Current M&A Scene in the Refining Sector

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5th ASIA REFINING

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Content

- Global Drivers of M&A in Refining
- US Perspective
- European Perspective and Key Players
- Developments in Asia and Key Players
- Concluding Remarks

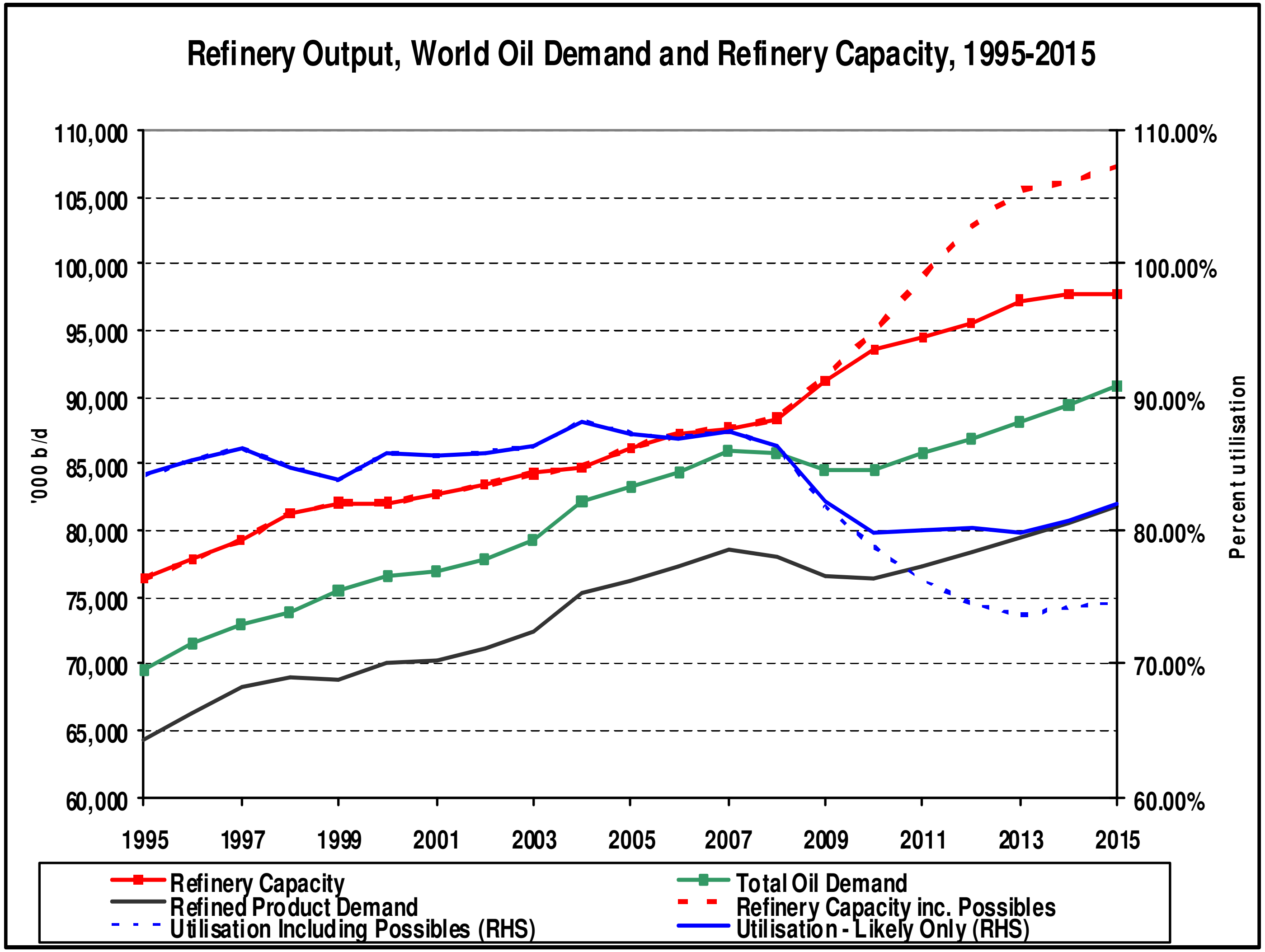
Breaking News

"Sunoco Idles 145,000 b/d Eagle Point, New Jersey, Refinery" – 6 October 2009

First large US-based refinery to close in the current downturn

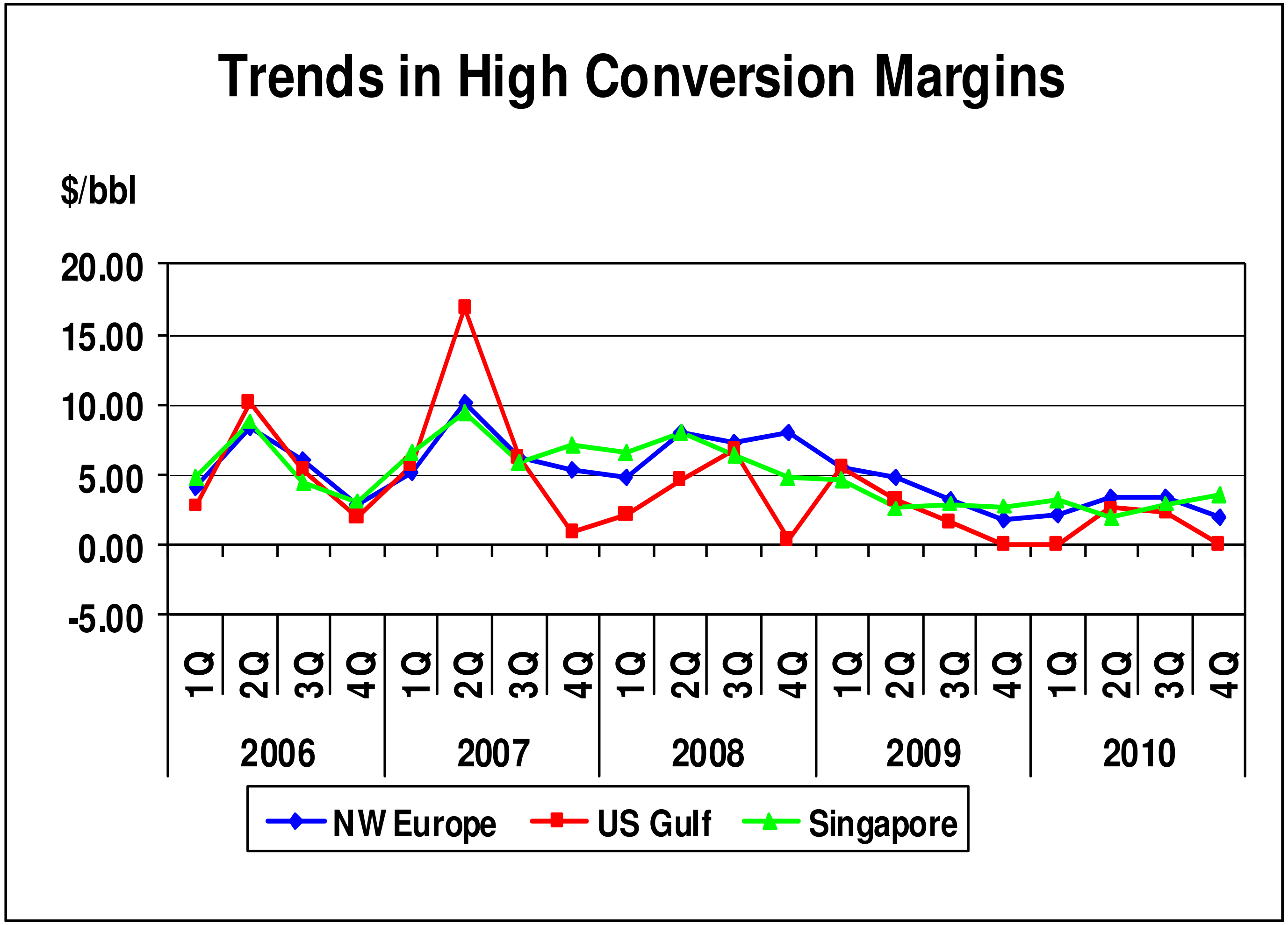
Background

