

The Future for European Steel and for Steel in Construction: Challenges and Opportunities Ahead

Making Better Sections 2 – Meeting the Market

26 – 27 October 2006



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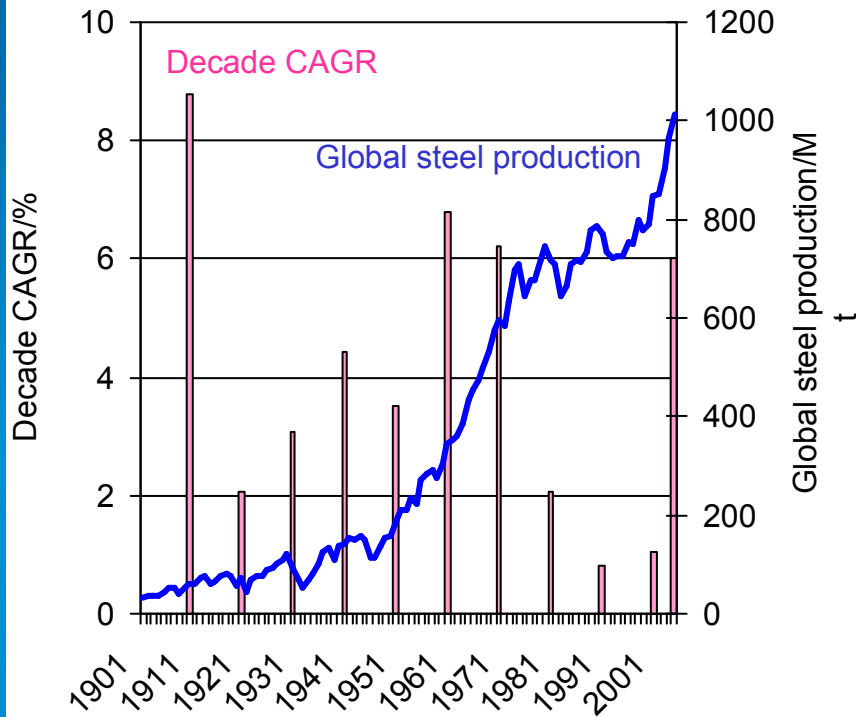
Hatch Beddows

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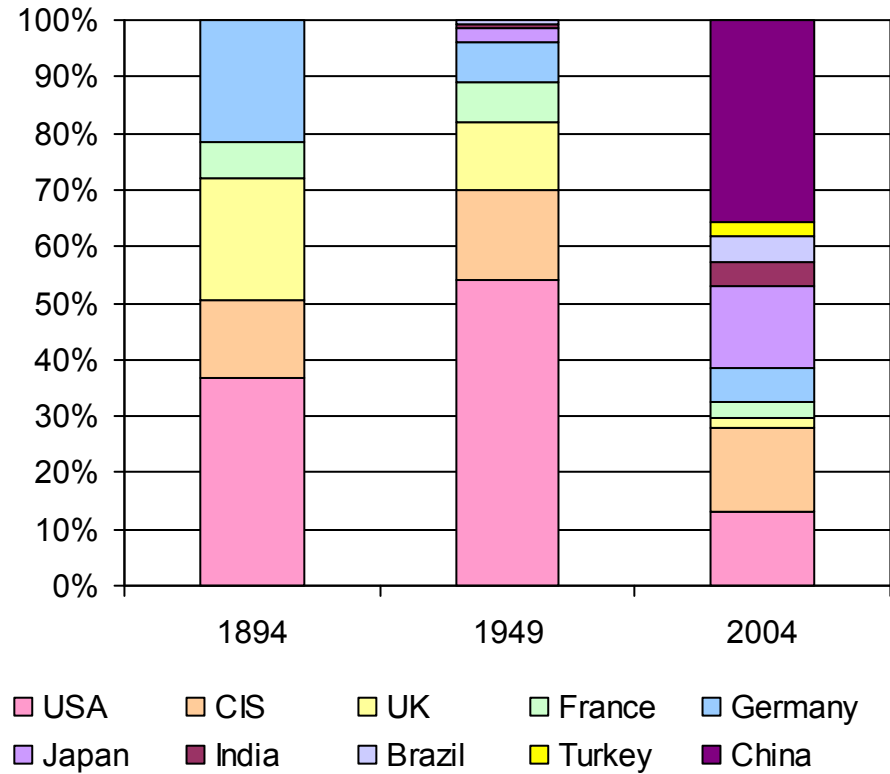
- **Global steel**
- Steel in construction
- Issues in construction

Growth in global steel production is back to normal but the locations for production are changing massively – steel is now an Asian business

Global steel production and growth rates



Steel production by region



Regional steel production is primarily driven by regional costs which vary significantly around the world

Labour (US\$/hour)	Ukraine	2.00
	Russia	2.50
	India	3.25
	South Africa	11.75
	Brazil	14.00
	South Korea	16.50
	Australia	33.00
	USA	39.00

Electricity (US\$/kWh)	Russia	0.03
	South Africa	0.03
	Ukraine	0.03
	Australia	0.04
	USA	0.05
	Brazil	0.05
	South Korea	0.06
	India	0.09

Coke (US\$/t)	India	88
	Ukraine	92
	Russia	97
	Australia	98
	South Africa	107
	Brazil	124
	USA	134
	South Korea	137

Scrap (US\$/t)	Russia	160
	Ukraine	160
	Brazil	200
	Australia	200
	South Africa	200
	USA	210
	South Korea	260
	India	270

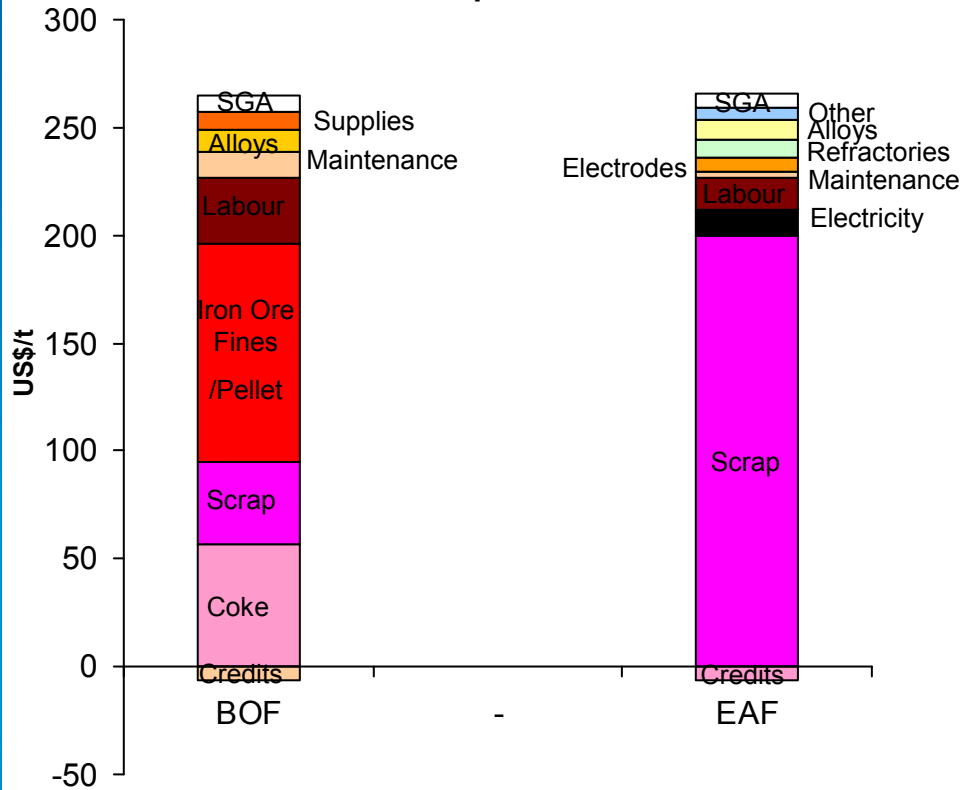
Natural gas (US\$/MMBtu)	Russia	0.80
	Ukraine	1.50
	South Africa	1.90
	Australia	2.19
	Brazil	2.85
	India	3.60
	USA	5.71
	South Korea	5.74

Iron (US\$/t)	India	28
	Brazil	30
	South Africa	37
	Australia	40
	Ukraine	43
	Russia	45
	USA	50
	South Korea	52

