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How can Value be Created in Galvanizing and Pre-Painting Steel?

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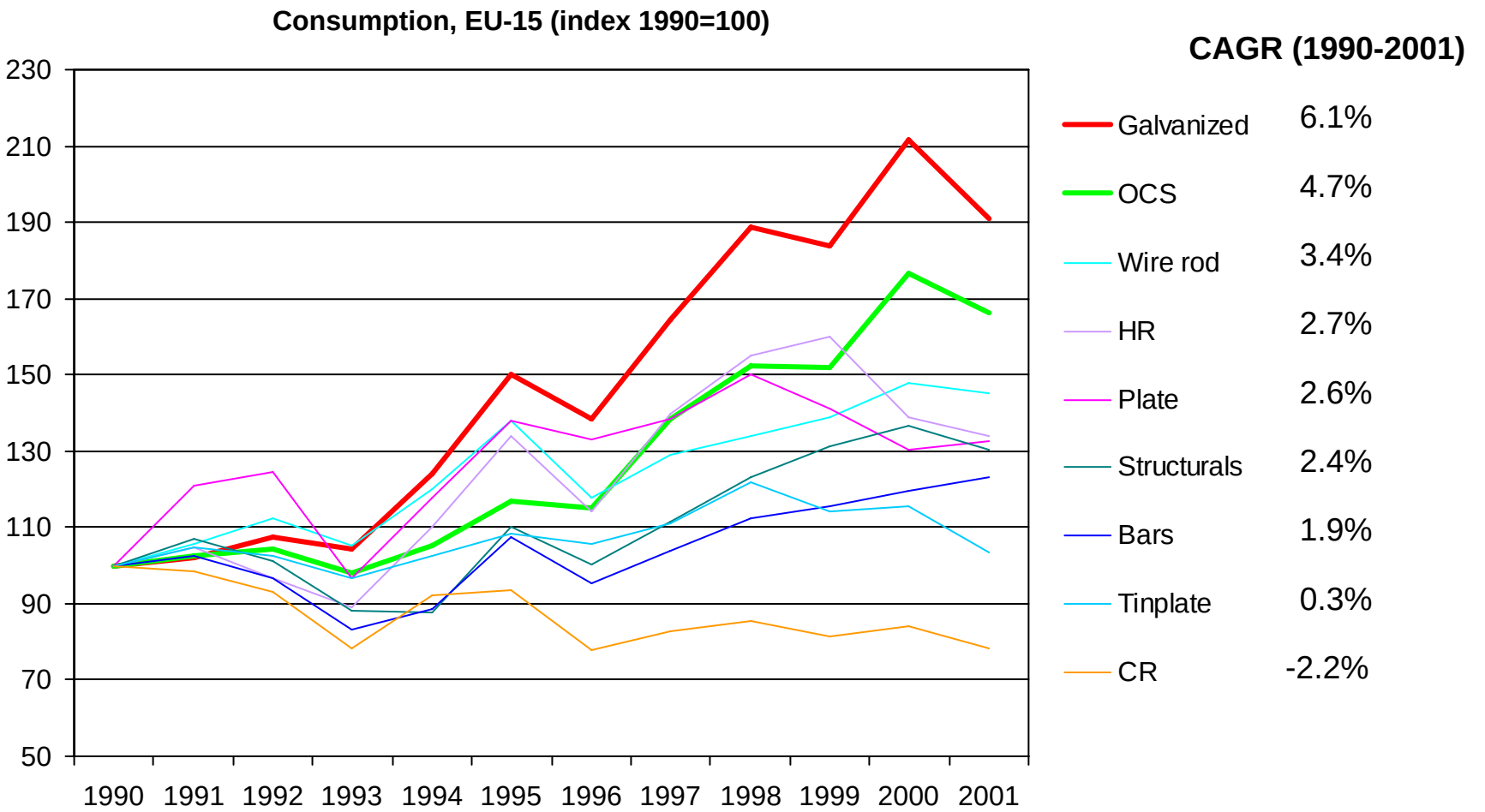
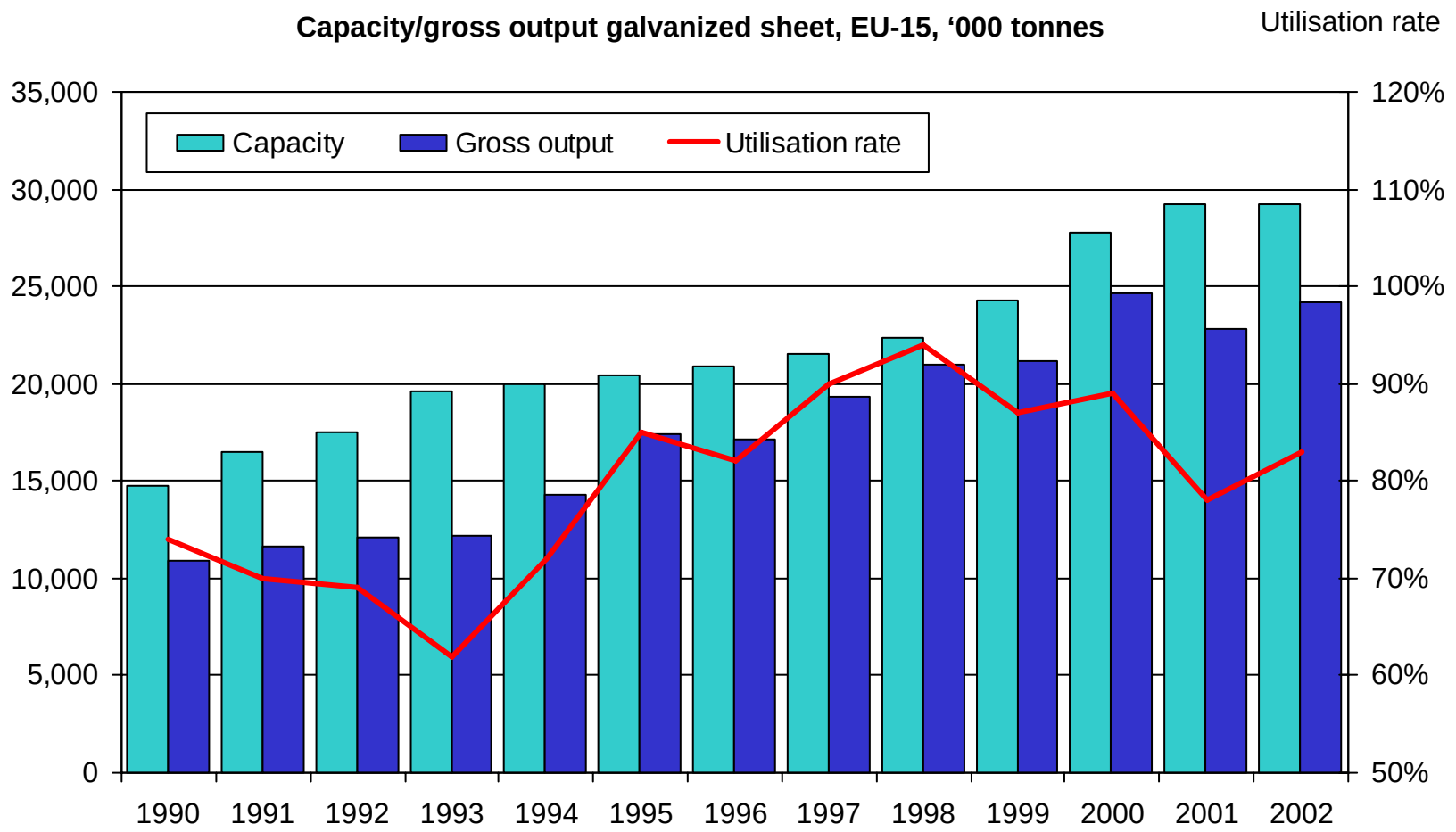
During the last decade, demand for coated sheet has outperformed that for all other major steel products...