- Global recession dampens refined product demand
- Firm in-progress capacity additions continue to completion
- Utilisation dips to 80% from 2010 and holds through 2015
- Oil demand doesn't recover to 2007 levels again until 2011



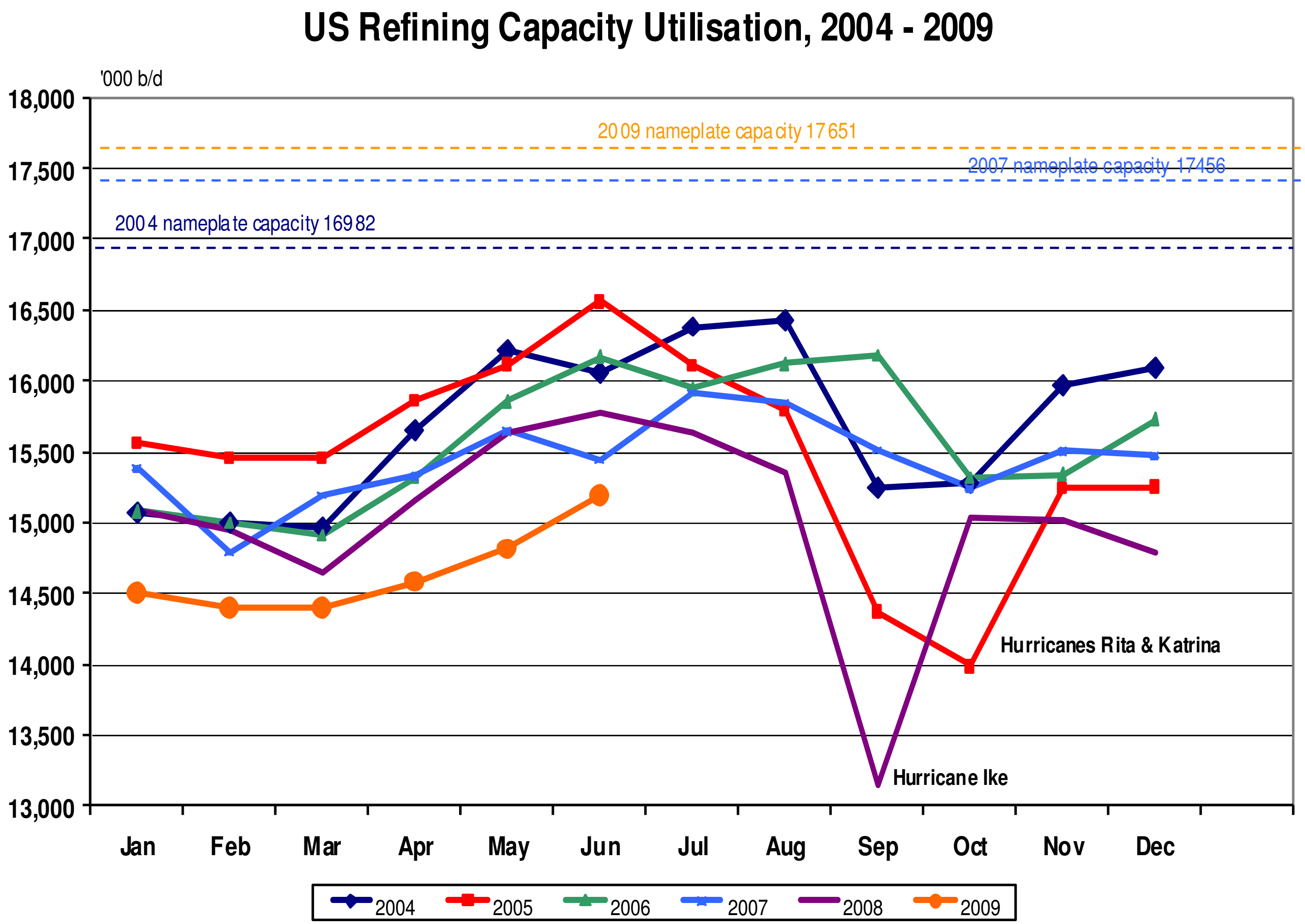
Margins

- Utilisation rates in 1H09 “defied gravity” – extensive maintenance
- High onshore products stocks and large volume of middle distillates in floating storage
- From 2Q09, margins starting to slump
- Widespread cuts in crude runs in all refining centres
- It doesn’t get any better from here for some time



