

# Pricing Structures under new Iron Ore Market Dynamics

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## High-level resource sector economics advisory services

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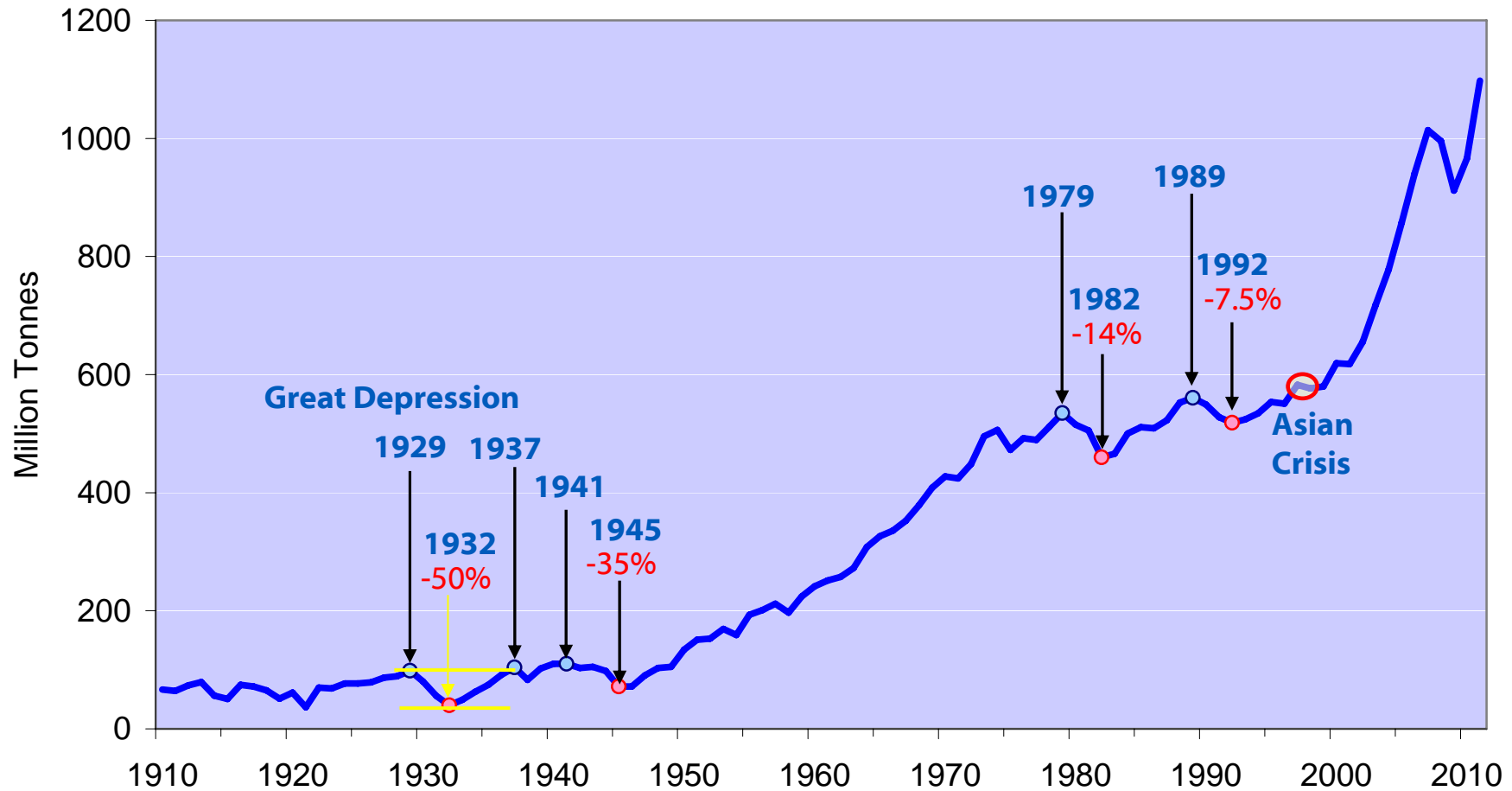
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# Agenda

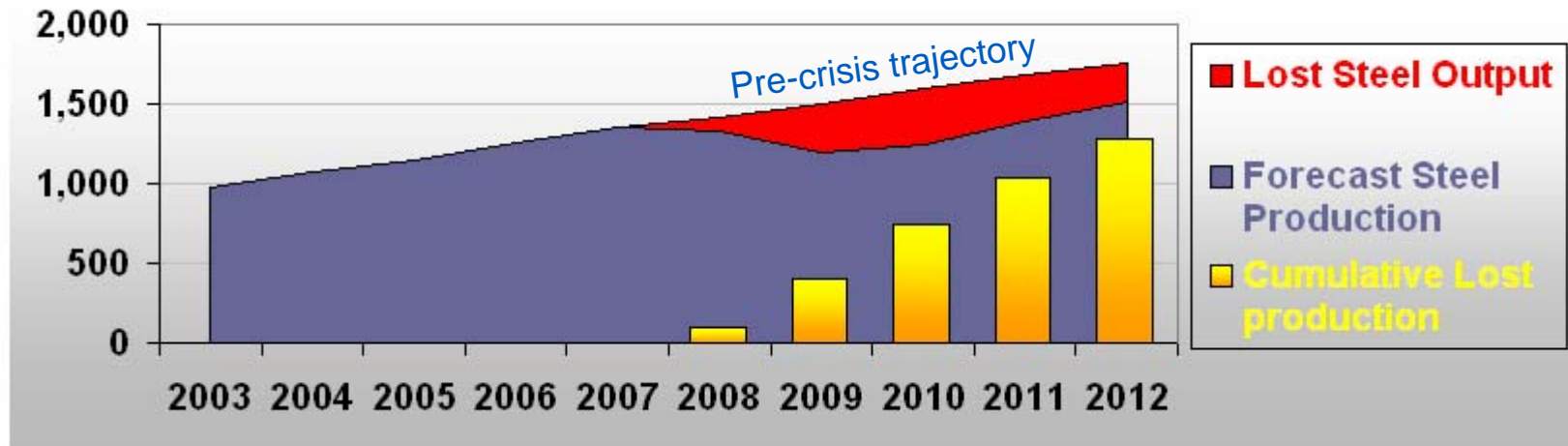
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- ❖ Market and price outlook for iron ore as global economies recover
- ❖ Changes are inevitable, but what will be the drivers?
- ❖ Contract vs. spot sales: where is the market heading?

