

Metal Bulletin's 6th International Galvanizing and Coil Coating Conference

Where's the Future for American Hot Dip Galvanizing?

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Paris

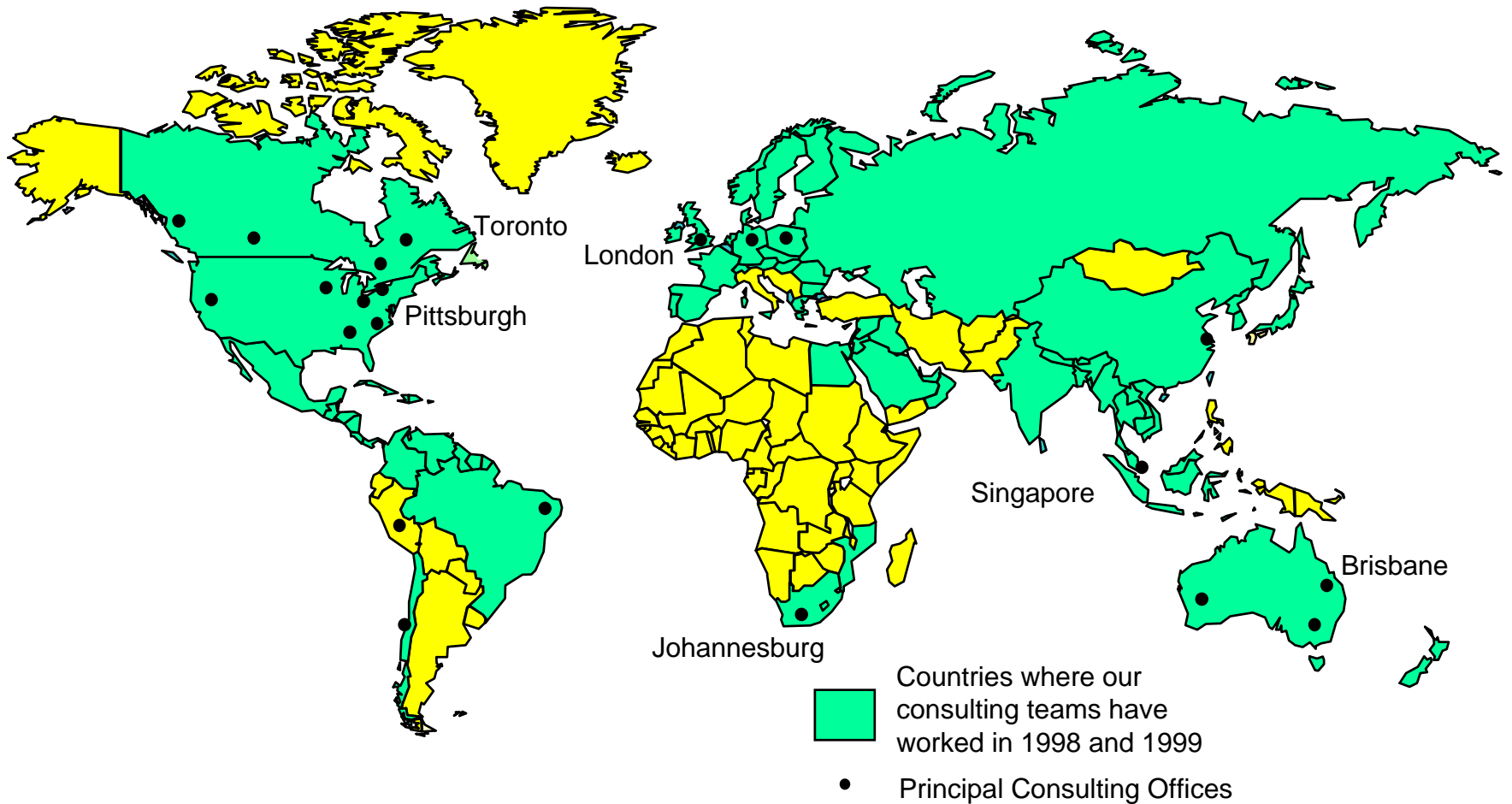


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AN INTRODUCTION TO HATCH BEDDOWS

