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# Megatrends - iron ore, metallurgical coal and scrap

Prepared for:

**OECD/South Africa Workshop on Steelmaking Raw Materials**

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Prepared by:

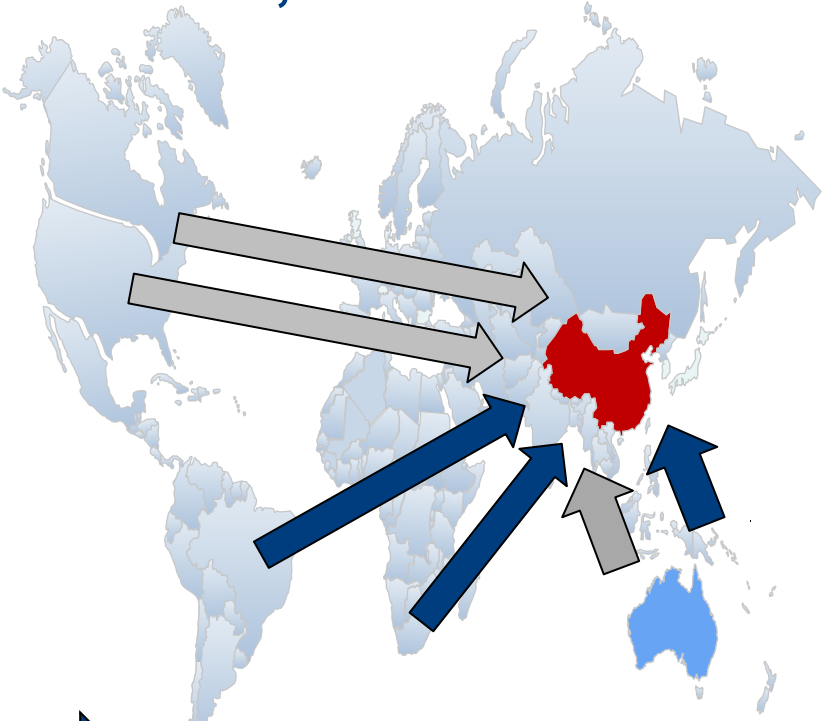
**Laura Brooks, Senior Consultant**



# Agenda

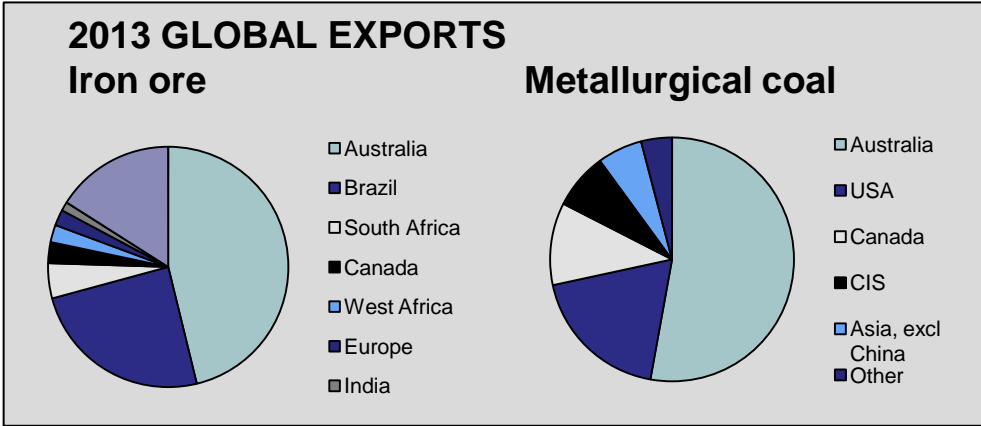
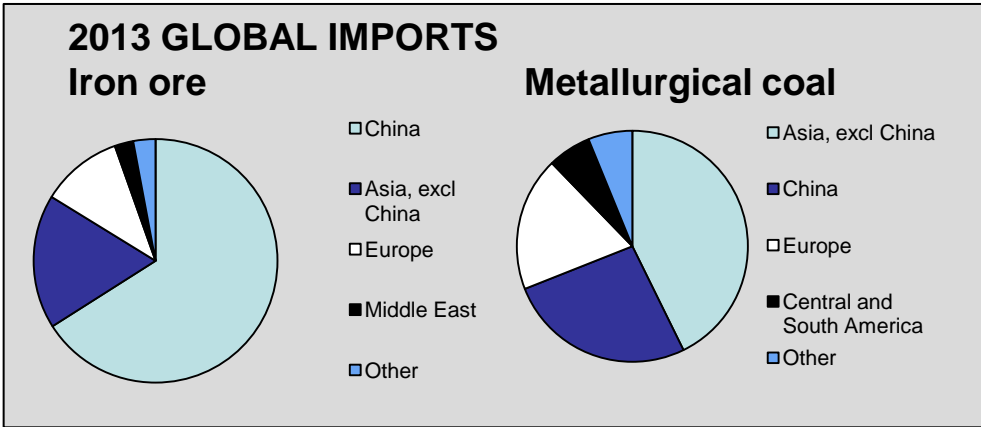
- **Summary of trade flows**
- Recent trends for the bulks – why have prices collapsed?
- Forecast – 3 megatrends to watch for
- What are our expectations for the scrap market?
- Conclusions

