

International Manganese Institute 2007 Annual Conference

Vienna

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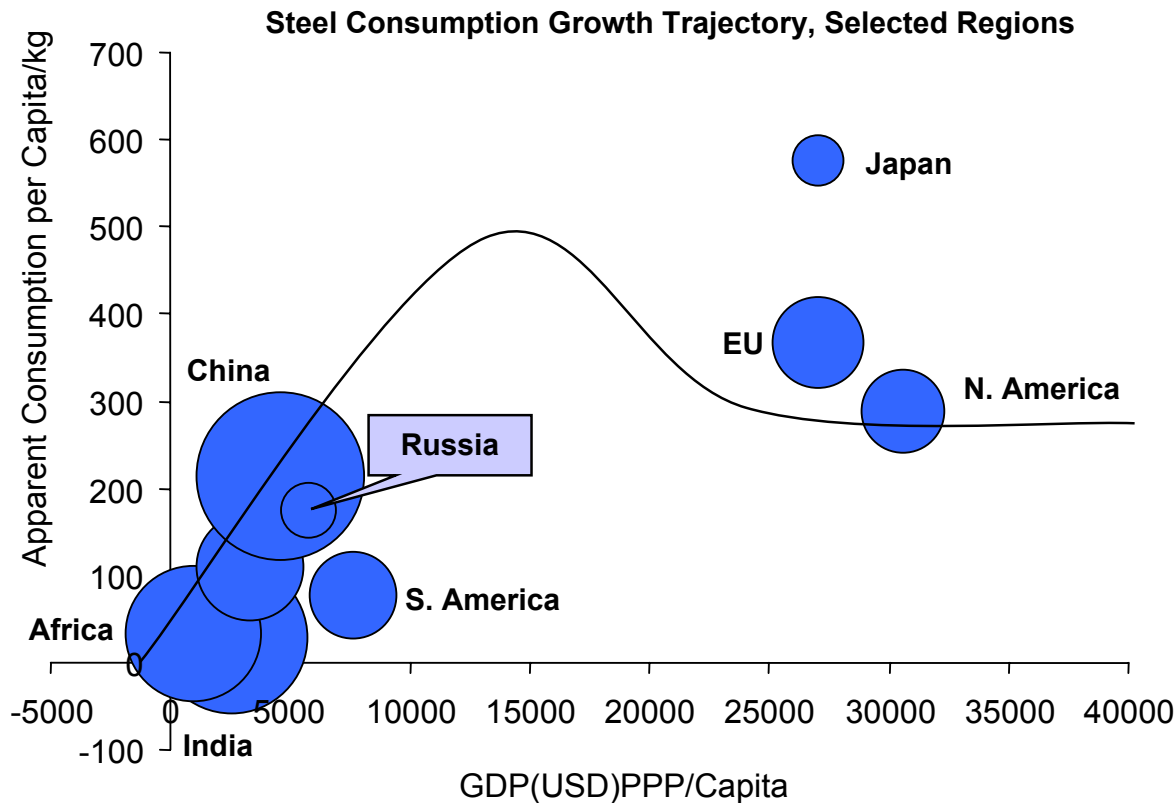
Hatch Associates

Dr. Rod Beddows, Executive Director, Hatch Associates (London)

Key Observations

- Consolidation is happening
- Globalisation goes in parallel
- Growth is also dynamic
- Iron Ore demand will rise
- Iron Ore Seaborne trade will grow
- Volatility in steel prices should decline
- Ferro alloys demand will rise

Steel consumption is driven by population and GDP. Half of the world's population lives in high growth areas.



