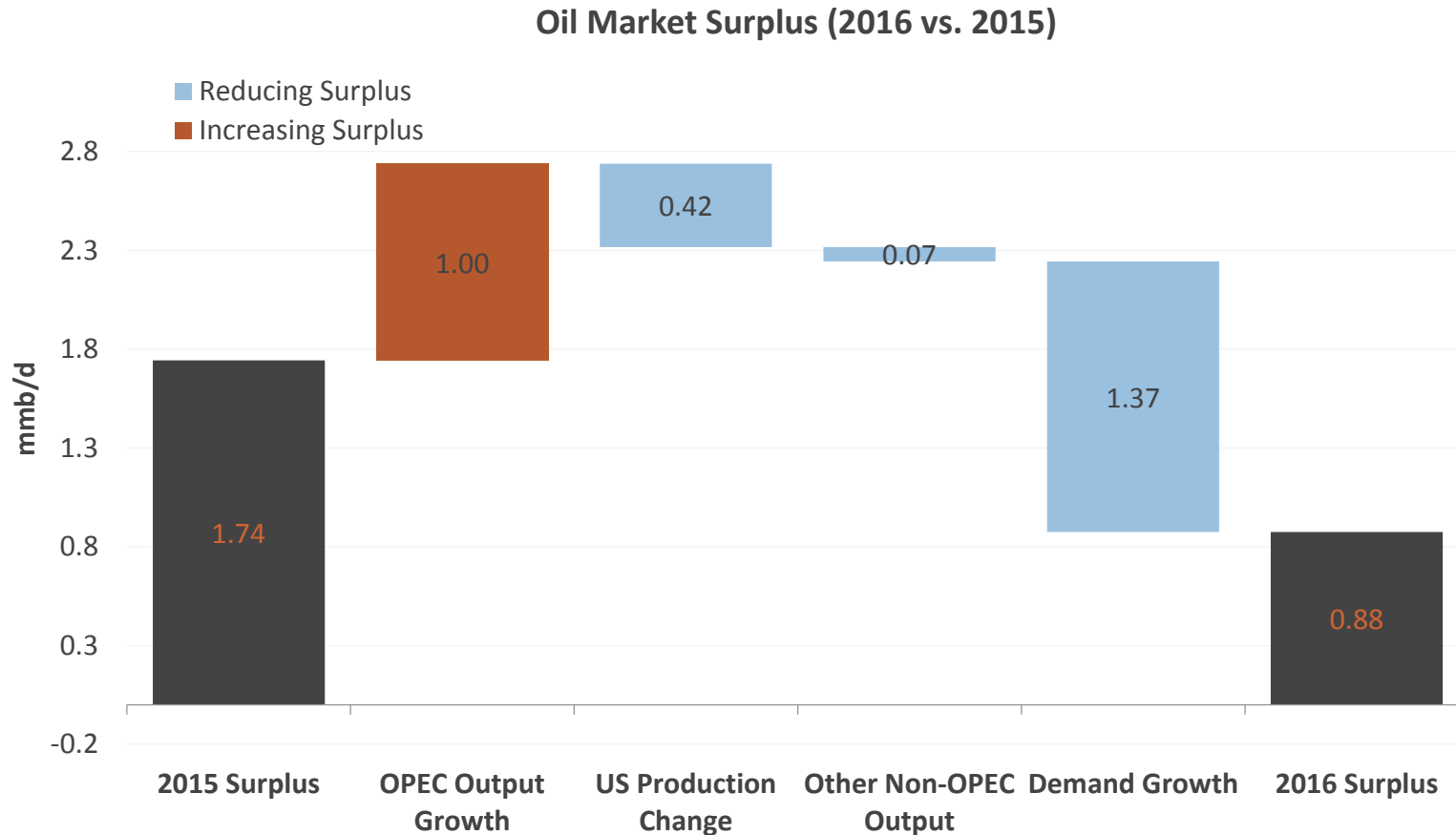


Evolution of Market Surplus: 2015 vs. 2014



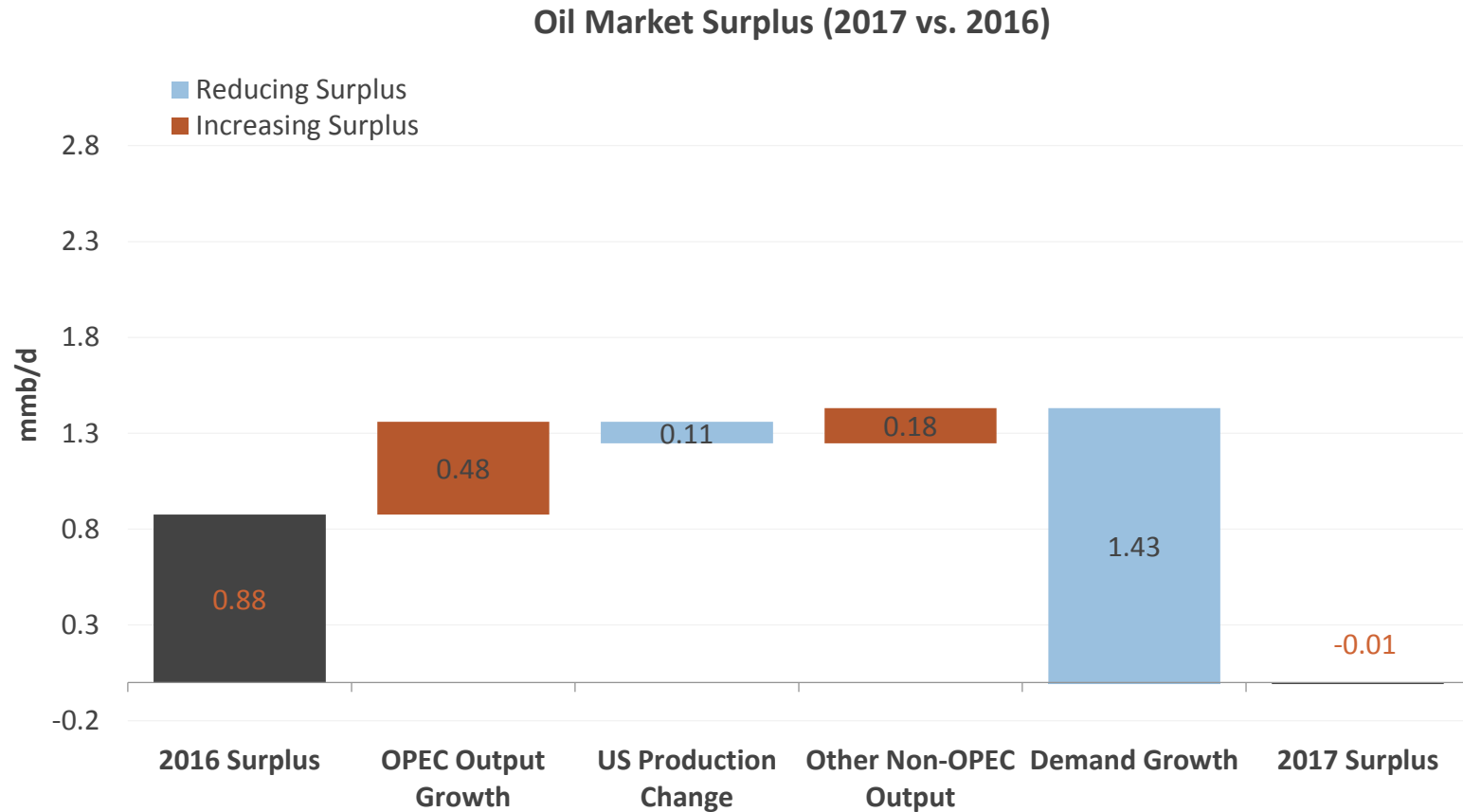
Evolution of Market Surplus: 2016 vs. 2015

Demand growth revised up 150 kb/d, non-OPEC supply decline now greater due to lower prices, also, less growth from non-Middle East OPEC members.