# Summary: trade flows are dominated by China and Asia on demand, whilst Australia takes centre stage on supply



**Blue Arrow** Iron ore supply  
**Grey Arrow** Metallurgical coal supply

**2013 value**  
Iron ore: \$254 bn  
Metallurgical coal: \$166 bn  
Gold: \$158 bn



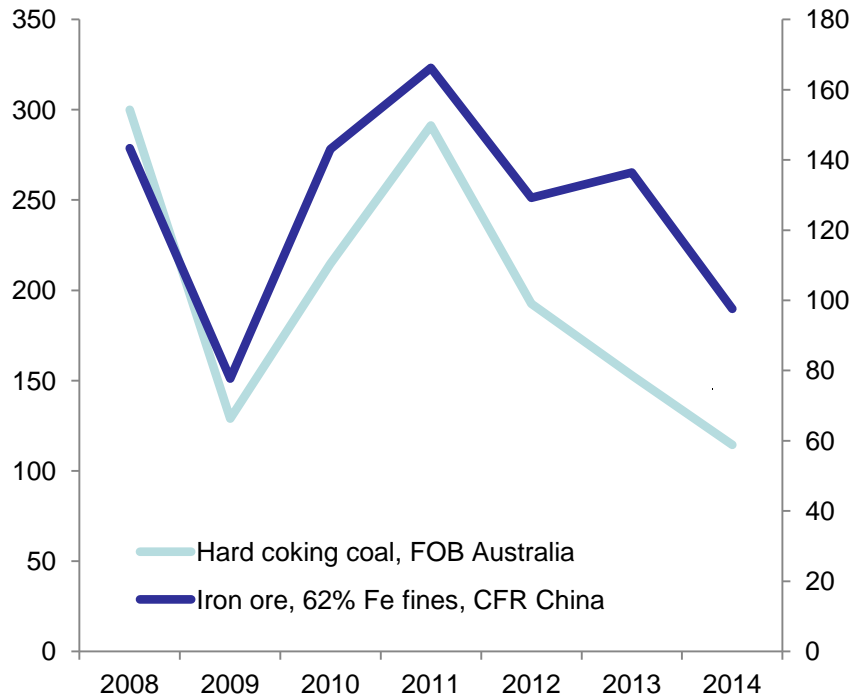


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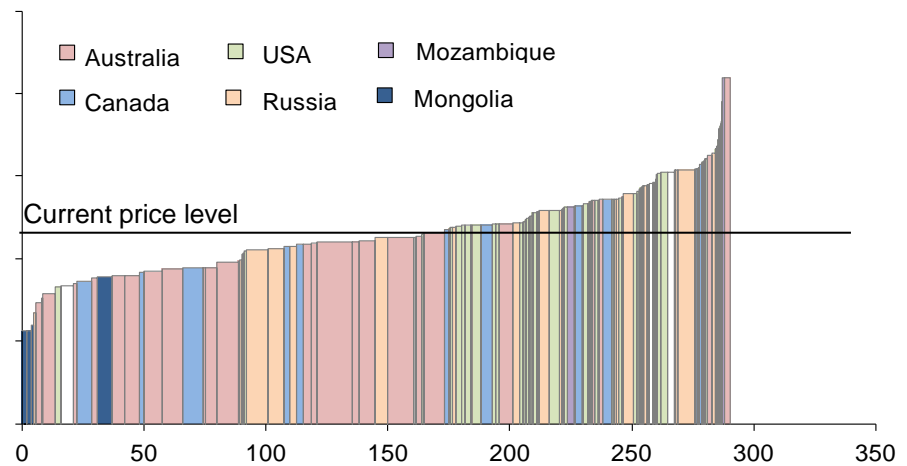
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# Recent trends: prices for the bulks have fallen dramatically this year and industry costs are having to adapt

Metallurgical coal price (LHS) and iron ore price (RHS), spot, nominal, \$/t



Business cost curve, metallurgical coal  
X-axis: Cumulative seaborne HCC production, Mt  
Y-axis: Business Costs, \$/t, FOB



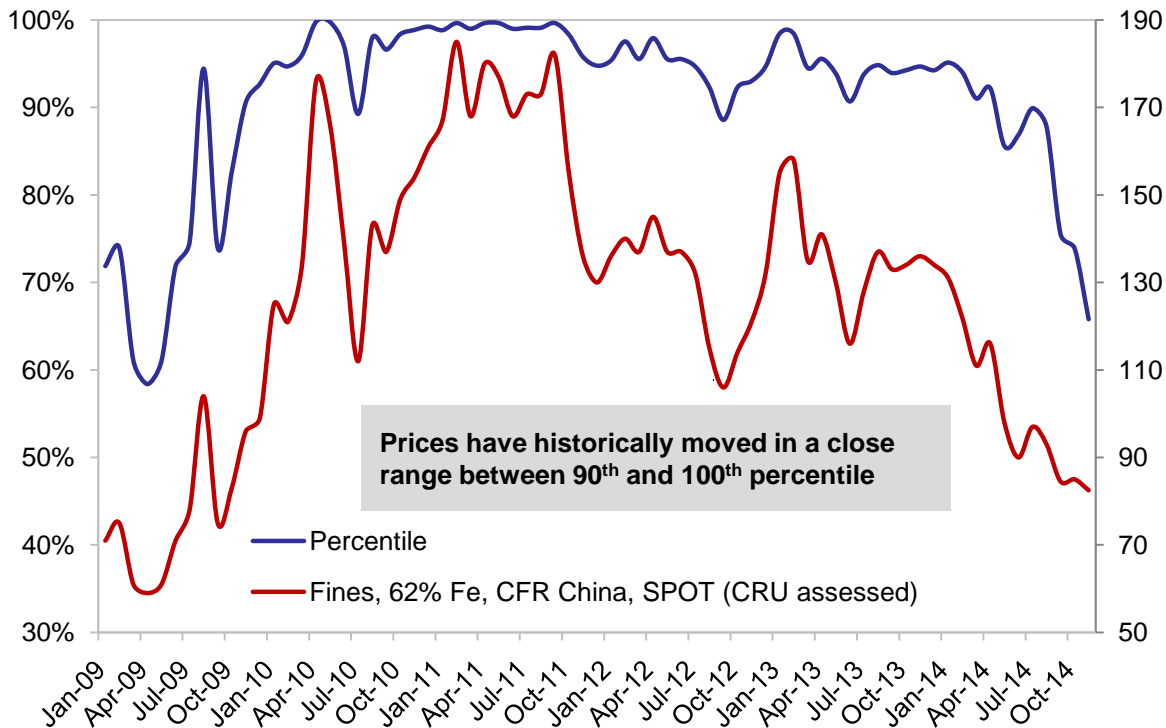
**These industries are suffering**

Some relief:

- Currency movements
- Deferred of non-essential costs

# We assess that iron ore is one step behind metallurgical coal, meaning that price support is forecast further out

Iron ore price and percentile on cost curve  
LHS: Percentile on the Business Cost curve  
RHS: Iron ore global price, \$/t



