



# Delivering in an Evolving Market

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14 May 2015



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# Summary of content

## **Market Overview: Structural Changes**

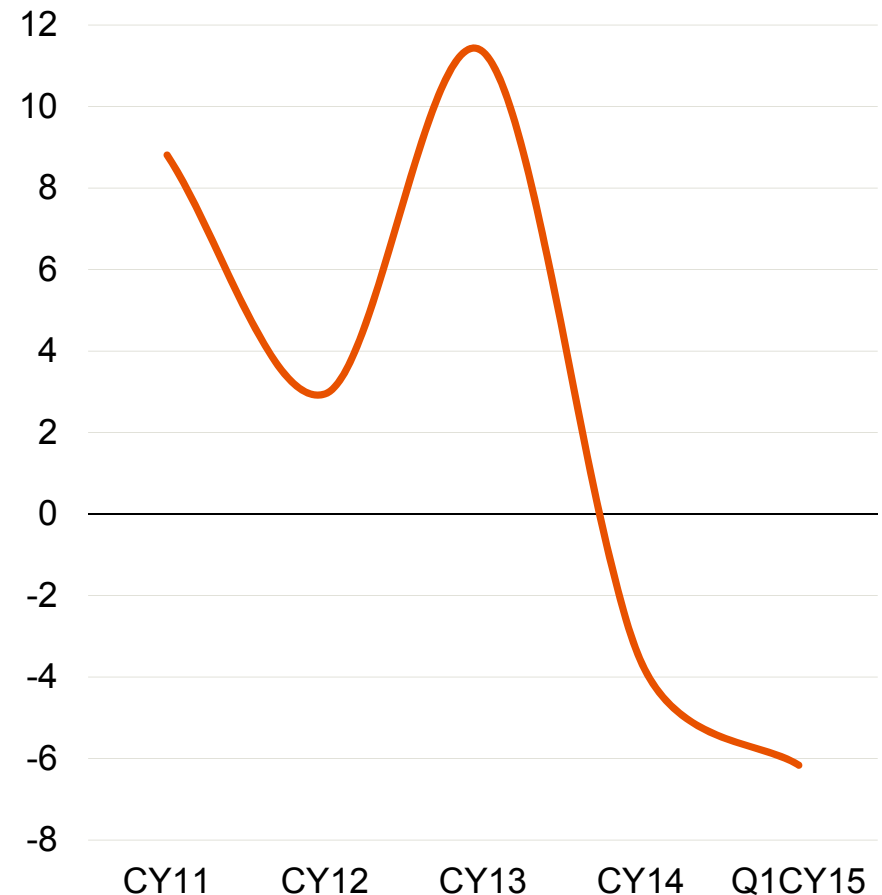
Adjusting to a Changing Environment

Platforms success: transparent, liquid and efficient market

# China steel demand facing short-term headwinds

- Domestic steel demand is facing temporary headwinds
  - property market downturn
  - manufacturing activity slowdown
  - weak machinery demand in line with low investment in manufacturing
  - softening of consumption of home appliances and automobile
  - traders de-stocking

China apparent steel demand<sup>1</sup> growth  
(YoY, %)