# Riding the iron horse – world pig iron production

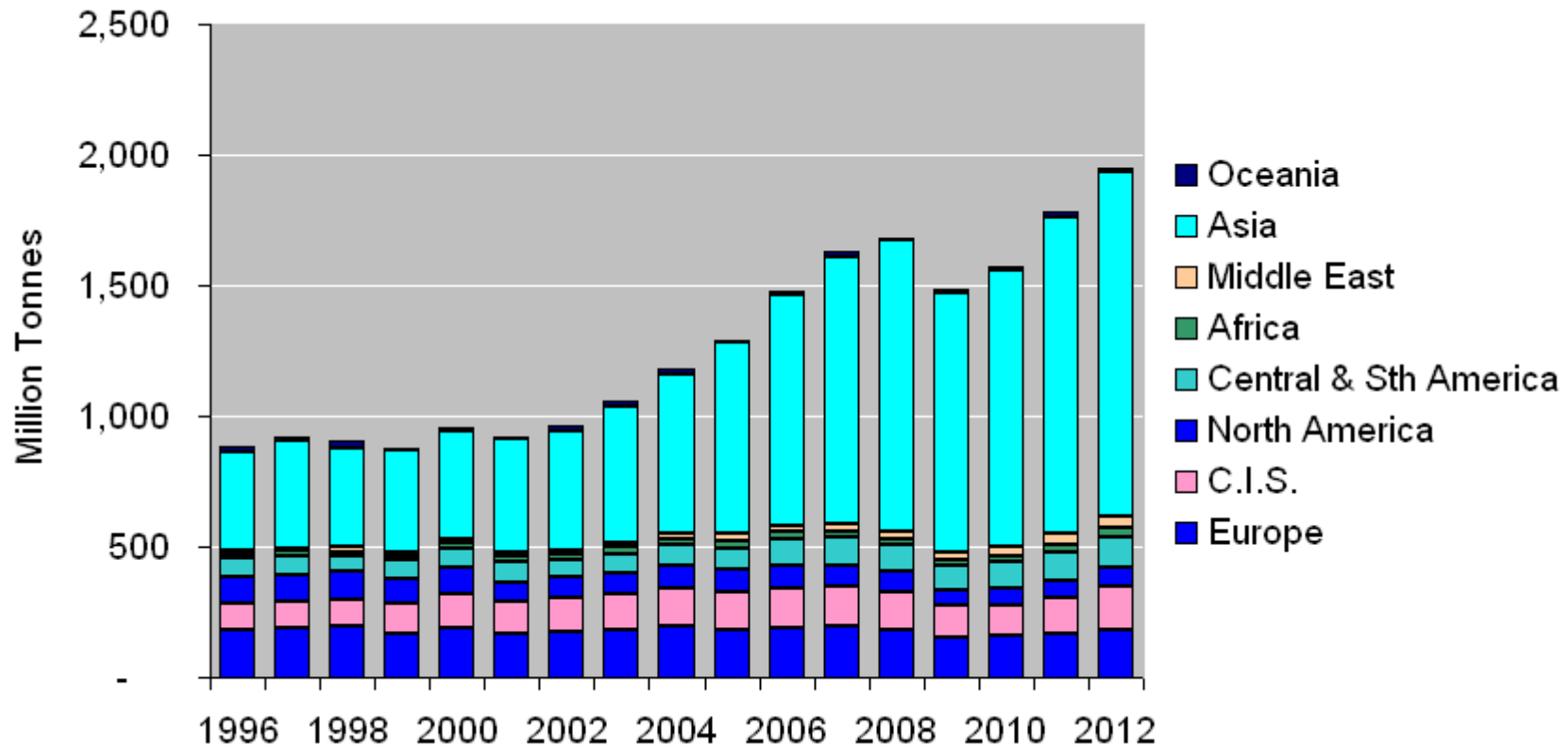


# Steel production



- ❖ World steel production down at least 10% in 2009
- ❖ By 2012 around 1.3 billion tonnes lost
- ❖ Equivalent to one year of production at 2006/07 levels

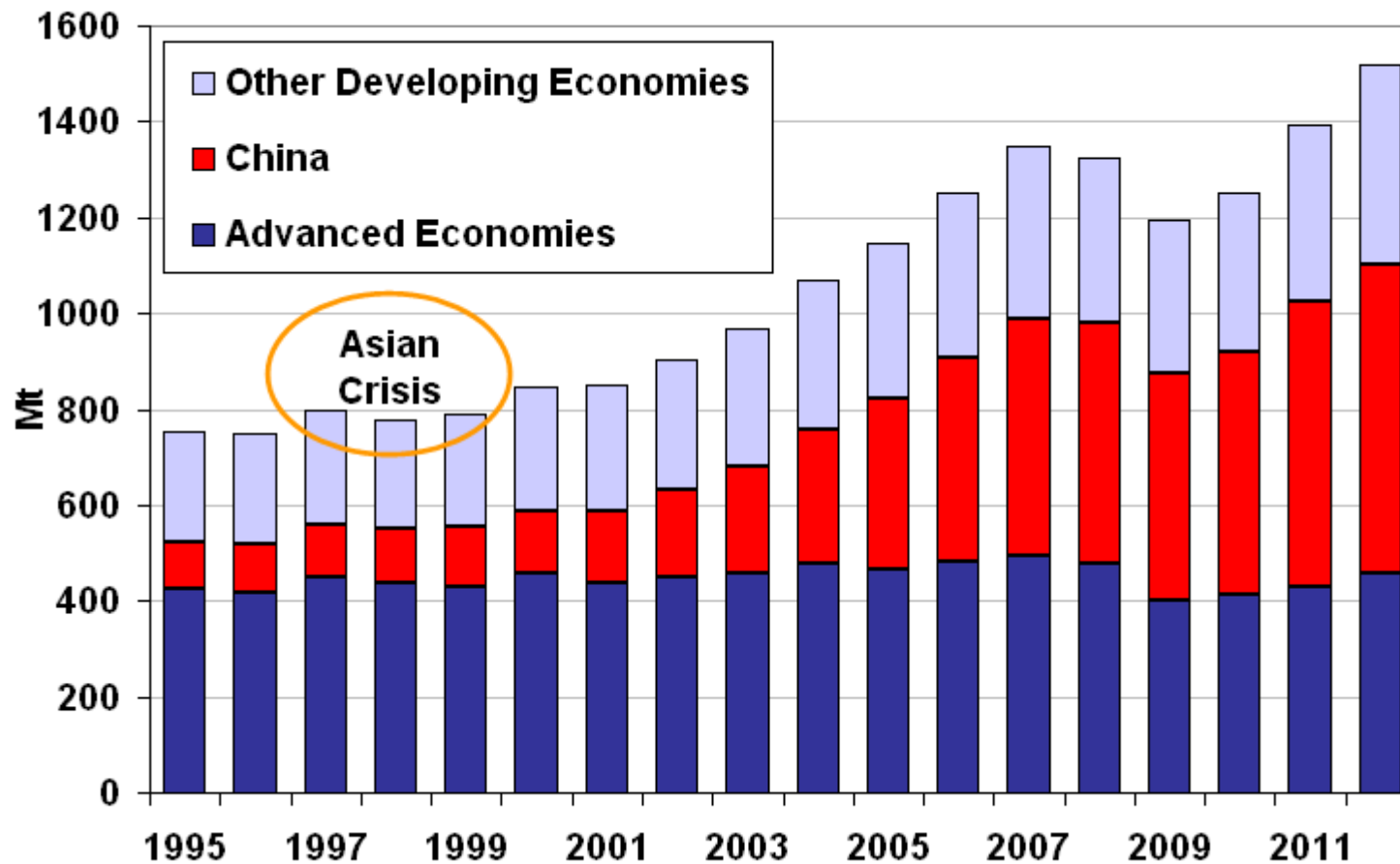
# World iron ore consumption



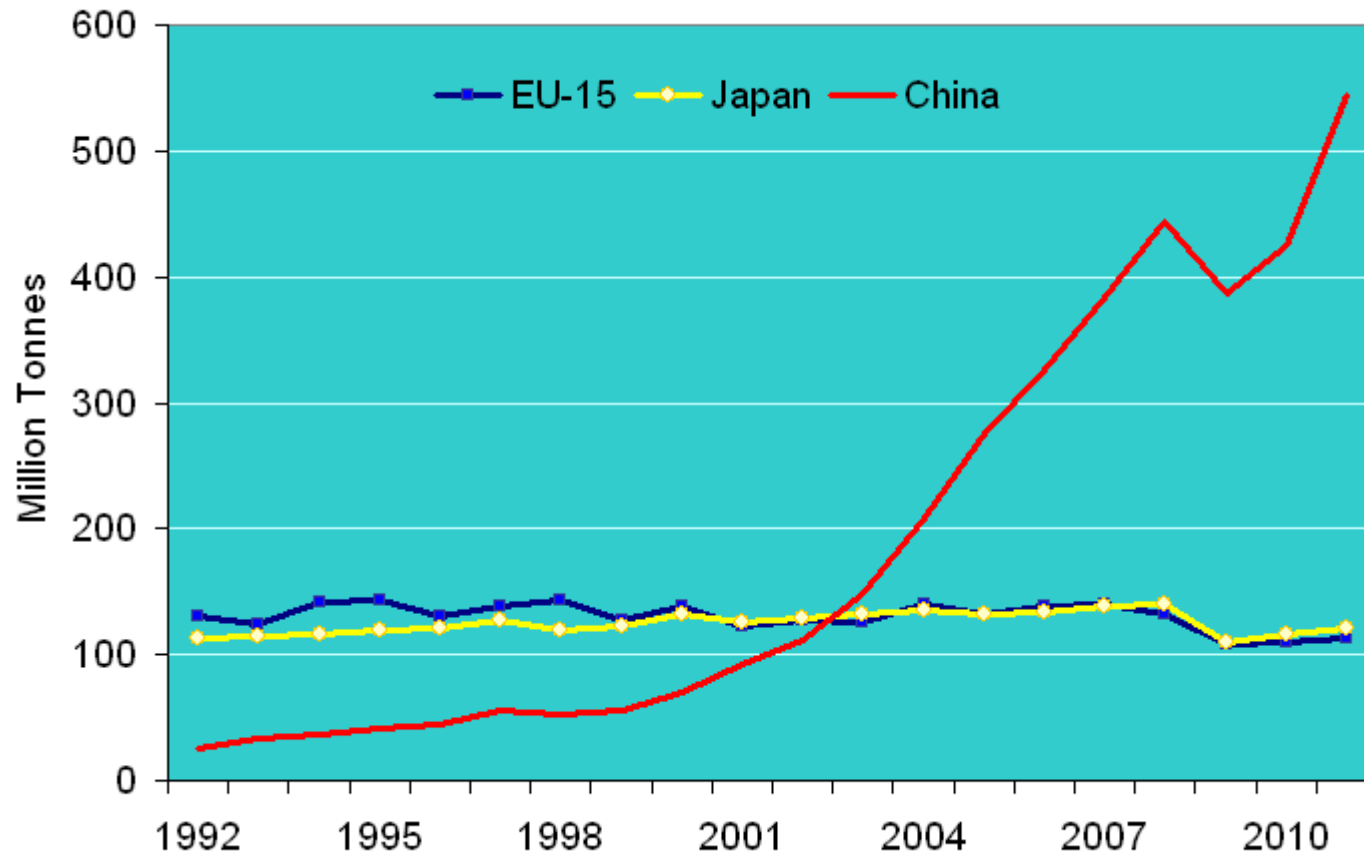
Asia has been the epicentre of recent growth – and will remain so