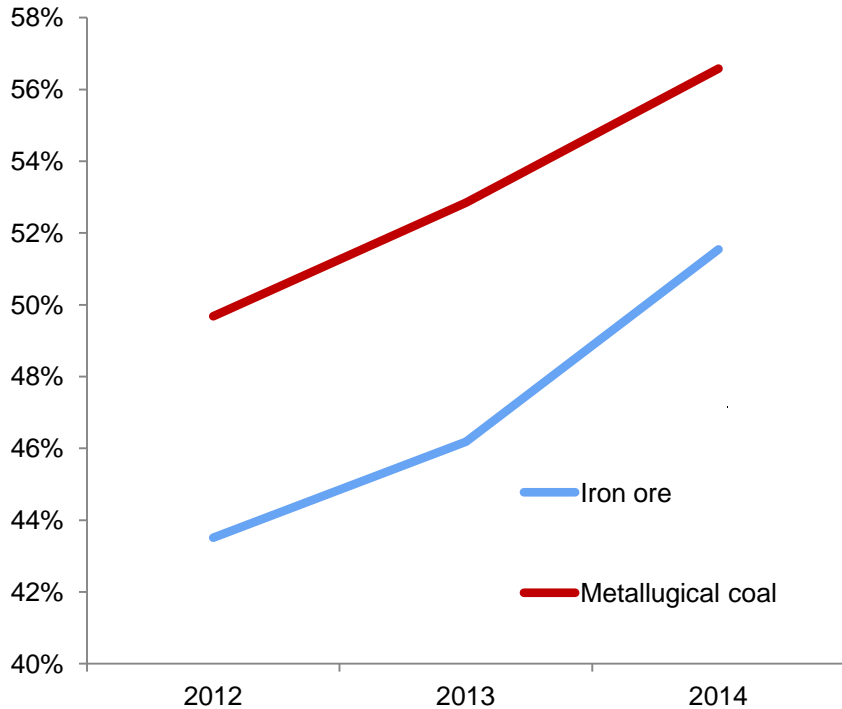
**However, iron ore has proved to be a more responsive market.**

**Displacement of high-cost iron ore production seen in 3 groups:**

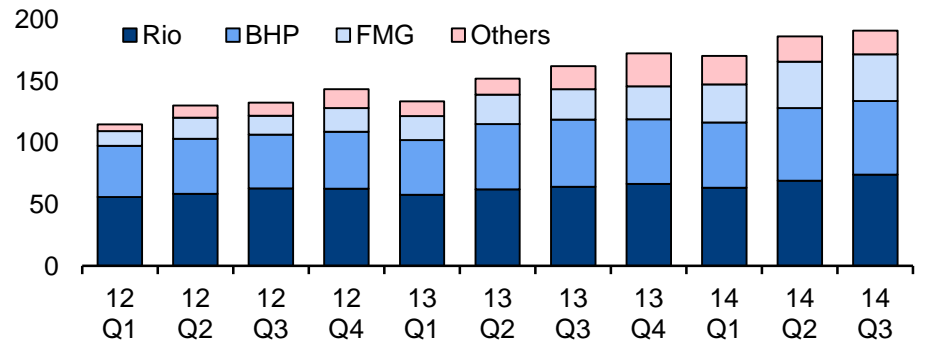
- Chinese domestic production
- Non-traditional exporters
- Junior miners