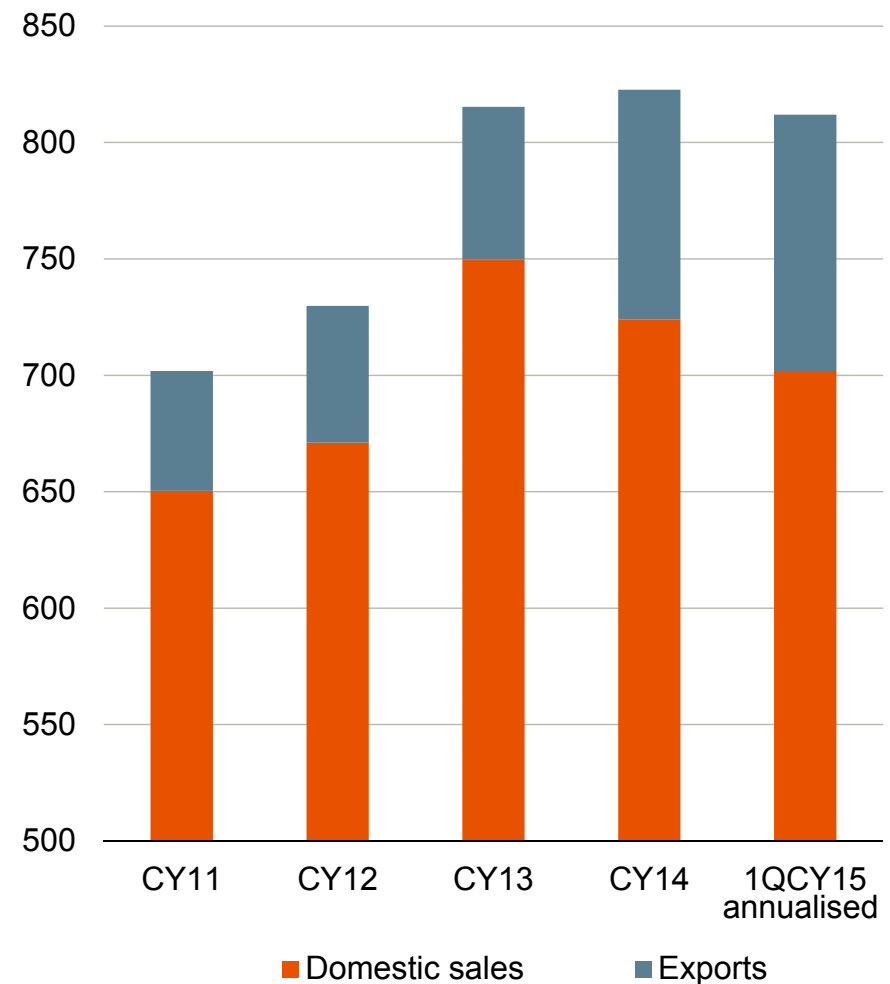


1. Apparent steel demand = crude steel production + imports – exports.  
Source: BHP Billiton; NBS; Mysteel.

# China steel production has recently increased its focus on exports

- China has been a steel net exporter since 2005
- Steel exports increased in CY14, as Chinese mills try to mitigate the temporary domestic demand weakness
- Steel exports remained high in Q1CY15
- Steel exports are expected to remain high in the long term due to China cost competitiveness and more overseas investment

**Production declines on weak domestic demand**  
(million tonnes of crude steel)

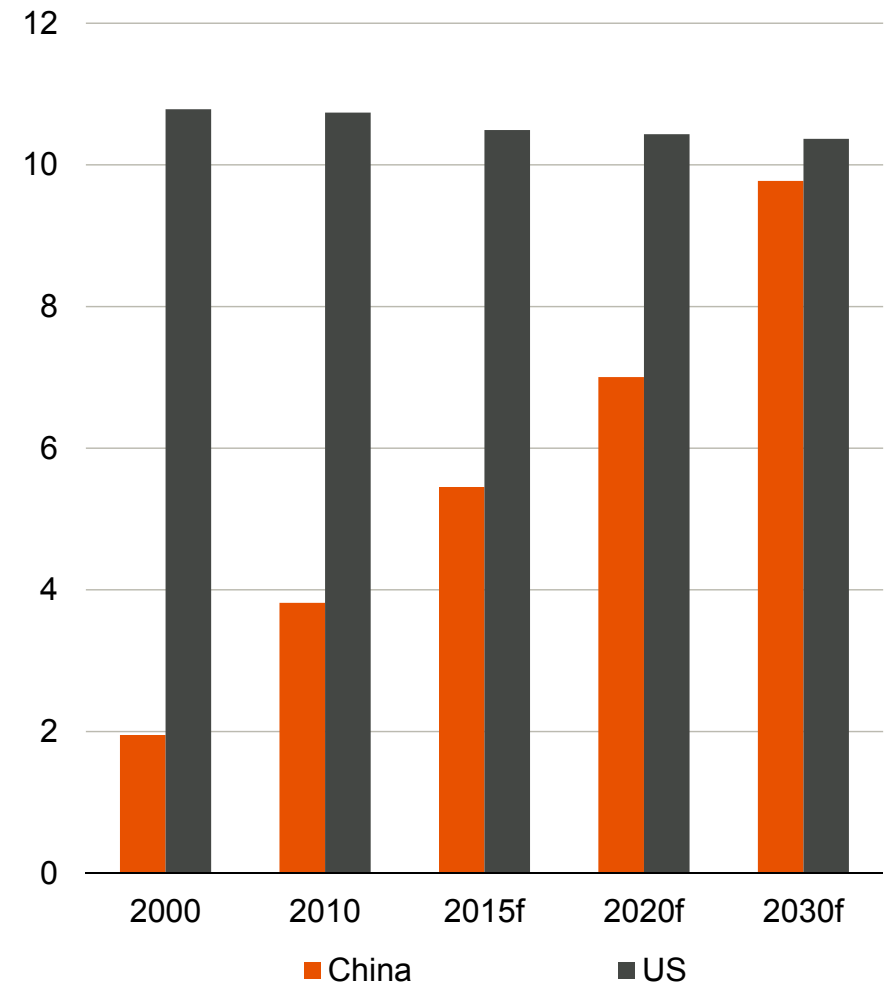


Source: BHP Billiton; NBS.

# Despite short-term volatility, China steel stock per capita has large upside potential

- Despite an expected moderation in the rate of demand growth, upside still exists for the Chinese steel industry
- Short-term demand could be subject to investment cyclicality affecting incremental stock addition
- Over the long-term, China will need more steel for sustainable economic growth
- We expect China's crude steel production to peak at 1 to 1.1 billion tonnes in the mid-2020s and plateau through to 2030