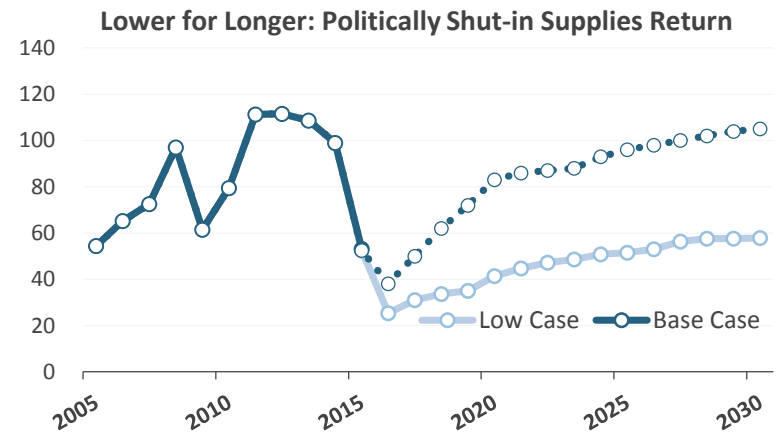
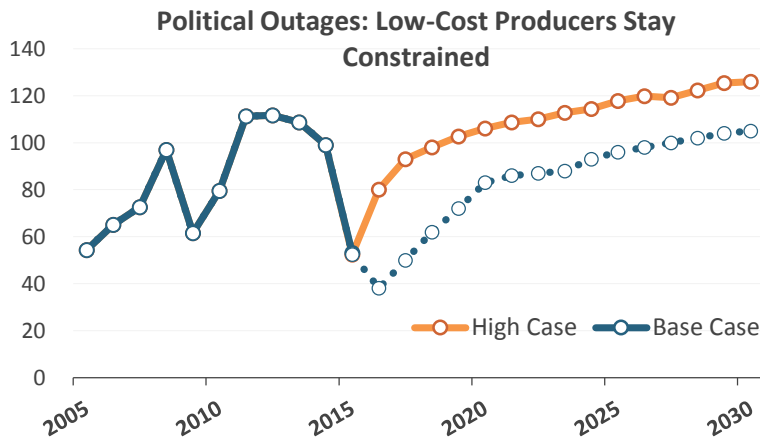
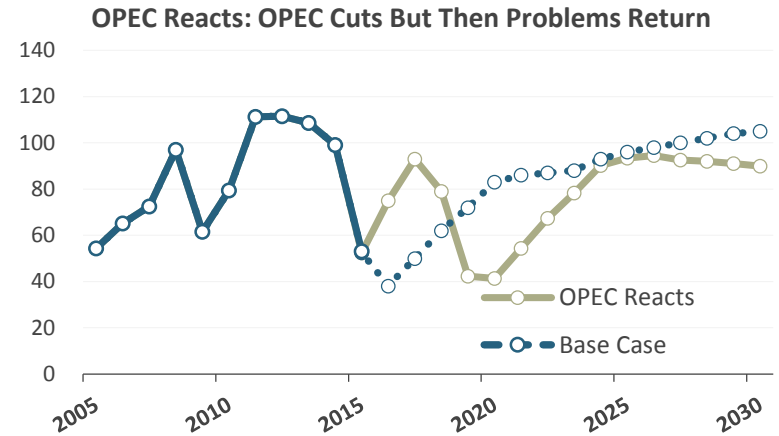
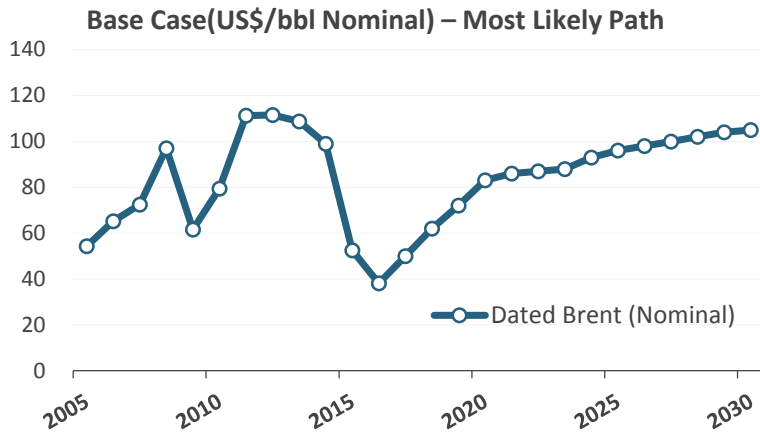
Evolution of Market Surplus: 2017 vs. 2016

Other non-OPEC recovers slightly, but US still down. Market becomes balanced in 2017