# A surge of low-cost supply from Australia has been the principal driver dragging prices lower...

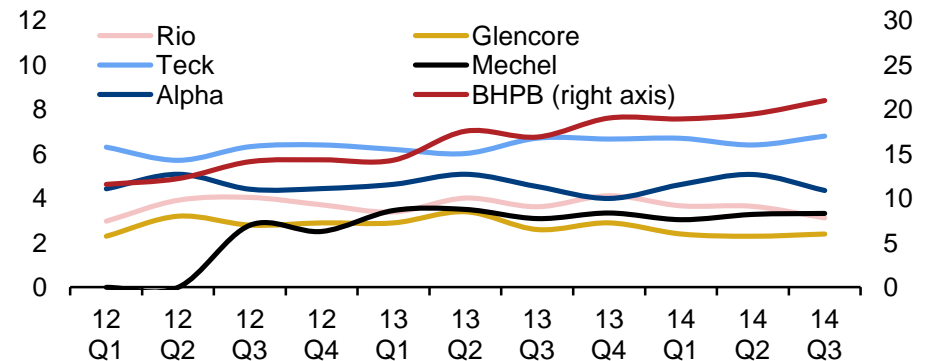
Australia's share of global exports, %



Australian iron ore shipments by selected company, Mt

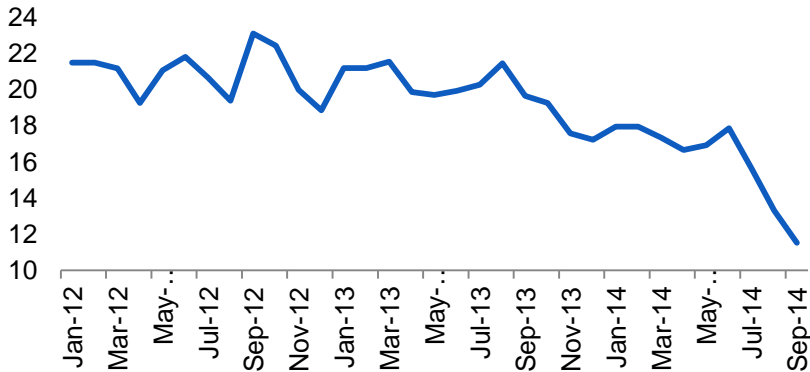


Met. coal production by selected major company, Mt



# ...combined with a poor data releases from the Chinese economy in H2, which hit sentiment across the value chain

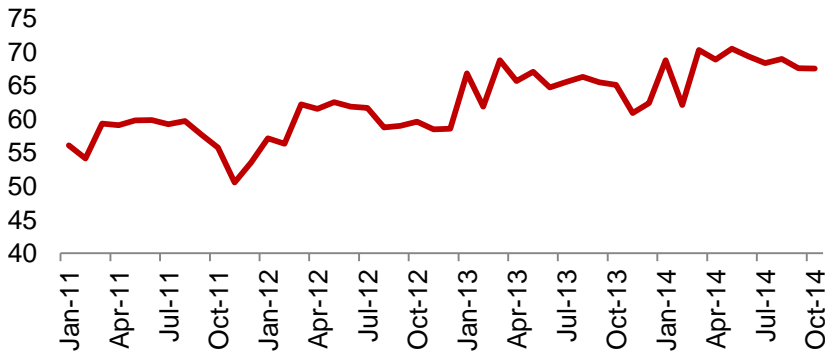
Chinese FAI, year-on-year, nominal, %



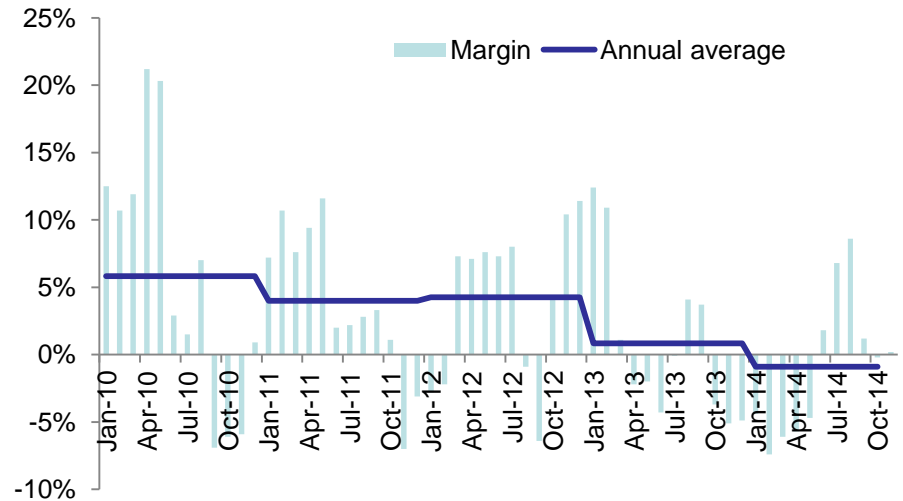
**Despite weakness in raw materials prices, Chinese steel mill margins are poor as steel prices also slump**



Monthly Chinese crude steel production



Average Chinese steel mill EBITDA margin <sup>(1)</sup>, %





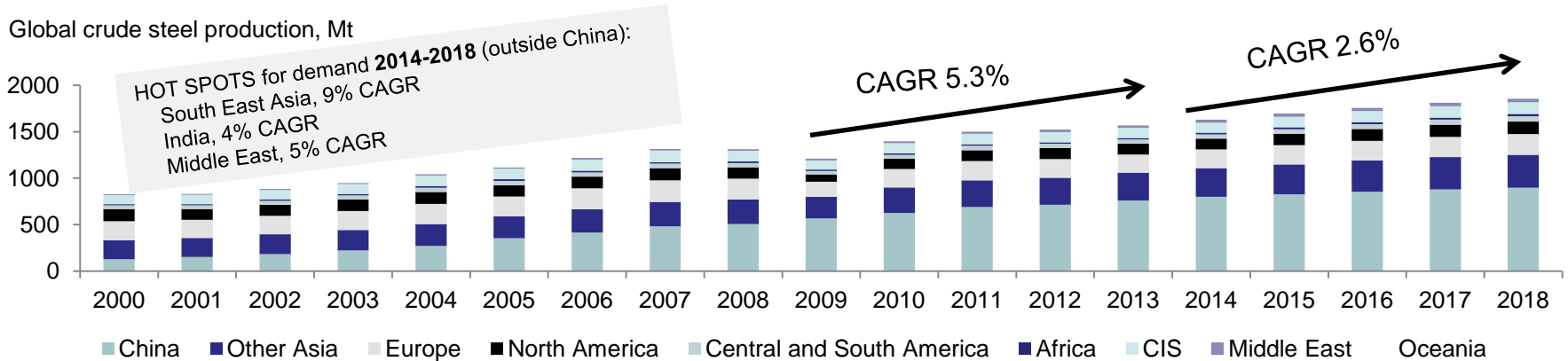


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# 1. Rate of demand growth to ease for global and China

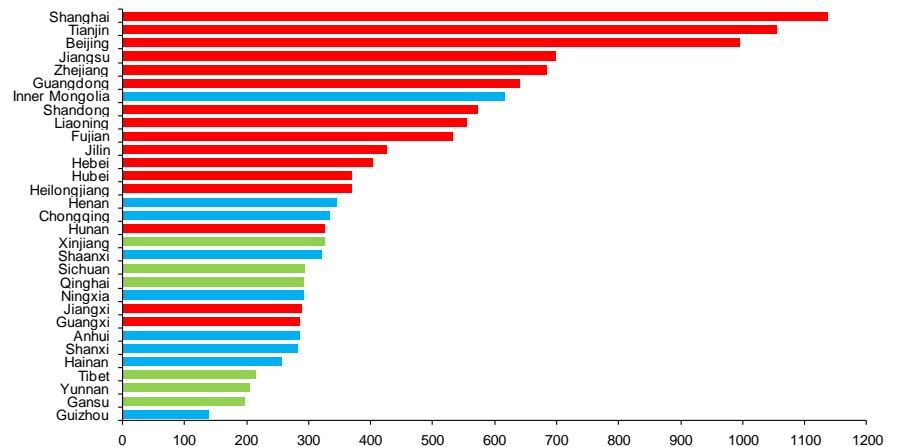
Global crude steel production, Mt



## CHINA

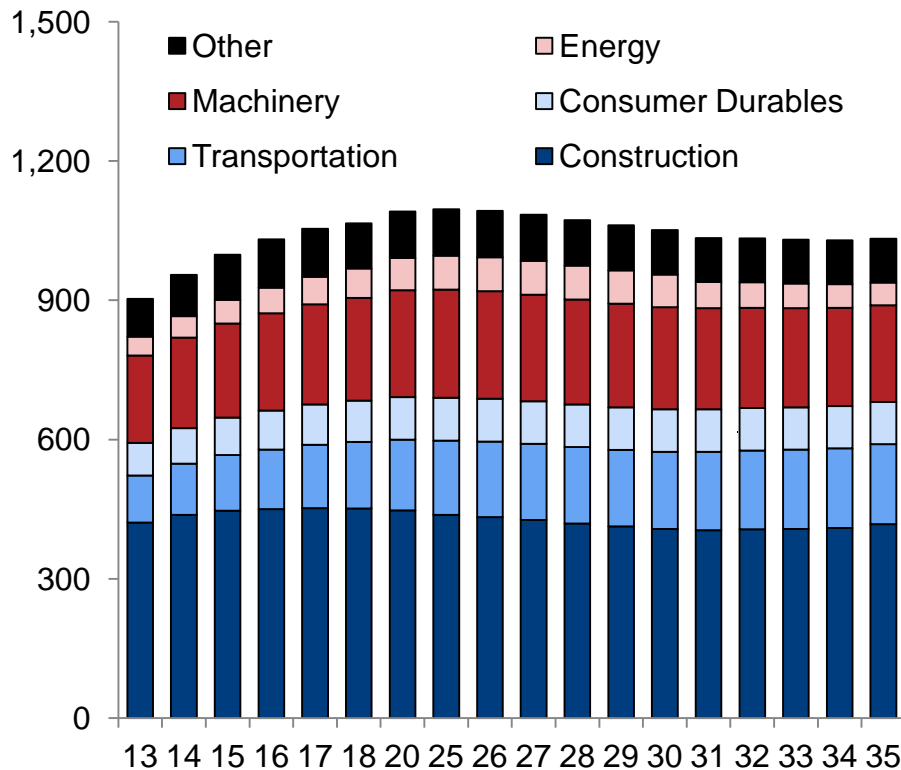
- Chinese growth to slow but not peak in next 5 years
- Development spreading westward will support growth
- Different sectors will drive continued growth
- BOF technology to dominate – scrap has no major impact in this time frame