**Substantial growth in Chinese steel stock**  
(finished steel per capita<sup>1</sup>, t)



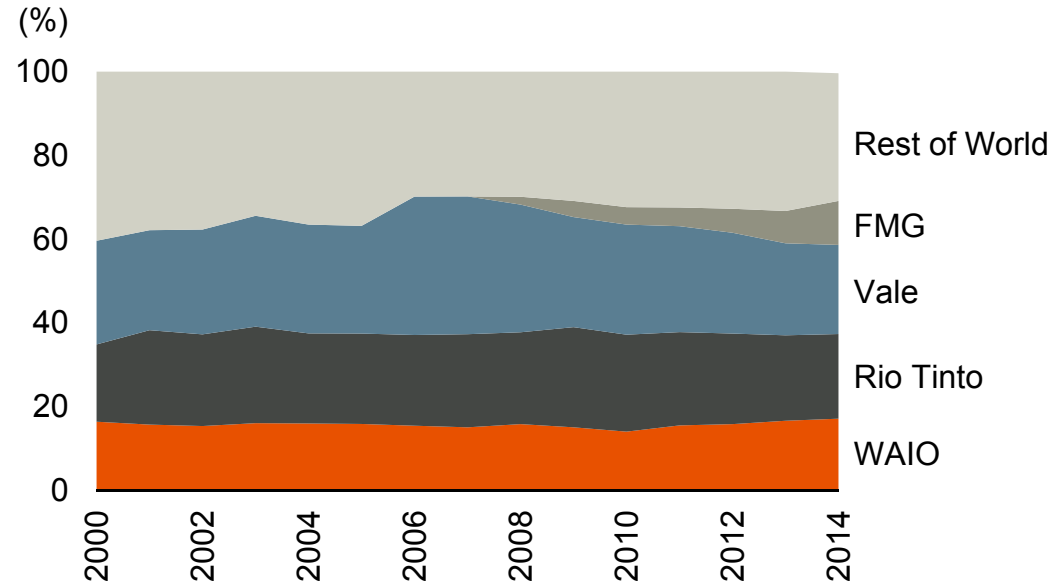
Source: BHP Billiton; IHS Global Insight; worldsteel.

1. Accumulation of steel stock is calculated from apparent steel consumption, net of trade in steel containing goods and net of steel out of use (scrapped).

# Our increase in volume, for value, has resulted in no growth in our market position

- BHP Billiton has maintained its share of iron ore exports through a disciplined program of investment
- We approved our last major investment at WAIO in 2011
- Since then we have focused on productivity
  - capacity utilisation, driving more volume through existing infrastructure
  - reducing external expenditure through lower demand, better rates and insourcing services
  - driving efficiencies and optimising functional support to enable people productivity
- Our productivity focus has resulted in volume growth above the original capital investment

Share of iron ore exports<sup>1</sup>



Total iron ore export growth<sup>1</sup>

	2008-2014 CAGR	Share of exports <sup>2</sup>
Rest of World	10%	31%
Vale	3%	21%
Rio Tinto Pilbara	8%	20%
BHP Billiton WAIO	11%	17%
Fortescue	46%	11%
<b>Total</b>	<b>10%</b>	<b>100%</b>

Source: Wood Mackenzie 2015.

1. All iron ore products including lump, fines, pellet feed and pellets, 100%.

2. Share of exports in 2014. BHP Billiton data excludes Samarco.

# Displacement of China's high cost domestic production by seaborne supply

- Chinese high cost mines displaced as low cost seaborne supply entered the market
  - primarily due to economic factors
  - more displacement expected to take place in 2015
  - displacement rate expected to slow as SOEs account for a higher portion of total production