# China – the giant shouldering the burden

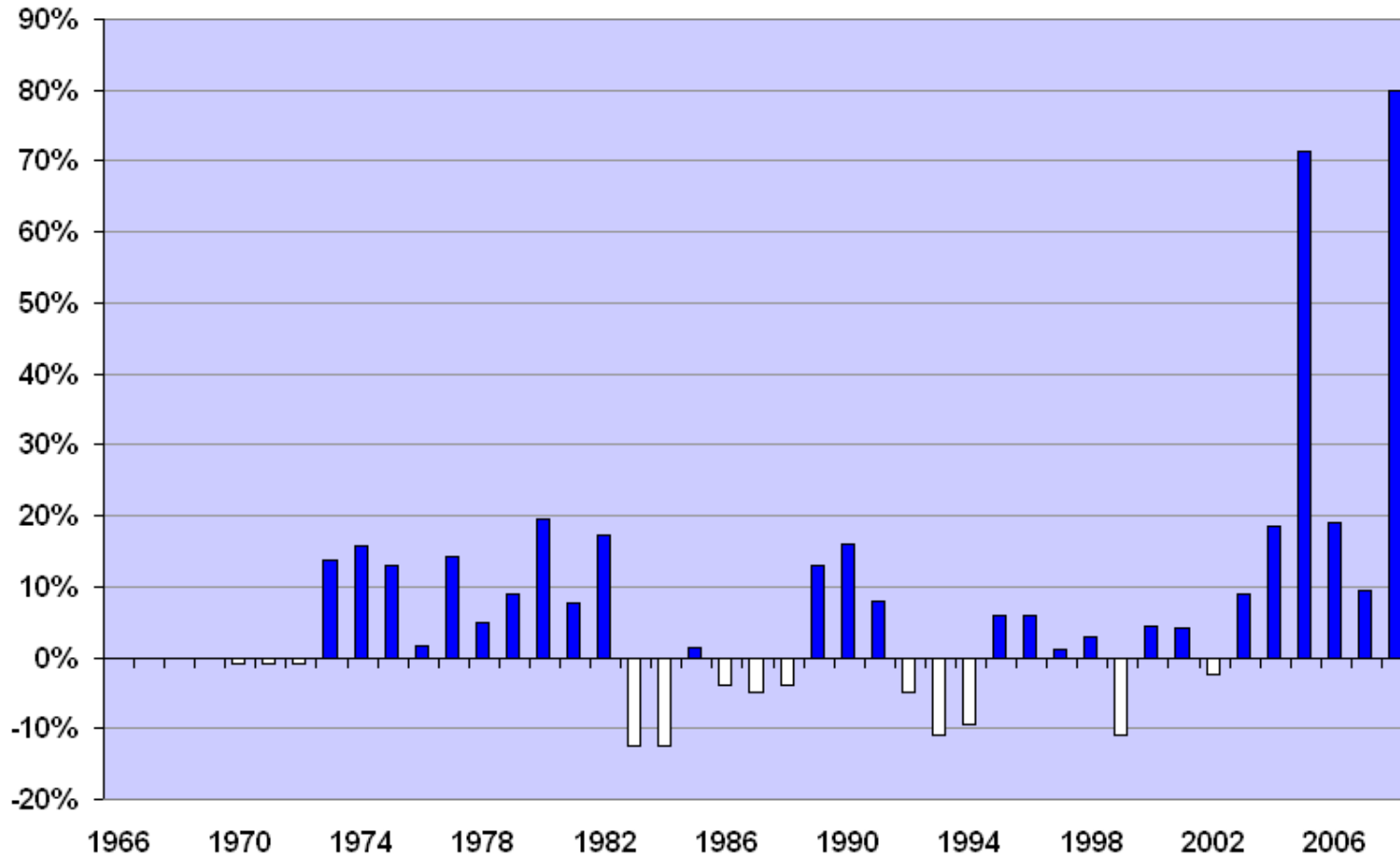
World Steel Production



# Key iron ore import markets

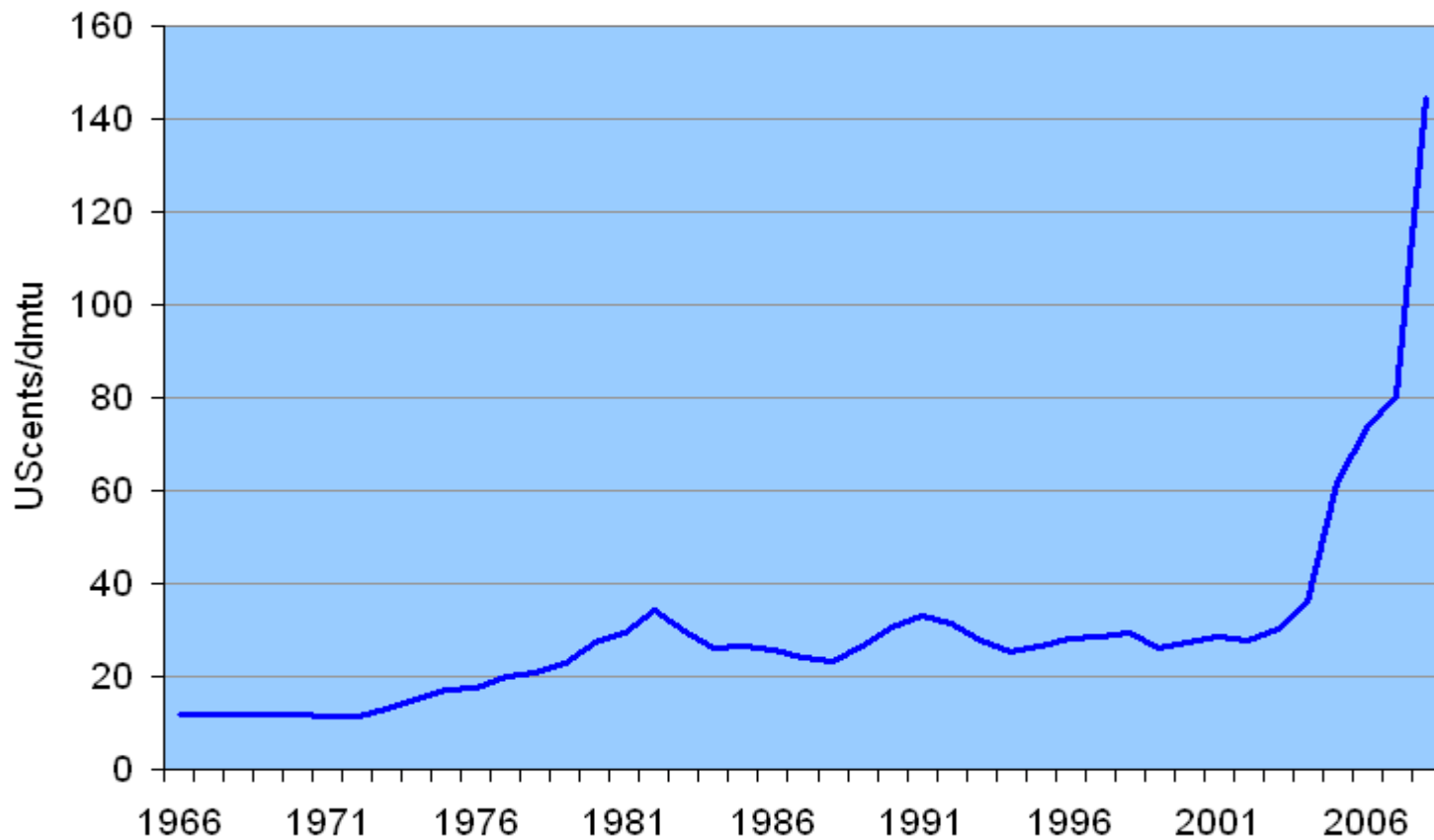


# Benchmark price changes – Australian fines



# Of price and power ...

## Australian Benchmark Fines Prices



# Pricing principles

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## **Market Clearing Price**

- ❖ The price that clears the market of all supplied product
- ❖ Supply and demand are in equilibrium

## **Stable Market Equilibrium**

- ❖ Fundamentals are constant

## **Unstable Market Equilibrium**

- ❖ Temporary equilibrium – dynamic fundamentals