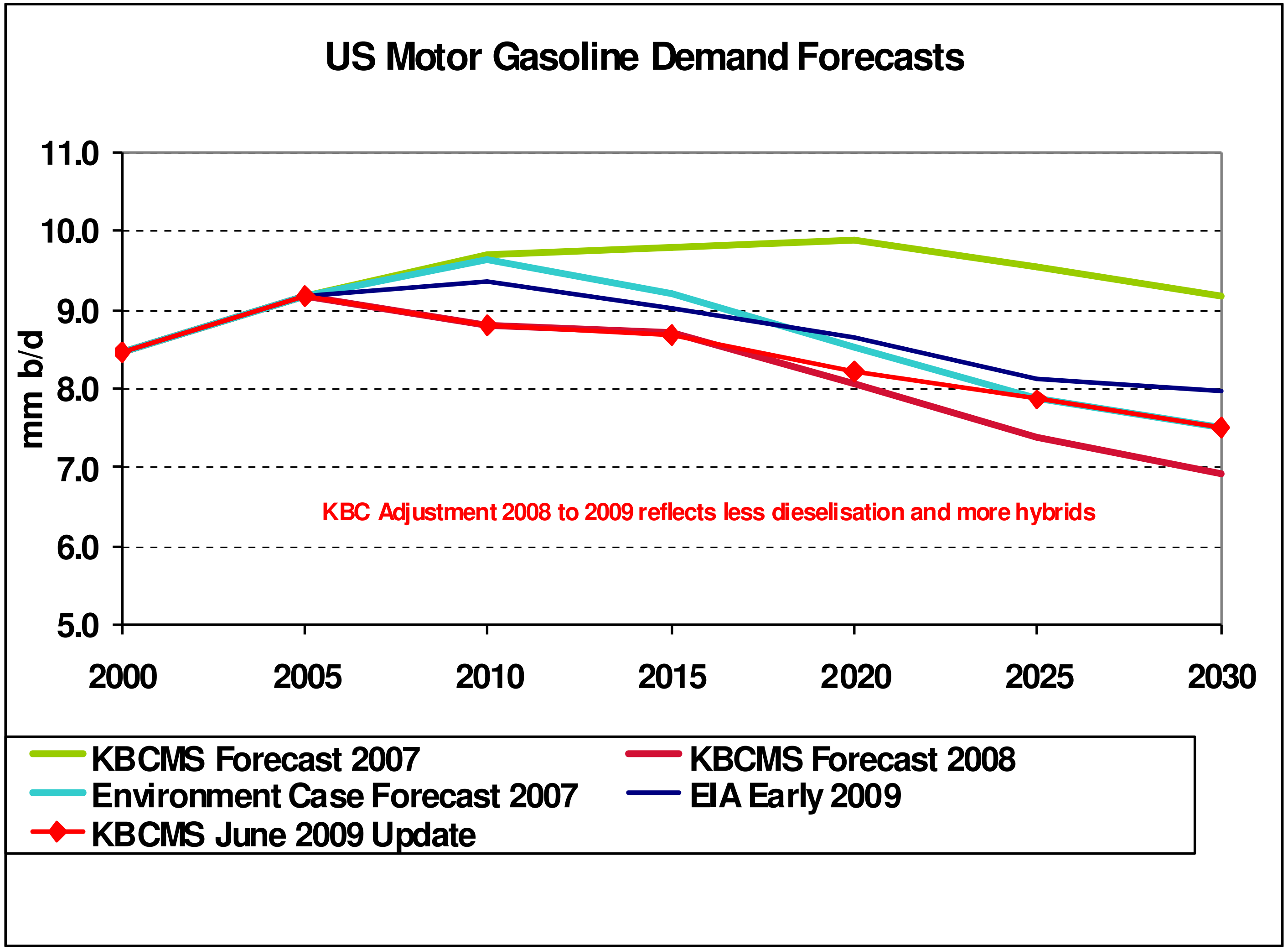
US: Runs Down 1.3m b/d vs Peak

- 1H'09 runs at 83%
- Collapse in demand has seen refineries running at record low rates
- CDU capacity to reach 18m b/d next year
- Increases in mandated ethanol supply will fill near-term emerging demand, leaving refineries backed out



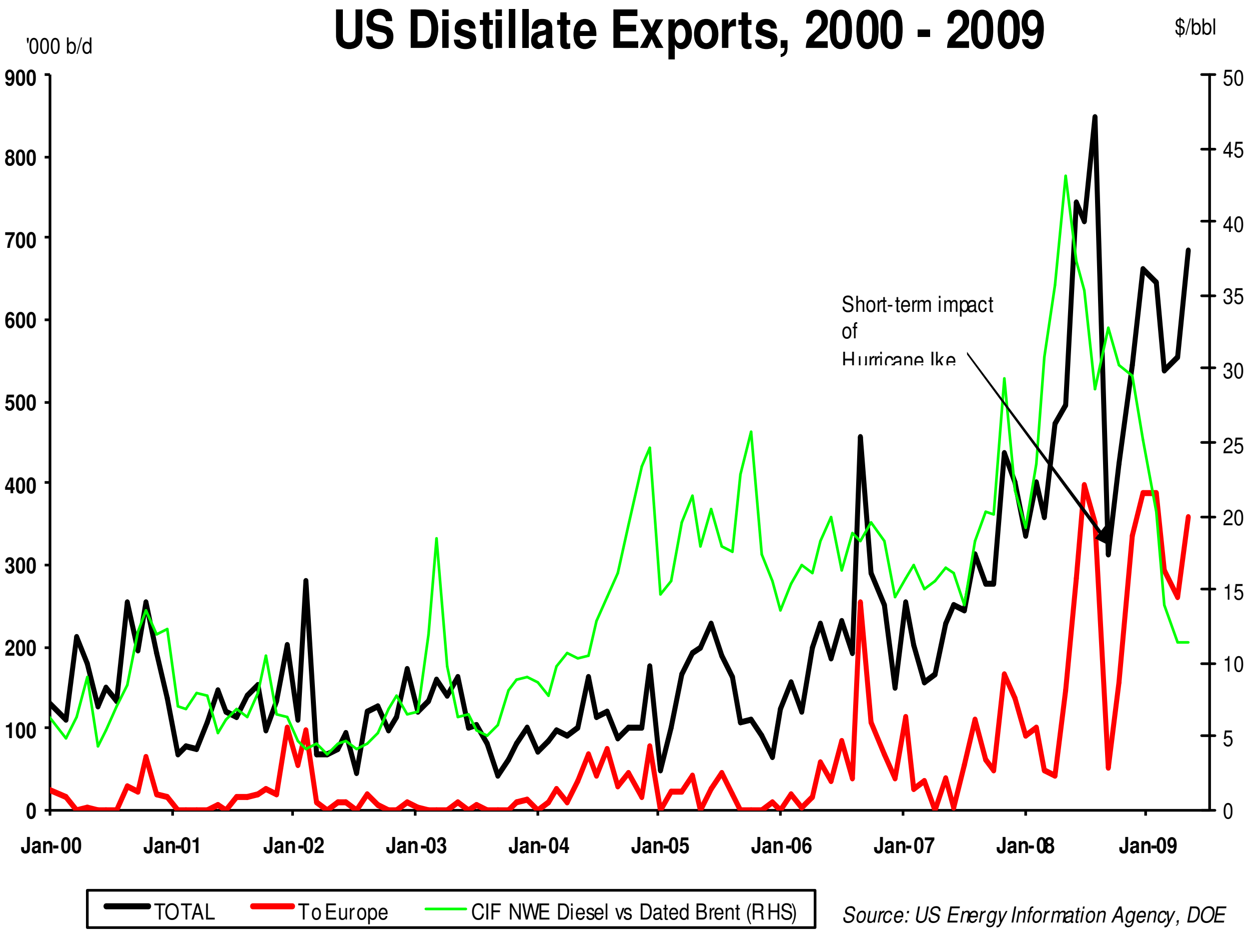
US: Gasoline Demand Has Peaked

- US 'EISA' at end 2007 tightens fuel economy standards
- New MPG mandates merely reinforce long held KBC view of risks to US gasoline demand
- Gasoline demand now seen to have peaked – change in key driver of refining strategy since late 2007
- Refining pressures intensified by oil demand collapse