**Operation rate of Chinese private iron ore mines vs. spot iron ore price**

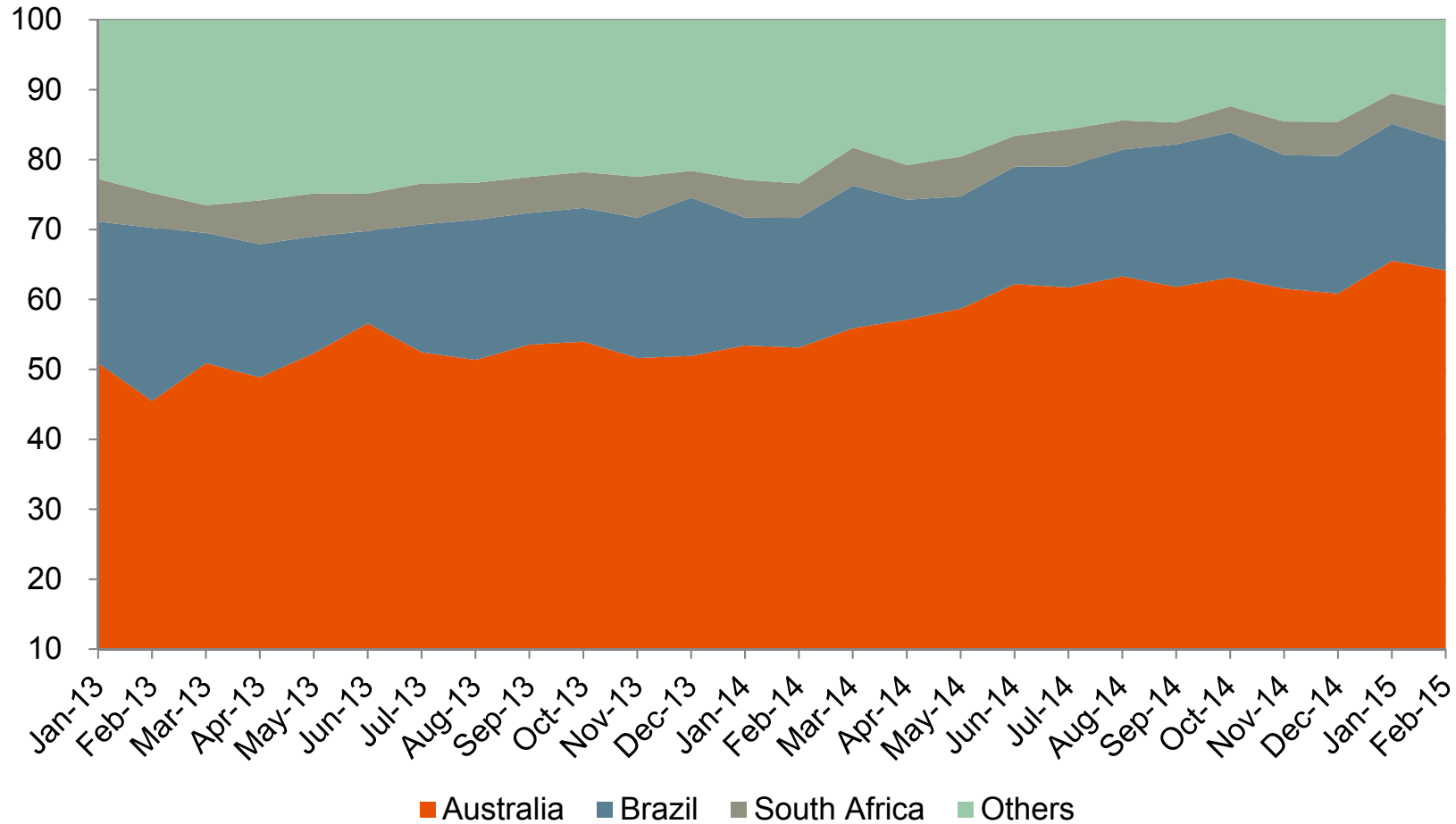


1. Private mine only, excludes SOE production.  
Source: SMM Survey; Platts.



# High-cost seaborne production also displaced

Seaborne iron ore imports to China (%)



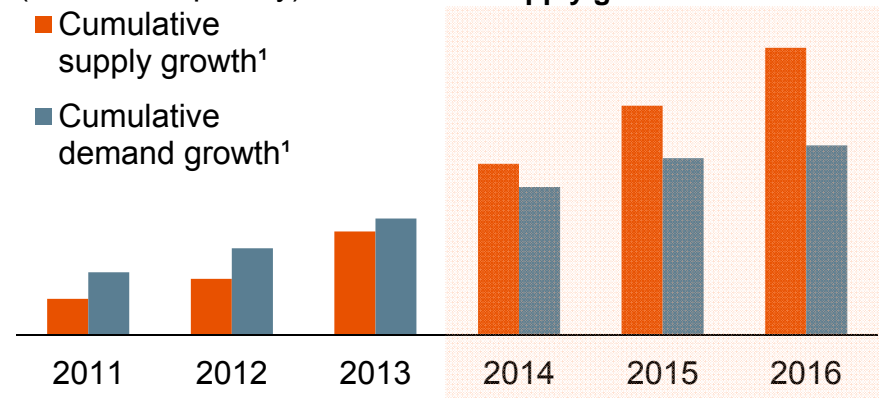
Source: GTIS; China Customs.  
1. Data basis CY2015 guidance

# The iron ore cost curve expected to flatten further over time

- Global contestable iron ore demand growth is expected to moderate
- Seaborne supply growth is expected to continue exceeding demand growth over the medium term
- We expect to retain a favourable position on the cost curve
  - underpinned by quality of our resource base and further productivity gains

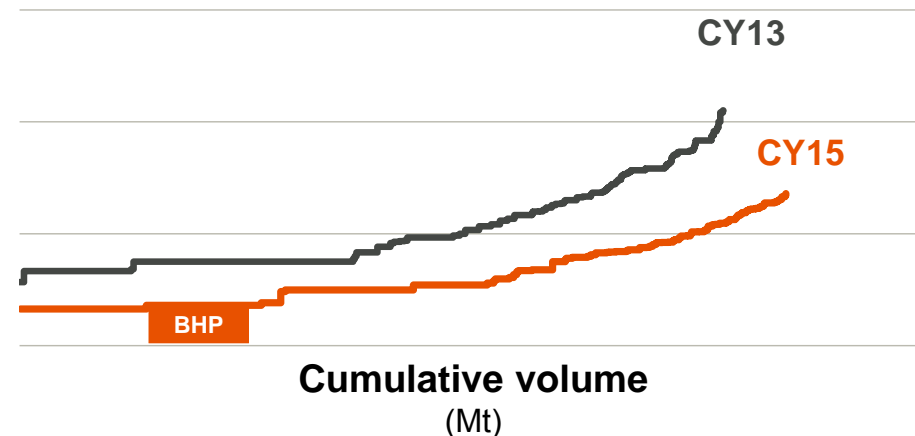
## Growth in low-cost supply expected to outpace demand...

(62% Fe, Mtpa, dry)



## ...leading to a flatter cost curve

(CIF China equivalent basis, US\$/t, nominal)



Source: BHP Billiton internal estimates; Cost curve from Macquarie Research, April 2015.

1. Demand refers to contestable demand. Future supply growth refers to BHP Billiton estimates of incremental supply from the majors only.