Notes:
Data is for 2004
1 MMBtu = 1.055 GJ

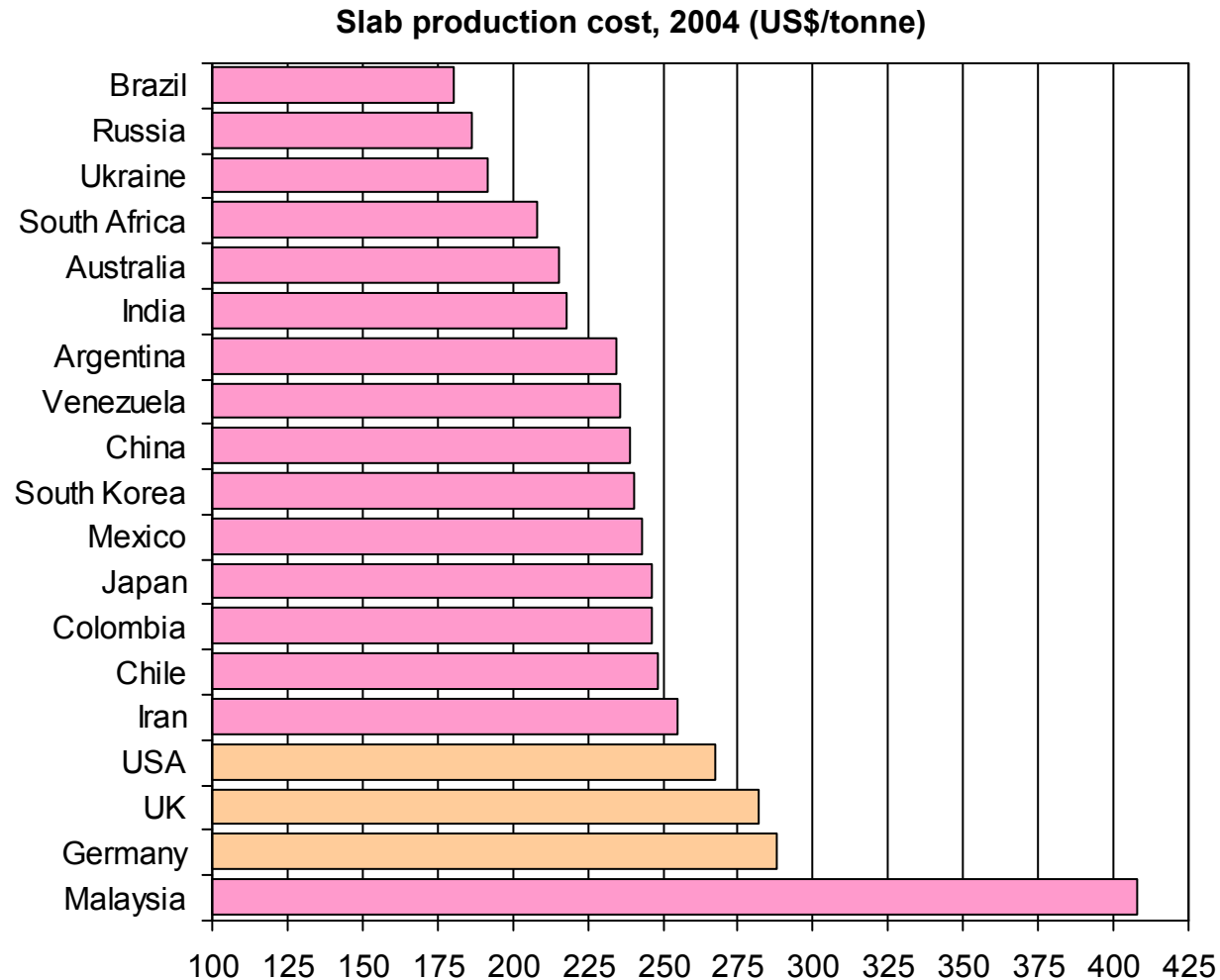
However, steel production costs are dominated by raw materials for both BOS and EAF steel and it is their availability and cost that determine economic viability of steel production

Typical cost structures for BOF and EAF billet production in Europe for 2004/US\$/t



Change in total cost (%) that results from 10% change in input variable		
Input variable	BOF/%	EAF/%
Coke	2.3	-
Scrap	1.2	7.0
Sinter/feed	3.8	-
Electricity	-	0.5
Labour	1.1	0.4

Consequently, from a cost point of view, steel production is now heavily favoured in regions such as S. America, CIS and S. Asia which are becoming the front ends for N. America and W. Europe etc.