China is not very far from maturity in steel demand though it may “overshoot”

New World Order

By mid-century, the top six economies could well be:

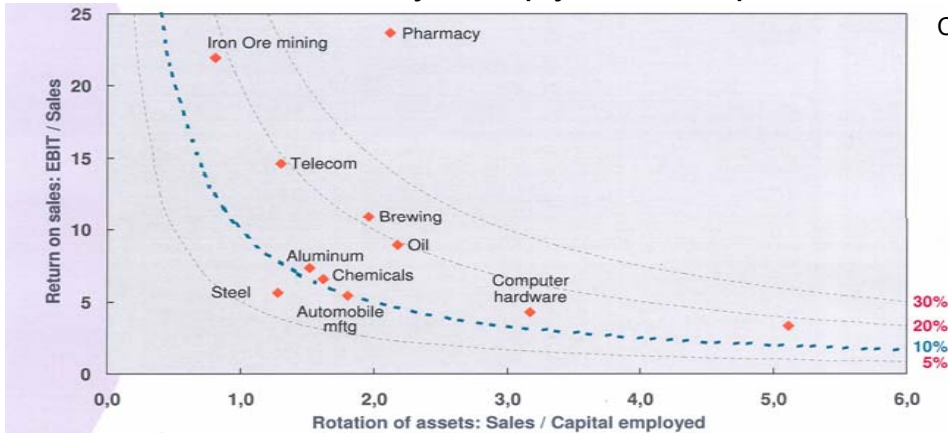
- China
- India
- USA
- Japan
- Brazil
- Russia

This will have a significant impact on growth in steel consumption as these economies grow and develop

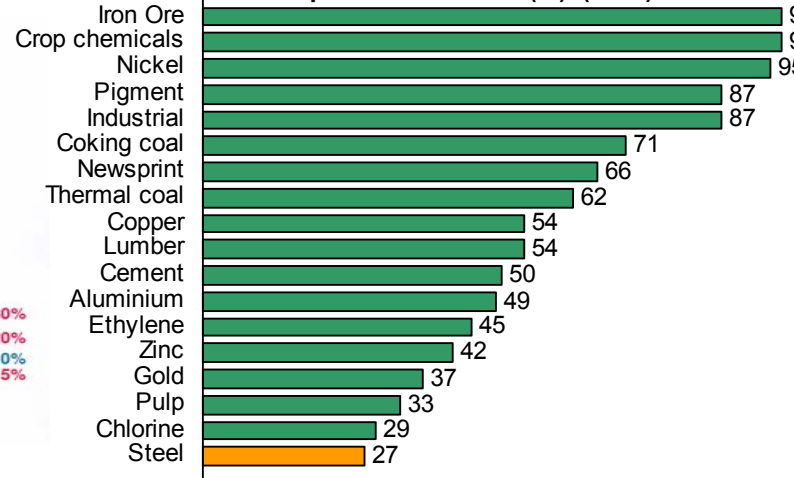
Note: Size of bubble represents population

Consolidation; the key facts, why and how?

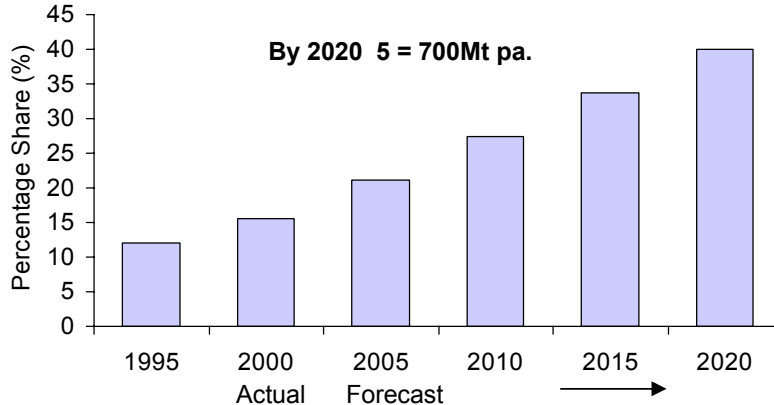
The Steel Industry did not pay the cost of capital