Chinese per capita crude steel equivalent consumption, 2010 (kg/head)

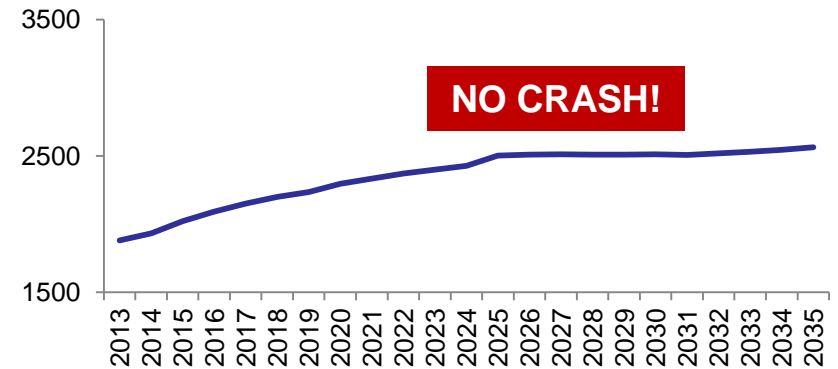


# No crash in demand in CRU's long-run forecast

China finished steel consumption by end use sector, Mt



Global iron ore demand, Mt



**Global demand levels supported in the long-run by development of large population economies, e.g. Indonesia**

## 2. More supply cuts are to come as prices hold at low levels and certain miners are unable to compete

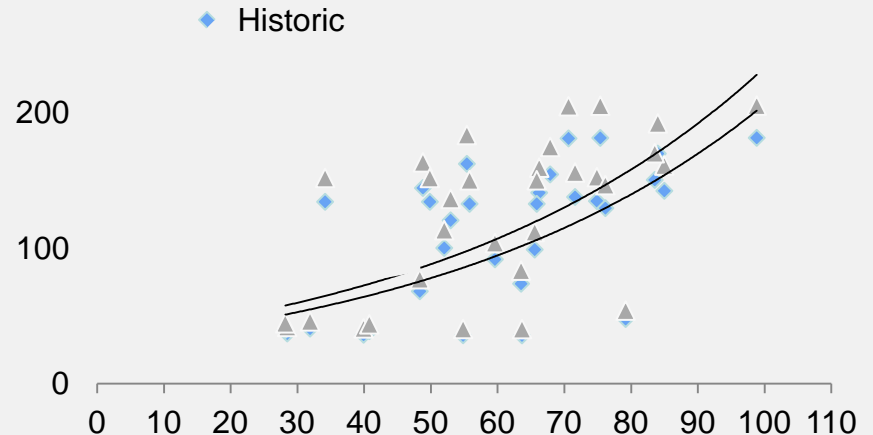
- More announcements of supply cuts to existing production, especially for iron ore
- Supply cuts in metallurgical coal to be realised next year  
*Exports set to drop by 2% y/y as a proportion of US and Canadian volumes drop out*
- Another set of projects likely to be cancelled
- Further M&A/JV activity is likely
- Stickiness of production in both markets provides downside risk to price forecasts



### Stickiness of Chinese iron ore production has increased towards year-end

x axis: Quarterly Chinese domestic ore production, saleable basis, Mt

y axis: Iron ore price, 62% Fe fines, CFR China, 2013 real 300

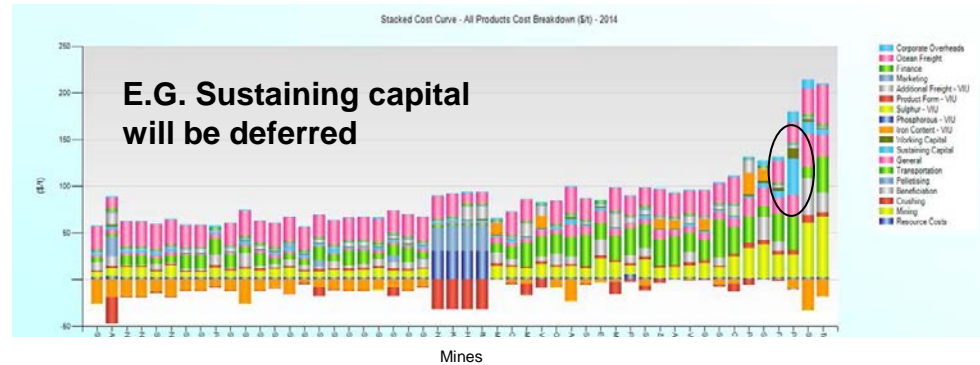
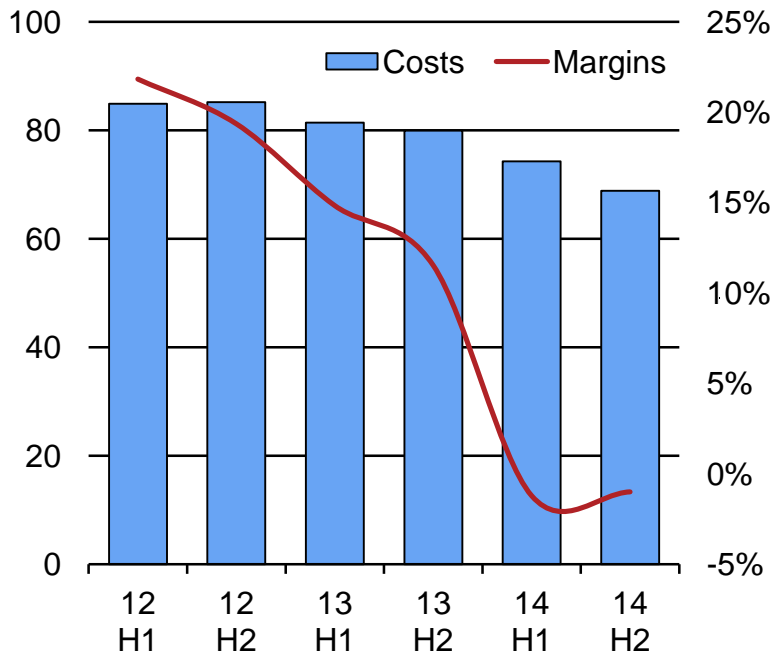