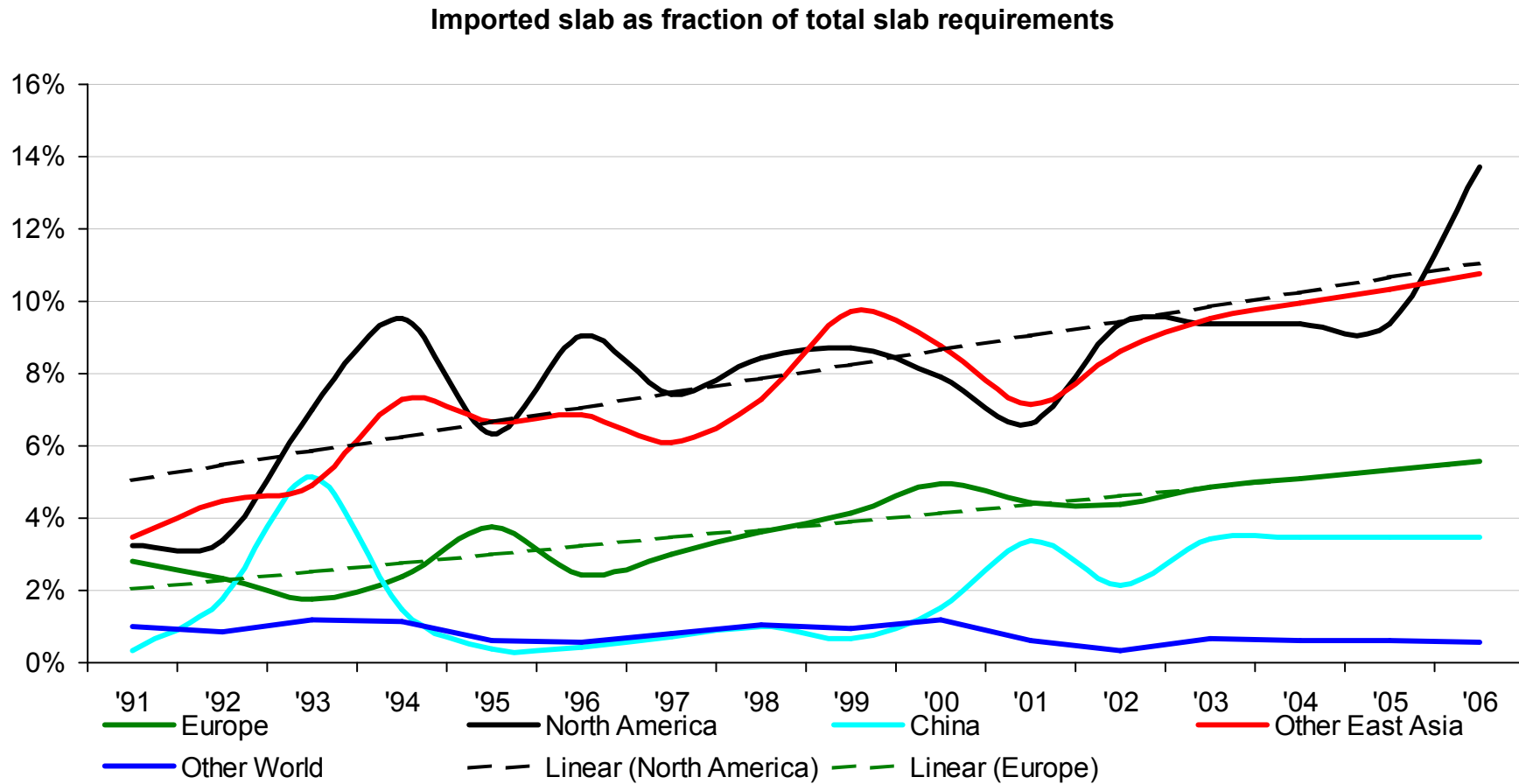


Note: Costs excluding capital costs and overheads

Source: WSD and Hatch Beddows

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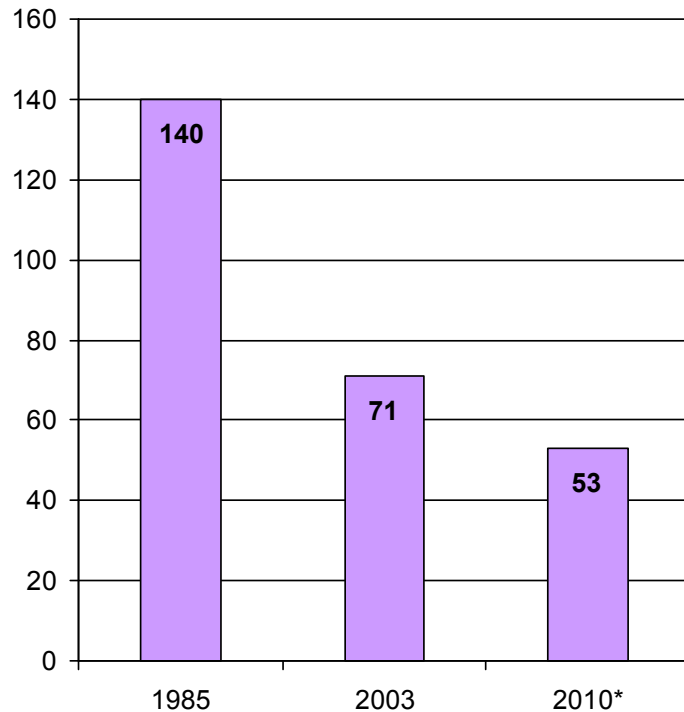
W. Europe and N. America are becoming increasingly dependent on lower cost imported semis



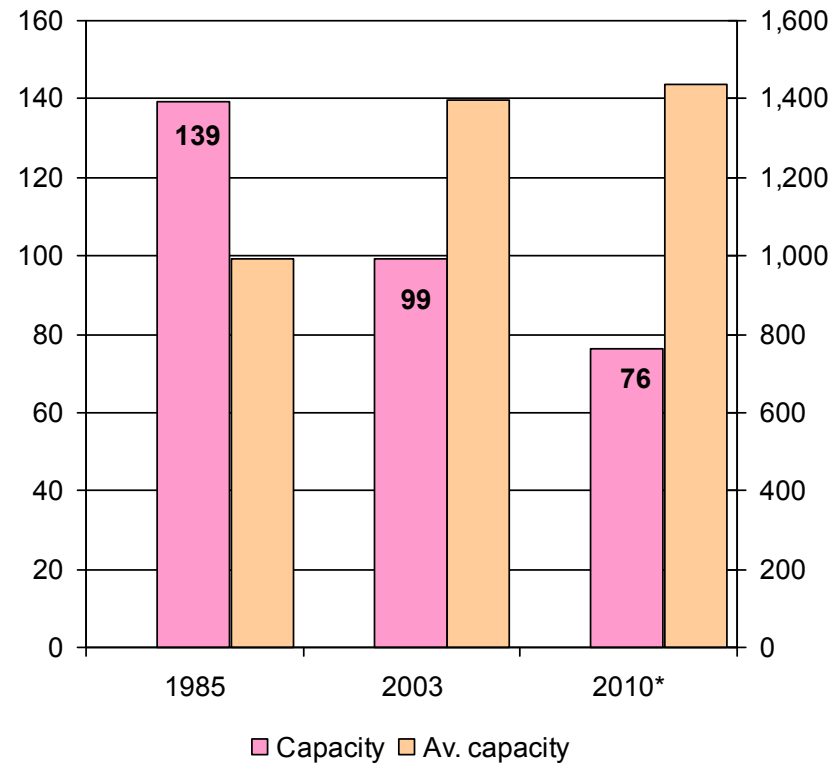
Source: WSD, ISSB, IISI and Hatch Beddows

This, coupled to stagnant local demand is expected to cause iron making in Western Europe to decline by 44% between 1985 and 2010

Number of Blast Furnaces in Western Europe



Total BF Capacity Western Europe (MT)



Source: James King and Hatch Beddows

In addition, different countries and regions have become steel exporters for other reasons than cost. China seems not to be a latent steel exporter

Brazil

- Only region to make strategic decision to export – state organisation Siderbras in 1970s
- Excellent access to raw materials esp. iron ore
- Very low position on cost curve

Russia/CIS

- Collapse of centrally controlled markets forced the hand of producers
- Excellent raw materials and cost structure
- All round low cost structure
- Proximity to Europe for several mills

European Union

- A former net exporter until 2000
- Production WAS dominated by state intervention – no more
- Overconfidence in 1970s and overinvestment in state companies

Japan

- No inherent structural cost benefit to steel making e.g. no raw materials
- Very low cost of capital – over expansion
- Migration of demanding customers pulling high grade material overseas (FDI)

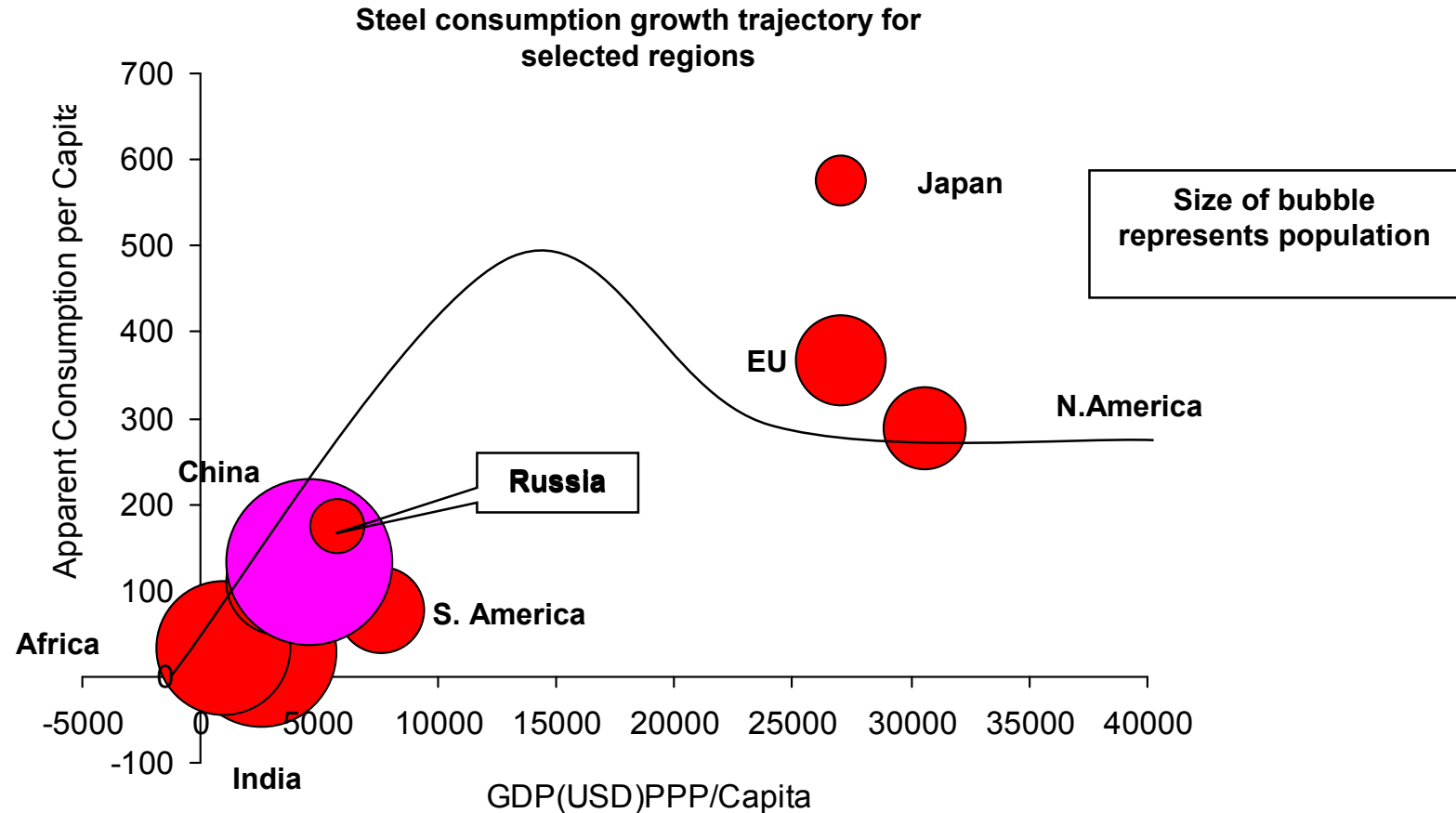
Korea

- Huge state funding for the construction of Kwanyang steel works
- Excellent transport infrastructure
- Steel companies are highly profitable