- ❖ Exchange rates, interest rates, costs, product mix/substitution, economy, taxes etc. are all changing



# What iron ore pricing structures are there?

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## Traditional Benchmark Contracts (FOB prices)

- ❖ “transparency and stability”

## Spot Sales

- ❖ Single cargo, CIF price

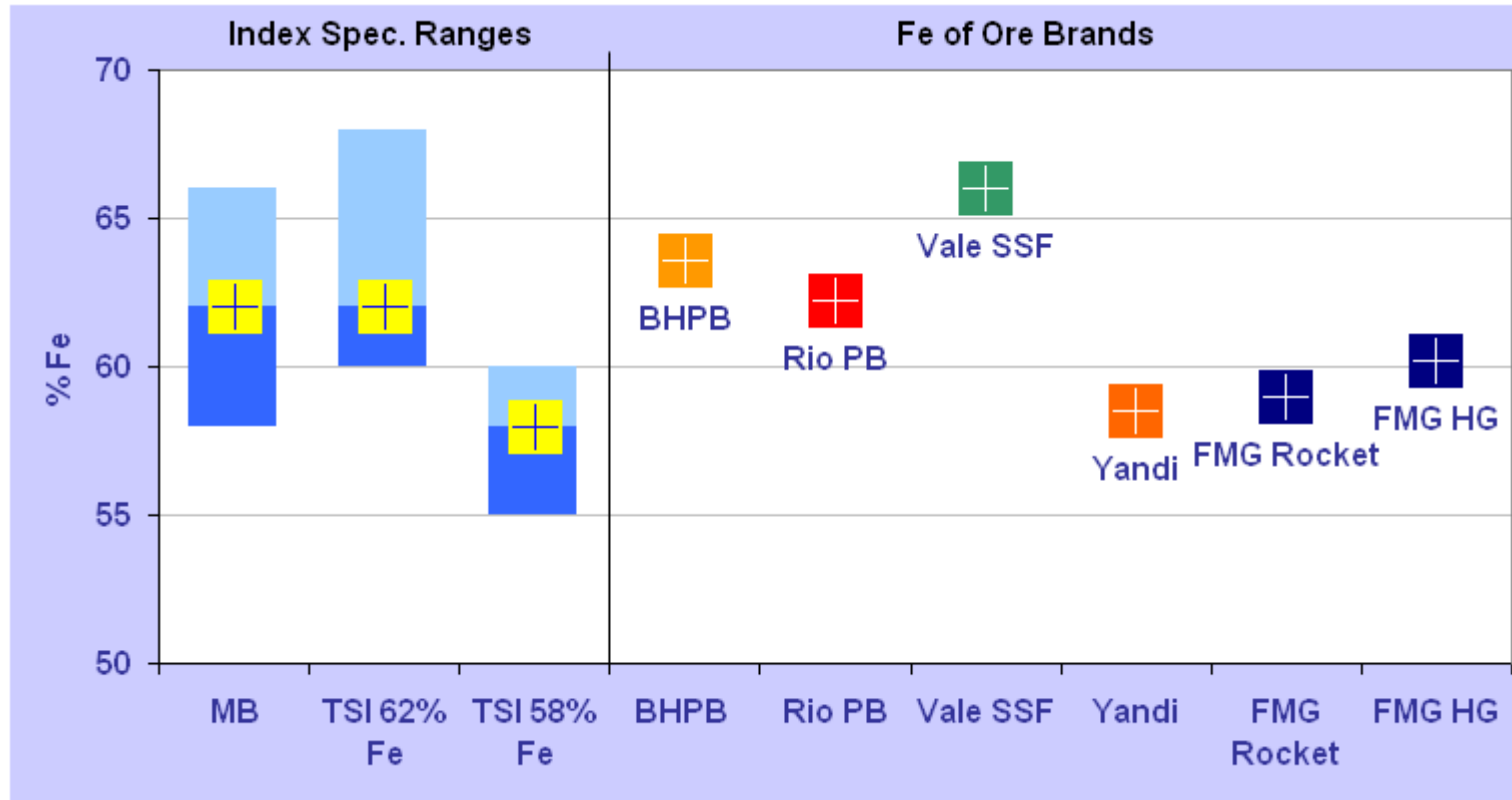
## Hybrid Systems (“formula pricing”)

- ❖ e.g. long-term contracts, pricing reviewed quarterly

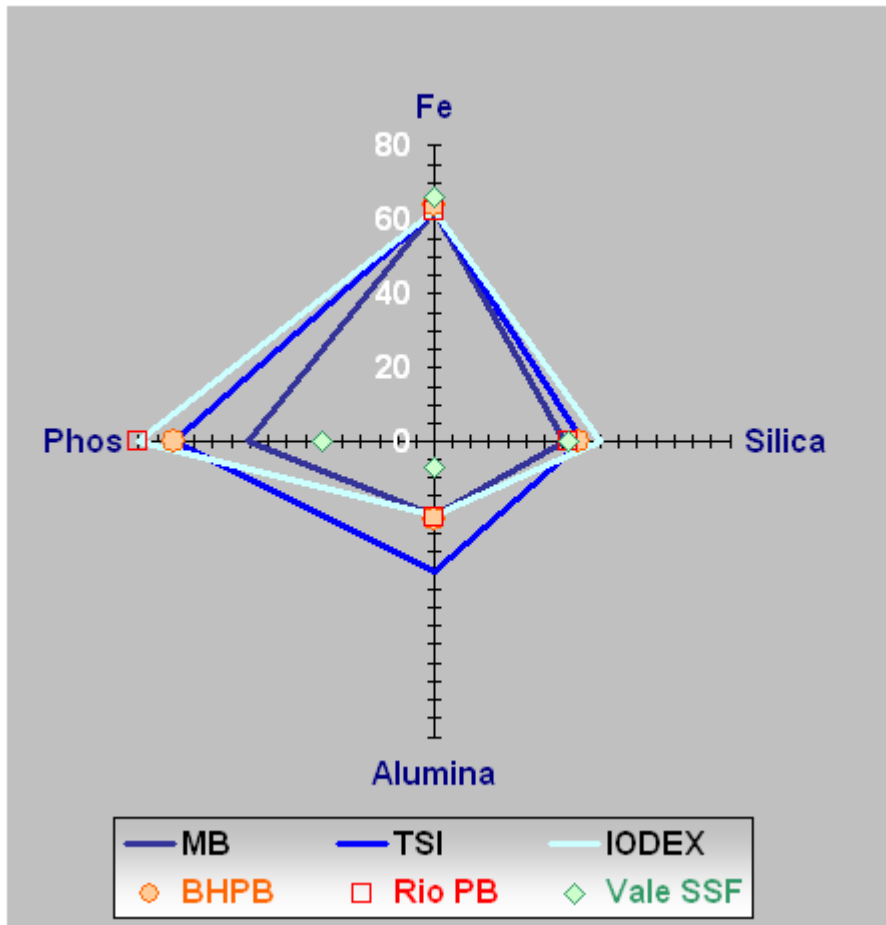
## Index-based pricing

- ❖ Three current index providers (*Metal Bulletin*, TSI, and Platts)