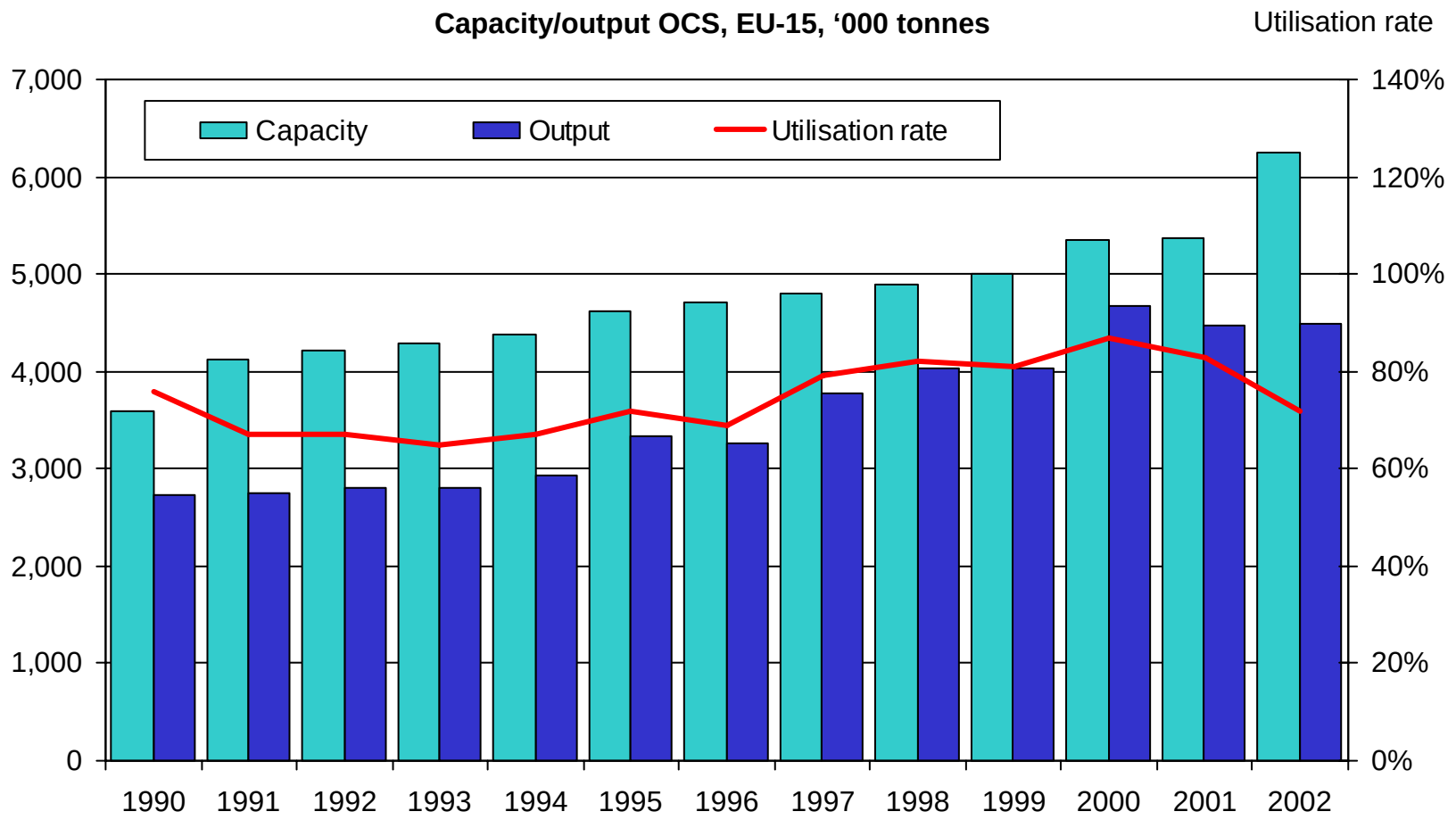
Source: WSD, Eurostat, ISSB

However, capacity has risen even faster and galvanizing lines have seen utilization rates drop after 1998...