US: Distillate Production May Save Refining Capacity

- US demand down 350,000 b/d YoY but exports of distillate rising steadily since 2007
- Base load of export to Americas (Argentina, Chile, Mexico)
- Increasingly able to export Euro V quality diesel to Europe
- New capacity additions favour distillate output (Garyville, Wood River, Port Arthur, Whiting)



Source: US Energy Information Agency, DOE

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US: Refiners Biding Time, But Can't Stay The Course Longer Term

- Loss-making independent refiners see need to consolidate
- Big West Flying J (65,000 b/d) bankruptcy (Jan 2009): currently shut but looking for a buyer
- Sunoco sale of Tulsa refinery (85,000 b/d) for just $65m ($764 per daily barrel): sell it or close it down
- Valero cancels HC/Coker projects at Gulf Coast refineries
- Canadian projects also cancelled (Irving grassroots refinery, Harvest expansion and PetroCanada coker)
- A move to cut costs, save cash and wait out the low margin environment
- But this could last years…. then Phoney War Ends!
- October 6, 2009 Sunoco idles Eagle Point; its 335,000 b/d Philadelphia and 178,000 b/d Marcus Hook interconnected refineries to operate at mid-90% utilisation

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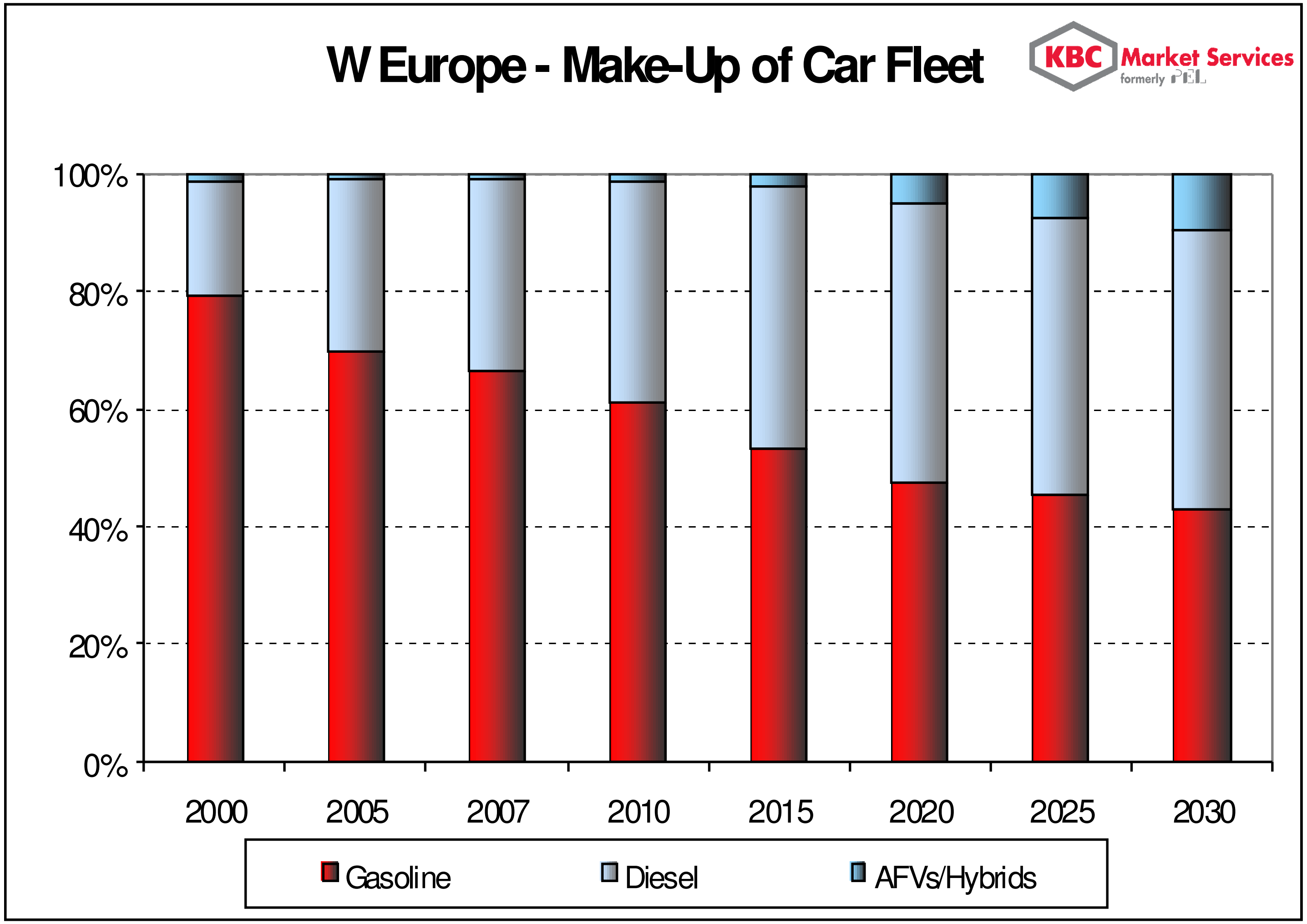
Europe - Dieselisation

- Refining system designed for gasoline
- But regional gasoline demand falling on progressive dieselisation of passenger car fleet
- Diesel economics work in Europe due to high fuel duties/taxes
- Structural surplus of gasoline and deficit of diesel to continue



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Europe – Refining Assets for Sale