# In efforts to stay in the market, there will be an increased focus on cost reduction and productivity amongst suppliers

Metallurgical coal cost cutting example

LHS: USA weighted average costs<sup>(1)(2)</sup>, \$/t

RHS: USA weighted average met. coal<sup>(1)</sup> profitability, EBITDA, %

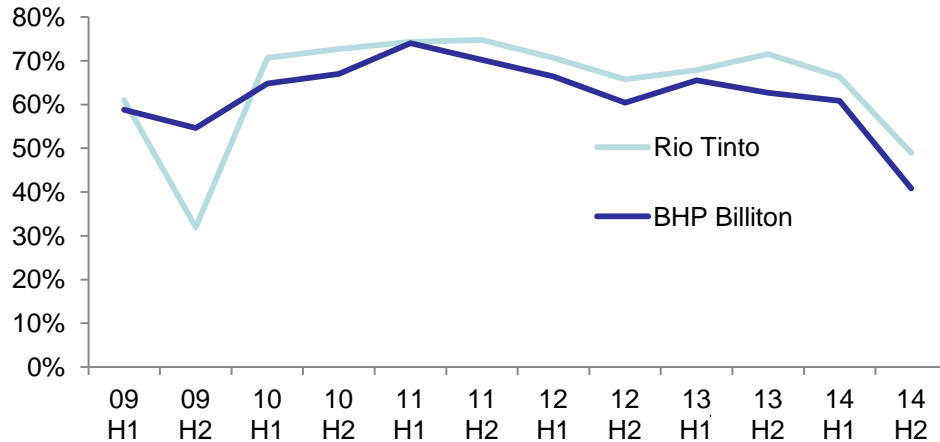


## Why is this important?

These actions will lower the cost curve and keep more material in the market – both imply lower price levels to hold

## PLEASE NOTE: the majors are still in a good position (although margins down on last year)...

EBITDA margins of selected companies' iron ore divisions <sup>(1)</sup>, %



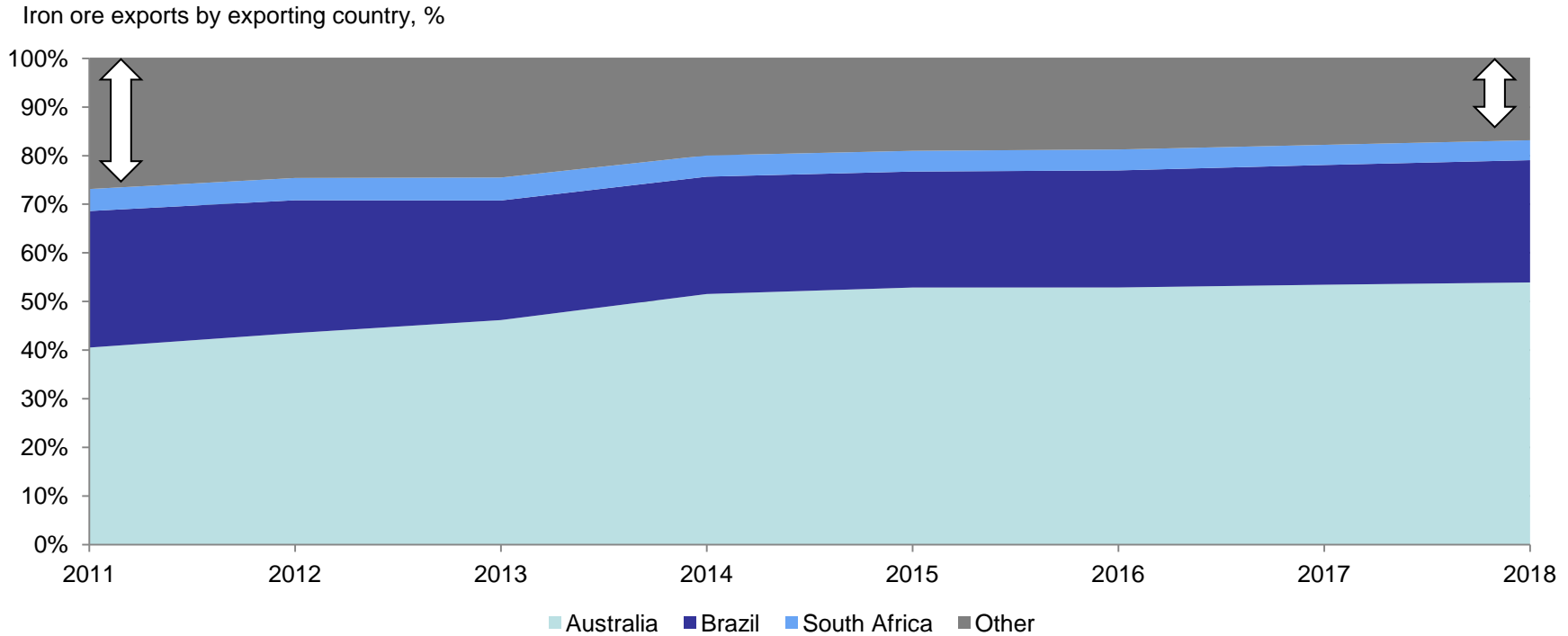
← Majors EBITDA margins remain between 40-50%...still what many businesses dream of, despite a >40% drop in the iron ore price y/y

...but, they too, will look to lower costs and one way to do this is to push volume (much of this has already happened in coal)

### BHBP quote (iron ore)

“We are targeting unit cast costs of \$20/t (excludes freight and royalties) in the medium-term”