# Price Indexes: Fe grade comparisons



# The standardisation question

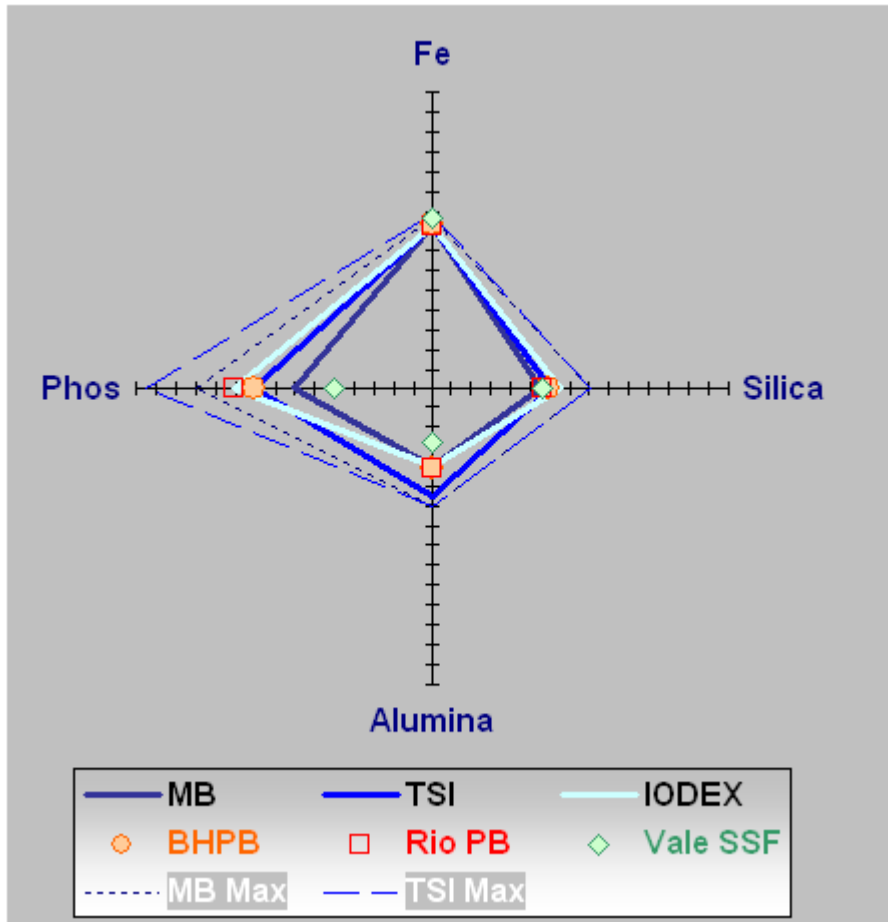


Silica & Alumina scale = Fe scale x 10

Phos scale = Fe scale x 1000

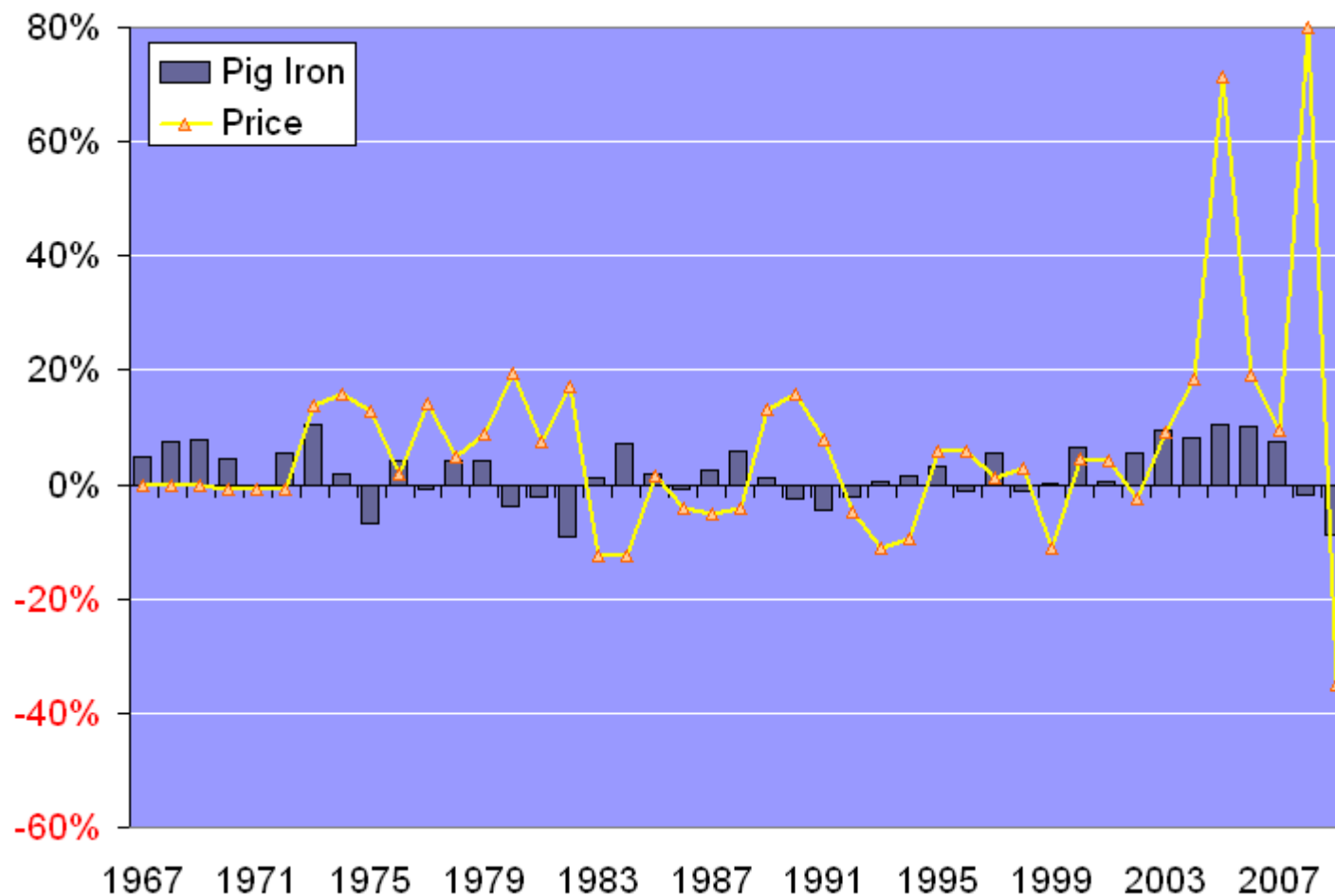
- ❖ Index base specifications generally map Australian benchmark fines
- ❖ Vale fines higher Fe and lower contaminants
- ❖ Normalisation dependent on historically-based coefficients