- European refiners have suffered from a sharp decline in demand during the recession, together with growth of new capacity in Asia and the Middle East, pushing EU utilisation down to 83% (June/July)
- US gasoline demand will continue to decline in the long term, which threatens European refiners who rely heavily on gasoline exports to the US of up to 1.0 million b/d
- European refinery assets for sale:
  - Germany – Shell's Harburg (110,000 b/d) and Heide (93,000 b/d) refineries; reported interest from Essar
  - Netherlands – Russia's Lukoil has bought a 45% stake in the Vlissingen refinery previously owned by Dow Chemical (Total retains a 55% stake)
  - Italy – ENI's simple 85,000 b/d Livorno refinery; reported interest from UK private equity fund Klesch & Co
  - UK – Shell's 267,000 b/d Stanlow refinery with reported interest from Essar; Ineos (former BP) 200,000 b/d Grangemouth refinery with reported interest from PetroChina; Petroplus 117,000 b/d simple refinery at Teesside, ceased production in March 2009

Royal Dutch Shell

- Mark Gainsborough EVP Downstream Strategy:
  - "We are looking to reduce overall refining assets by around 15%"– represents about 600,000 b/d
  - "Europe is not the place to have an out-and-out merchant refinery; for an asset to have a long-term future it needs to be world-scale of be in a very secure niche"
  - Shell's German refiners are "just too small"; "European refiners below 200,000 b/d will struggle to compete on the international export market"; "refineries on the US East Coast probably need to be 400,000 b/d to succeed in current market conditions"
- About 45% of Shell's capacity is in Europe where refineries, in general, are relatively simple and old
- Looking to sell refineries in UK, Germany, Canada and New Zealand
  - Conducting strategic review of its Montreal East refinery in Canada which may lead to a closure or sale
  - 267,000 b/d UK Stanlow refinery up for sale (Essar interest)
  - Shell's 17.4% stake in New Zealand's 107,000 b/d Marsden Point refinery up for sale
- Investing in petrochemicals in China (Nanhai, with CNOOC 50% JV) and looking to invest in other refineries
- Also continuing development of GTL in Qatar

Total

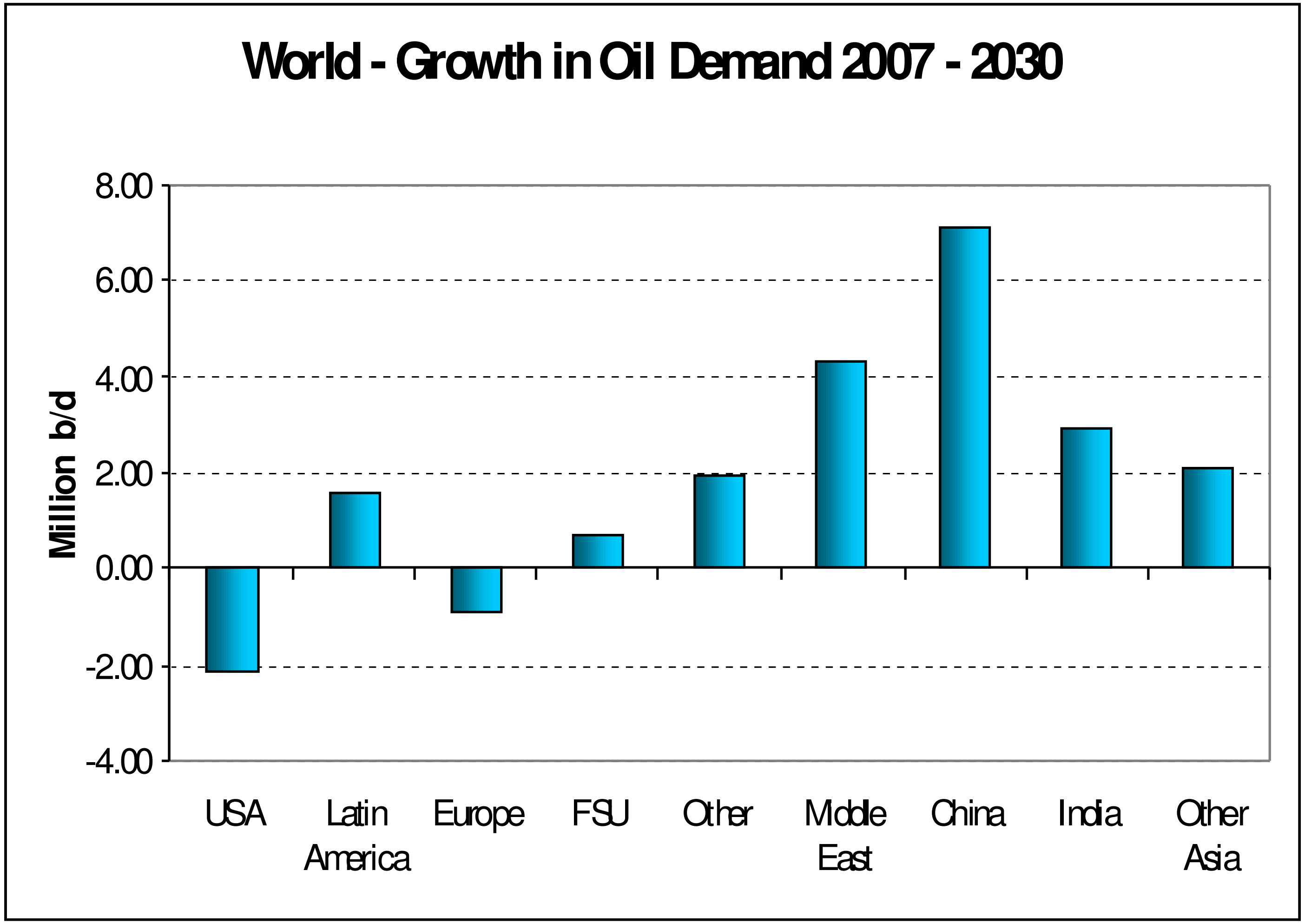
- Largest oil refining capacity in Europe running at 85% utilisation; owns 6 of 13 refineries in France:
  - In June, through Total, 45% stake in Dutch 153,000 b/d Vlissingen refinery sold for $725 million to Russia's Lukoil (boosting refinery capacity to process its own crude)
  - Closure of one of two CDUs at 330,000 b/d Gonfreville refinery to shed 250 jobs, August 2009
  - Temporary closure of 160,000 b/d Dunkirk refinery due to poor demand, September 2009

- CEO Christope de Margerie,"Our constraint today is too many assets in one part of the world"; the European refining market is "certainly not an area of growth, we have to adapt our system to new demand"; priority has to be given to those refineries with a "long term future"

- Developing 400,000 b/d refinery JV refinery with Saudi Aramco in Jubail Saudi Arabia at $9.6 billion, completion second half 2013

