

# Global Energy Report

China Merchants Futures (Hong Kong)  
Hong Kong Commodities Research

## Opportunity from divergent demand

- China is experiencing divergent gasoline & diesel demand
- Asian diesel crack spreads are depressed due to China exports
- Long Asian gasoline spread + Short Asian diesel spread profitable

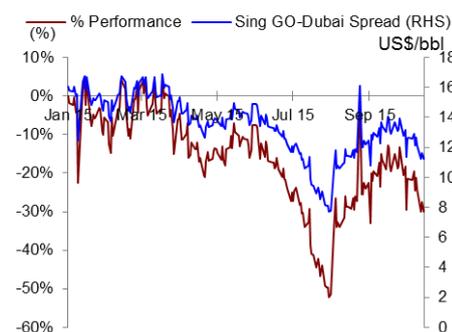
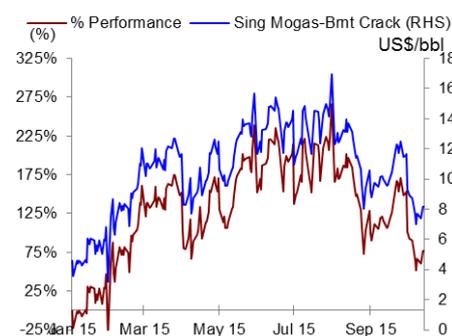
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### Price Performance



Source: Bloomberg, CMF(HK)

Absolute return (%)	1m	6m	12m
Mogas-Brent	(14.3)	(12.7)	(43.2)
Gasoil-Dubai	(13.6)	(18.8)	(21.9)

### Related Research

1. Global Energy Report – “The rising tide of oil ahead” – Aug 7, 2015
2. Global Precious Metals Report – “Gold regaining some luster” - Sep 4, 2015

## China gasoline boom and diesel bust

Diesel demand in China is falling for the third consecutive year, while gasoline is growing at double-digits. At the current trajectory, we should see Chinese gasoline demand surpassing that of diesel by 2017. Chinese refiners have had to increase diesel exports to neighbouring countries in order to alleviate the growing domestic glut. In turn, Asian (Singapore) diesel spreads have remained in a declining trend for most of this year, while in contrast, Asian gasoline crack spreads have been buoyant, significantly up trending throughout most of the year.

## Structural shift in Chinese refined product demand

The divergence in demand comes as 1) weak economic environment reduces diesel demand, 2) transition to a more service-based economy depresses industrial use of diesel, and 3) passenger cars sales have been much stronger than their commercial vehicle counterparts. These factors will continue to shift the paradigm of country's refined production demand more towards gasoline and marks a longer-term trend.

## Asian diesel spread are worth shorting

Chinese diesel exports have increased 10%YoY to date. This has caused Asian (Singapore) diesel spreads to decline by 30%YTD, while at the same time strong gasoline demand in the region has bolstered Asian (Singapore) gasoline crack spreads by surged 77%YTD. Hence, taking into account the price difference, longing 2 Asian gasoline (mogas) crack spread contracts while shorting 1 Asian diesel crack swap contract would have resulted in a positive profit profile for most 2015.

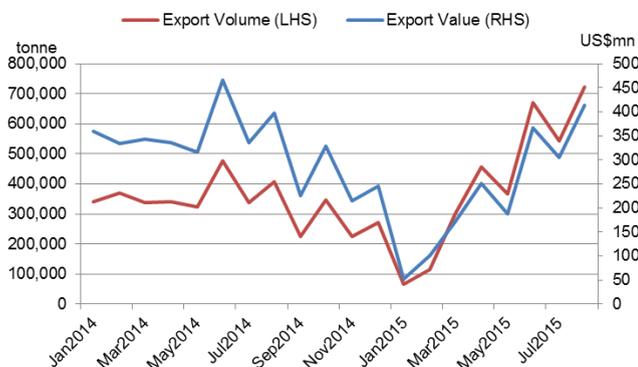
## Price Update

Front Contract		Close	Change		High	Low	Range	
			(US\$)	(%)			(US\$)	(%)
NYMEX WTI	(US\$/bbl)	46.57	-0.87	-1.83%	48.43	46.44	1.99	4.29%
ICE Brent	(US\$/bbl)	49.22	-1.05	-2.09%	50.70	48.88	1.82	3.72%
NYMEX Nat. Gas	(US\$/mmBTU)	2.50	-0.05	-1.81%	2.56	2.49	0.07	2.73%
NYMEX RBOB Mogas	(US\$/gal)	1.31	-0.04	-2.76%	1.36	1.31	0.05	3.71%
ICE Gasoil	(US\$/mt)	451.75	-14.00	-3.01%	467.75	450.00	17.75	3.94%
EURUSD		1.1376	0.0021	0.18%	1.1410	1.1343	0.0067	0.59%
Dollar Index (Spot)		94.7590	-0.0820	-0.09%	94.9820	94.5390	0.4430	0.47%