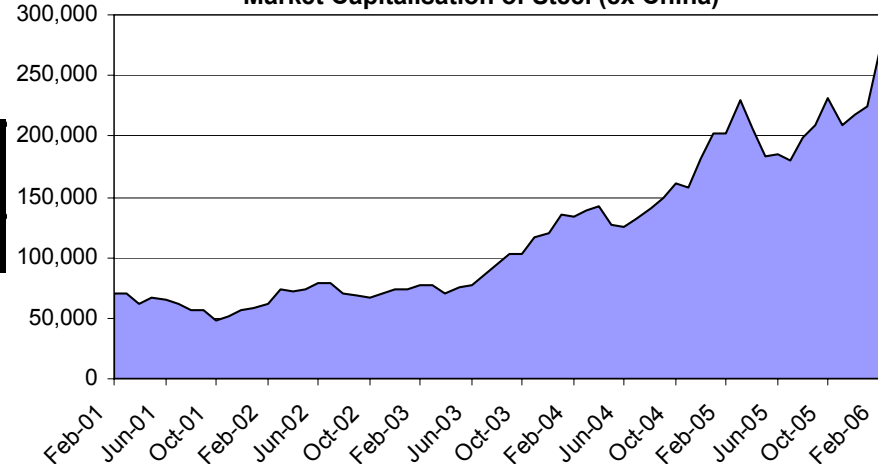
Top 10 market share (%) (2002)



Forecast Share of Top Five Producers of Crude Steel based on Historic Trend of Industry Consolidation



Market Capitalisation of Steel (ex China)



Who are the leading consolidators?

- Mittal (ISG, Arcelor, etc.)
- Tata (Corus ... stated ambition now 100Mt pa.)
- Severstal (Rouge, Lucchini)
- Evraz (Oregon and others)
- US Steel (National etc. ...)
- CSN, possibly ... 'the not quite' consolidator
- Gerdau (Ameristeel, etc.)

etc. ...

Most of the consolidators benefit from wide EBITDA margins which are supported by backward integration

This has been facilitated by high I.O. prices

What will Mittal plus Arcelor mean for competitors?

- Creates a 110MT pa Carbon Steel Giant
- Three times the size of the next largest
- At maximum limit of market share in EU flats, EU sections, EU wire rods, NA flats
- Mittal is currently 50% self sufficient in Iron Ore, 20% in Coking Coal
- The group is aiming for self sufficiency
 - Expansion of Iron Ore in Ukraine, Kazakhstan
 - Iron Ore developments in W. Africa
 - CC developments in Kazakhstan, elsewhere
- The Mittal business model will put intense pressure on all EU BOF producers. Mittal will eventually have high quality assets with cost structures €60-80 pt lower than Corus, Riva, TKS etc.
- This pressure is spreading through Arcelor – Mittal and others (Russians, Tata, etc.)
- This deal, could be transformational for EU and world steel

Steel Market Dynamics

Around 1990

- The Steel Industry was Local / National / Regional (EU)
- Trade cross border ... but not ownership
- Most trade was seen by the locals as “dumping”
- Competition was local
 - USS v LTV v Bethlehem v Inland etc.
 - Thyssen v Krupp v Hoesch
 - Etc.
- Relations with I.O. suppliers were friendly(ish)
- Few producers had ore supply – in fact they sold these assets
- All saw themselves as in the same boat
- I.O. prices had been trending downwards
- EAF producers were a separate industry
- Consumers were relaxed. Many local suppliers could be played off against each other
- Price volatility could be passed on to the end consumer (you and me!) as finished goods inflation was common

Steel Market Dynamics

Now the Competitive Dynamics are transformed in the developed economies (ex Japan?)

Steel Co & Steel Co

- Local consolidation
- Regional consolidation
- Means very reduced competition
- In some cases clear oligopolistic structures are visible
- International consolidation is introducing some new competition
 - Russians into USA
 - Ukrainians into EU
 - Indians not just (Mittal) everywhere
 - Brazilians & Indians & Russians into EU & USA
- Rivalry to be 'leaders' in consolidation. Eat or be eaten
- And now bifurcating business models in terms of integration
- Backward integration is the winning business model
- Whatever happened to forward integration?