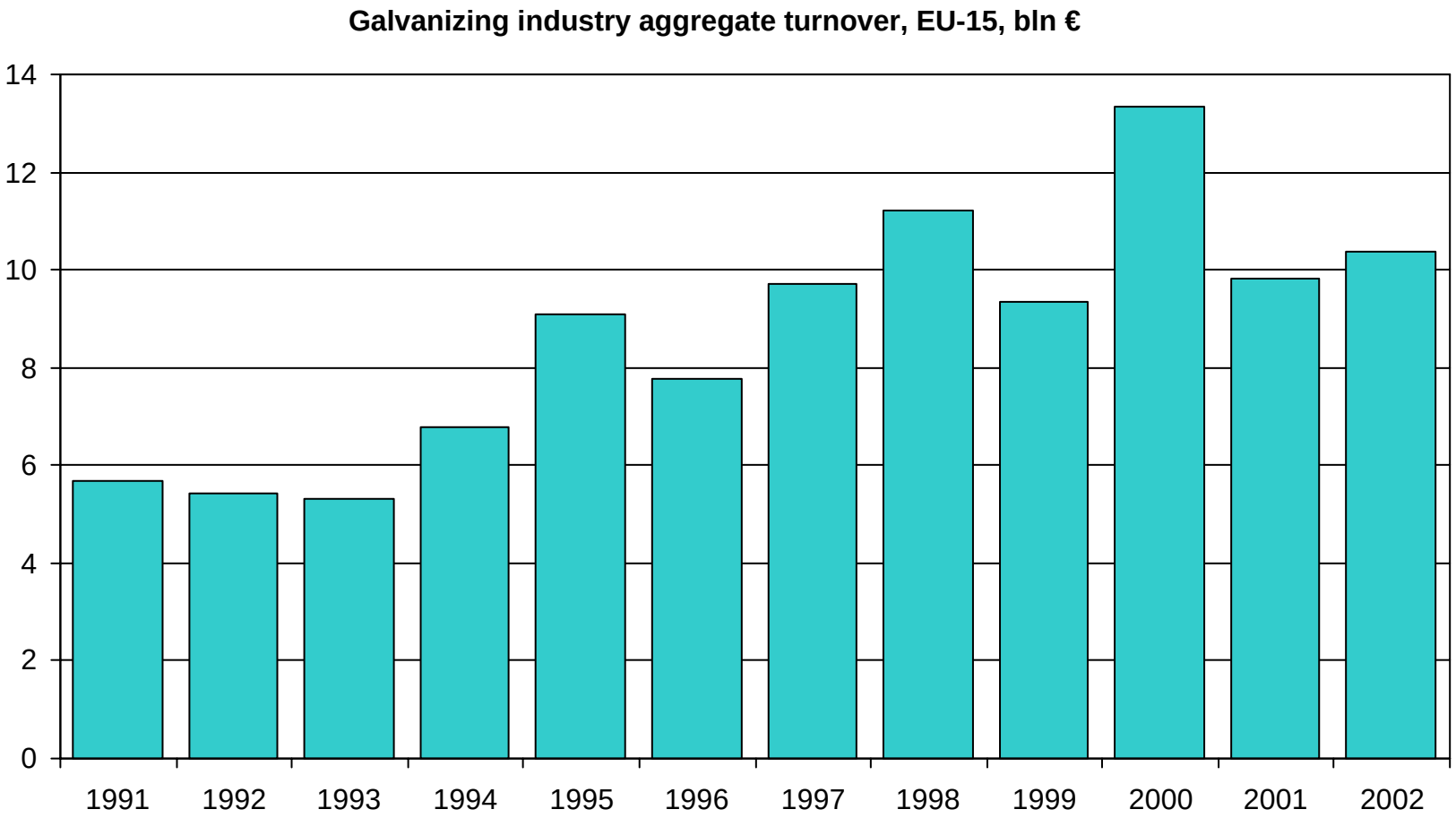
Source: WSD, James King, Eurostat, ISSB, MBR, Hatch Beddows

Followed by declining utilization in the organic coating industry in 2001



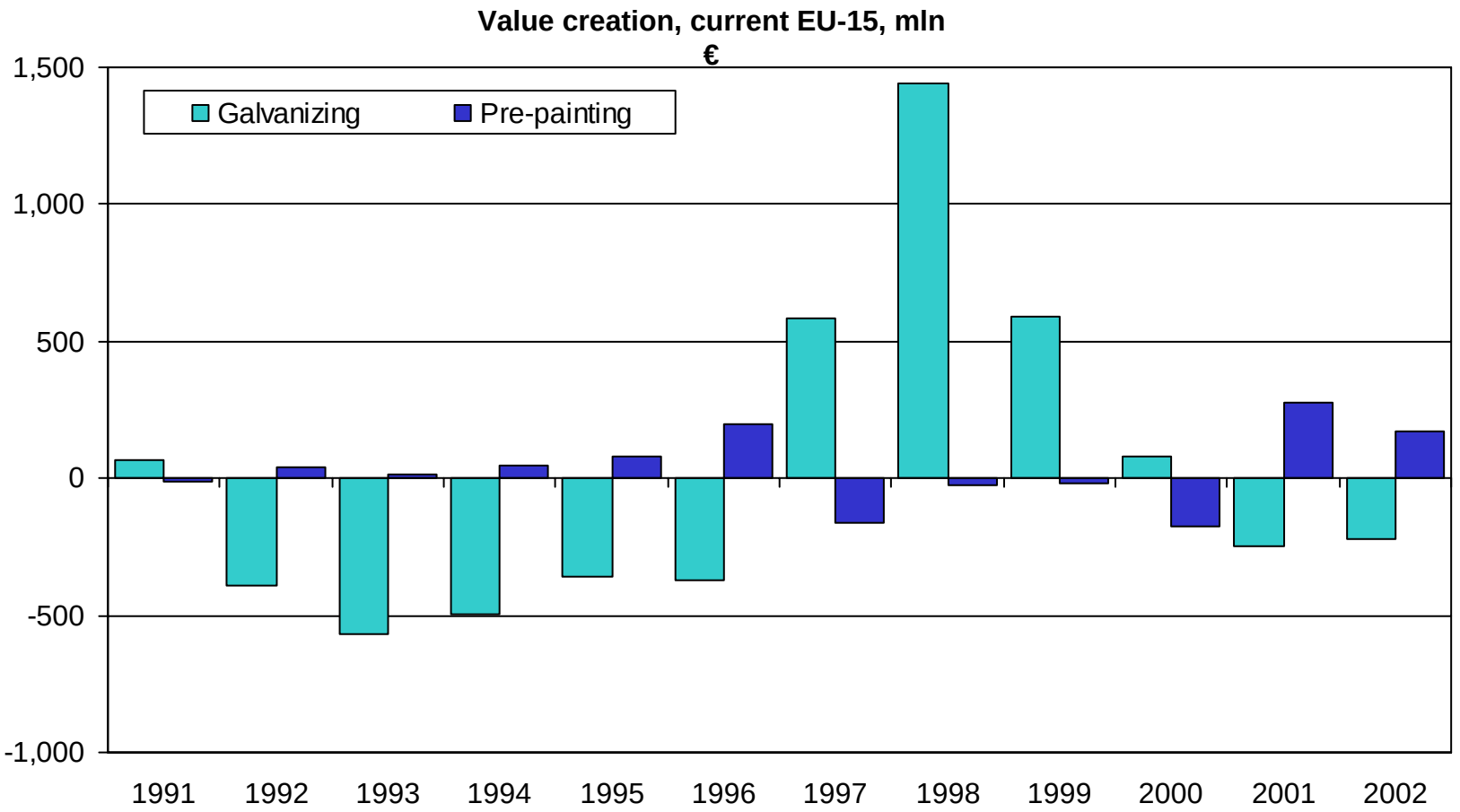
Source: WSD, James King, Eurostat, ISSB, MBR, Hatch Beddows