Source: Bloomberg, CMF (HK)

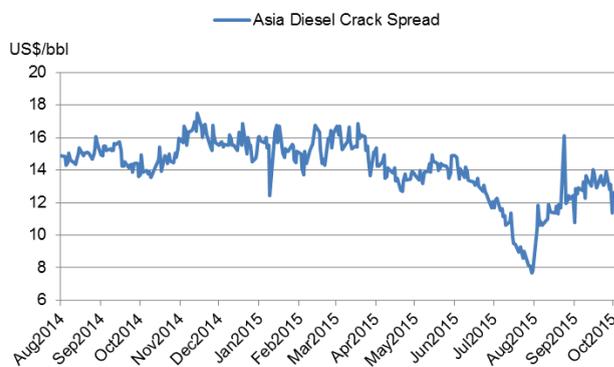
**Focus charts**

**Figure 1: China diesel export**



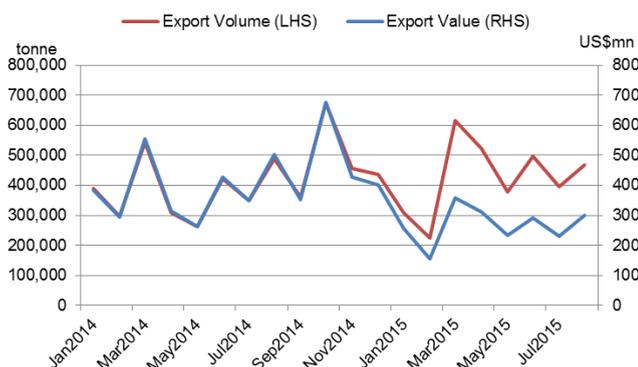
Source: China C&E, CMF (HK)

**Figure 2: Asian diesel crack spread**



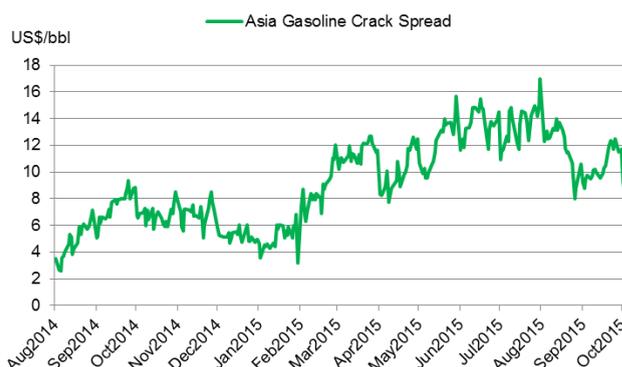
Source: Bloomberg, CMF (HK)

**Figure 3: China gasoline export**



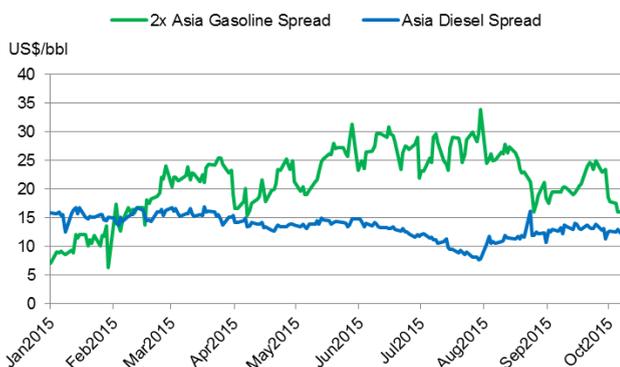
Source: China C&E, CMF (HK)

**Figure 4: Asian gasoline crack spread**



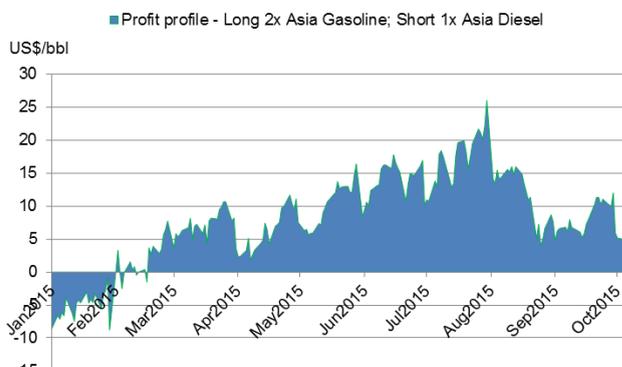
Source: Bloomberg, CMF (HK)