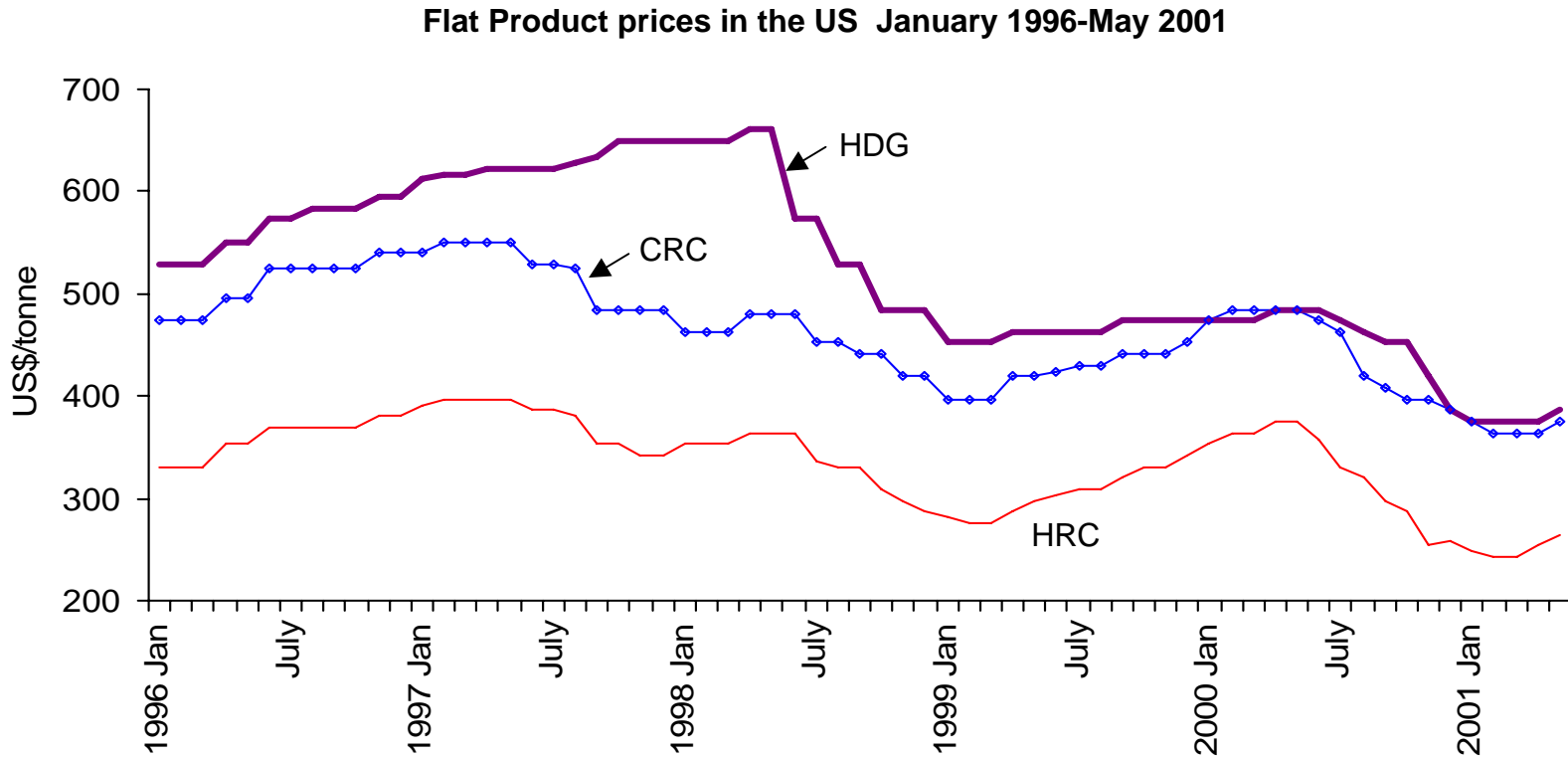
Hatch Beddows is the world's leading international management consultancy focused on the metals and mining industries, with over 300 professionals performing business and systems consulting world-wide



Once perceived as a lucrative downstream operation, the value added by hot dip galvanizing has been severely eroded over the last three years. How can American Hot Dip Galvanizers react?