Volatile price margins between CR-Galv and to a lesser extent between Galv-OCS are causing considerable fluctuations in industry fortunes over time



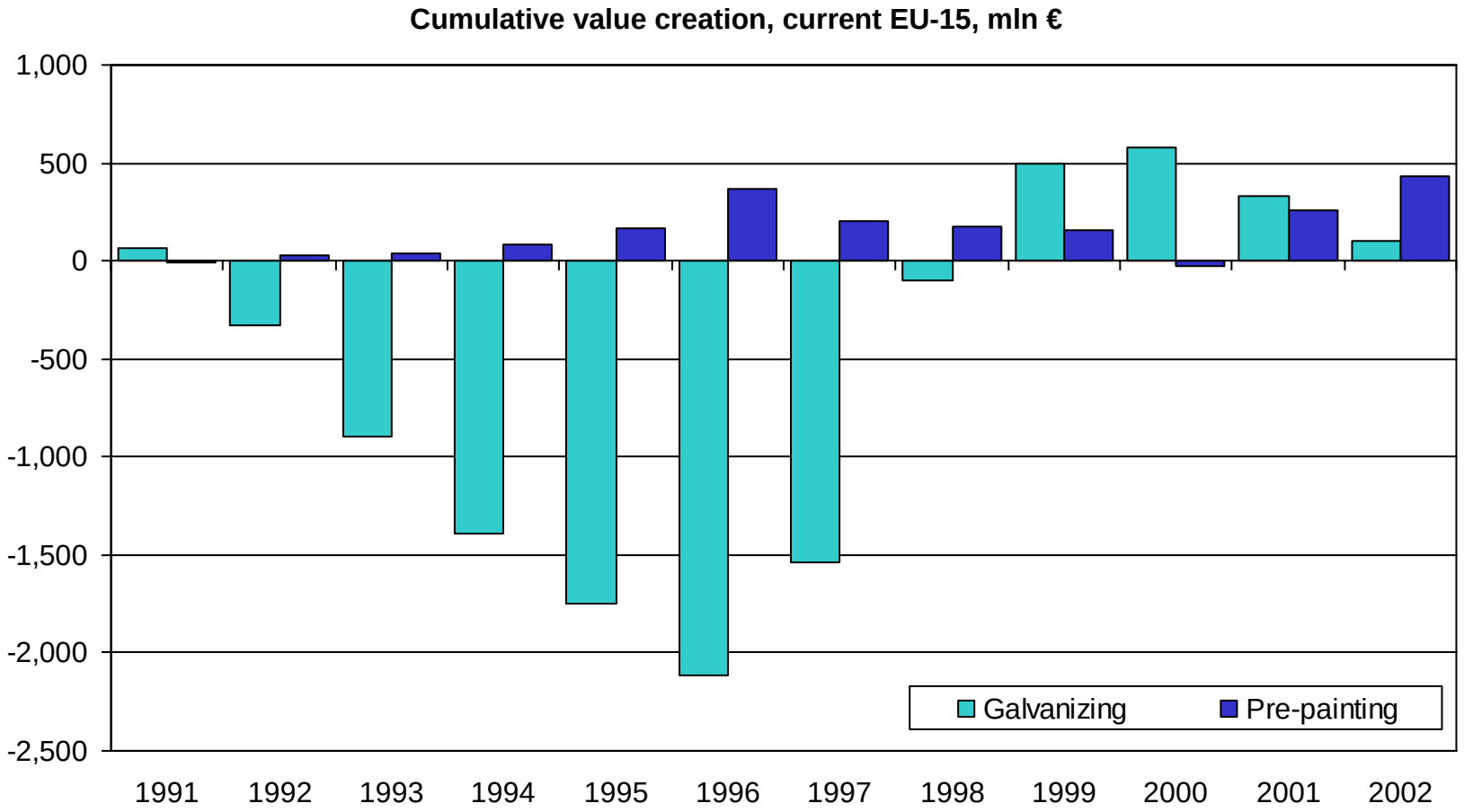
Source: WSD, James King, Eurostat, ISSB, MBR, Hatch Beddows

Much of the value created in the EU galvanizing industry was realized during a period of tight market fundamentals from 1997-1999, offsetting value destruction in most other years.



Source: Hatch Beddows analysis
Note: Calculations are based on a Weighted Average Cost of Capital (WACC) of 10%

Over 1991-2002, we estimate that the galvanizing industry has earned back its cost of capital, but has not created much value, despite exceptional market growth.