China

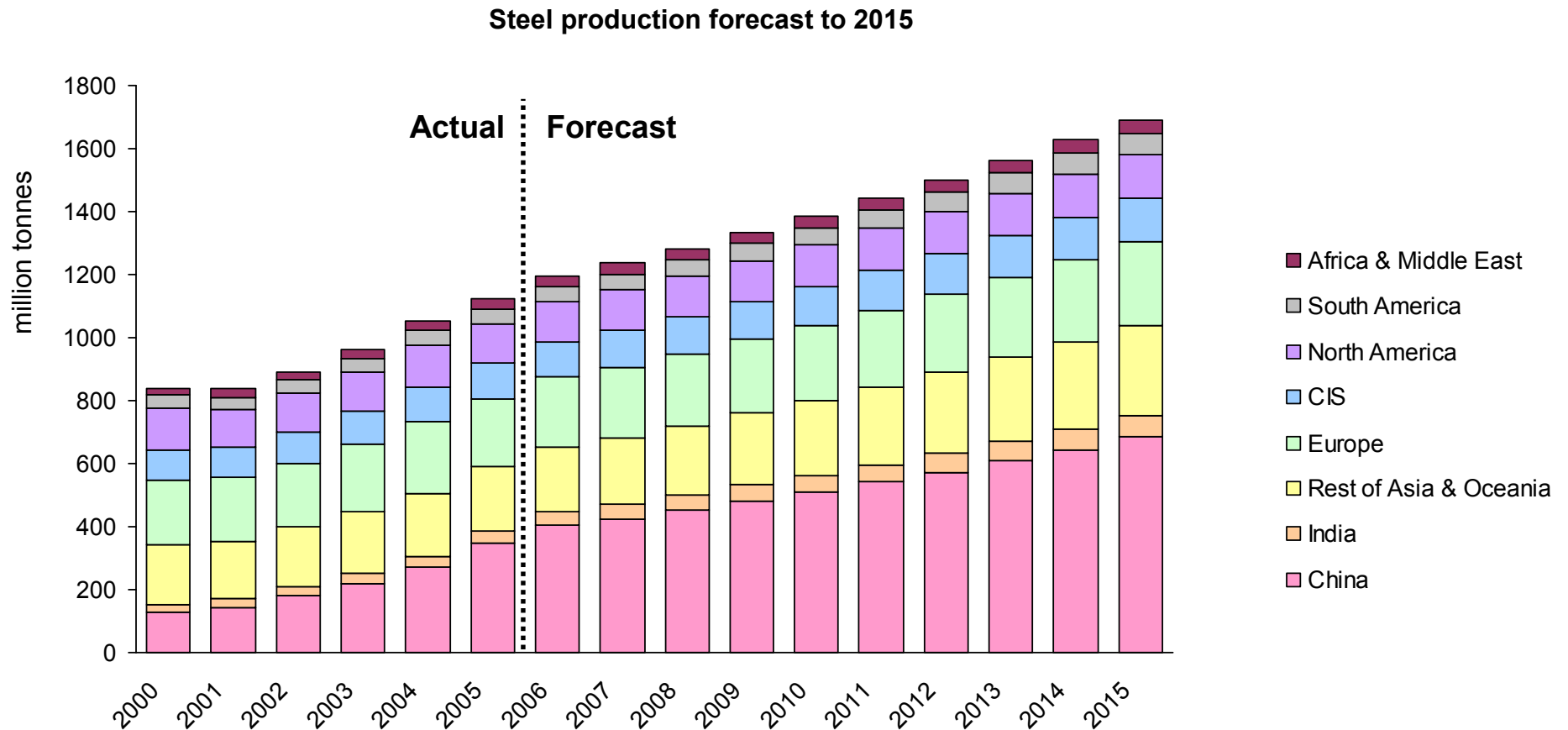
- No raw material advantage – only low labour cost
- No central control
- Capital cost to rise as banks restructure – but still an issue
- Low quality product with no customer quality pull
- Export is geared to manufactured goods

Steel production should of course be led by steel consumption – and it is this coupled to Chinese global aspirations that has created the Chinese steel industry powerhouse



THE FUTURE FOR EUROPEAN STEEL AND FOR STEEL IN CONSTRUCTION - GLOBAL STEEL

In summary, world crude steel output is projected to reach 1.7 billion tonnes by 2015, fuelled by continued strong growth in Chinese production



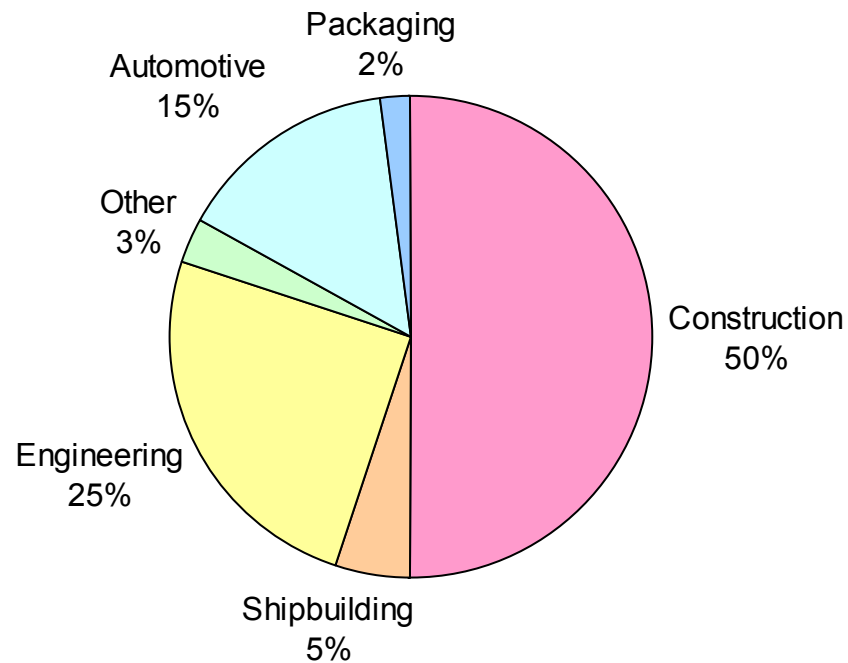
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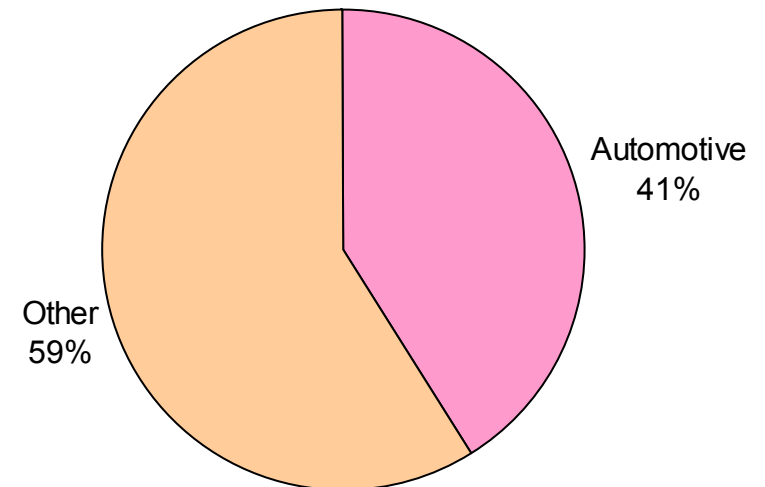
THE FUTURE FOR EUROPEAN STEEL AND FOR STEEL IN CONSTRUCTION - STEEL IN CONSTRUCTION

The automotive sector gets far too much attention! What could steel in construction be like if given the the same resources as auto