- Recent experience in the steel industry is that overall product prices, and the spreads between value-added products, at historically low levels
 - At current transaction prices, virtually all producers are operating at a loss – many at a cash level
- What has gone wrong for American Hot Dip Galvanizing? Is it purely a domestic overcapacity issue? Is it demand driven, or the old culprit of imports?
- If it is domestic overcapacity, how severe and how long will it remain for?
- What are the options for Hot Dip Galvanized sheet producers?
- We will consider potential answers to this question for producers in both the automotive and construction/commodity HDG sheet markets

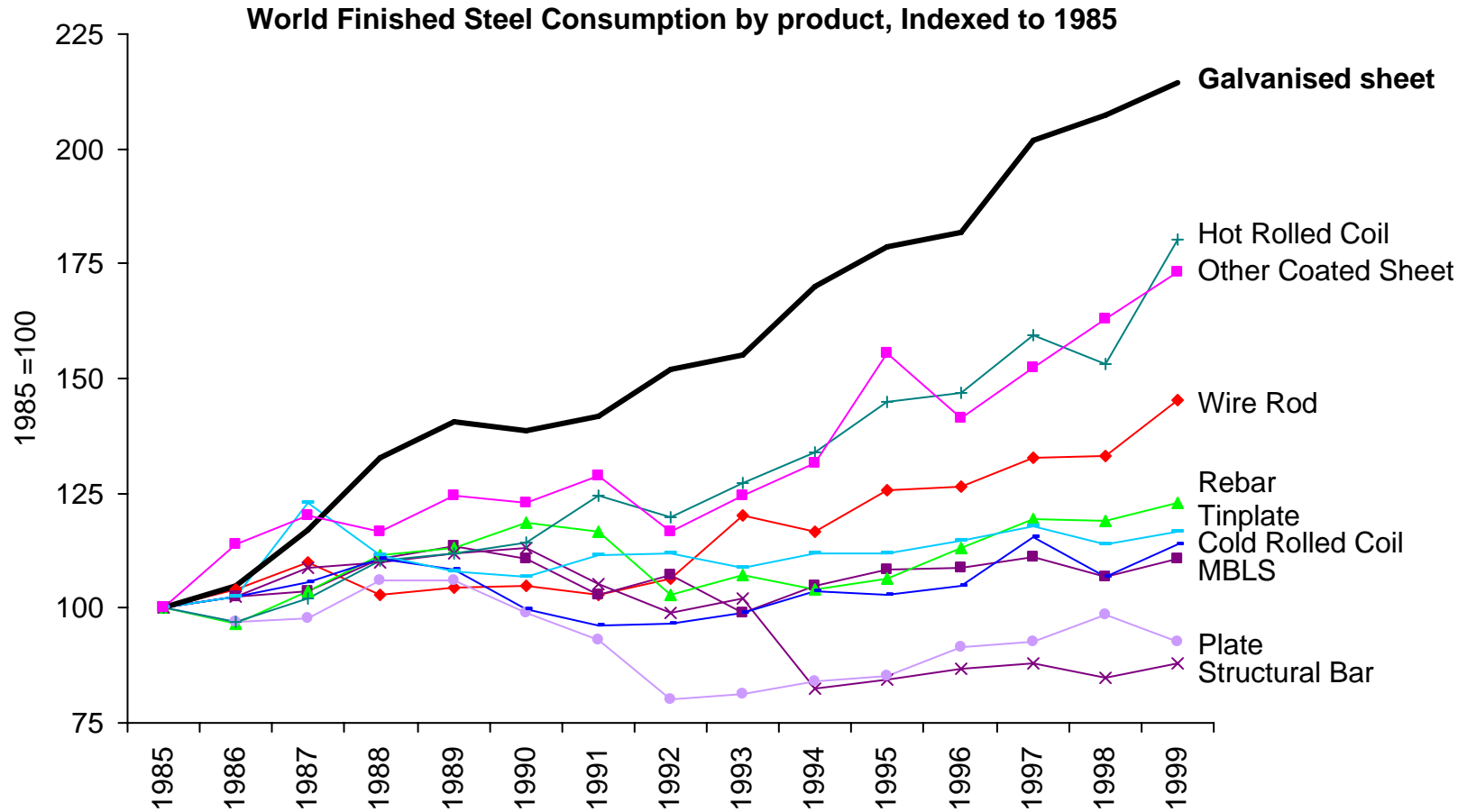
HDG prices are losing ground on other steel products – at times it has sold at less than cold rolled coil. Why is the value added of galvanizing being severely eroded?