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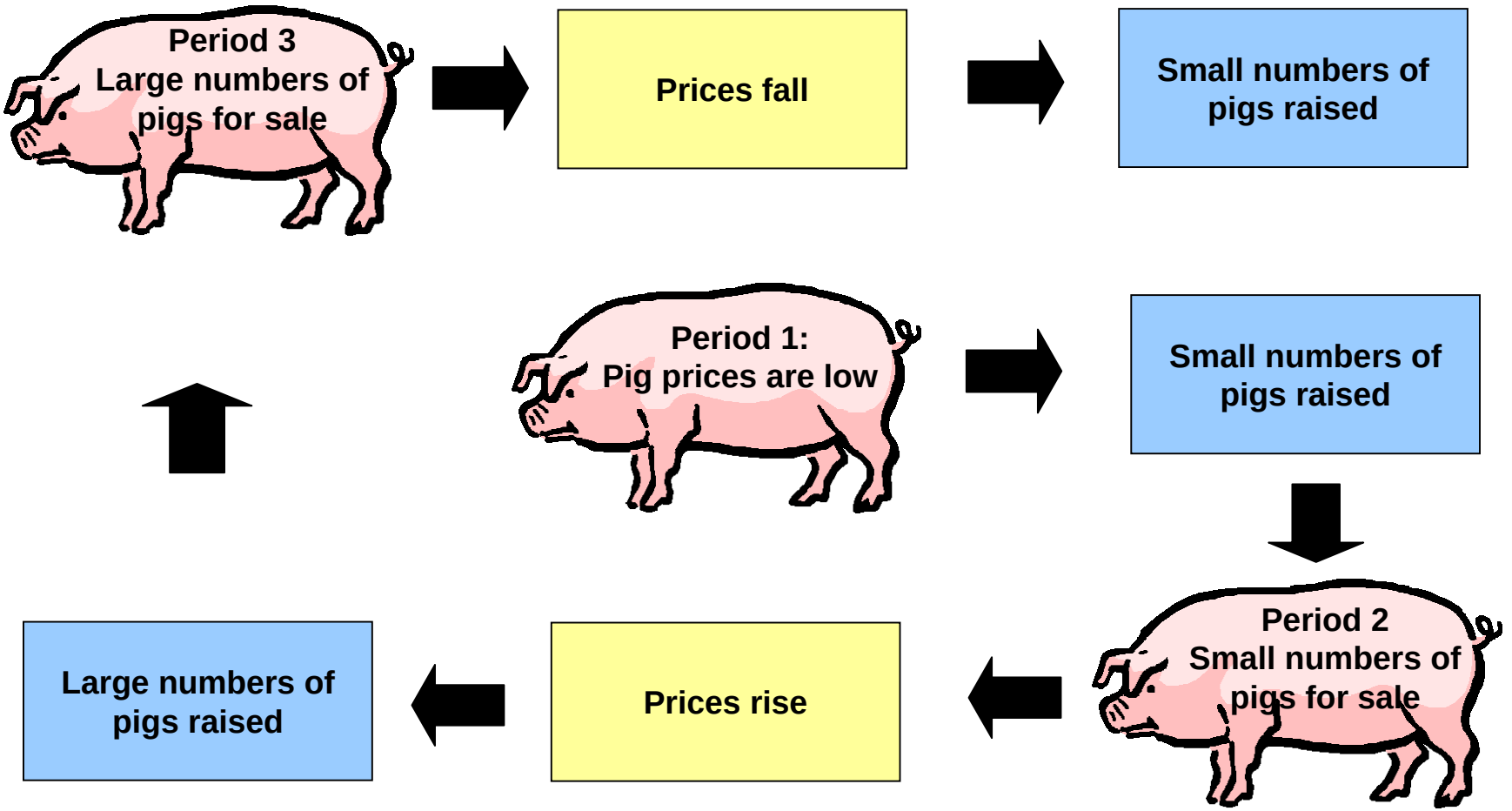
The steel coating industry seems subject to a typical case of the so-called ‘pig cycle’



Source: Coase and Fowler (1935-1940), Tillinghast- Towers Perrin

The pig cycle describes industries with persistent, substantial discrepancies between supply and demand

- The pig cycle theory was developed by R. Coase, Winner of the Nobel Prize for Economics in 1991, and R. Fowler in a series of papers between 1935 and 1940 in an attempt to explain persistent periods of supply/demand imbalances in British pig and bacon production.

- An industry is subject to the pig cycle when the following conditions occur:
  - Prices vary inversely with available capacity
  - Low entry barriers
  - Decisions to enter are based on current prices
  - Time lag in adjusting supply
  - Poor management information, especially on levels of future prices

- Within steel, galvanizers and pre-painters are especially vulnerable to the pig cycle:
  - They have lower entry barriers than other flats markets
  - They are active in a fast growing market, causing more volatility

Source: Coase and Fowler (1935-1940), Tillinghast-Towers Perrin

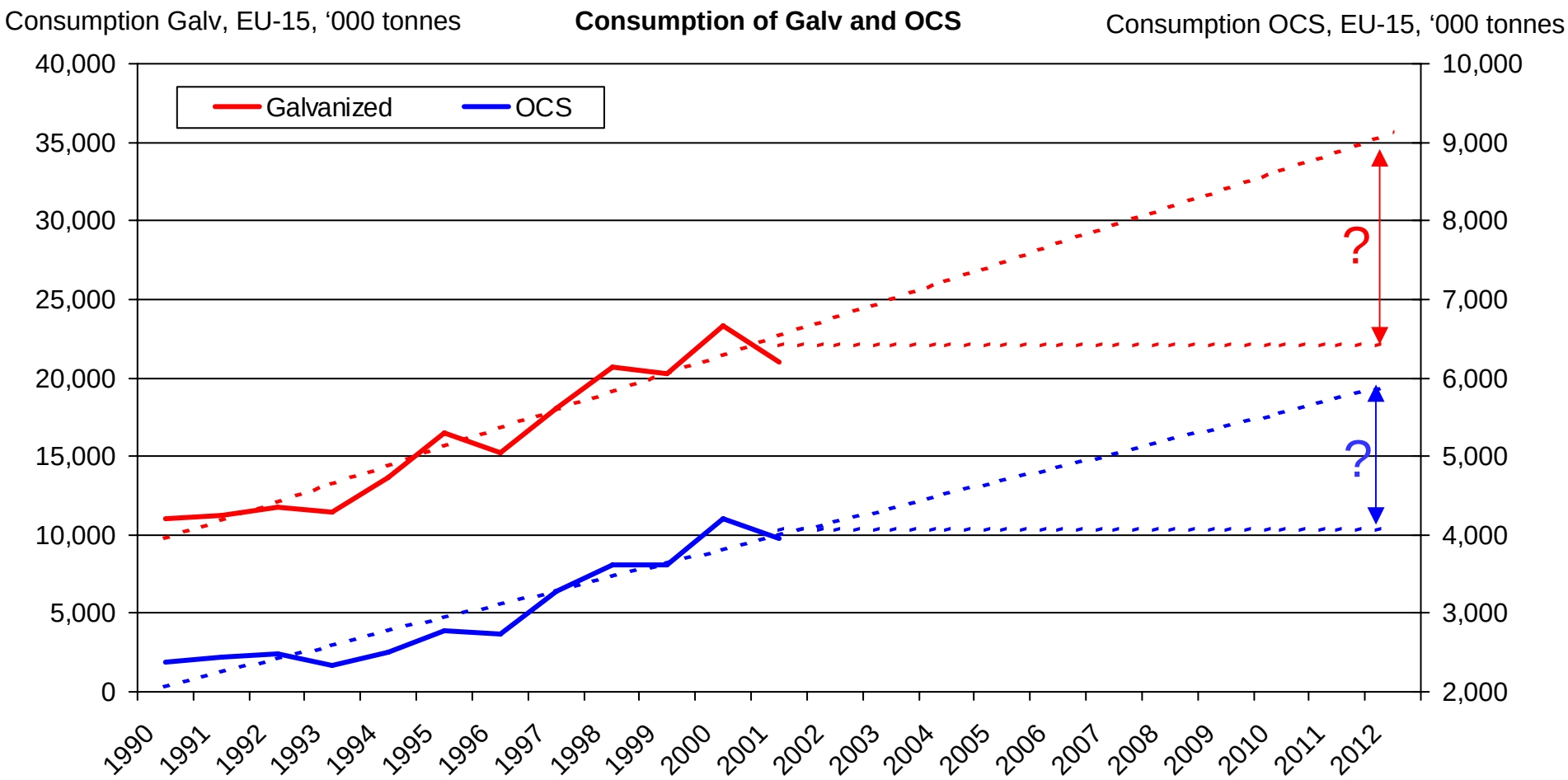
A fast growing market does not guarantee long term value creation for steel coaters if the industry remains subject to the pig cycle