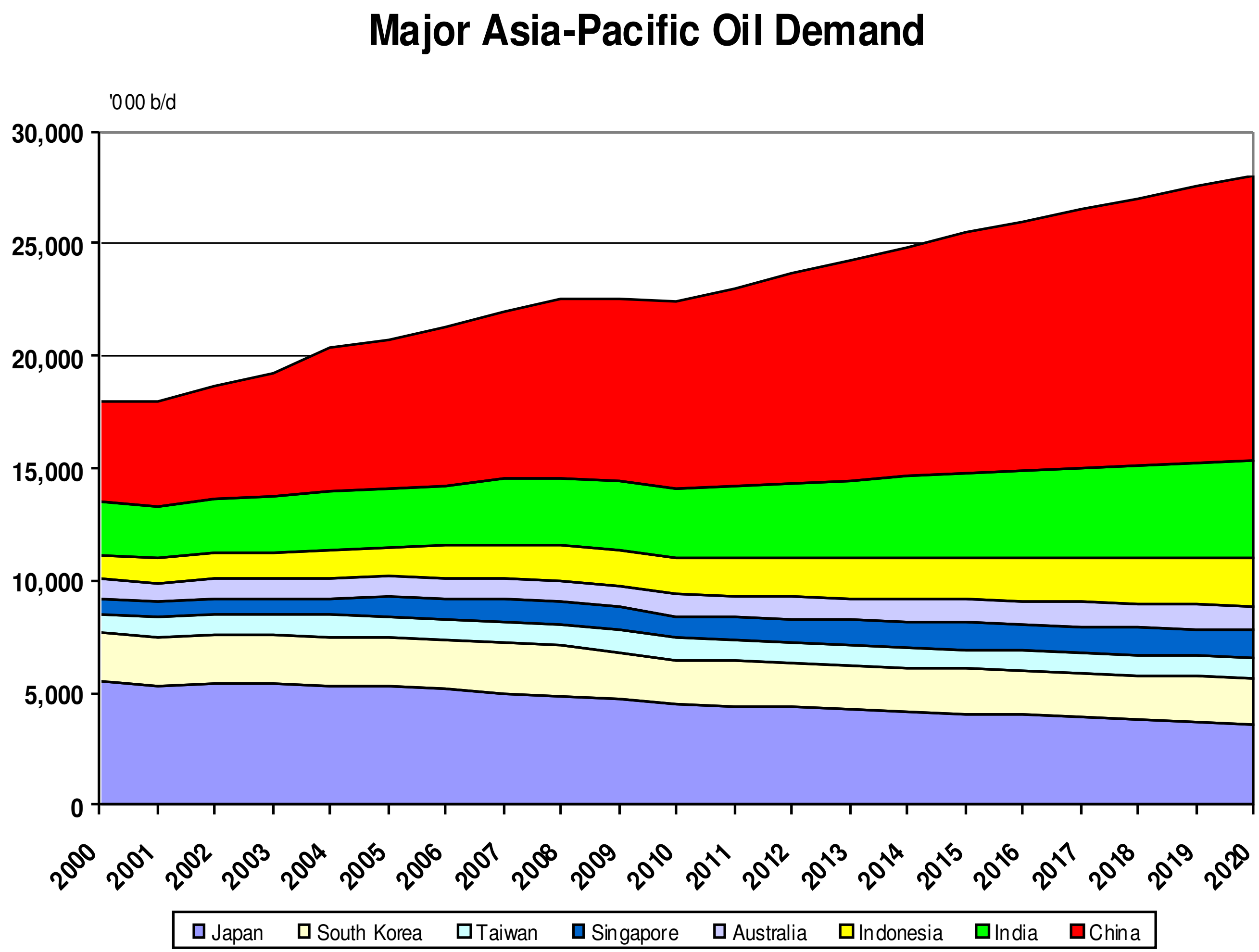
Asian Oil Demand in Global Context

- The US is no longer a critical force – except to the downside – esp. in an Obama Administration
- Europe weakening
- China will remain increasingly important as the driver of world oil demand growth
- India also important
- Remaining growth in the Middle East, Latin America, FSU. (some upside potential)



Asian Oil Demand

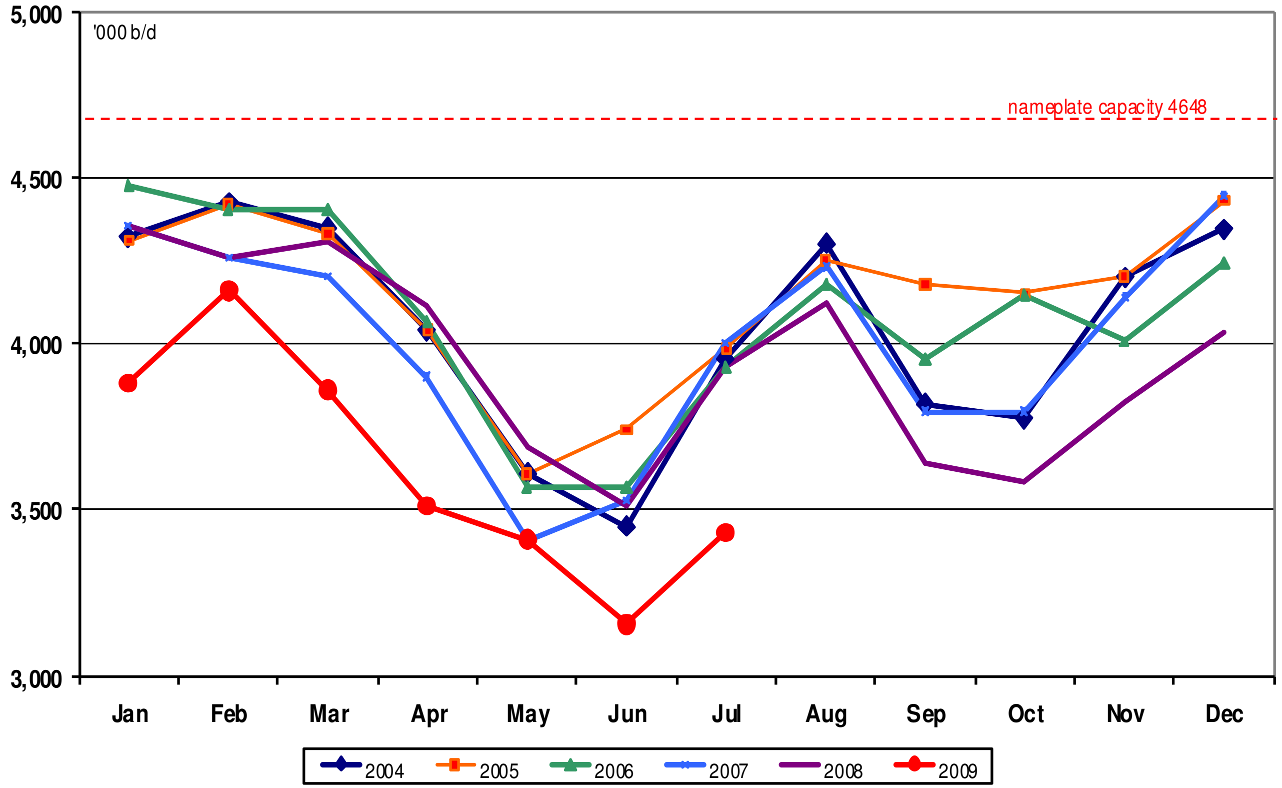
- M&A pressures on refiners generally less in Asia but mixed picture of growth in developing Asia (China, India, Indonesia) and decline in more mature markets (Japan, South Korea)
- Signs of regional consolidation already emerging
- Global majors and Middle East NOCs are repositioning for presence in China