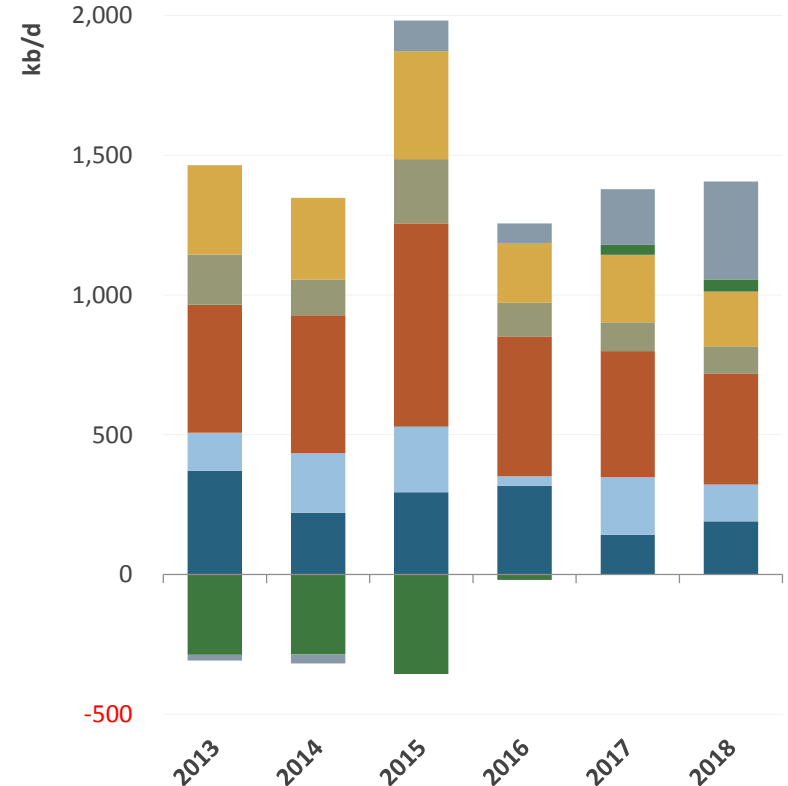
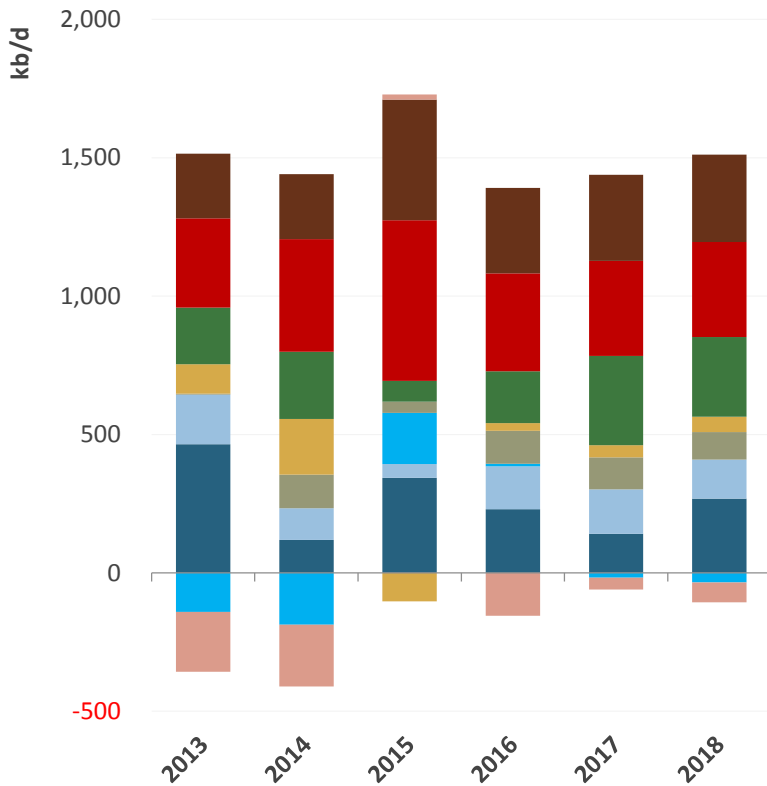


FGE Long-Term Price Forecast

Among the many variables affecting crude prices, four key scenarios drive our price outlook range:



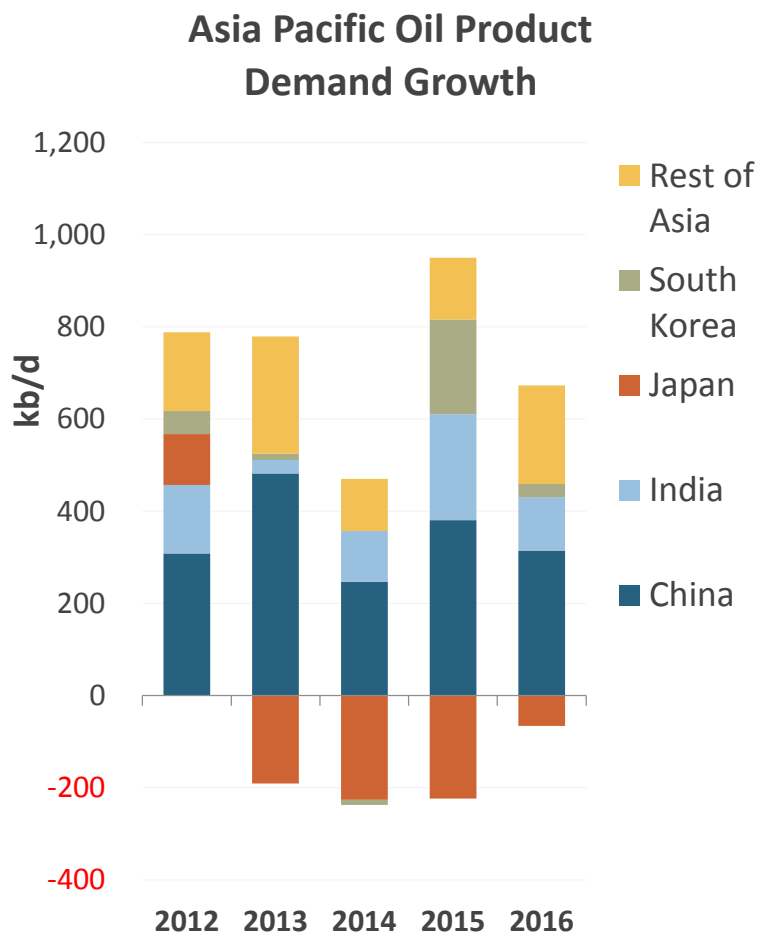
Global Oil Demand Mid-Term Outlook: Gasoline Stays Strong on Robust Auto Fleet Growth