# Casting a wide net

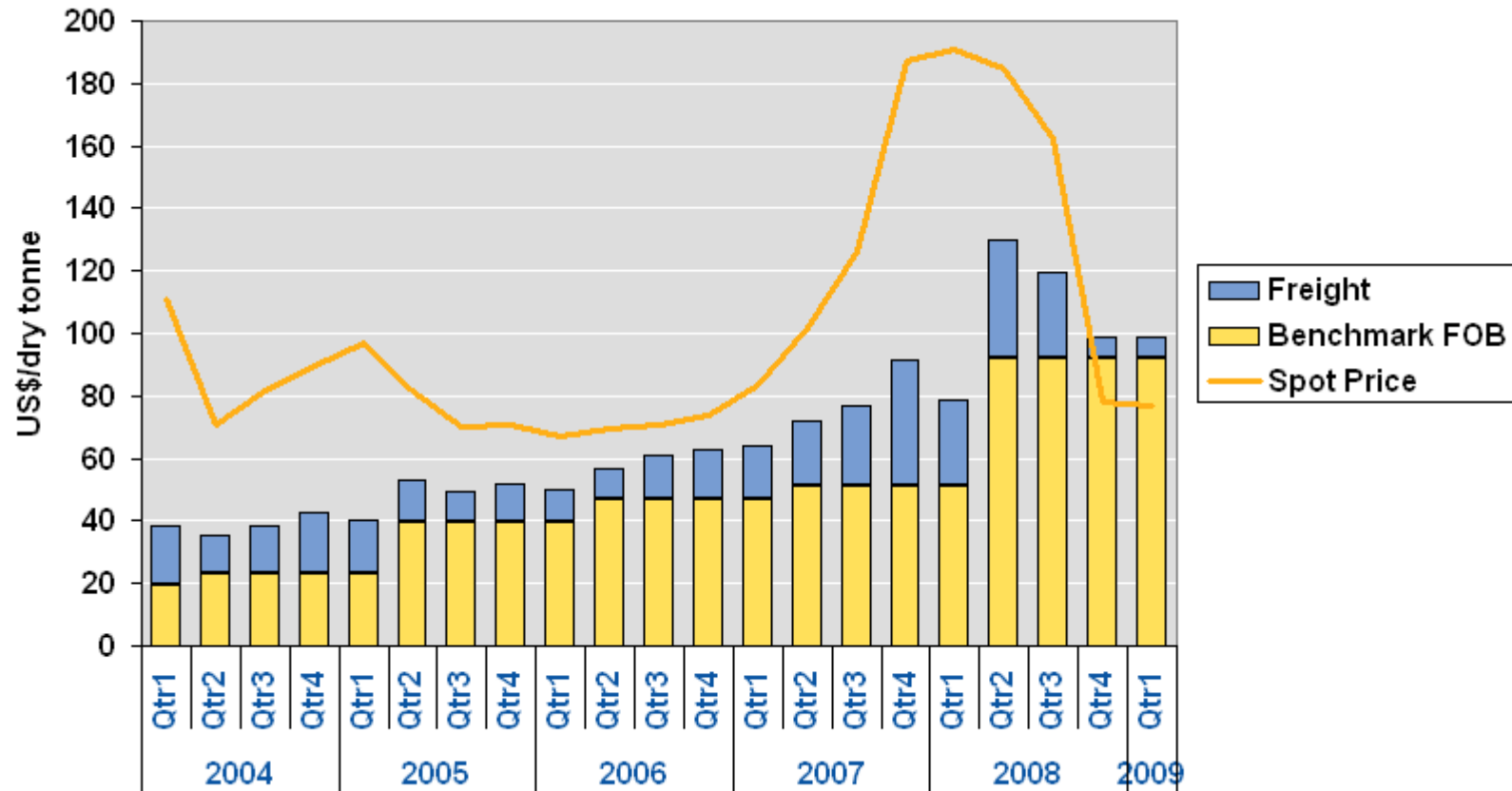


- ❖ Wide range of ore qualities fit within the specification envelopes
- ❖ Value of consistency?
- ❖ Market assessment versus techno-economic analysis of VIU

# Price response to changes in blast furnace output



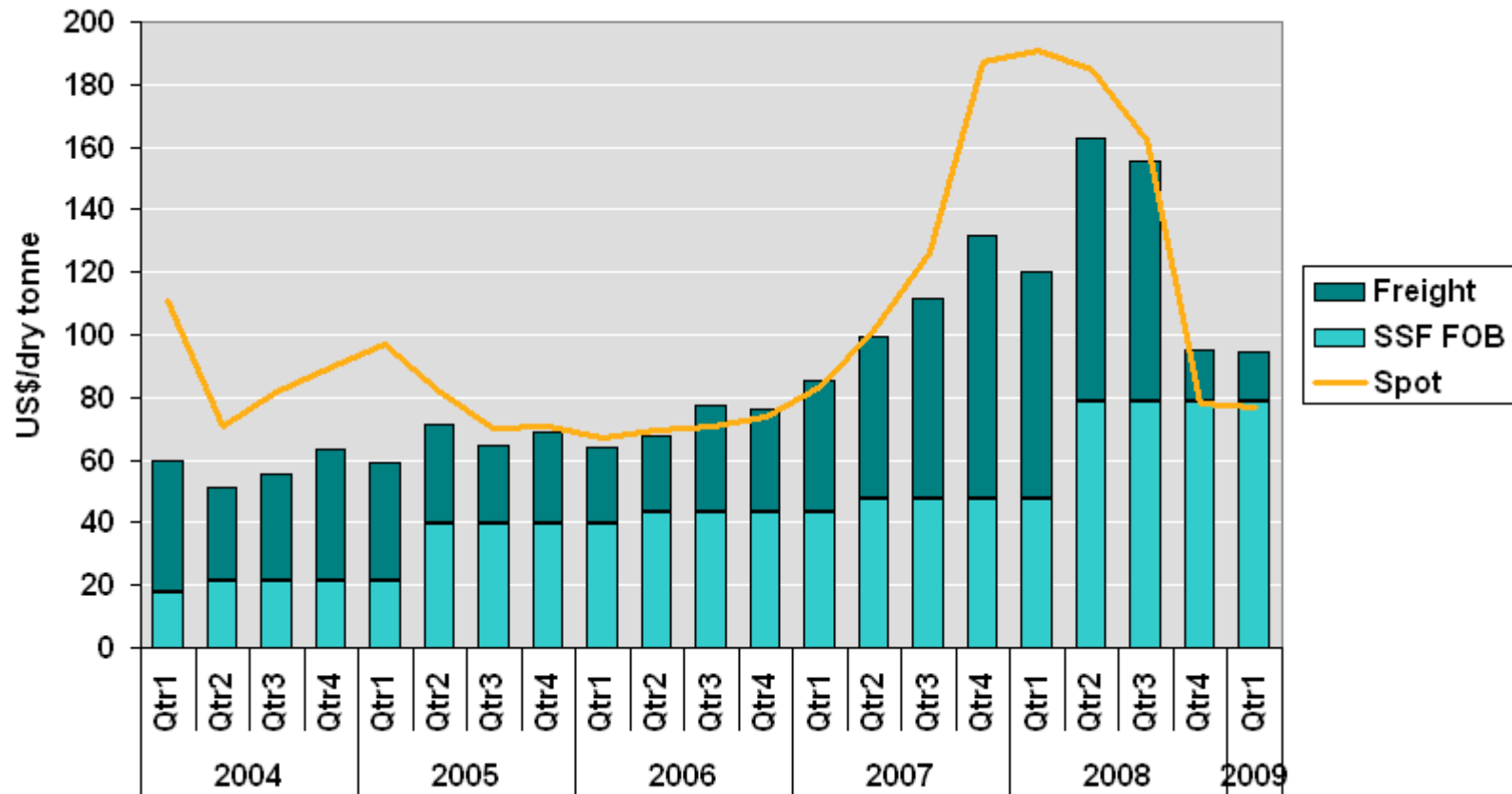
# Australian fines prices, CFR China



References: BHP Billiton, Rio Tinto, Tex Report, Metal Bulletin, Steel Trade Today, Metalitics