- During the last decade, periods of strong over and undercapacity in the markets for coated sheet have occurred in North America and Western Europe and are threatening to occur in Eastern Europe, the CIS and China. Steel does not seem able to break out of the pig cycle.

- Not much can be done about the time lag between investment and supply changes, but investment decisions may be improved by:
  - Better price information: Steel is the only significant metal market lacking price transparency and a forward price curve. The introduction of forward contracts by the LME may provide better current and future price transparency, on which to base investment decisions.
  - Consolidation: Steel coaters do not have poor market information, a main cause of the pig cycle is the fragmentation of the industry and individual producers' fear of being left out. Consolidation would bring more discipline and better capacity control. In addition, concentration of market power with a few strong players could raise barriers to new entrants.

Further consolidation of the galvanizing and coil coating industry in Western and Eastern Europe is a pre-condition for future value creation

Moreover, exceptionally strong market growth rates seen in the past cannot be taken for granted in the future



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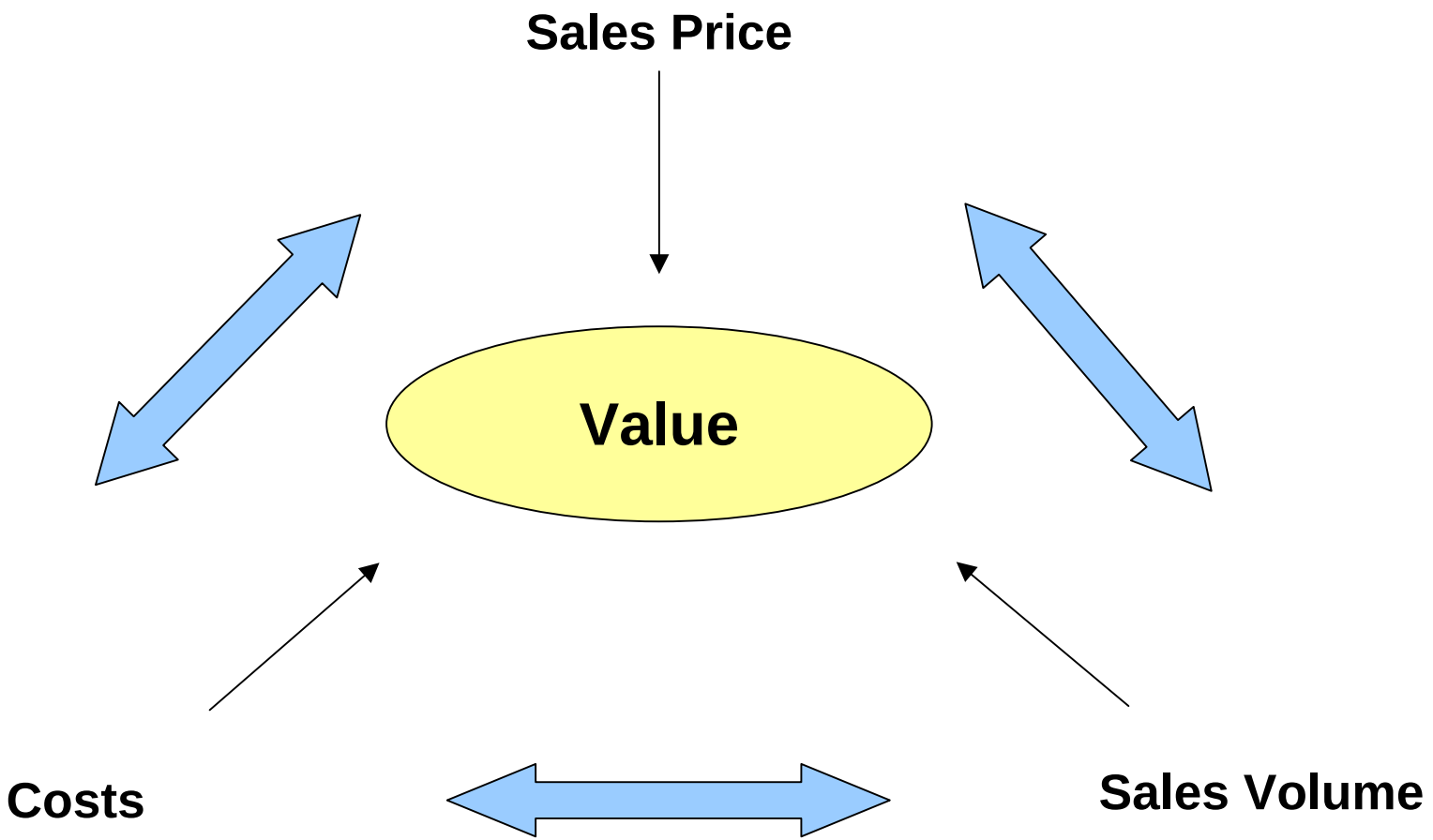
How can value be created in galvanizing and pre-painting steel?