Consumption of steel worldwide



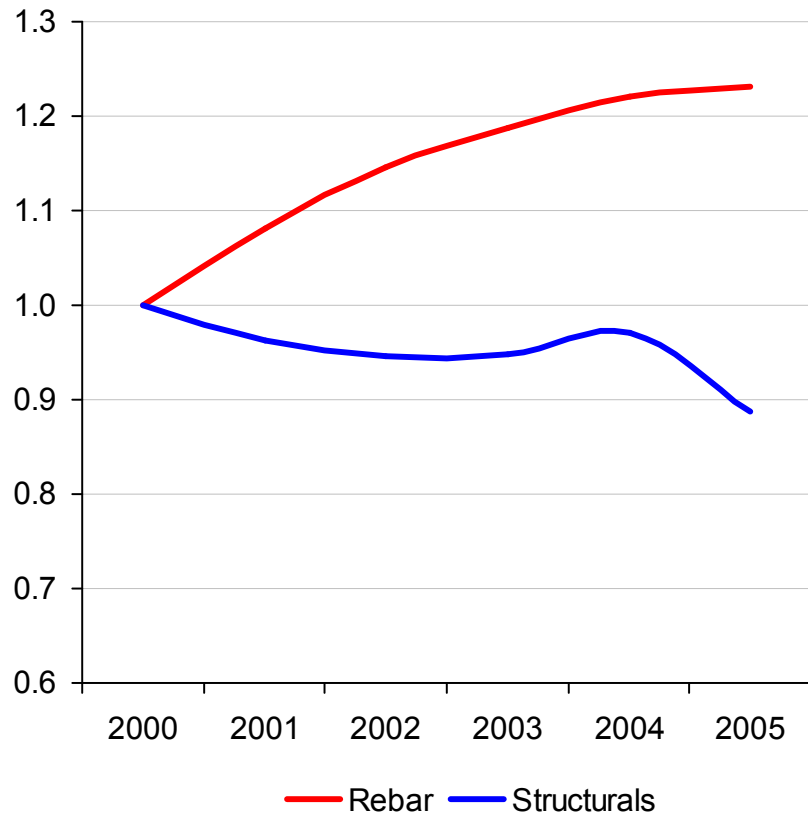
Steel development costs (RD&T, marketing etc.)



Source: IISI, WSD and Hatch Beddows

THE FUTURE FOR EUROPEAN STEEL AND FOR STEEL IN CONSTRUCTION - STEEL IN CONSTRUCTION
Concrete vs. sections seems to define steel in structures

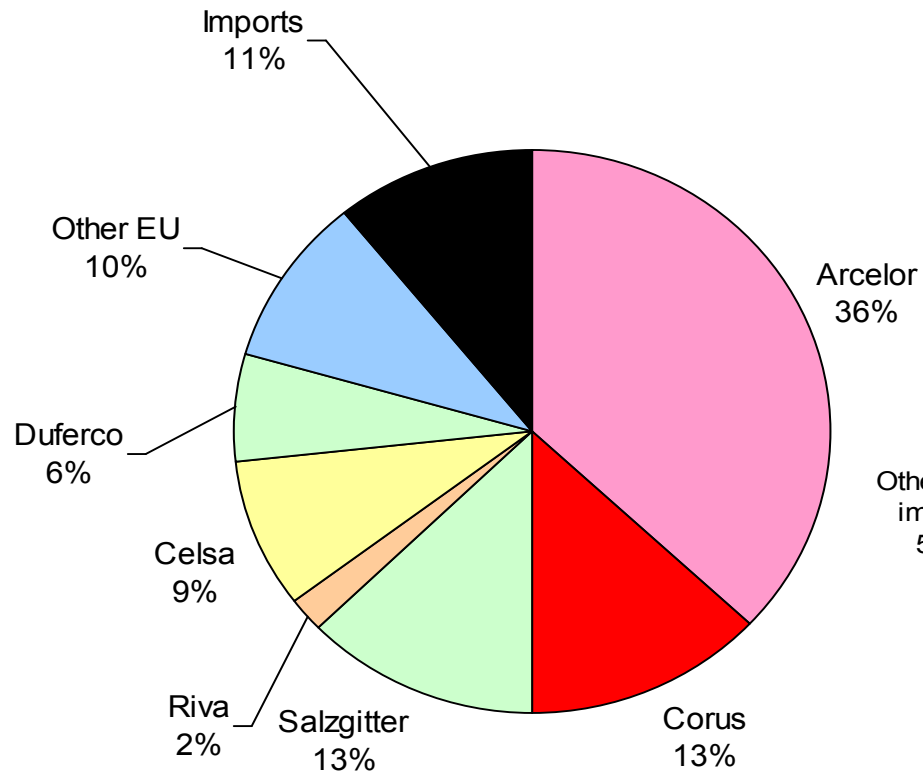
EU 15 consumption of rebar and large sections



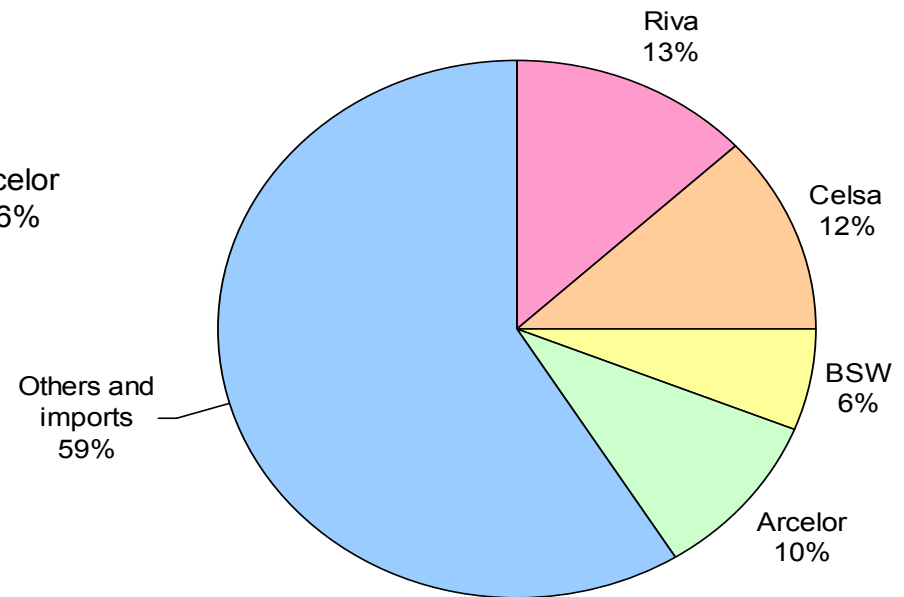
- During this decade, W. European rebar has out performed structural steel in volume terms
- What is happening here?

The European structural steel is very well structured but the rebar industry is fast catching up

EU15 market shares for sections



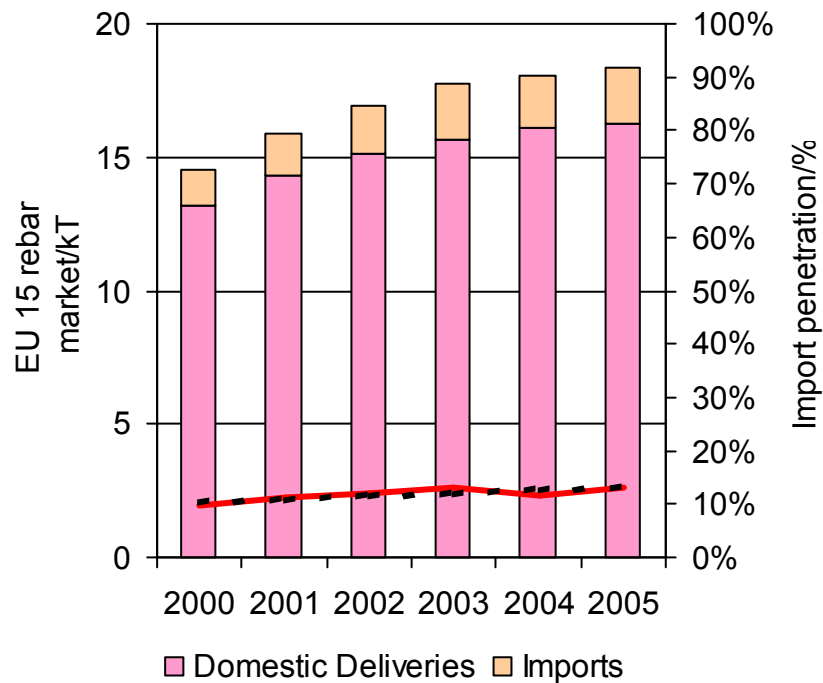
EU15 market shares for reinforcing steel