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**Adjusting to a Changing Environment**

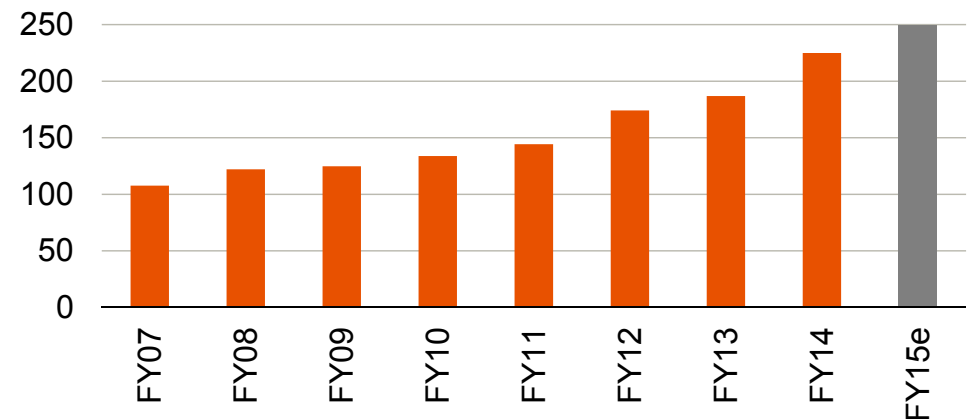
Platforms success: transparent, liquid and efficient market

# Productivity gains will drive future production volume increase

- WAIO production guidance for FY15 is 250Mt vs 225Mt in FY14 through further productivity gains
  - growth in supply chain capacity to 270Mtpa is expected to be achieved without the need for additional fixed plant investment
- Our focus remains on producing at the lowest possible cost
  - unit cash costs<sup>1</sup> decreased by 29% in H1 FY15
  - our unit costs are now below US\$20/t as we continue to improve productivity<sup>2</sup>

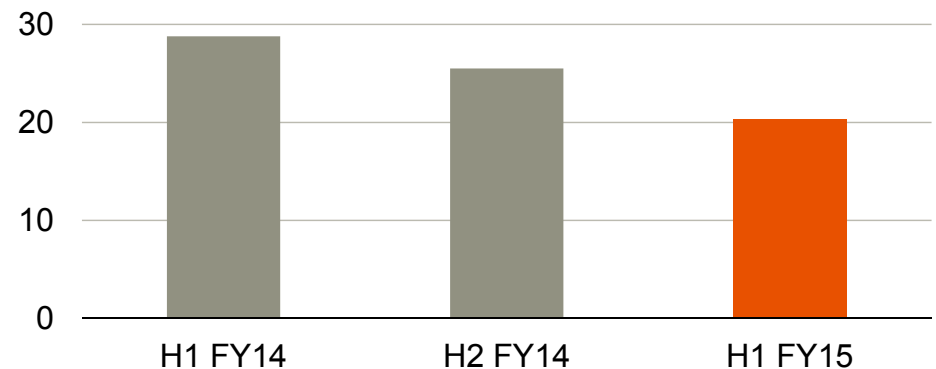
## WAIO production

(million tonnes, wmt, 100% basis)



## WAIO unit cash costs have decreased significantly

(unit cash cost, US\$/t<sup>1</sup>)



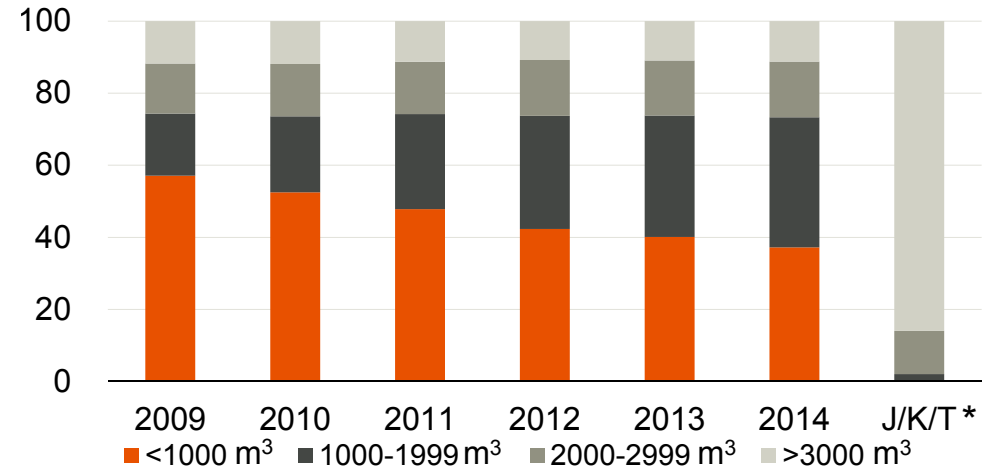
1. Excludes freight and royalties. Based on an exchange rate of AUD/USD 0.91.

2. Excludes freight and royalties

# Chinese mills increasingly value stable, high quality ore

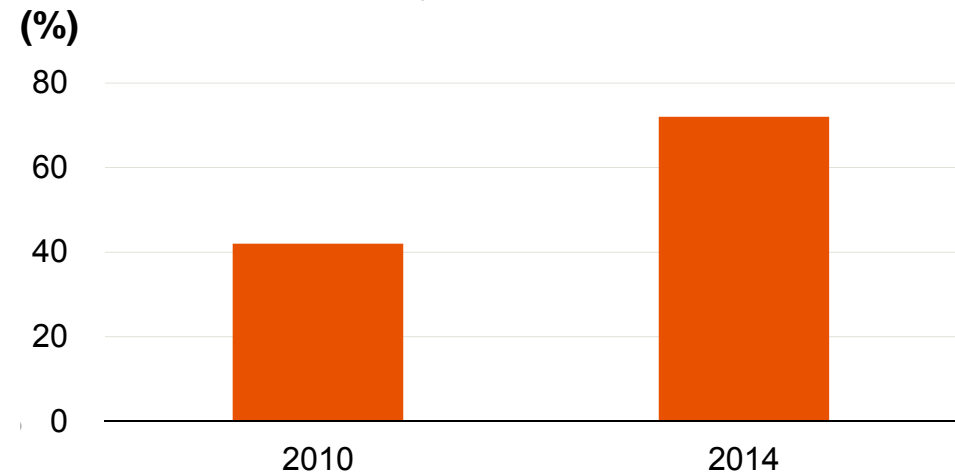
- China is following the global trend towards larger blast furnaces
- This trend is driven by economic factors as well as environmental considerations
- High quality raw materials lower emissions