**Figure 5: Asia gasoline vs. Asia diesel spread**



Source: China C&E, CMF (HK)

**Figure 7: Profit profile from Asia gasoline/diesel trade**

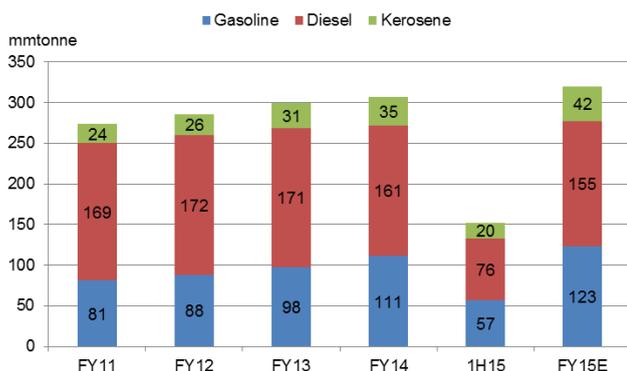


Source: Bloomberg, CMF (HK)

## Chinese refineries producing fewer diesels

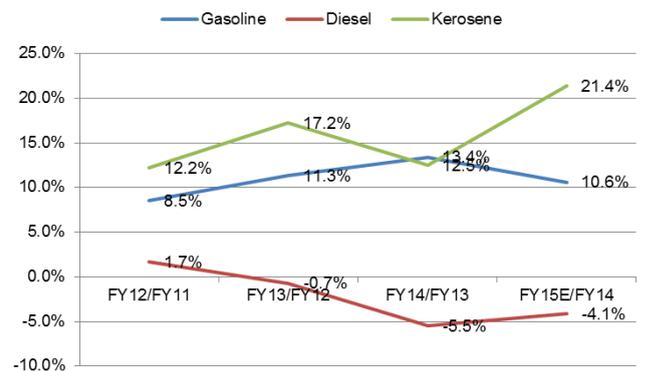
- China's refined oil product production is traditionally (and is still) skewed toward diesel demand, making up c.60% of total refined products sold, while gasoline makes up about only about one-third of the country's domestically produced supply of refined products.
- Both PetroChina and Sinopec (who in aggregate make up about 90% of the country's refining capacity) have recorded production declines for diesel since 2013. We believe that this reflects, in part, the current weak economic environment within the country as well as the central government's policy shift towards a more service-based economy, which depresses the industrial use/demand for diesel in China.
- As a result of the continuingly weak Chinese economy (2015E/2016E GDP growth <7% versus 1979-2010 GDP growth of 9.91%), the two refiners are expected to produce only 155mmtonnes of diesel during 2015, a c.4%YoY drop versus one-year ago and the lowest level of diesel production since 2010.
- In contrast, production of gasoline has steadily increased by low double-digits since 2013 and is expected to reach 123mmtonnes during 2015, up 10.6%YoY. This would bring gasoline's share of total refined products up to c.38% of total refined production, the highest on record. At the current trajectory, we should see gasoline surpassing diesel as the refined oil product with the highest demand in China by 2017.

Figure 8: PetroChina + Sinopec product output



Source: The Companies, CMF (HK)

Figure 9: Refined product growth



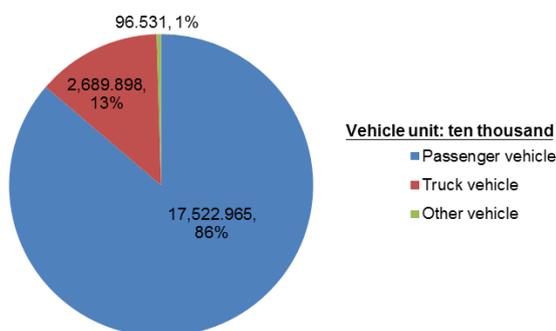
Source: The Companies, CMF (HK)

## More passenger vehicles explains shift to gasoline from diesel

- The growth of automobiles sales and production in China has not been able to escape the global decline in vehicle sales that has been evident since 2009-2010. However, China remains a key market for passenger and commercial vehicles, booking nearly 23.9mn vehicles sales during 2014 and accounting for 27% of total new vehicles sales world-wide.
- Passenger cars (PC) sales in China have been particularly much stronger, in recent years, than their commercial vehicle counterparts, growing at a 14%CAGR (2009-2014) versus just 3%CAGR (2009-2014) for commercial vehicles. To put it into perspective, in 2014 more than 5 passenger vehicles were sold for each commercial vehicle versus a ratio of approximately 3:1 back in 2009. As a result, passenger cars now dominate the Chinese auto market to a greater extent than 10 years ago (over 86% of new vehicles registered are passenger vehicles versus 74% in 2004).
- In 2014, privately owned small passenger cars were numbered to be at c.104mn according to Traffic Control Bureau statistics. Furthermore, 99% of these PC vehicles were gasoline powered, whereas about 70% of Chinese CV was diesel (and declining). The increase in more gasoline powered passenger vehicles in China