Japan: Oil Demand Breaks Down

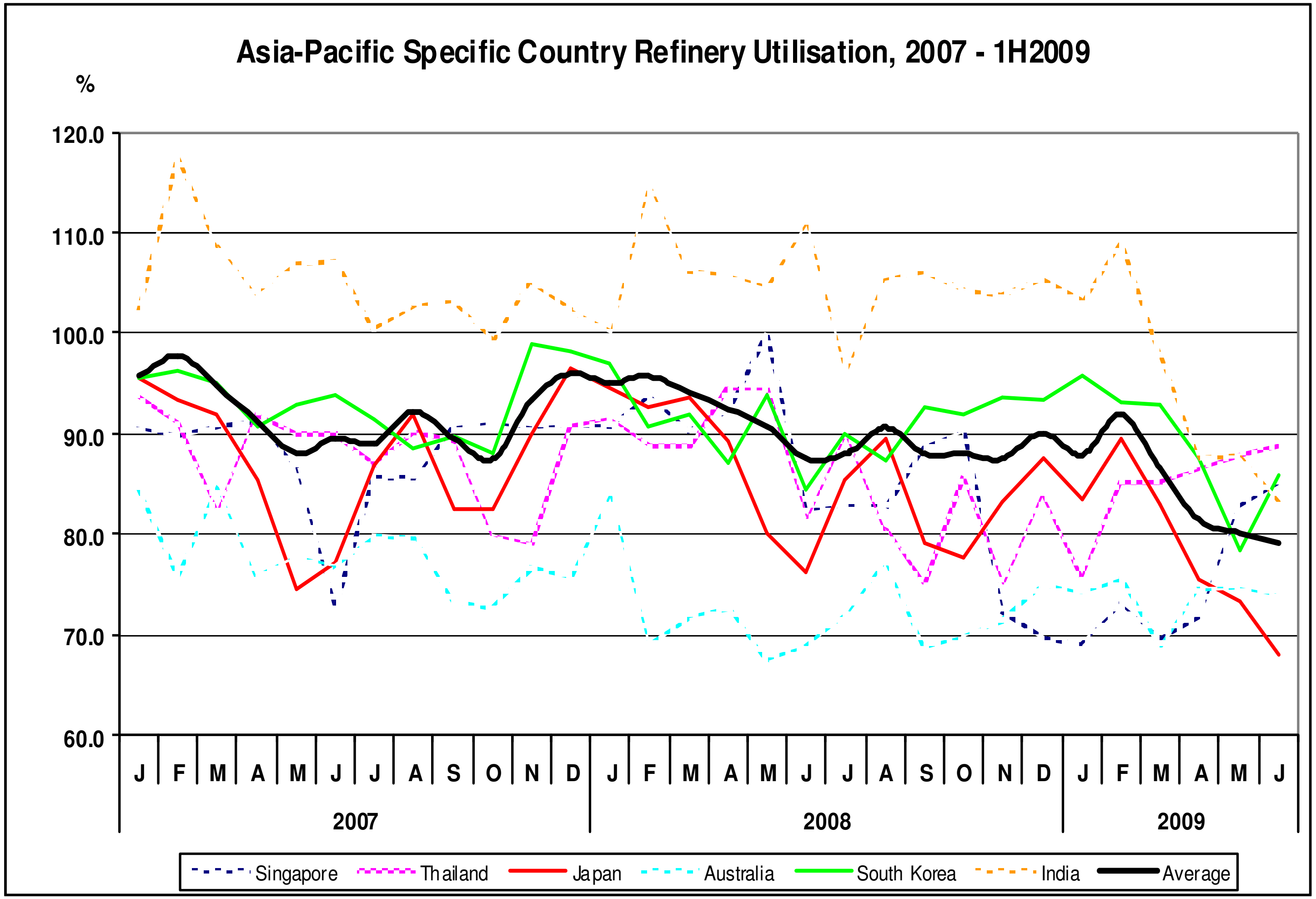
- From mid-2008 onward a pronounced downward shift in total oil demand
- Refineries under pressure as utilisation falls to historically low levels (June 2009 = 67%)
- Capacity closures announced; additional run cuts anticipated
- Can Japanese refining be repurposed, or are closures ahead?

Japanese Refinery Throughput 2004-2009



It's Bad in Other Markets Too

- Deterioration in underlying level of A/P utilisation
- Most countries are affected
- Taiwan down to below 70% on maintenance