**Blast capacity by furnace sizes (%)**



\*J/K/T refers to Japan, Korea and Taiwan.

**Sinter De-SOx capacity<sup>1</sup>**



Source: Mysteel; BHP Billiton, External

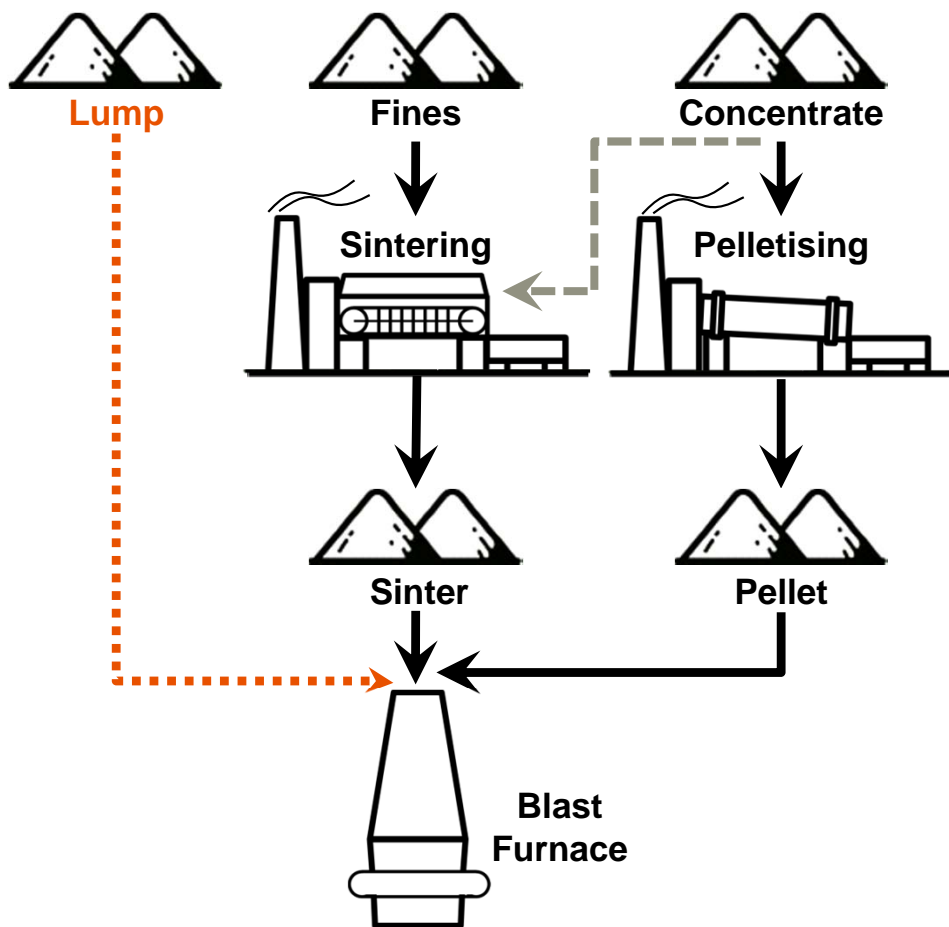
1. Calculated based on data from:

6<sup>th</sup> International congress on the Science and Technology of Ironmaking (2012), Progress and Perspective of Iron Making in China, Sha Yongzhi *et al*

5<sup>th</sup> Chinese sintering flue gas DeSOx and DeNOx technology conference (2015), Research and Application on synchronized technologies of multiple pollutant removal in sintering flue gas, Xining Lu

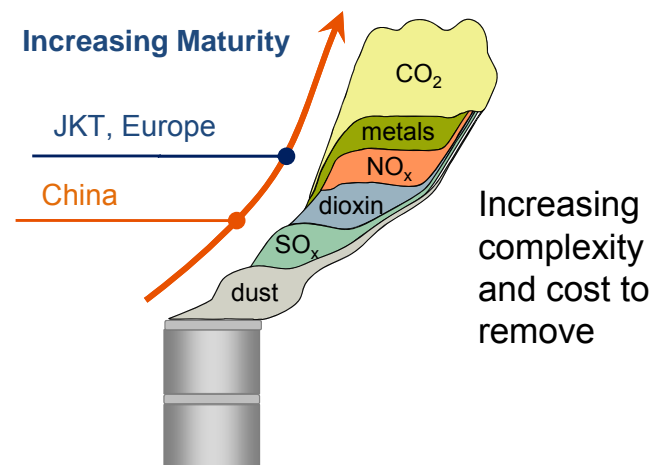
# Newman Blend Lump is the direct charge choice of the future

## Lump is the only true direct charge



- Newman Blend Lump (NBL) generates very low SO<sub>x</sub> emissions<sup>1)</sup>
  - a benchmark for chemical quality and in-furnace performance
  - low in chloride, alkalis and trace impurities
  - an increasingly attractive product as gas cleaning costs increase

## Environmental maturity curve:



Note: 1. Lump does not go through high temperature agglomeration processes that oxidise S to SO<sub>x</sub> gases. Sulphur content is also very low (NBLL YEJ14 = 0.02%S). Secondary fines contributes to sinter plant emissions.