- North America
- Europe
- FSU
- China
- OECD Asia
- Latin America
- Africa
- Middle East
- Other Non-OECD Asia

- LPG
- Naphtha
- Gasoline
- Jet/Kerosene
- Gasoil/Diesel
- Fuel Oil
- Other

Asian Demand: Moderating, but Still Solid Growth



Average Annual Growth, kb/d

	2013	2014	2015	2016
China	482	247	381	315
India	29	110	229	116
Japan	-191	-226	-223	-65
South Korea	14	-11	206	28
Rest of Asia	254	113	134	214
Total	589	233	727	608

Note: Data for 2015-2016 is forecast.

Refining: Are the Good Times Coming Back?

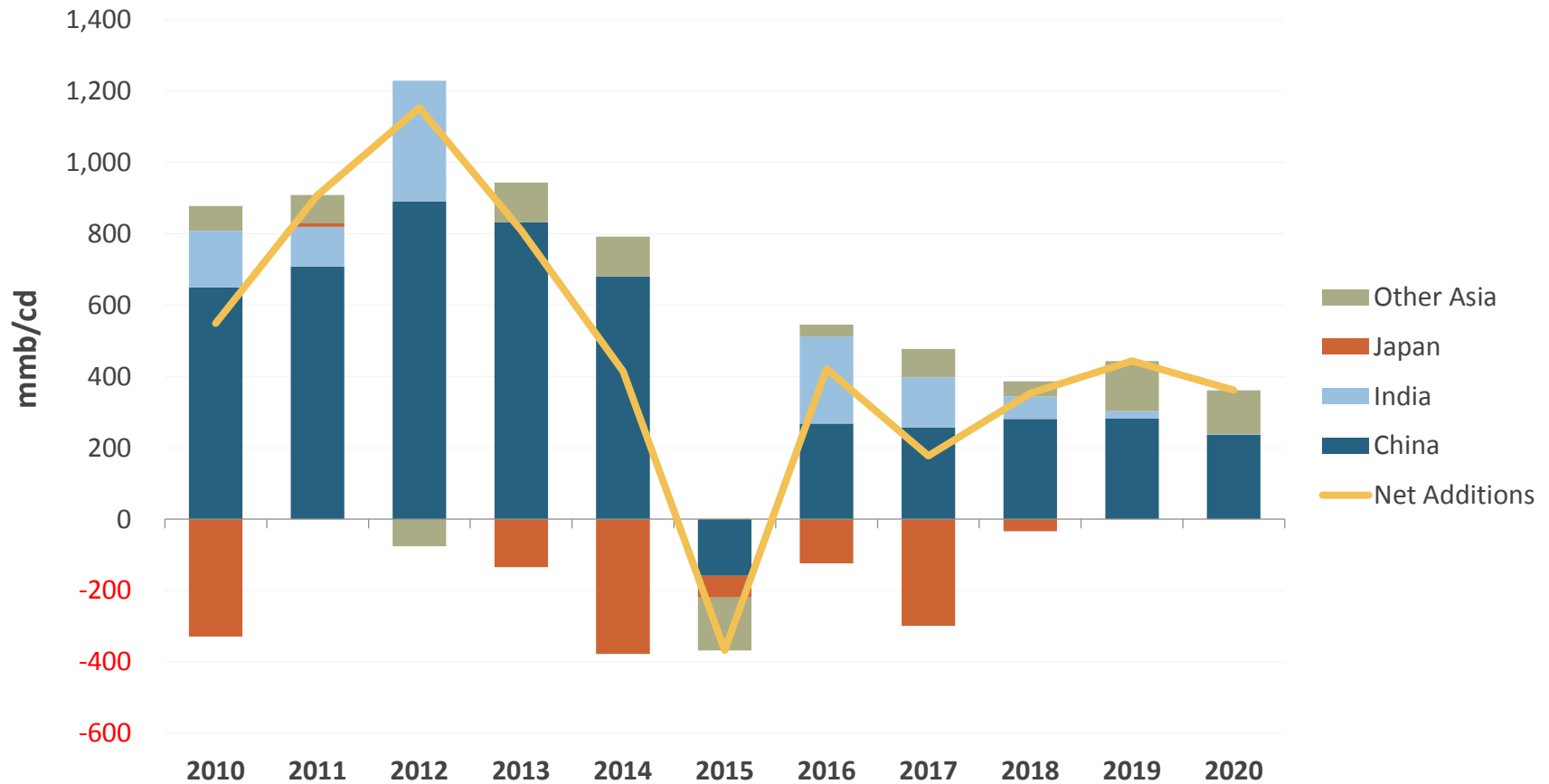
- Best margins in many years. Why?
- Lower crude prices help refining margins.
- No new refining projects in China...for the first time...but exports surging!
- No new refining projects in India...for the first time.
- No new export refining projects in the Middle East till end decade (except for condensate splitters).