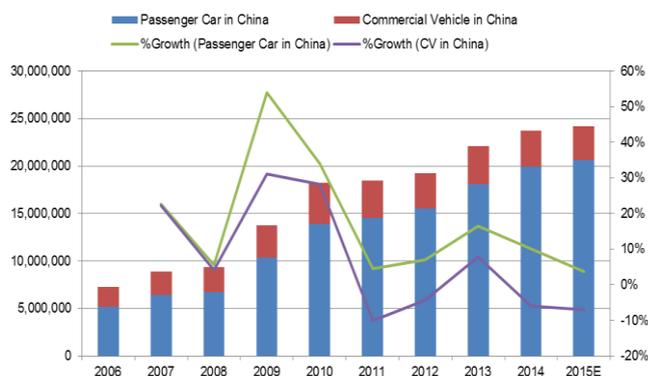
will continue to shift the paradigm of country's refined oil production demand towards gasoline and marks a longer-term trend. Eventually, we expect China's refined product demand to mirror that of the U.S. whereby approximately 70% of crude oil demand is used to fuel the nation's passenger vehicle fleet.

Figure 10: Global automobile production distribution



Source: CEIC, CMF (HK)

Figure 11: China automobile production distribution

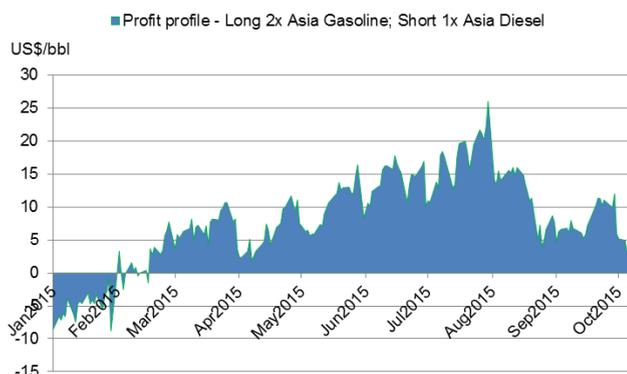


Source: CEIC, CMF (HK)

### Chinese exports put a damper on Asian crack spreads

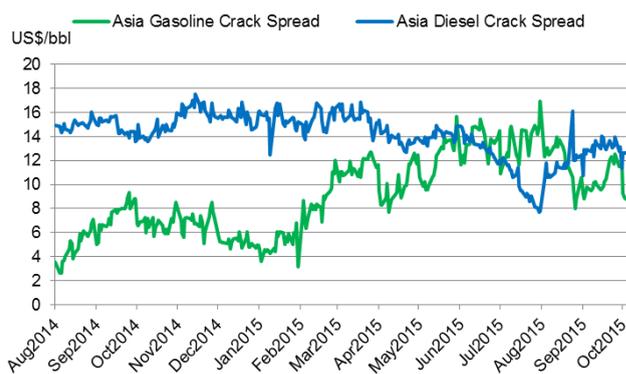
- China has added more than 600,000bpd in refining capacity last year, bringing the nation's total refining capacity to c.14mmbpd. Traditionally, Chinese refineries are more similar to European refineries (than U.S. refineries) in that they have been designed and constructed for more diesel production (approximately 50% of capacity). This means that, inherently, China will still face a diesel glut as it refines more crude oil.
- In order to alleviate this glut, refiners have increased their diesel exports into neighbouring Asia countries. The three Chinese oil majors, PetroChina, Sinopec, and CNOOC were allotted a 20% increase in oil product export quota to 9.75mtonnes earlier this year, which have resulted in a 10%YoY increase in diesel exports year-to-date.
- This has caused Asian (Singapore) diesel spreads to decline by 30%YTD, while at the same time Asian (Singapore) gasoline crack spreads has surged 77%YTD on higher regional gasoline demand. Hence, taking into account the pricing difference, longing 2 Asian gasoline (mogas) crack spread contracts while shorting 1 Asian diesel crack swap contracts would have resulted in a positive profit profile for most 2015.

Figure 12: Profit profile from Asia gasoline/diesel trade



Source: Bloomberg, CMF (HK)

Figure 13: Asian gasoline & diesel crack spread



Source: Bloomberg, CMF (HK)

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