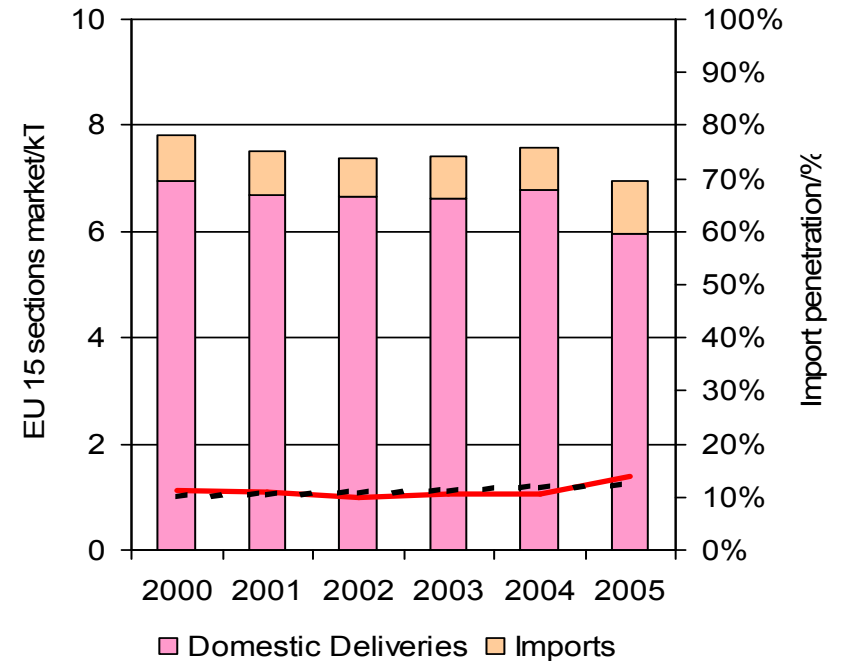
Source: Eurofer and Hatch Beddows

Consequently, both industries are relatively successful at minimizing 3rd country imports

EU15 demand for rebar/Mt and import penetration

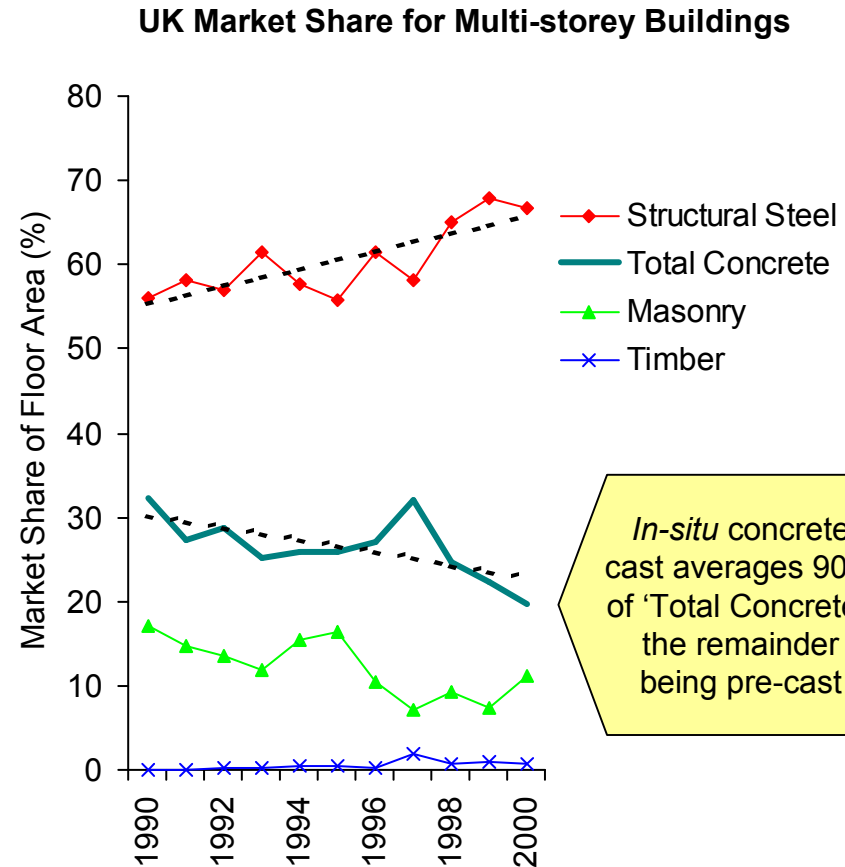
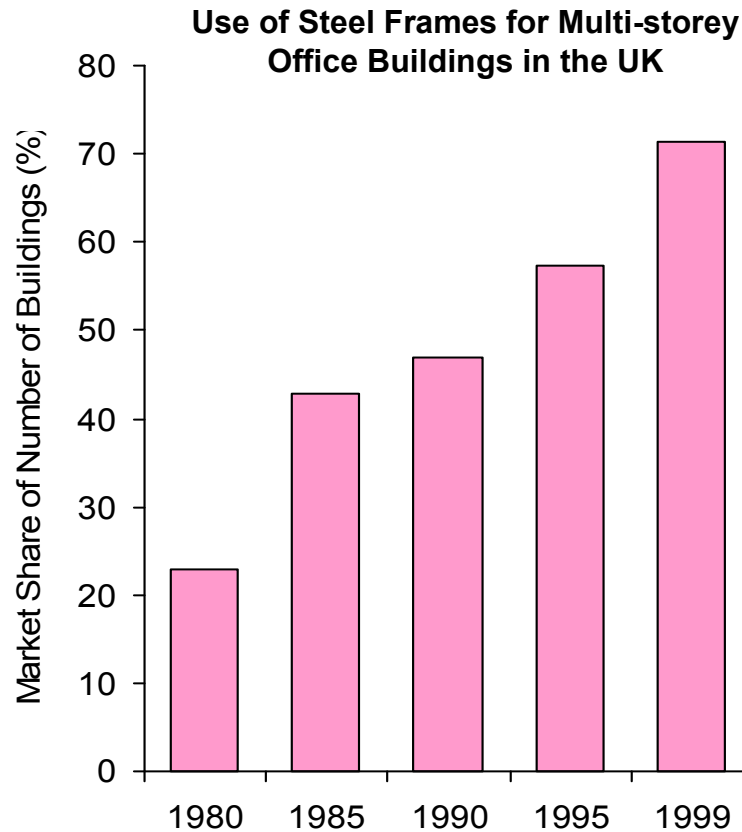


EU15 demand for large sections/Mt and import penetration



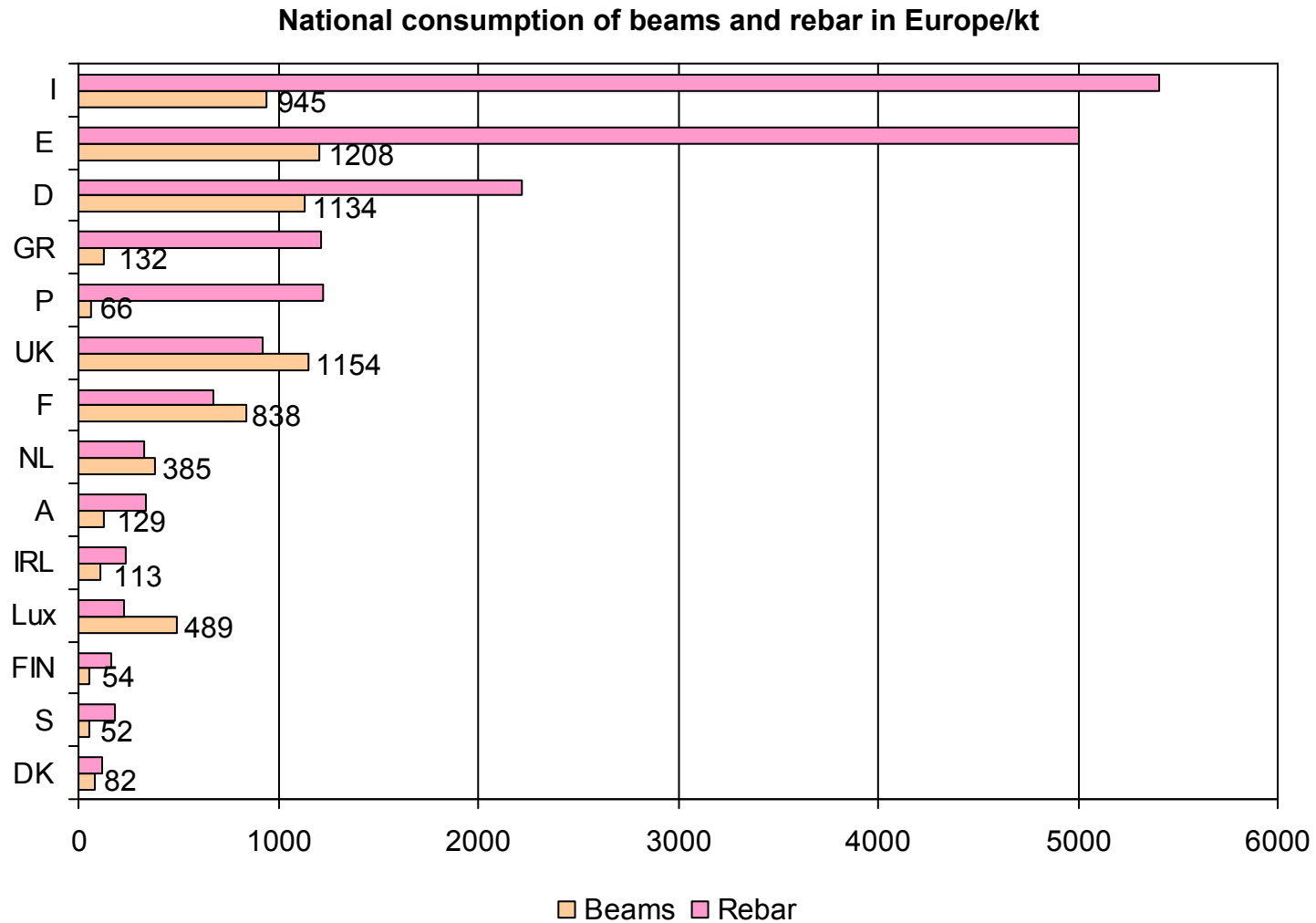
Source:-WSD, ISSB, Eurofer and Hatch Beddows