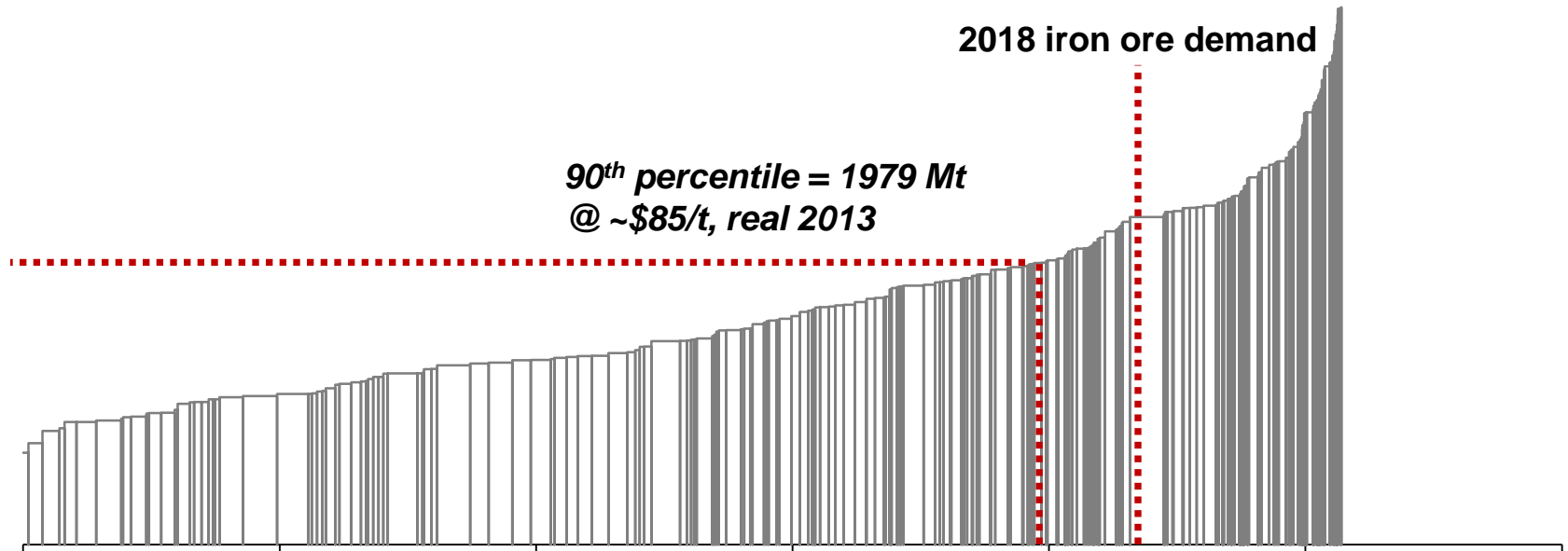
## Therefore, for ore, with further big additions from the majors looming, the supply-side is set to become more consolidated



**No equivalent stark change for coal**

### 3. Depressed price levels to hold for both bulks. However, some mild uplift is forecast as markets return to equilibrium

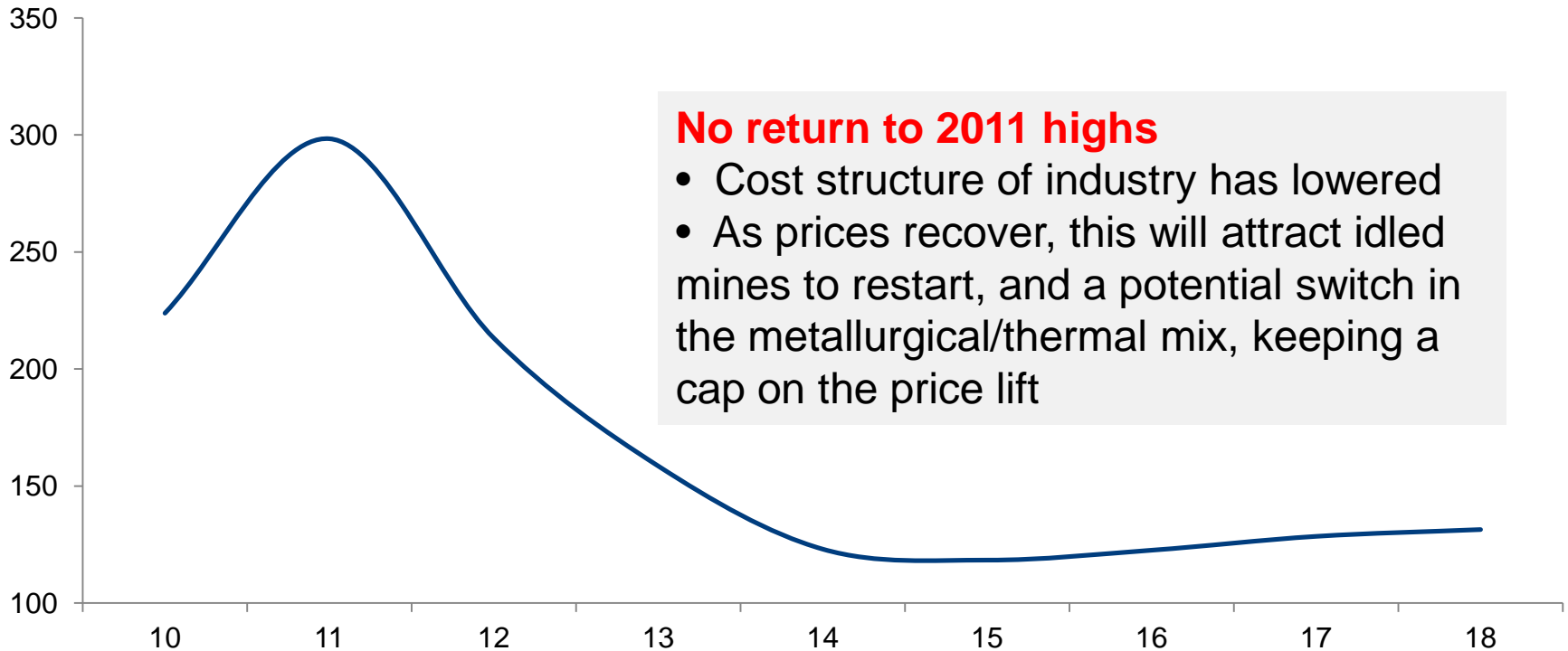
x axis: Cumulative iron ore production, Mt  
y axis: Iron ore Business Costs in 2018, \$/t real 2013