Cost Reductions (1)

- **On-going productivity improvements**

- **Price reductions in zinc/paint**
  - Zinc and paint account for a substantial part of the conversion costs of galvanized sheet and OCS, respectively. As a result, industry profitability is very sensitive to the prices for these consumables.
  - The price for zinc, a commodity product, is outperforming steel prices over the long term.
  - The paint industry has consolidated in recent years and although the EU steel coating industry has shown some consolidation as well, most pre-painters have seen their bargaining power reduced.

- **Cost reductions in zinc/paint**
  - Thinner coating layers without performance loss can lead to significant savings in the cost per tonne of coated sheet.
  - This improves the products' competitiveness versus other materials and versus post-painting operations…
  - And is in the interest of both steel producers and paint suppliers, which are partners in providing essential value to the steel product.

Cost Reductions (2)

- **Cost reductions in the substrate material**

  What is the potential for the use of thin-gauge HR as substrate for galvanized and pre-painted coil?

- **Optimization of portfolio management**

  Especially relevant for producers which operate multiple production lines making different qualities, for different end-use markets, for different customer types.

- **“The search for the Holy Grail”**

  Is there a new technology that could lead to a step change in galvanizing/pre-painting costs? Should solid block coating and coil powder coating (for coils) be written off?

But cost reductions do not create value for galvanizers and pre-painters if savings are passed straight on to consumers and/or suppliers

⬇

CONSOLIDATION

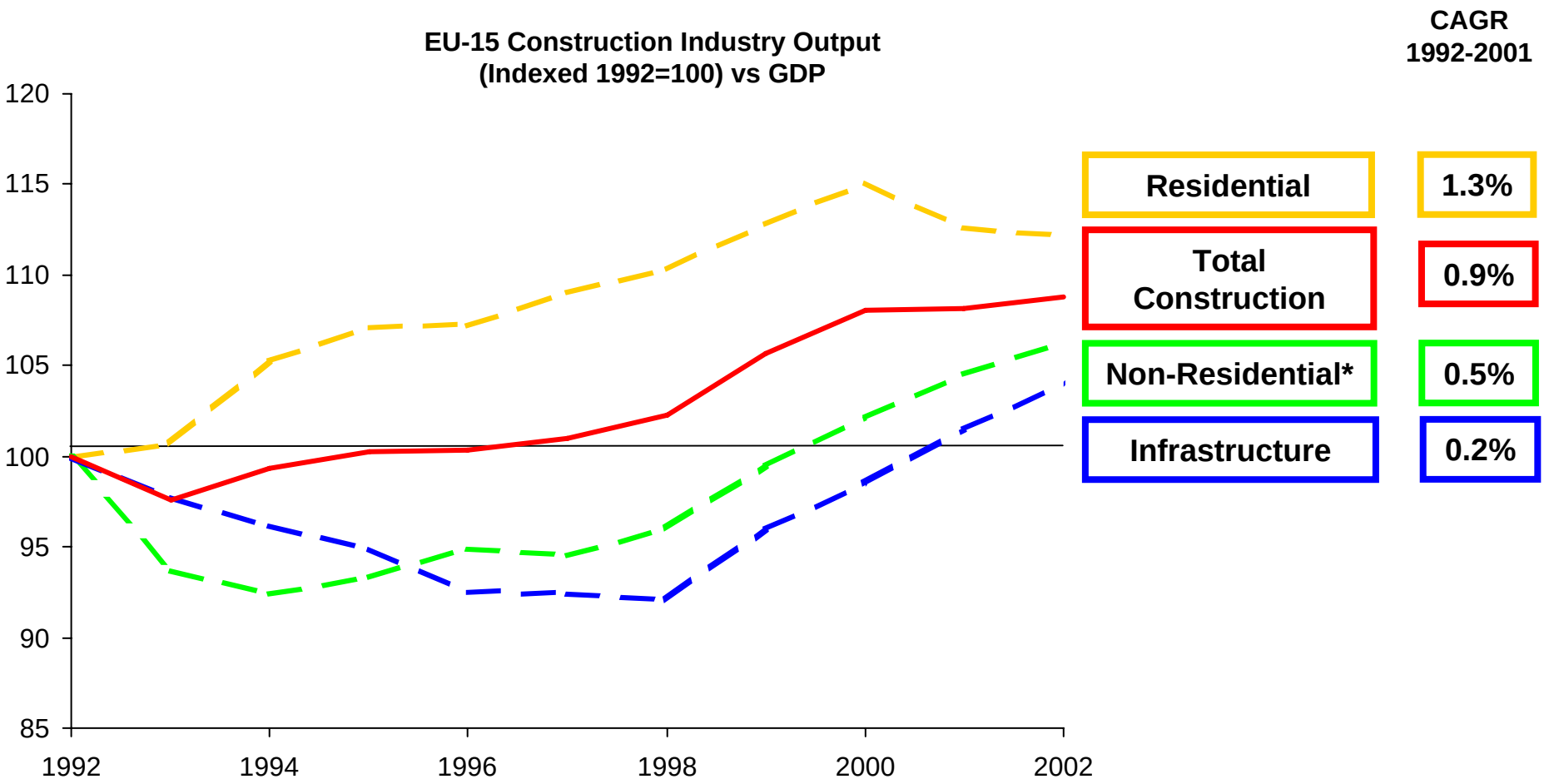
Increase Sales Volumes

- **Product development**

  New coating types and new applications in existing markets. Example: Bonazinc/ Granocoat coatings (which are used for extra corrosion protection, not to replace post-painting operations).