Notes: Spot fob Midwest prices are depicted for the following product specifications:
Hot-rolled sheet : ASTM 569; 0.121-inch thick; 48-inches wide; coiled (first pass Q&T)
Cold-rolled sheet: AISI 366; 0.034-inch thick; 48-inches wide; coiled
Galvanized sheet: AISI 525; G-90; 0.0276-inch thick; 36-inches wide; coiled

Source: Purchasing Magazine, Hatch Beddows analysis

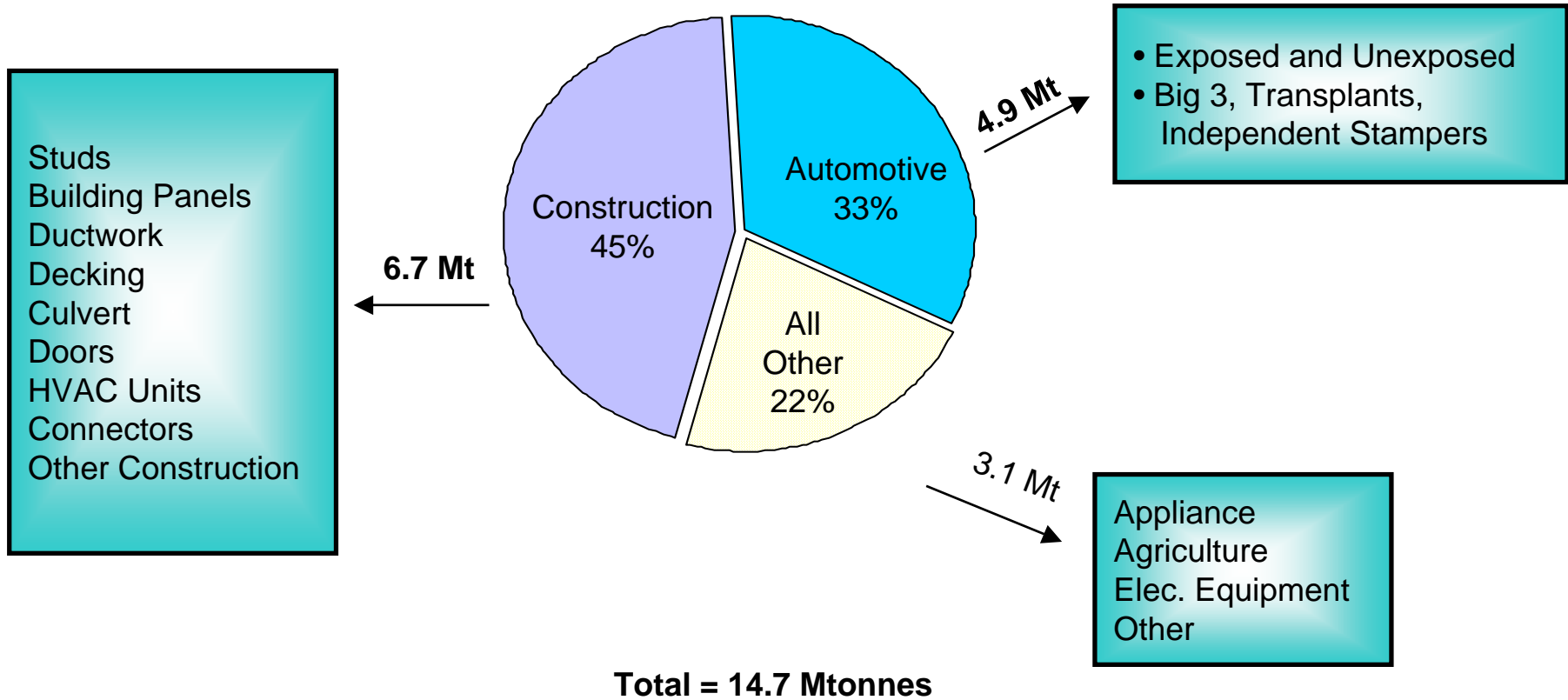
Consumption of galvanised products has out grown all other steel products since 1985: so demand is growing, but will it continue?