## This is set to happen sooner for metallurgical coal than iron ore

Hard coking coal contract prices, real 2013\$, \$/t, FOB Australia



### No return to 2011 highs

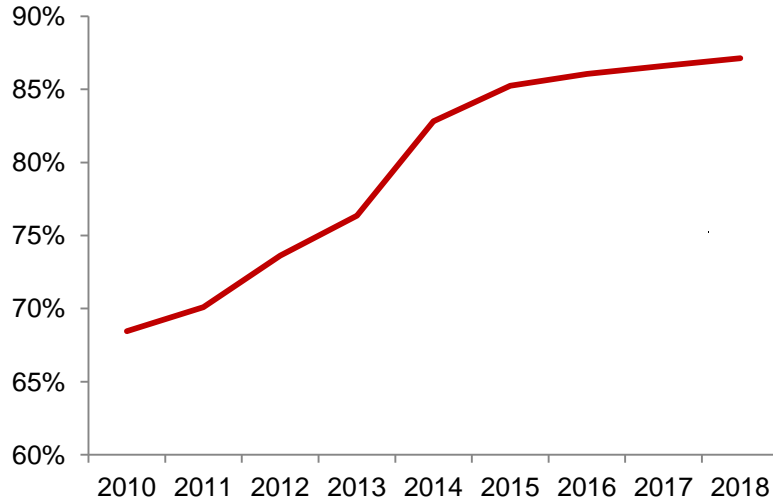
- Cost structure of industry has lowered
- As prices recover, this will attract idled mines to restart, and a potential switch in the metallurgical/thermal mix, keeping a cap on the price lift

# A critical difference between the bulks = the role of Chinese domestic supply

## For iron ore...

- High-cost Chinese supply has been, and will be, squeezed out (NOTE – more resilience recently)
- China's import reliance will rise

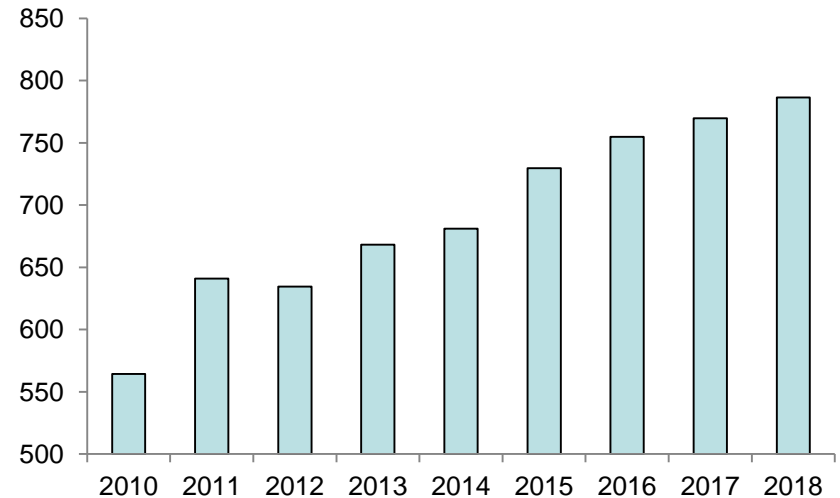
Chinese import penetration, iron ore, %



## For metallurgical coal...

- Chinese supply is not a key supplier in the 4<sup>th</sup> quartile
- Greater protection from the government

Chinese domestic metallurgical coal production, Mt



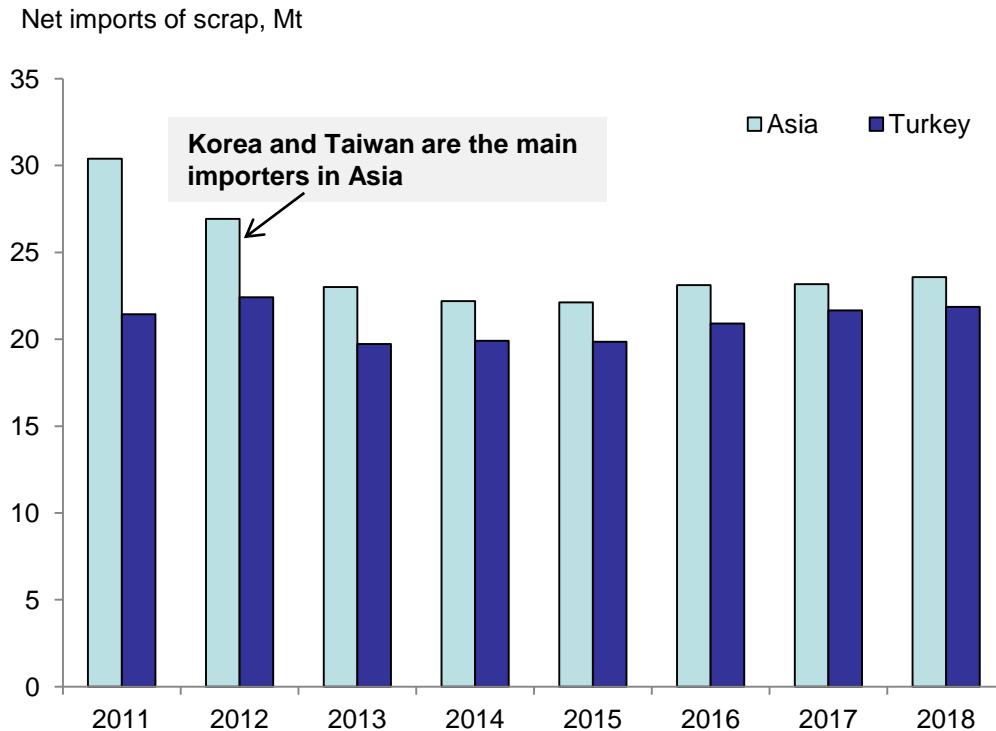
## Iron ore seaborne trade is more reliant on China



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## Scrap megatrend 1: Volumes demanded from key importing regions are not set to return to 2011/2012 levels



### Trade: demand-side weakness next year and through to 2018

- Deterioration in finished steel demand from these regions
- China's increased presence in finished steel markets

## Scrap megatrend 2: Any marked impact of scrap in China is not set to kick in until the next decade

Chinese BOF share of steelmaking, %



**By 2025, the vast majority of steelmaking will still be via the BOF route, despite the expected increase in the scrap pool**



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# Conclusions

→ what megatrends in the next 5 years?

1. Steel demand to continue to grow but at a slower rate
2. More supply cuts for the bulks – those in coal to come sooner
3. Increased focused amongst producers on cost control
4. Today's lower price range is the new norm
5. Import demand in scrap markets to remain weaker than recent history



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**Thank you for your attention**





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