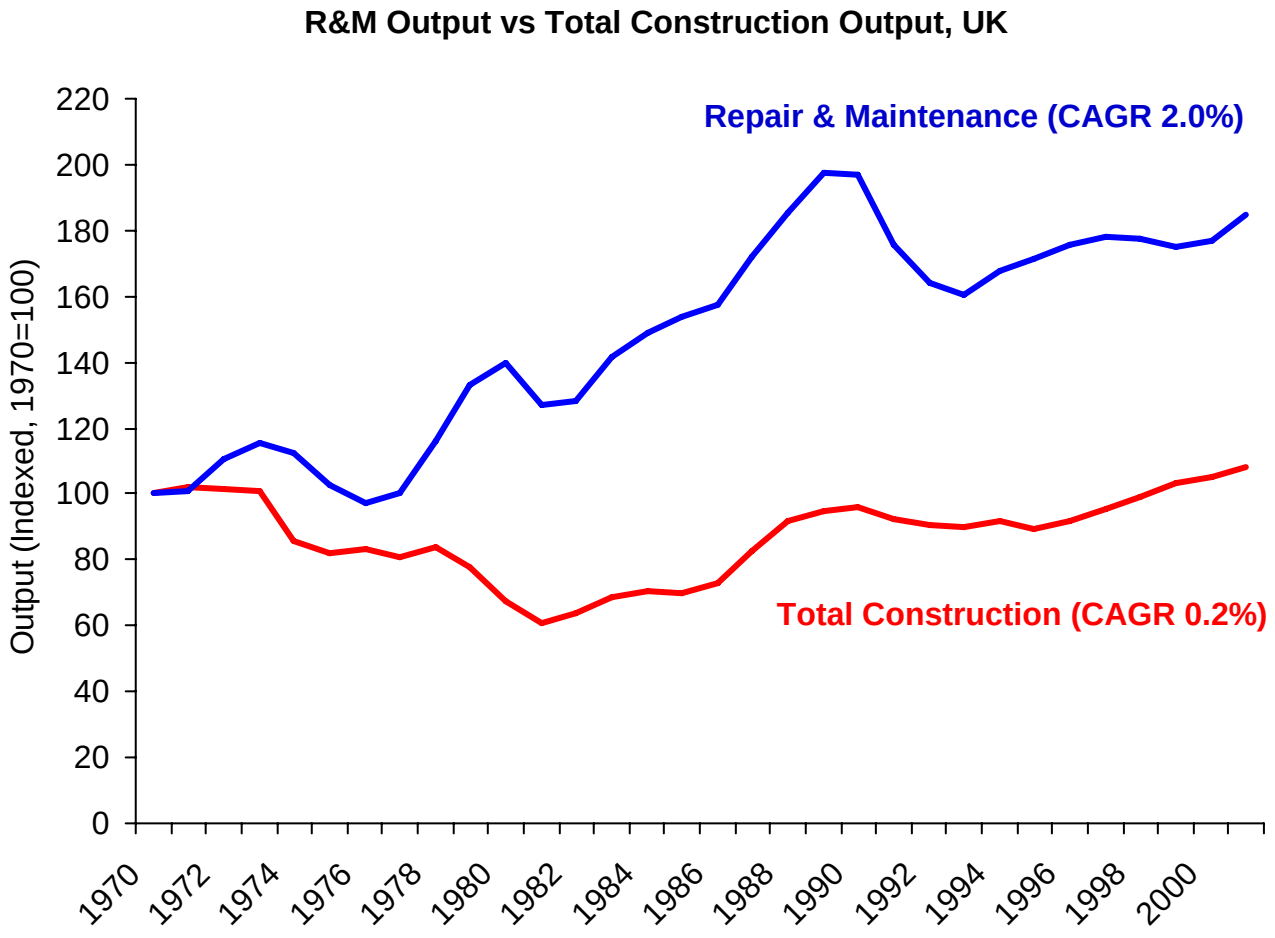
- **Market development/penetration**
  - Geographically: strong demand growth expected in Eastern Europe
  - By end-use sector:
    - Further penetration of the EU commercial construction sector, like Corus has achieved in the UK.
    - Penetration of ‘untapped’ construction segments: Residential, Repair & Maintenance

The residential sector is showing the fastest growth within the construction industry



* Non-residential = Commercial & Industrial
Source: FIEC

Output in the repair & maintenance sector now equals that from new build construction and has been growing at a faster rate since 1970



- Rising house prices and scarcity of land have driven the growth of the R&M market as an increasing number of properties are renovated.
- In the EU, turnover from R&M now almost matches that from new construction.

Source: DTI

Increase Sales Volumes

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    - Penetration of 'untapped' construction segments: Residential, Repair & Maintenance
    - Further penetration of the appliance industry, mainly by replacing post-painting operations.
    - In the longer term, will OCS be able to replace post-painting operations in the automotive industry?

Potential Threats (1)

- **Competition from Eastern Europe & the CIS**

  Anticipating strong demand growth, producers in Eastern Europe & the CIS are rapidly expanding regional coating capacity. With a cheaper cost base and rising quality standards, regionally based producers could become strong competitors to those in the EU-15.

- **Migration of end-use manufacturers to lower cost countries**

  In addition, part of the growth in consumption of coated sheet in Eastern Europe is likely to be at the expense of consumption in the EU-15, as end-use manufacturers are expected to relocate part of their operations to the Candidate Countries in the coming decade. The question is: To what extent will manufacturers migrate, when will they do so and how does this vary by end-use industry?

- **OCS overcapacity in China**

  Today, China is a net importer of 1m tpy of OCS. However, in 2005 China is forecast to be a net exporter of 1m tpy of OCS, adding 2m tpy of pre-painted material to the global market balance. Asian material, mainly from South Korea and Taiwan, already accounts for the majority of current third-country imports of OCS into the EU. Will Chinese output find its way to EU markets in the years ahead?

Potential Threats (2)

- **Reversal in the use of weldable primers in automotive**

  If automotive producers would discontinue the use of weldable primers, the equivalent capacity of several pre-painting lines would become available to compete in other market segments.

- **Reversal of substitution of CR by galvanized sheet in automotive**

  Will the EU follow developments in North America?

Conclusions (1)

- In the past, demand for galvanized sheet and OCS has been boosted by positive substitution effects, most of which are likely to slow down or even disappear in the years ahead.

- However, as results over the last decade show, growing markets and structural cost reductions are no guarantee for long term value creation by the industry as a whole.

- To realise and safeguard a healthy, value creating sector, galvanizers and pre-painters need to:

  - reduce the industry's fragmentation in order to prevent the "pig cycle" effect and increase producers' bargaining power over other players in the supply chain
  - create new substitution & penetration effects to add to generic sector growth

Conclusions (2)

- This means improving coated steel's competitiveness versus alternative materials and competing processes, which will require:
  - innovation in product and technology
  - closer co-operation with suppliers, processors and end-users
  - an increase in marketing efforts targeted at designers, architects, contractors, governments etc.
- Again, consolidation would benefit the industry by increasing the effectiveness of R&D activities and product & market development efforts.
- Finally, consolidation will benefit the industry by enabling more efficient portfolio management across multiple production lines.

Thank you for your attention!

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