Asia Pacific Net Refinery Capacity Additions

Over 2015-2020, China accounts for around 55% and India 25% of firm and likely capacity additions.

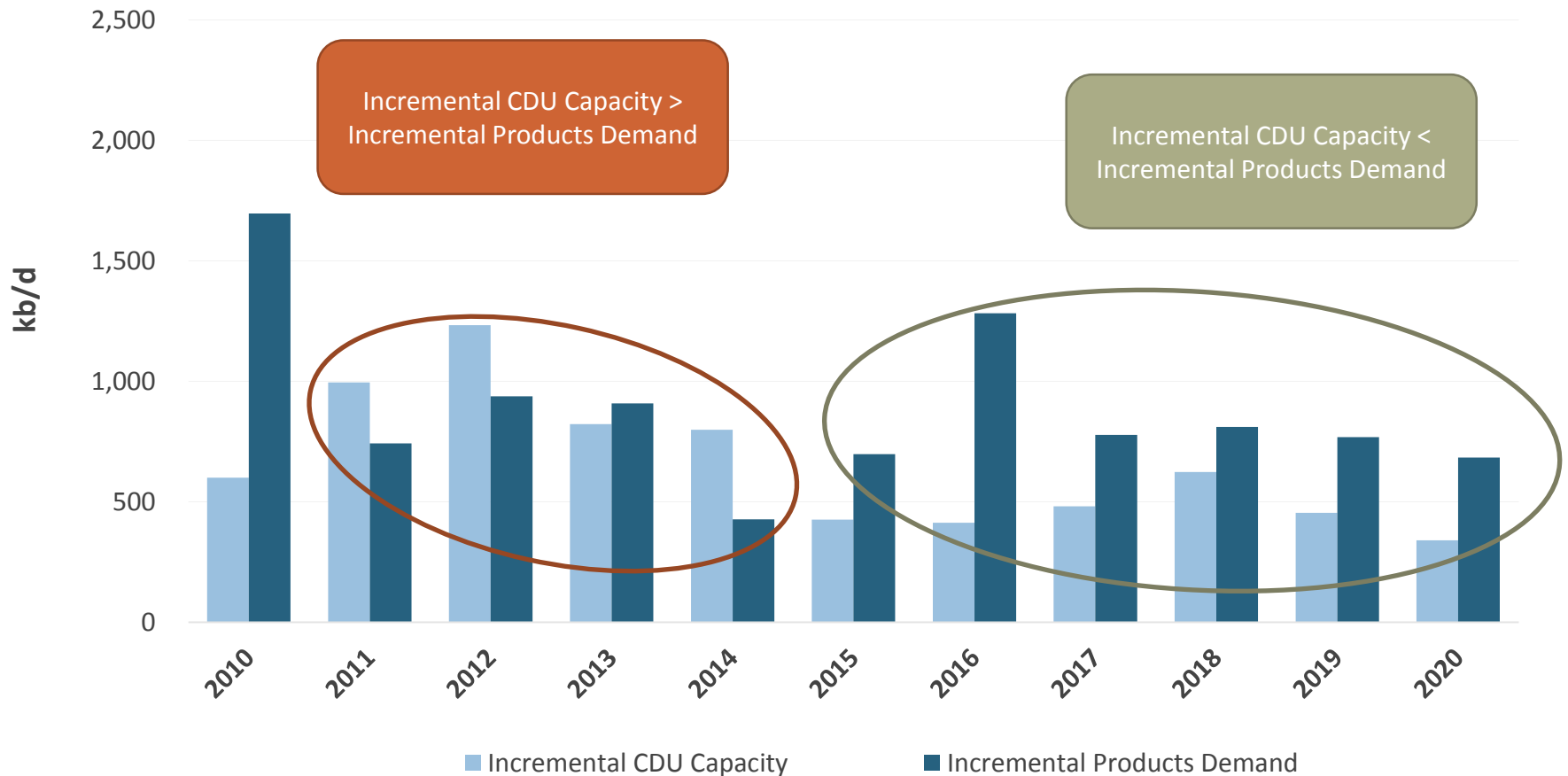
Incremental Refining Capacity Additions in the Asia Pacific, 2010-2020