Spot CFR price for 63.5% Fe fines

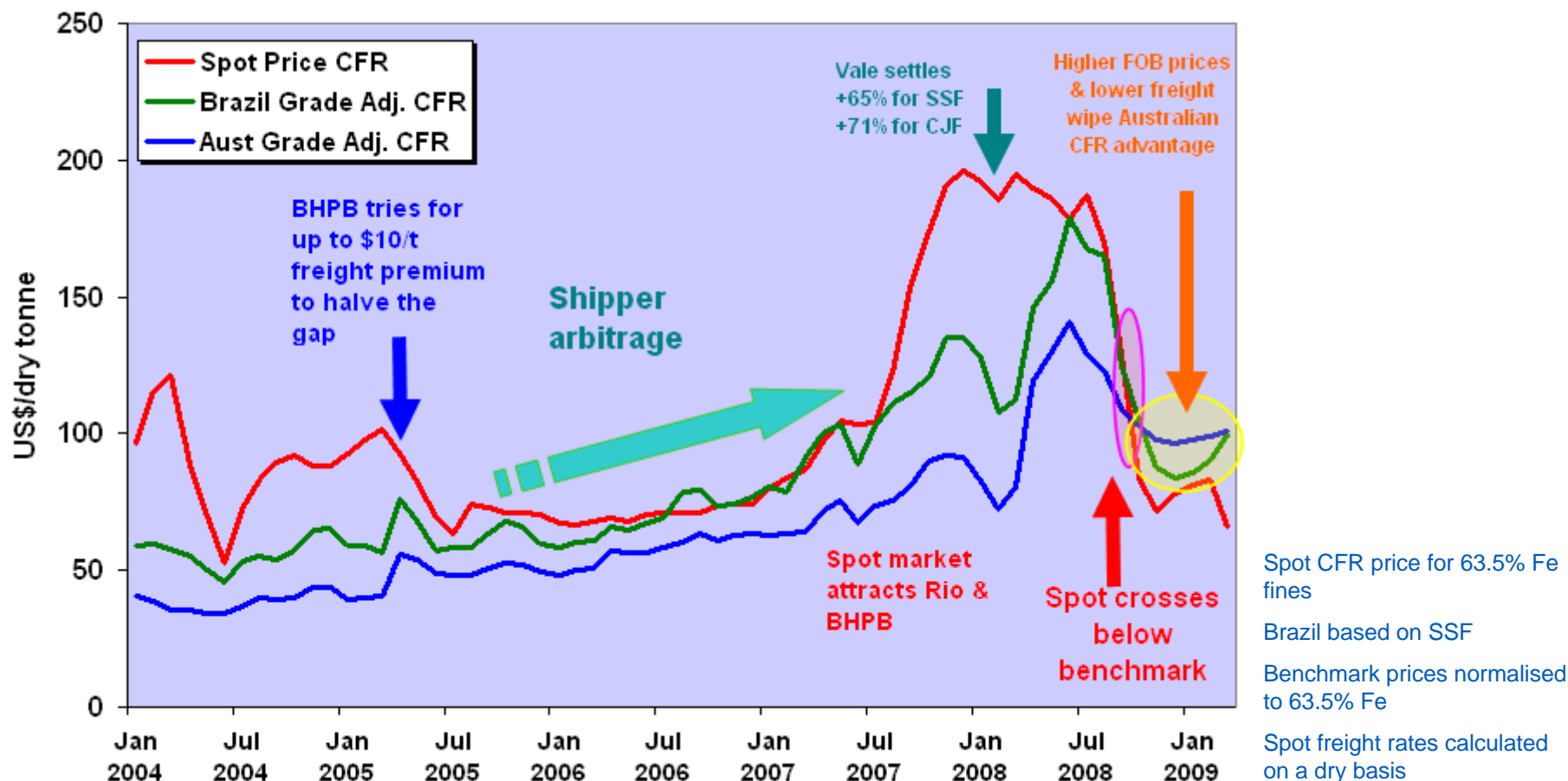
# Brazilian fines prices, CFR China



References: Vale, Tex Report, Metal Bulletin, Steel Trade Today, Metalitics

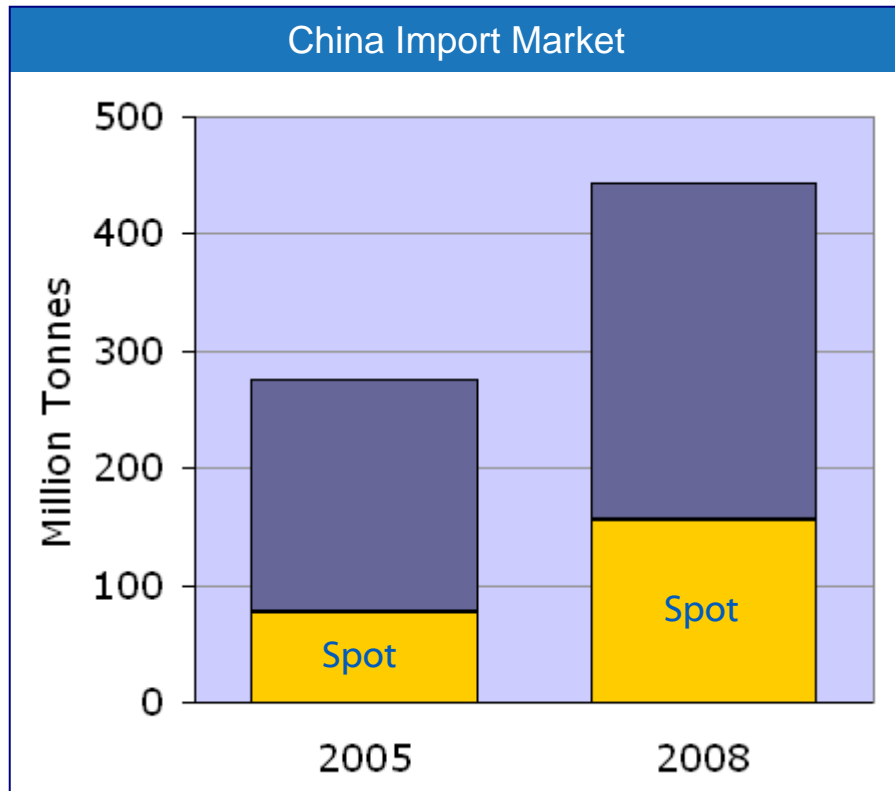
Spot CFR price for 63.5% Fe fines

# Spot the benchmark



References: BHP Billiton, Rio Tinto, Vale, Tex Report, Metal Bulletin, Steel Trade Today, Metalitics

# The spot market – from filler to indicator



References: CMN, Tex Report, Metalytics estimates

- ❖ China's explosive growth created a significant spot market
- ❖ 2005
  - ❖ Mainly for Indian exports
  - ❖ Quality and consistency issues
- ❖ 2008
  - ❖ Rio & BHPB ramp up spot sales
  - ❖ Price Indexes emerge
  - ❖ Swap market based on Index
  - ❖ BHPB pushes index-based prices –
    - ✦ Baosteel and BlueScope contracts
    - ✦ No new benchmark contracts