The underdeveloped capital markets and family ownership in Asia are delaying this process in that zone

Steel Market Dynamics

Steel Co v The Consumers

- Surging steel prices have not been passed on to the end consumer (you and me!)
- Intense competition (e.g. Auto industry) and the growth of China in manufactured goods has led to much end product price deflation
- Consolidation in Steel is explicitly to achieve better returns (mostly from higher prices)
- So – “the devil can take the hindmost” – the poor manufacturer of metal intensive products
- And price volatility remains a major difficulty for purchasers
- But the Steel industry resists price risk hedging

Steel Market Dynamics

Steel Co v Iron Ore Co

- Consolidation in I.O. plus growth in demand has shifted power to the I.O. producers
- Prices have surged. Margins with them
- Steel companies have been annoyed – as not all are in the same boat
- The ‘new’ competitors (who did not really exist in 1990) have their own supply – CSN, Tata, Russians, Ukrainians
- These consolidators are a ‘wild card’ in the dynamics of the I.O. industry
- What % of Steel production by BF is backward integrated?
- Might the I.O. companies kill the golden goose?
- Do they really mind given the time value of money?

So the future

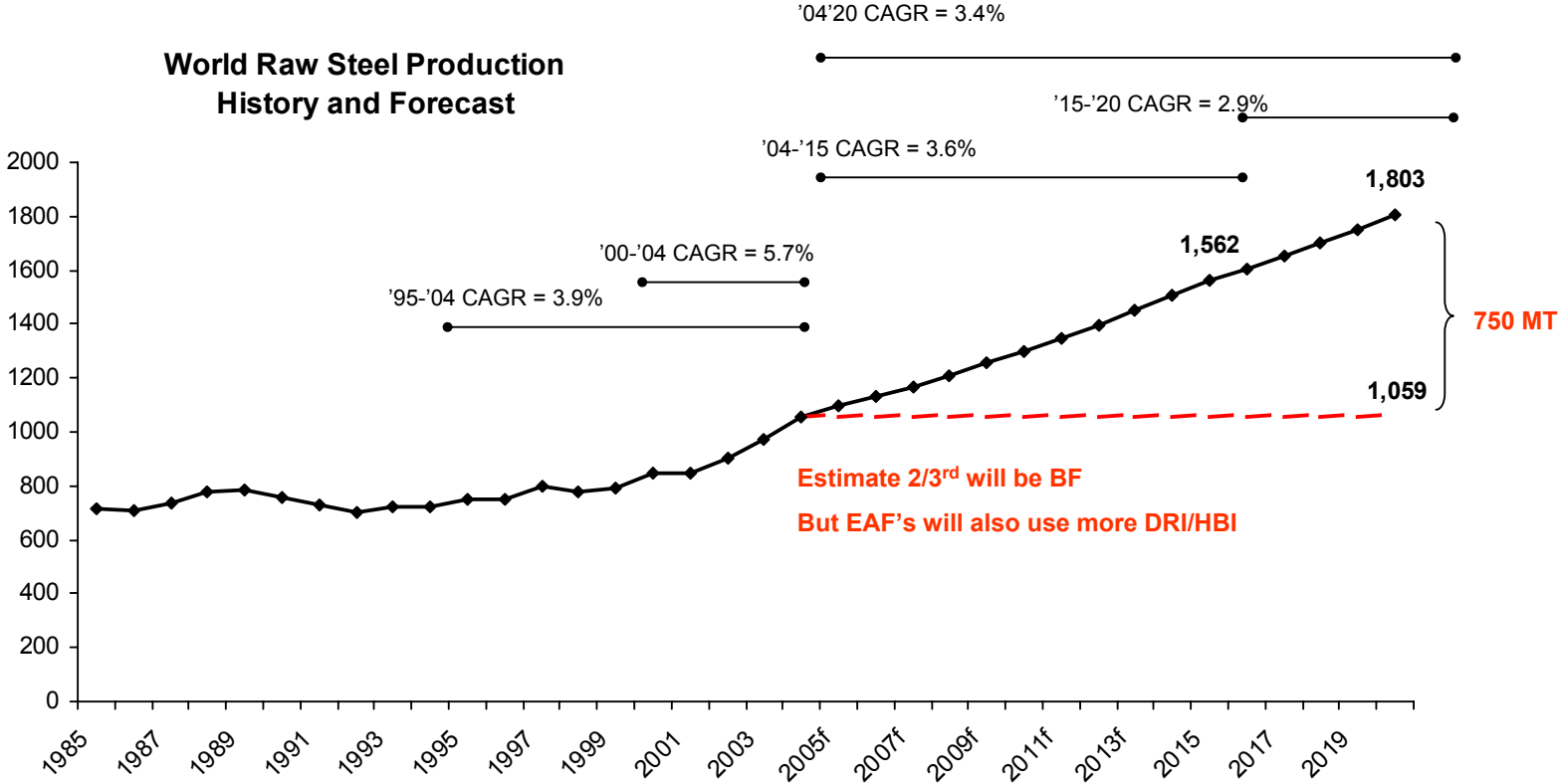
What about demand?