Within the UK, a marketing initiative across the construction supply chain by BS markedly displaced reinforced concrete as the preferred material in commercial buildings - how extendable is this to mainland Europe



Source: Corus, Construction Markets (2000), Hatch Beddows analysis

Rebar still dominates especially in the South

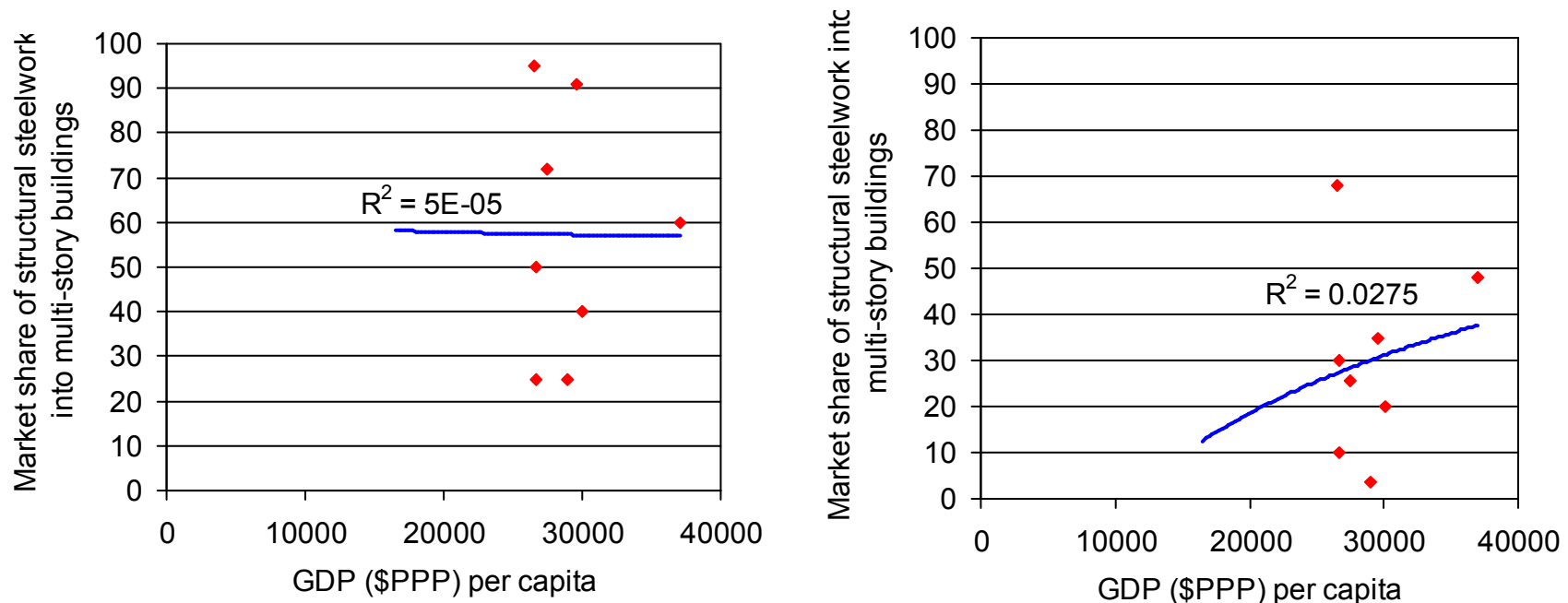


Source: EUROFER and Hatch Beddows

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Structural steelwork market share into single and multi-storey buildings do not correlate with national GDP – other factors including national steel campaigns make the difference - the UK shares of 95 and 68% still sets the benchmark

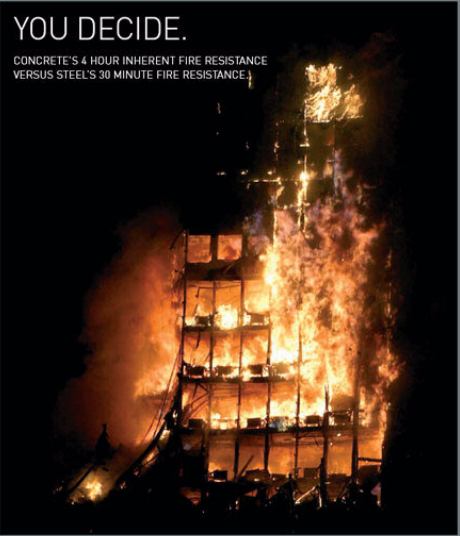
Market share of structural steelwork in single and multi storey buildings and GDP (\$PPP) per capita



THE FUTURE FOR EUROPEAN STEEL AND FOR STEEL IN CONSTRUCTION - STEEL IN CONSTRUCTION

The concrete industry is getting much more commercially and technically minded - it has been fighting back on the safety and the environmental front amongst others

YOU DECIDE.
CONCRETE'S 4 HOUR INHERENT FIRE RESISTANCE
VERSUS STEEL'S 30 MINUTE FIRE RESISTANCE.



REINFORCED CONCRETE
MAKE THE RIGHT CHOICE

BAR
BRITISH
ASSOCIATION OF
REINFORCEMENT

For more information on why concrete is the right choice visit www.uk-bar.org

YOU DECIDE.
SUSTAINABLE THERMAL COOLING
OF REINFORCED CONCRETE OR THE
OVERHEATING, ENERGY GUZZLING
OF LIGHTWEIGHT STRUCTURES?



REINFORCED CONCRETE
MAKE THE RIGHT CHOICE

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For more information on why concrete is the right choice visit www.uk-bar.org

YOU DECIDE.
THE INHERENT SOUND INSULATION
OF CONCRETE OR PRAYING THAT YOUR
NEIGHBOURS ARE OUT TONIGHT.