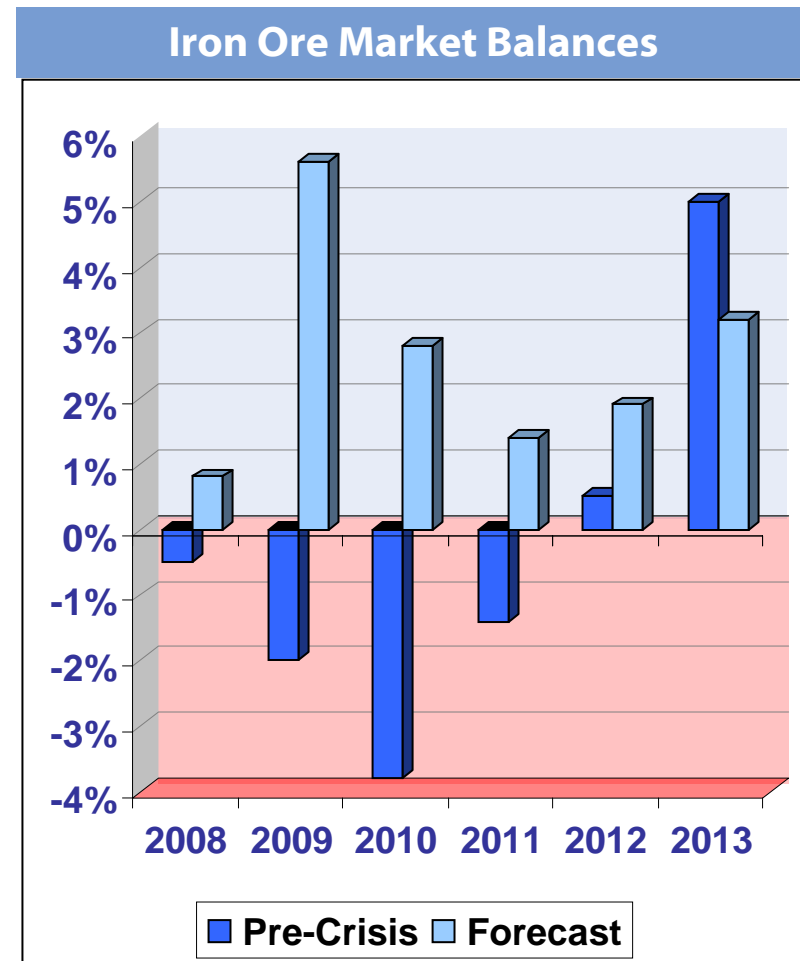
# The Iron Ore Market

## *Before the crisis*

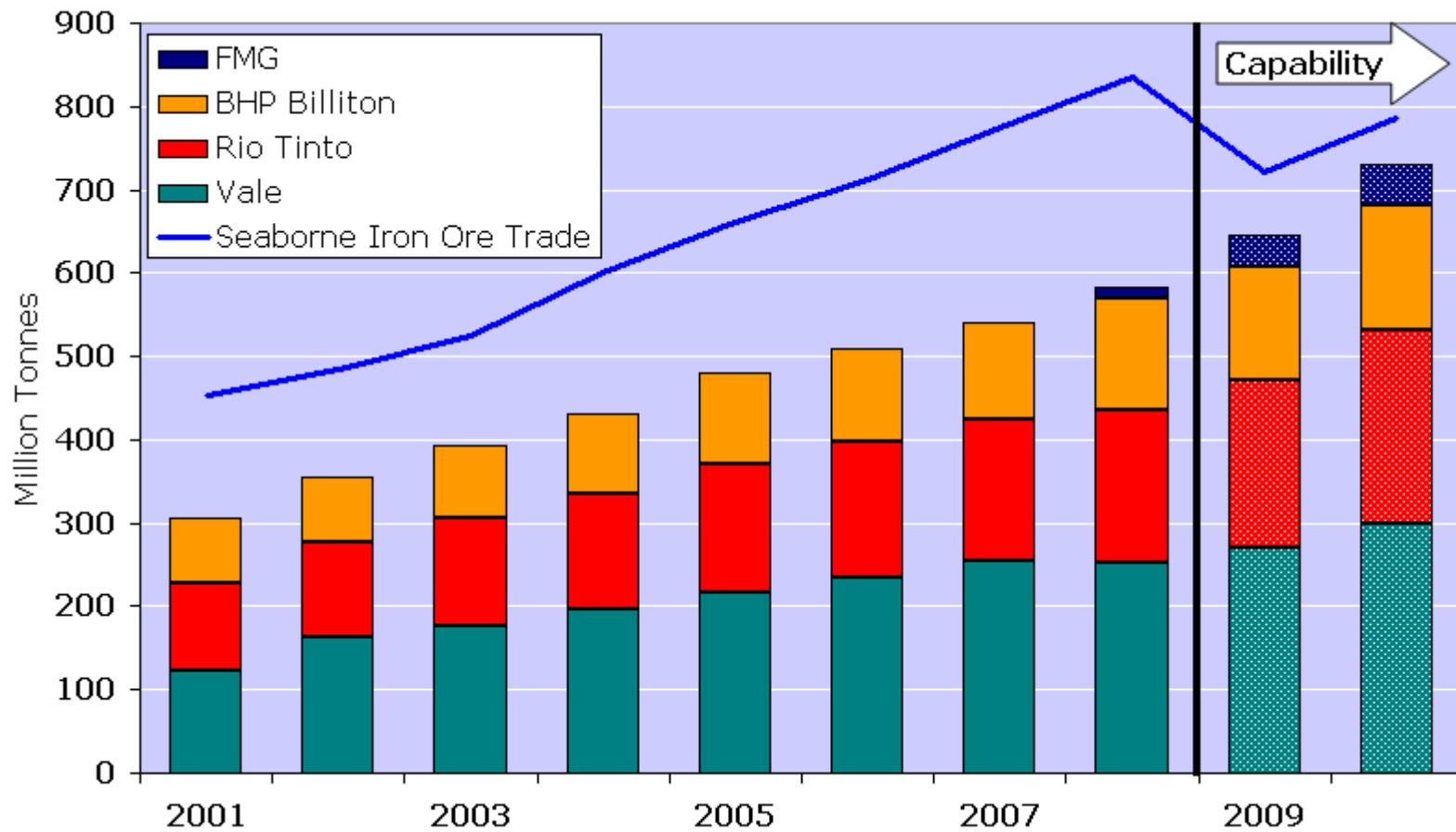
- ❖ Market not in balance until 2012
- ❖ Whole supply chain stretched
- ❖ Development constraints

## *The New Picture*

- ❖ Demand fallen below supply
- ❖ Market surpluses
- ❖ Projects slowed, delayed or frozen
- ❖ Tighter market emerging 2011/12



# Potential to overwhelm



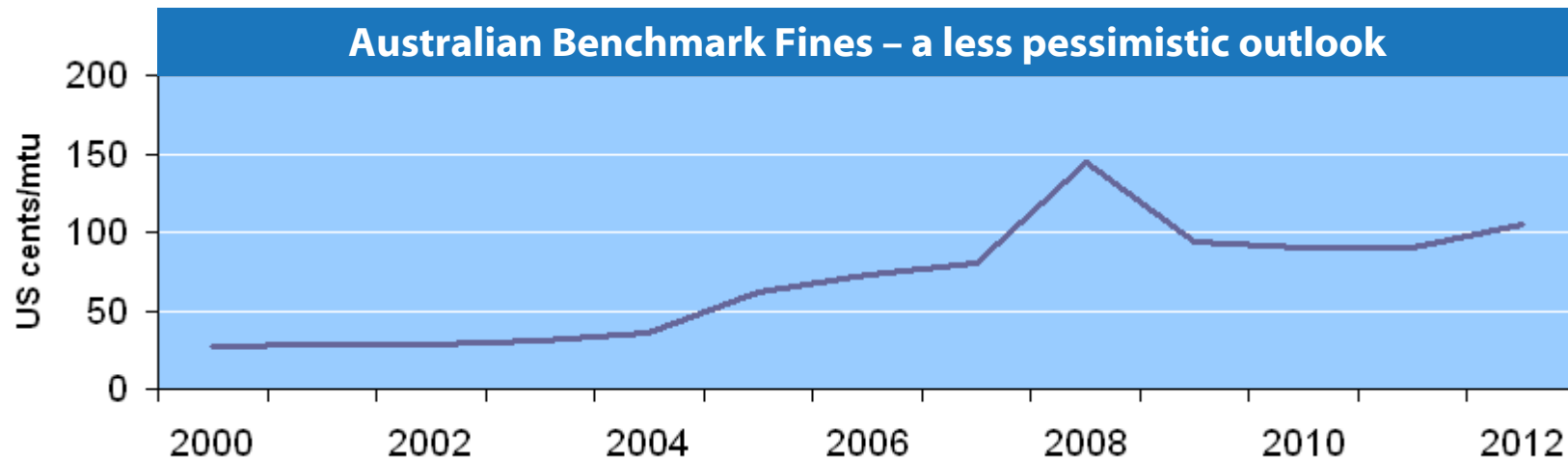
# How will future iron ore prices be characterised?

## ❖ Coal analogue

- ❑ benchmark substitute – reference to large contract tonnages between traditional major participants
- ❑ Indices, but forecasts in terms of reference price

## ❖ LME analogue

- ❑ Forecasts for base metals in quarterly or yearly averages



# Looking forward...

- More market-responsive price systems
- Mix of:
  - Benchmark
  - Hybrid – periodic adjustment
  - Index-based
  - Spot
- Global recession means some demand lost forever
  - Some Chinese market improvement in 2009
  - Other markets stabilising 2010 -2012
- Major contract price reversals in 2009
- Industry shakeout – resetting goals and plans
  - Rationalisation
  - Projects delayed, deferred, and reconfigured
  - Marginal producers squeezed out
- Longer term
  - Use of hedging – swaps and futures
  - e-auction platforms
  - Solid prices and margins for cost-efficient producers



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*Thank You*