What about prices?

What about supply?

Who will be the winners in the steel industry and the raw material supply industry?

Our Steel consumption and Production forecast

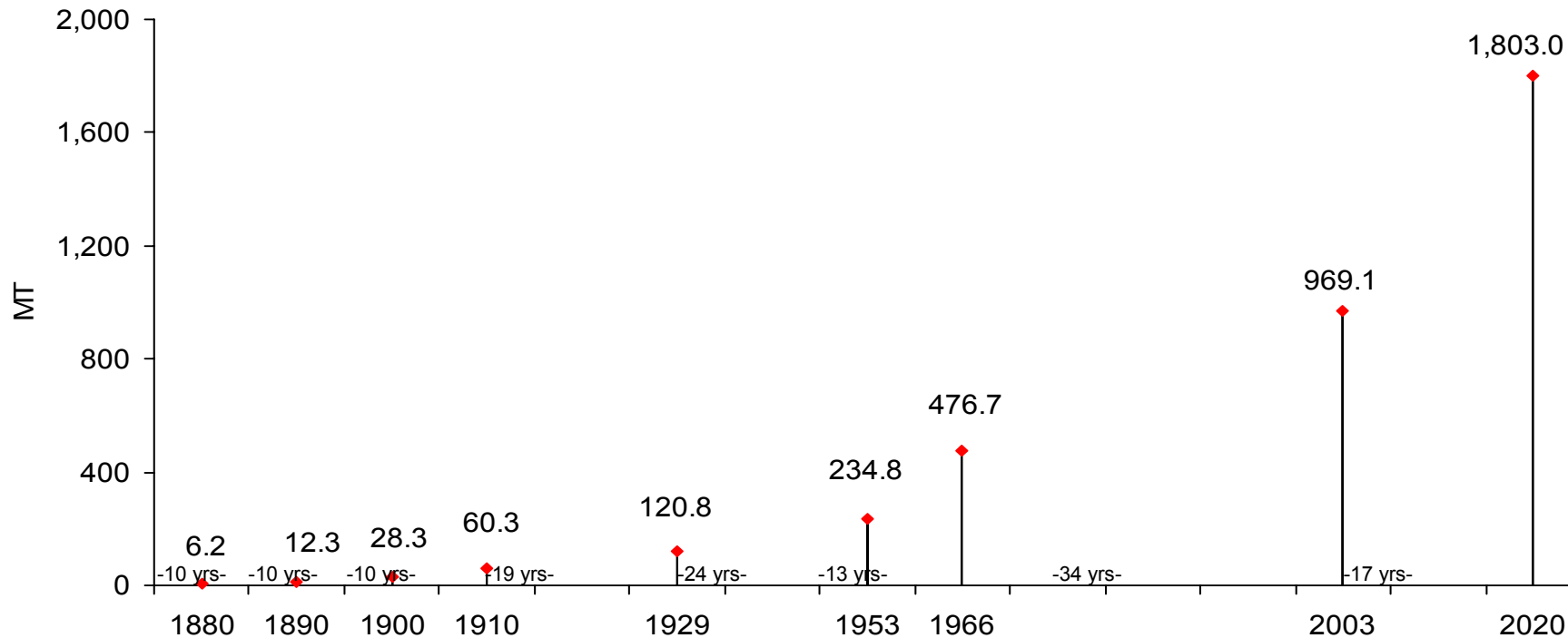