REINFORCED CONCRETE
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Source: BAR and Hatch Beddows

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In contrast to most other steel intensive supply markets, the construction market remains a 'pre-industrial' sector

- Construction is currently characterised as a series of sequential and largely separate operations undertaken by individual designers, suppliers and contractors
- Like car manufacturing in the 1920's, construction projects generally consume all raw materials on the location of construction
- Use of pre-fabricated construction components, systems and modules is still embryonic
- Most steel products used in construction are of relatively low value
- Most processing activities are relatively simple, requiring low capital and technology investments (cutting, slitting, profiling)
- **Time management and cost control are notoriously slack, with many projects being delivered too late and over budget**

Time management and cost control are notoriously slack, with many projects being delivered too late and over budget



FROM THE CITY THAT BROUGHT YOU WEMBLEY STADIUM

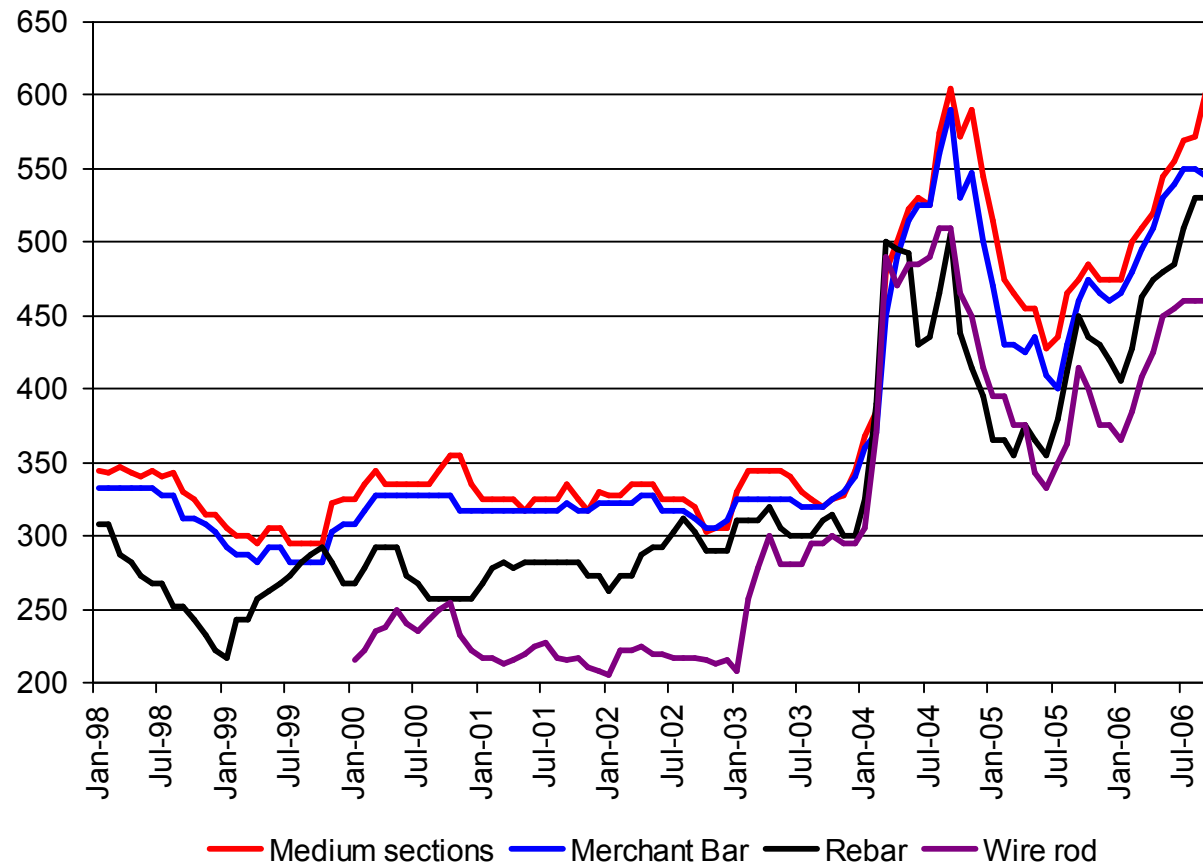
FO.C OE NVSE



“A client who thinks he can transfer all the risk down and expect the contract to be completed on time is living in cloud cuckoo land”

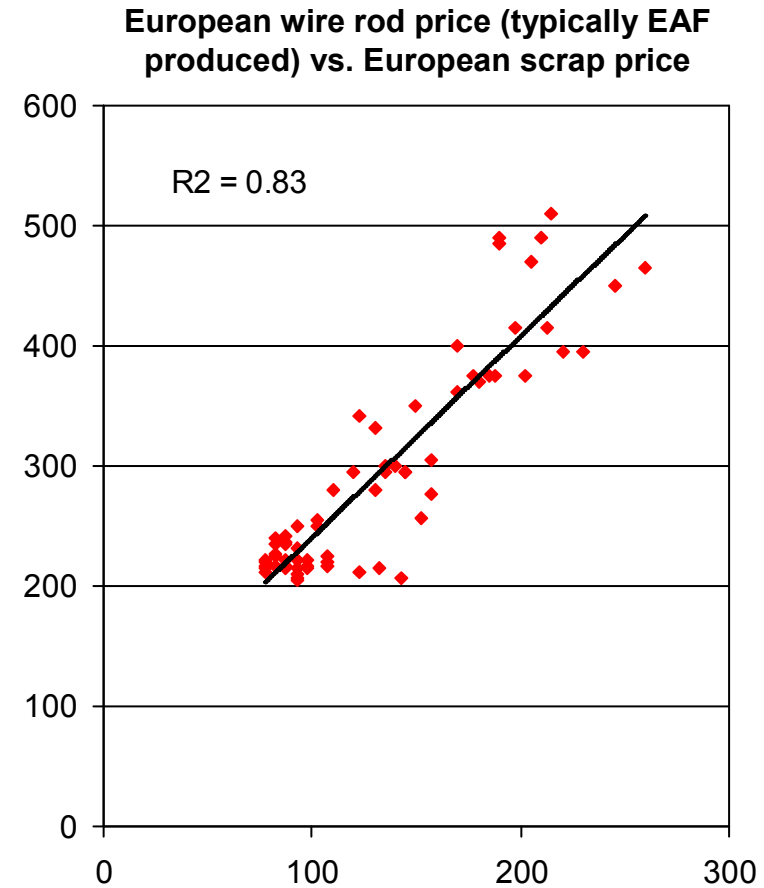
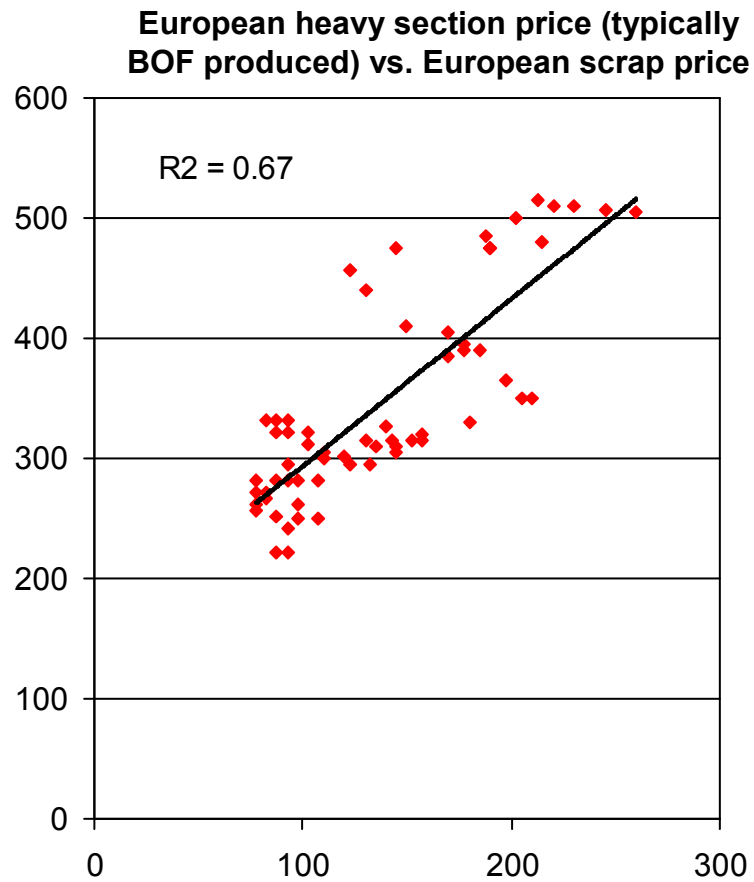
Despite consolidation and improved capacity management steel prices are more volatile as ever

European light long product delivered prices/(€/t)



Source: SBB and Hatch Beddows

Rebar producers have an inherent advantage in that they have a natural hedge with their scrap supply



Source: SBB and Hatch Beddows

Risk management tools for several steel products are now being developed and we encourage you to take part in the ongoing process




LONDON METAL EXCHANGE

platts

The LME and Platts Steel Venture

Liz Milan
London Metal Exchange

- How can a price index help my business?
 - Be a starting point for one-to-one negotiations
 - Based on product quality, quantity, and service levels
 - Reduce the risk of contract default
 - Both parties agree to the market price so no need to renegotiate contracts
 - Allow for the development of financial products to manage price risk for
 - producers
 - and all participants in the value chain

QUESTIONS

Thank you

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