Note: Data for 2015-2020 is based on Firm & Likely CDU additions—weighted for risk of delays (base case)

East of Suez Net CDU Capacity vs. Demand Growth

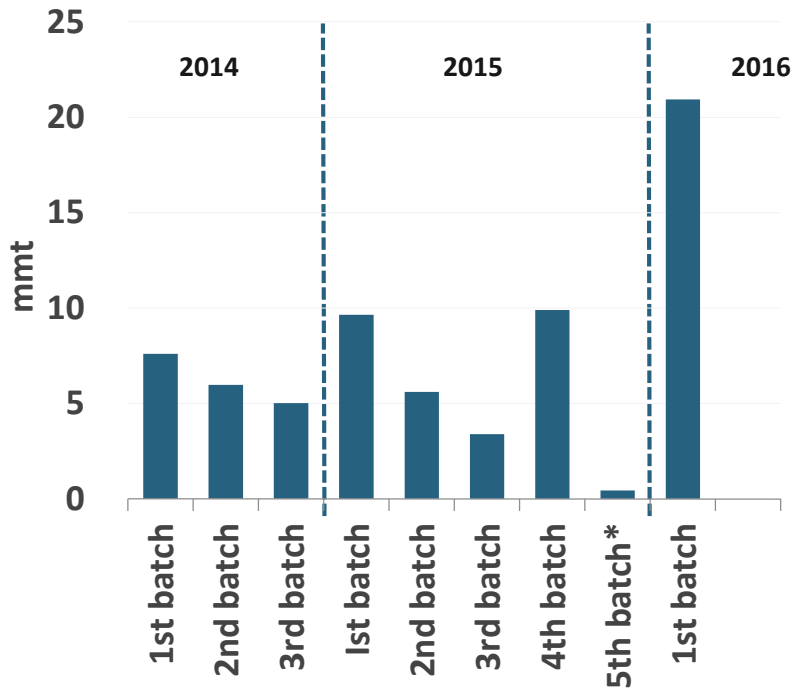
EoS CDU Capacity vs. Demand Growth



Note: Data for 2015-2020 is based on Firm & Likely CDU additions—weighted for risk of delays (base case)

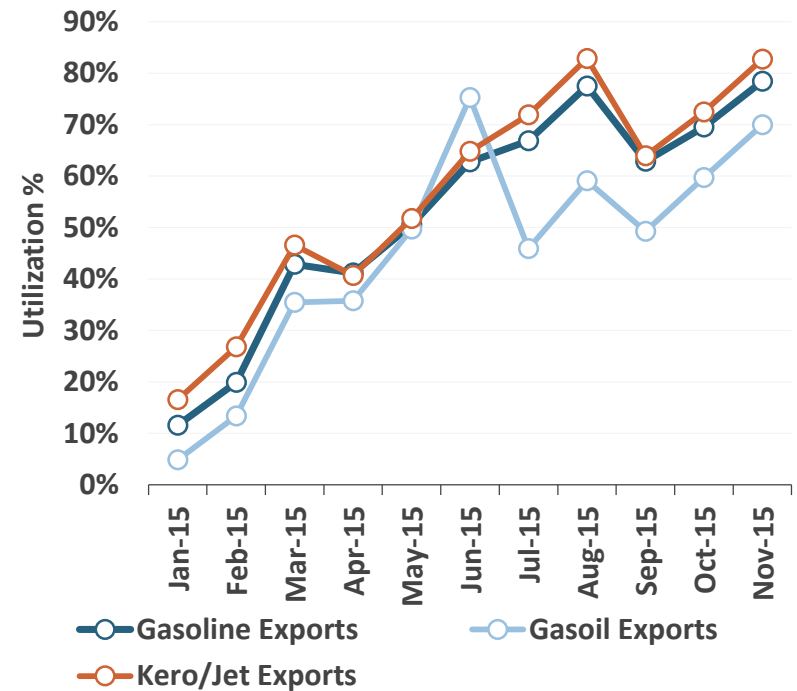
China Recently Announced Record Volume of Exports Quotas for the First Batch of 2016...But Not All Will be Utilized Right Away