Sometime around 2020 Iron Ore demand will exceed 2.1 Bn Tonnes

STEEL INDUSTRY DEVELOPMENT : PAST AND FUTURE

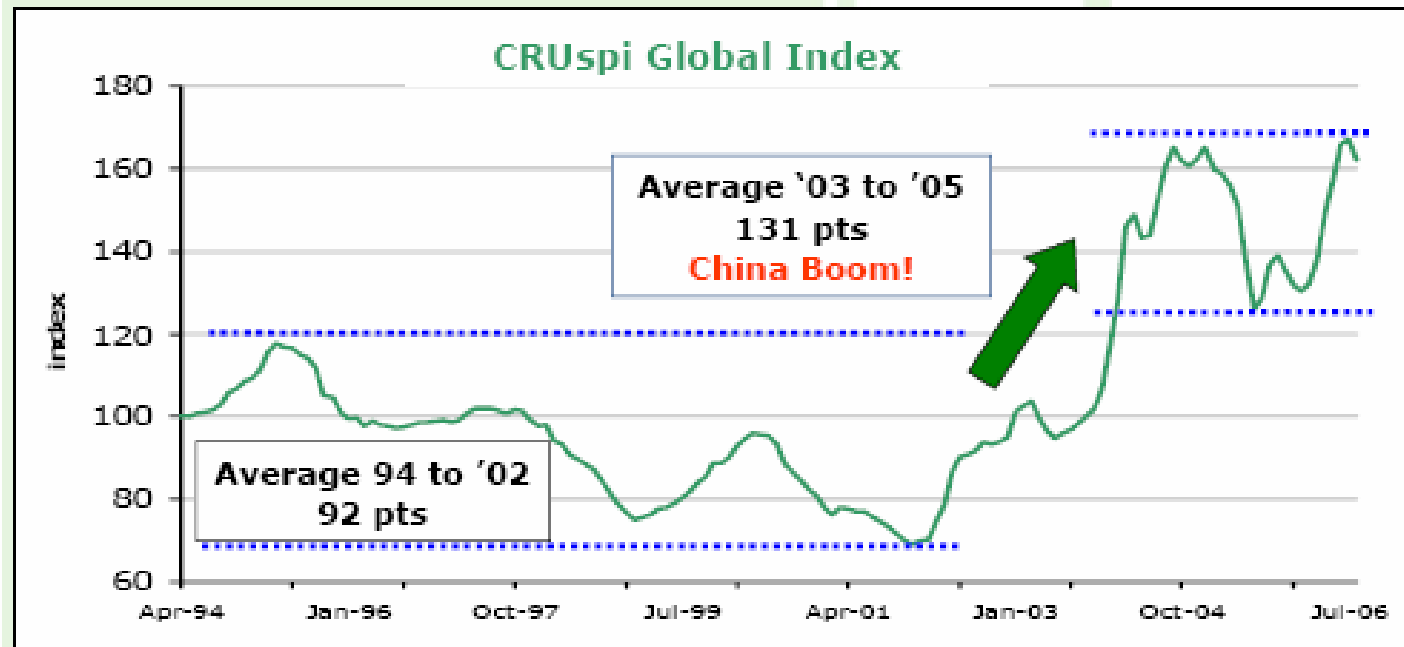
Since 1880, global crude steel production has on average doubled every 16 years