Source: BHP Billiton

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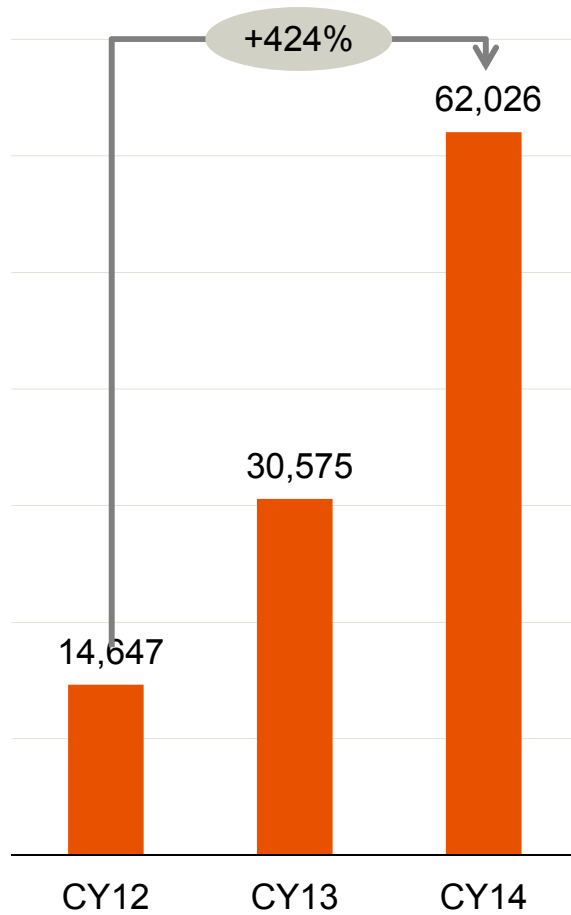
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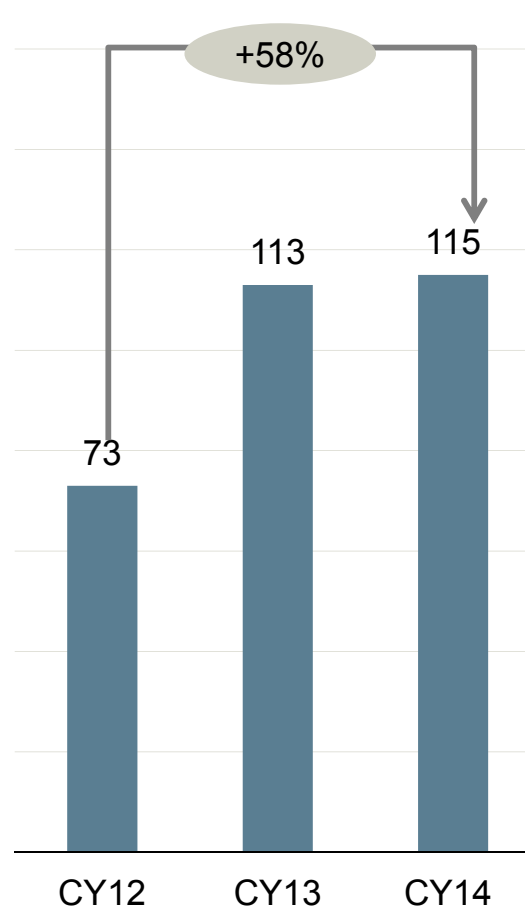
**Platforms success: transparent, liquid and efficient market**

# Platform sales doubled from CY13 to CY14

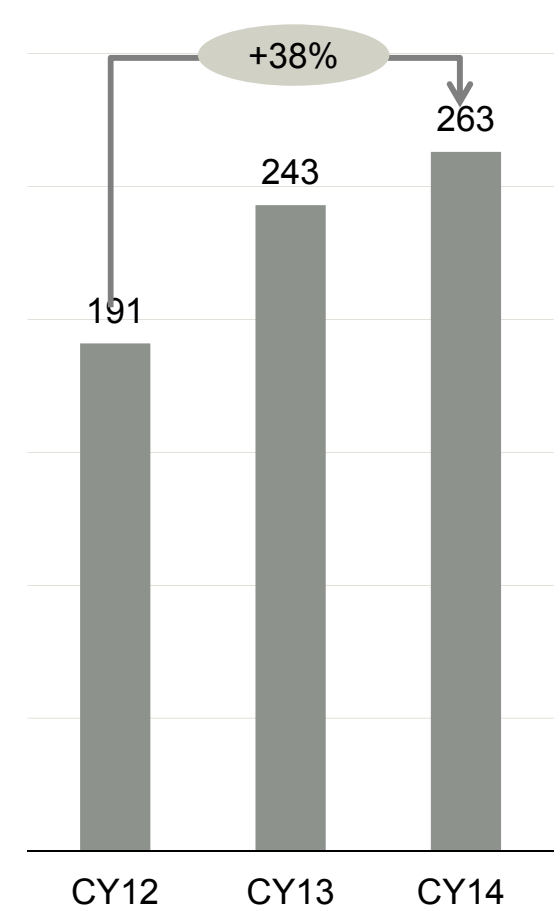
Spot transactions via globalORE and COREX (kt)