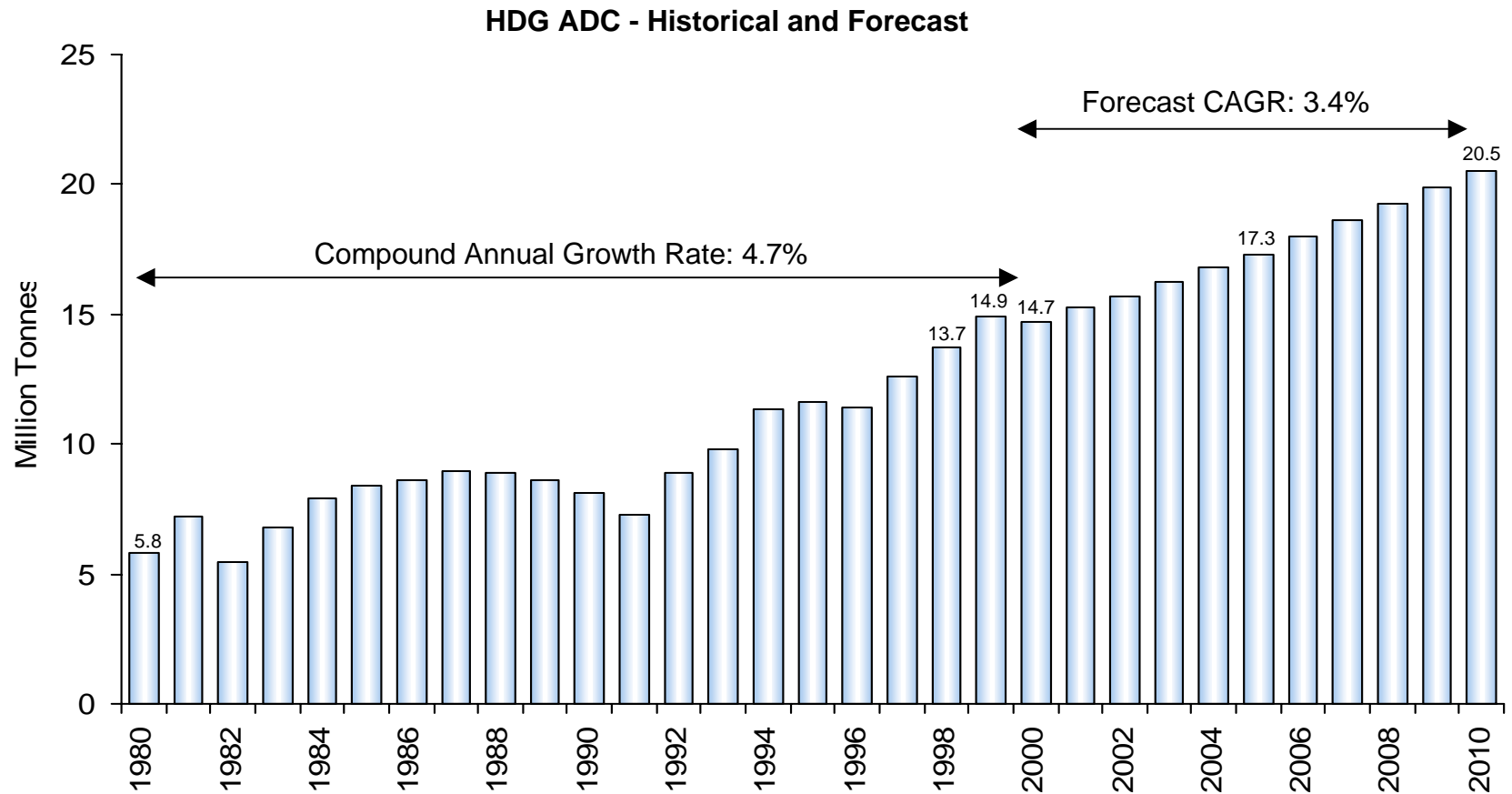
Source: WSD (2000), Hatch Beddows analysis

The growth in galvanized sheet consumption has been driven by the automotive sector and a variety of construction applications