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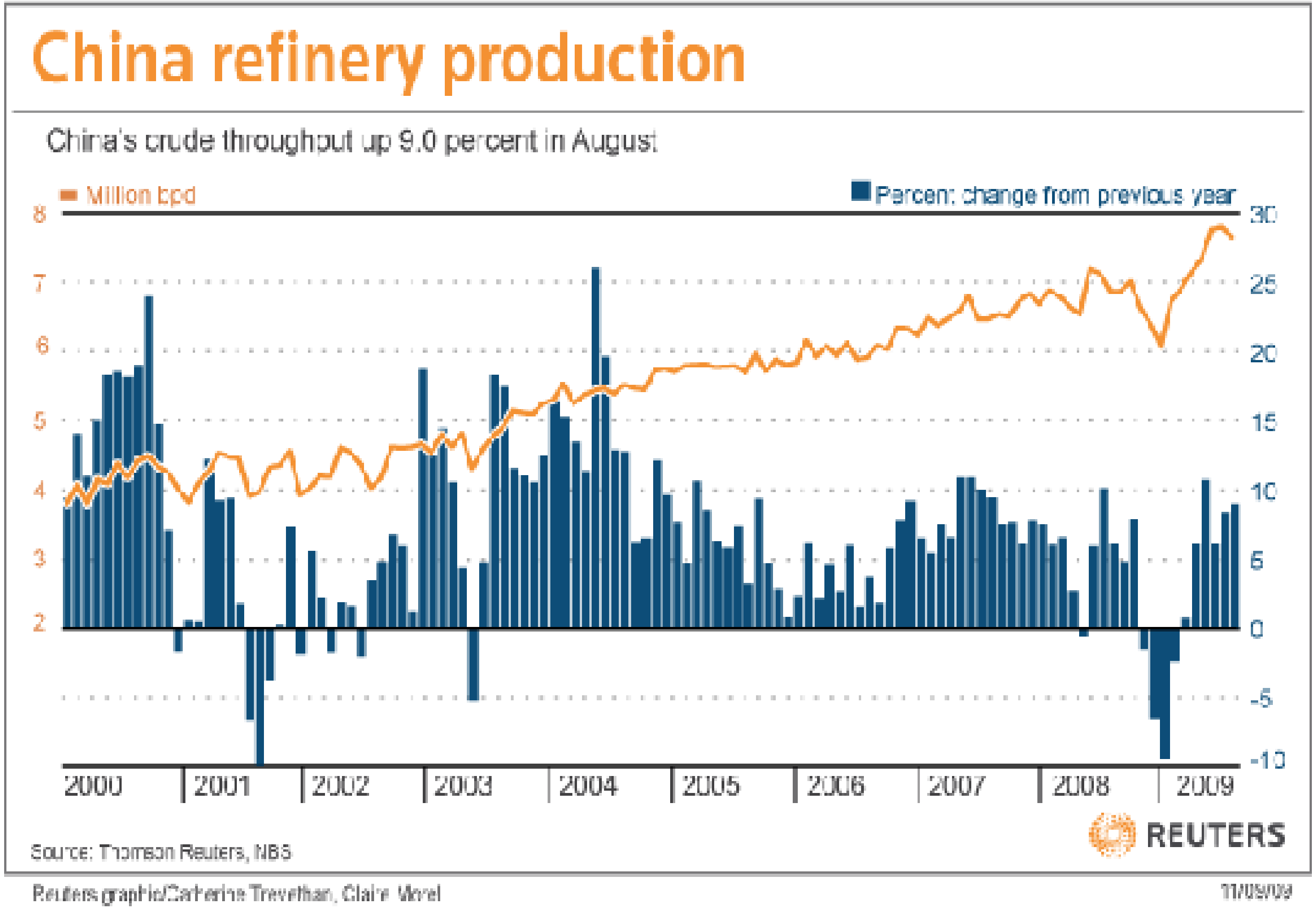
Only China Bucks The Trend

- Downturn in utilisation short & sharp in 1Q09
- Runs have soared to record 7.8 million b/d on new capacity additions (+1.0 million b/d in 2009?)
- High runs supported by new domestic price structure – guarantees fixed refining margin at crude prices below $80/bbl
- Diesel exports to continue?



PetroChina

- Has just secured $30 billion in loans to fund its “Go Global” strategy
- One objective is to become a key global oil trading business:
  - Bought 45.5% stake in Singapore Refining Company for $1 billion with 285,000 b/d refinery strategically located at the Singapore pricing hub for Asia
  - Bought 49% stake in Nippon Oil’s Osaka refinery
  - Reported to be interested in the UK 200,000 b/d Grangemouth refinery which is connected to the North Sea Forties pipeline, with Forties setting the price of BFOE (Dated Brent) used as a benchmark for 60% of global spot crude oil trade
  - Reported to be looking at asset purchases elsewhere in Europe and in Latin America (Aruba, YPF Argentine)
- Possible involvement in potential new 400,000 b/d refinery in Malaysia

Nippon Oil

- Merger with smaller Kyushu Oil (2-3Q08)
- Will merge with Nippon Mining (April 2010)
- Shutdown of Toyama refinery (early 2009)
- May close further capacity
  - Effort to streamline refining
  - Intends to close 400,000 b/d of capacity

Essar Oil

- Plans to expand their existing 240,000 b/d refinery in Gujarat stage-wise, first to 320,000 b/d (2010) and then to 680,000 b/d
- Purchased 50% of Kenya Petroleum Refinery Ltd from Chevron, Shell and BP in July
  - Nominal fee ($12m?) plus commitment to invest
  - This seems more likely a terminal play
- Reportedly interested in stakes in Shell refineries in UK and Germany

Where Are The Value Players?

- Valero, Tesoro and PetroPlus all seem to have had enough for now
  - Though Valero (16 refineries in N. America) lost out on attempt to enter Europe through Vlissingen acquisition
  - Some of these bargain purchases are now being shut down (Valero/Aruba 235,000 b/d, Petroplus/Teesside 117,000 b/d)
  - Valero has cutback operations at its 182,000 b/d Delaware refinery and is considering closure
  - Standalone independent refiners are losing money
- Shell is selling capacity in some markets while building in others
- It's still cheaper to buy than to build, but

Just because an asset is cheap, doesn't make it good value!

TESORO

VALERO

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What Makes an Asset Attractive?

- Synergies, Scale and Storage
  - Purchases of nearby assets may provide synergies or integration (incl petchems) and scale unavailable to separate units
  - Purchases of overseas assets may enhance oil trading capabilities or lock in crude volumes
  - Possible business opportunity for financial investors to turn refineries into storage sites (market structure likely to remain in contango)
- Configured for Distillate (HC) and Fuel Oil Management
  - Globally, future demand growth will favour distillates
  - Depending on markets, pending IMO bunker fuel regulation can imply a lot of upgrading investment
- Price
  - Cheaper to buy than to build new capacity ($10k per barrel/day ceiling versus $25-30k)
  - Possible relocation of assets (Indian sub-continent)

Concluding Remarks

- Process of rationalisation and Merger & Acquisition in the refining sector is only just beginning
  - Collapse of refinery margins has been constrained by extensive maintenance, delayed completion of new plant and pre-manufacture of products for floating storage
  - But margins now under strong pressure with global cuts in utilisation (except China)
- Oil demand destruction and heightened climate change concerns have concentrated refining pressures in the 'old world'
  - Refining systems under greatest pressure are in Europe, US, Japan/Australasia
    - Expect plant closures and enhanced M&A activity
    - More refining assets will come up for sale in Europe and the US on more favourable terms
    - Asian interest in asset purchase – will Sinopec follow PetroChina (& Essar)?
- Much of Asia has layers of protection
  - Growth in oil demand will revive levels of utilisation despite new capacity – China, India, Indonesia
  - Government supported, strong business conglomerates – South Korea and Taiwan
  - Powerful national oil companies – India, Indonesia, Malaysia
  - Competitive world-scale integrated sites – Singapore, South Korea, Taiwan
  - Import parity refinery gate pricing even in deregulated export refining centres – South Korea and Thailand
  - However, scope for some consolidation of ownership - Philippines, Thailand & S.Korea as well as Japan and Australasia