Members on globalORE (#)



Members on COREX (#)

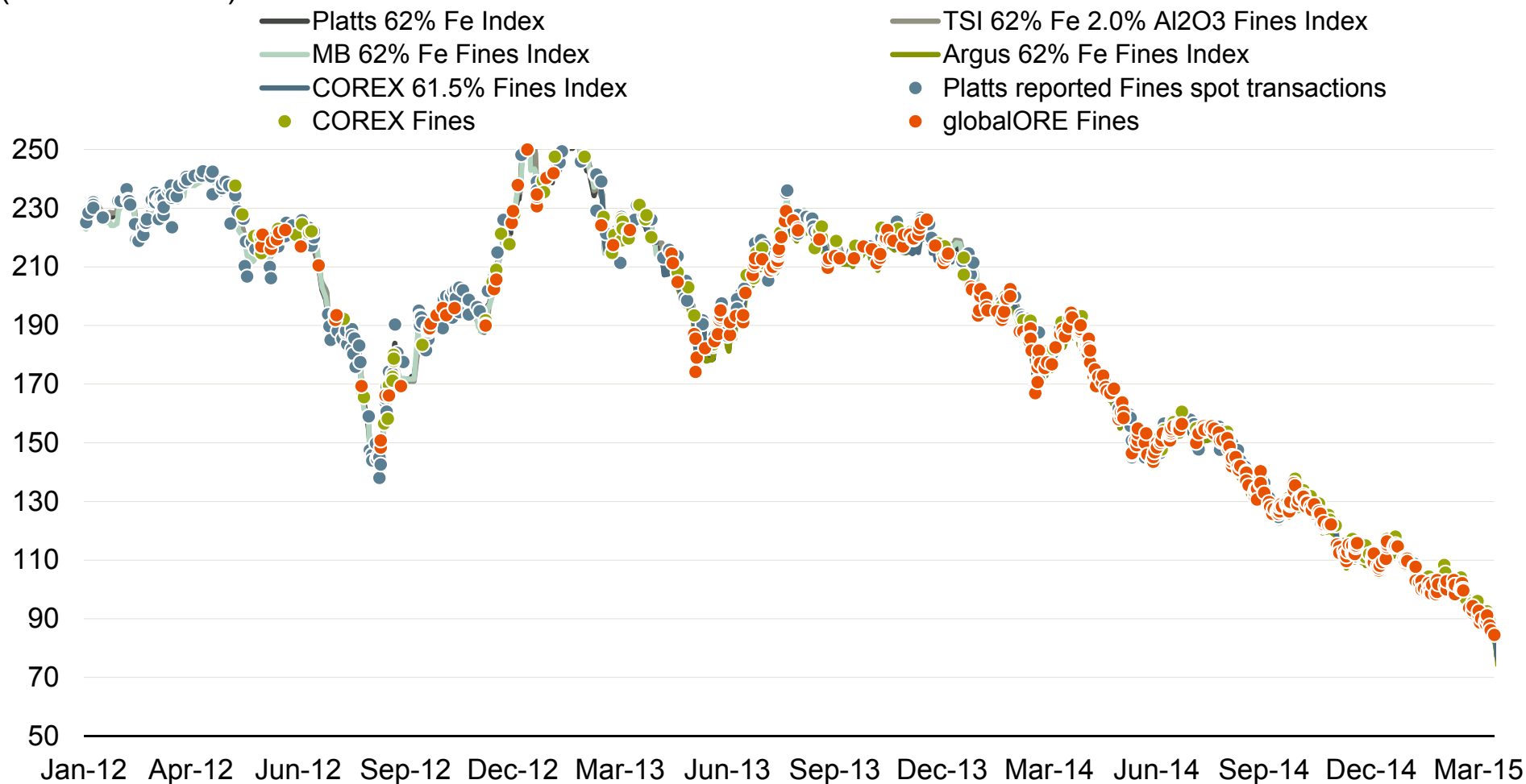


Source: globalORE; CBMX.



# Spot transactions and platform sales are informing price indices

## Reported iron ore 62% Fe fines spot transactions\* vs. Indexes (US cents/dmtu)



Note: include spot transactions with Fe grade range from 60% to 63.5%. CBMX launched since May.08, 2012, and globalORE launched since May.30, 2012.  
Source: Platts; globalORE; CBMX; TSI; MB; CISA.

- China steel demand facing short term headwinds, mainly due to weak property market
- Long-term upside remains for steel industry, evidenced by low steel stocks per capita
- China's net exports reached record highs in 2014, as mills focus on external markets to mitigate domestic weakness
- Low-cost seaborne supply, mainly from Australia has displaced higher cost production, Chinese and seaborne alike
- The iron ore cost curve will continue to flatten, the degree to which is dependent on the industry's ability to debottleneck and further reduce costs
- BHP Billiton's iron ore continues to deliver on volume commitments through productivity gains, driving greater value for shareholders
- Rising transaction volume on trading platforms highlight their success at driving market transparency, liquidity and efficiency



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resourcing the future