The projected growth rate matches the historical averages



Source: Metal Statistics, Hatch Consulting

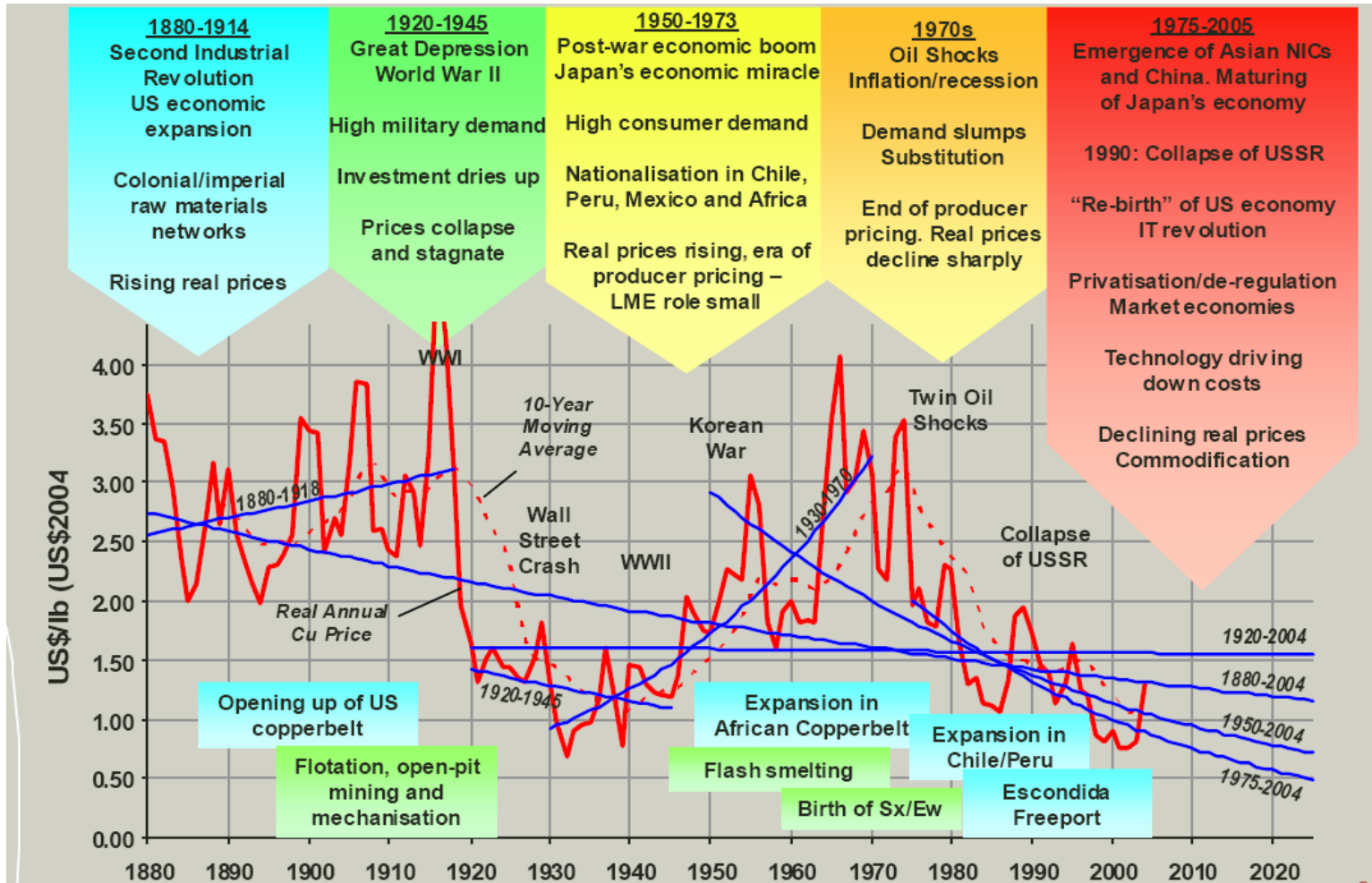
Steel products prices have been high and above historical levels over the last three years ... Why? ... Will it continue?



Source: CRU

Is this a “blip” or a new equilibrium?

BHP Billiton's view of the 'Super Cycles'. The development of the Cu price.



So the Key Observations

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In all facets of the steel industry the long term winners will be global, large and integrated or specialist niche companies. General advice is to forsake the middle ground