China's Exports Quotas, 2014-2016

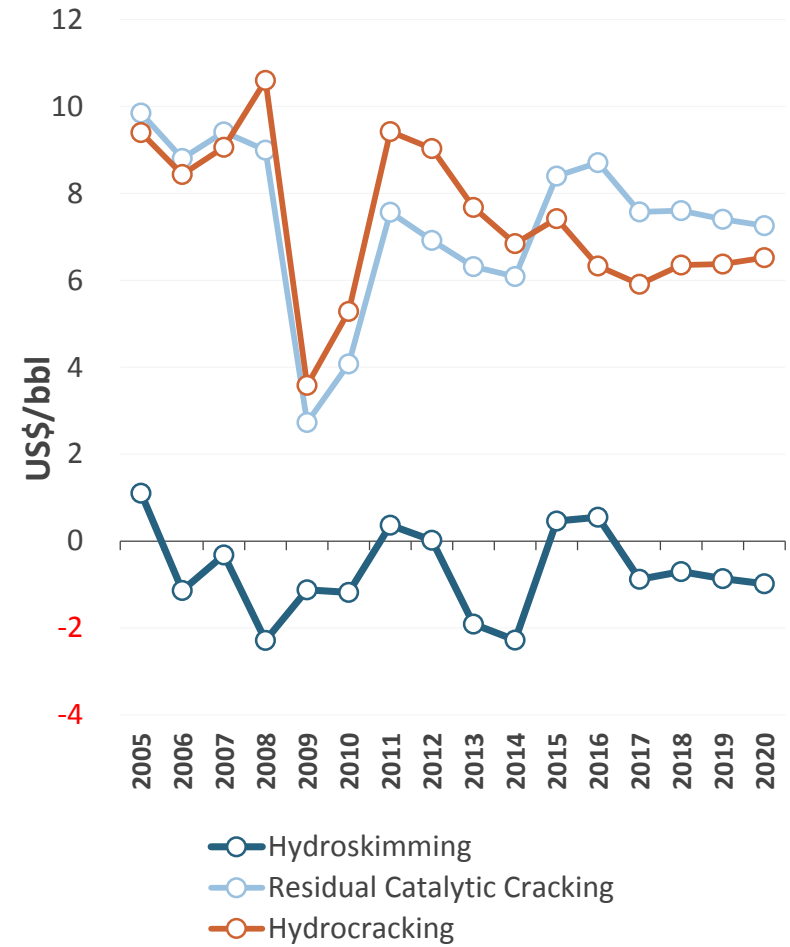
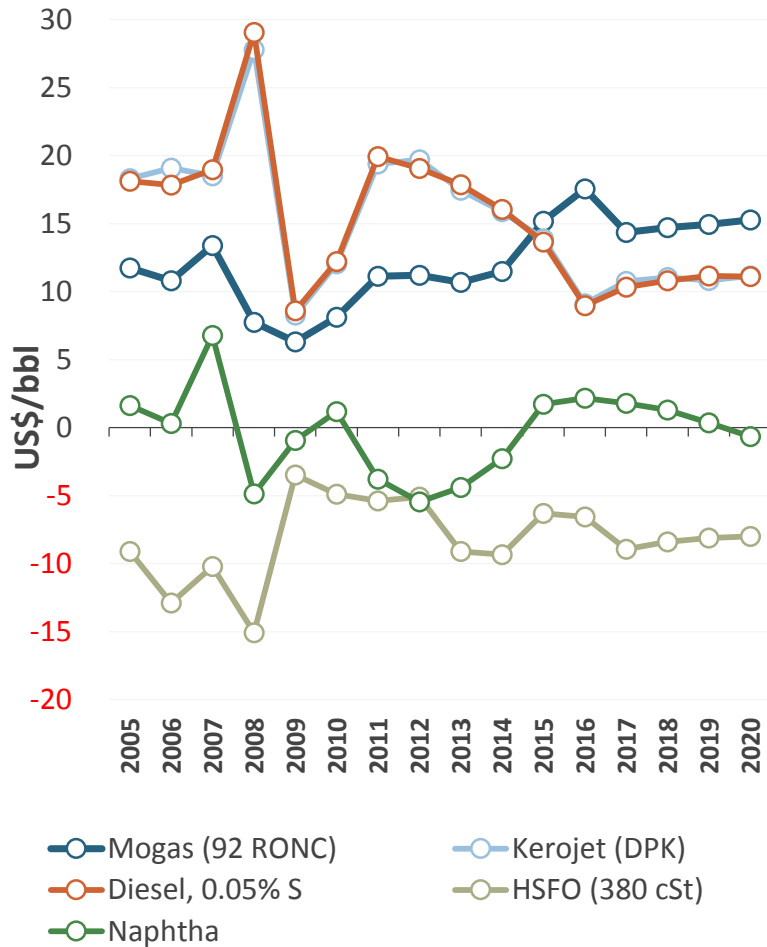


*Quotas awarded to Sinochem and Shandong Dongming

Utilization of Export Quotas Rose Over 2015



Singapore Oil Products Cracks and Refining Margins vs. Dubai Crude



Actual prices from 2005 to 2015. Forecasts in 2016\$ thereafter.



Thank You

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