US HDG consumption by end-user sector (2000)



A slowing in the construction and automotive sectors due to economic conditions suggests a healthy growth rate for HDG of 3.4% to 2010, although this is down from the 4.7% experienced between '80-2000

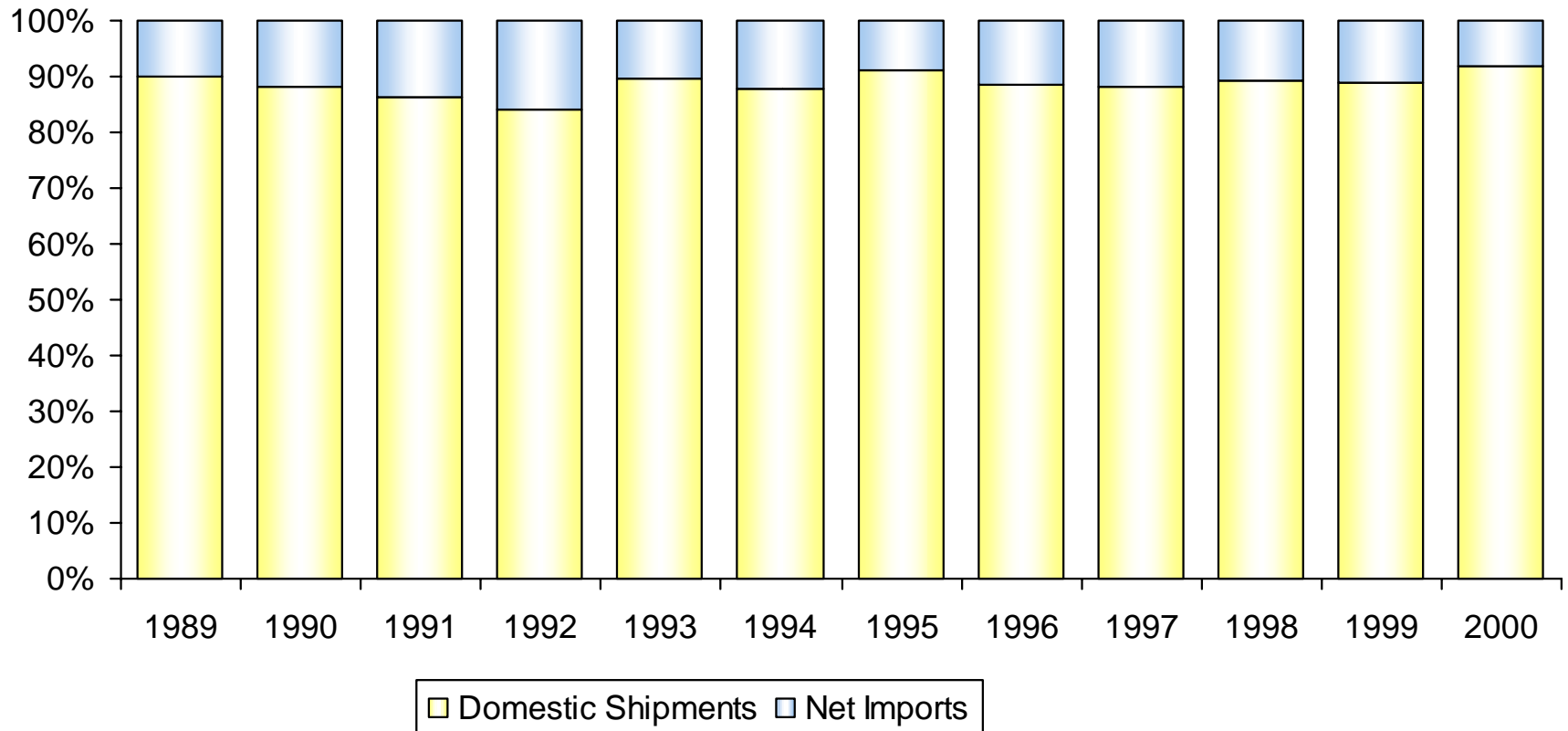


Source: AISI, Hatch Beddows forecasts

INTRODUCTION: IMPORT PENETRATION

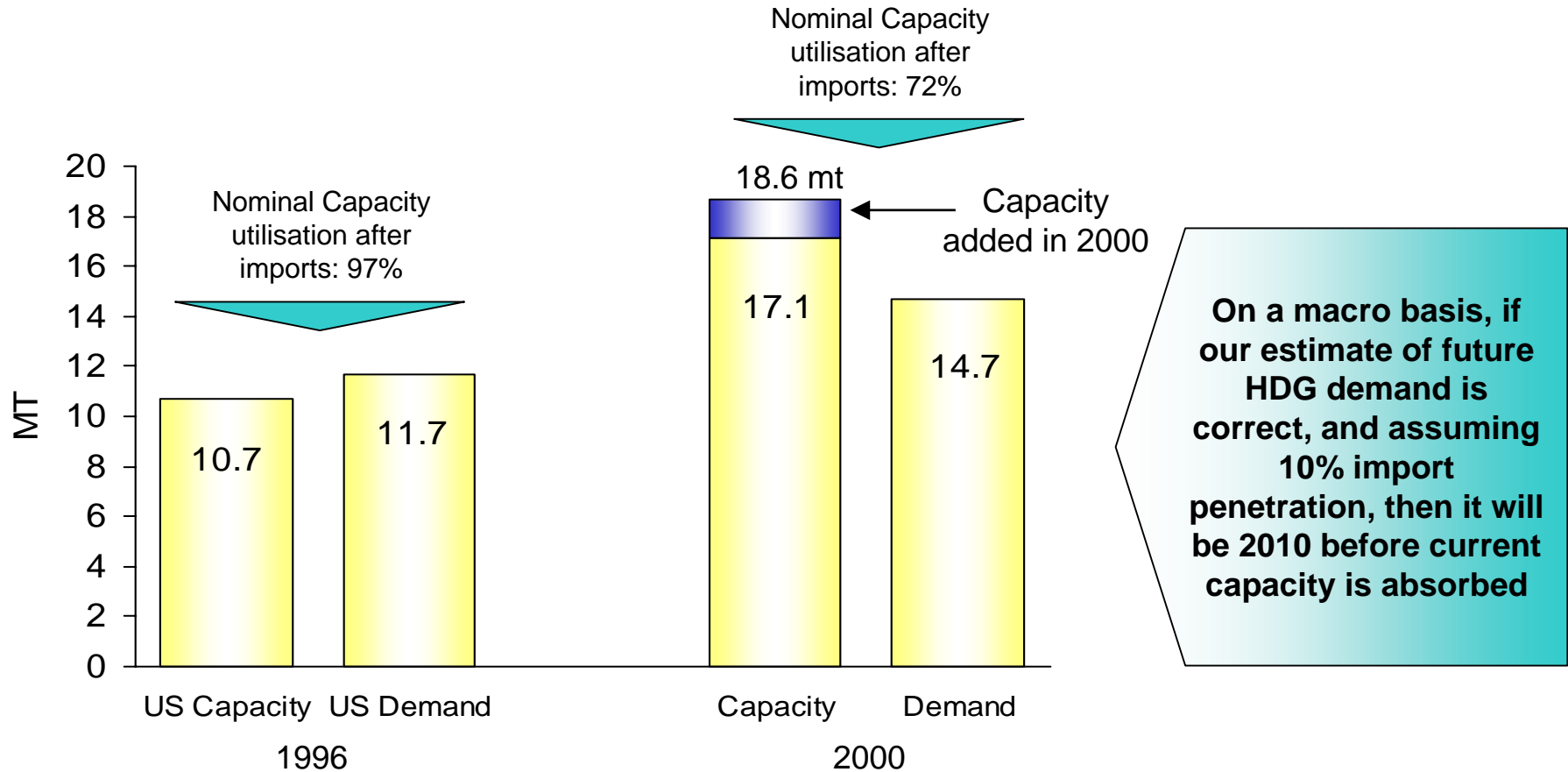
Import penetration of HDG sheet is around 10%, half the import penetration rate for all steel products. In fact the year 2000 has the lowest import rate for the last decade

US HDG Consumption 1989 - 2000



Source: AISI, Hatch Beddows analysis

US HDG capacity grew by 8 million tonnes in the late 1990s and consequently a significant surplus of capacity exists. The current capacity overhang may not be absorbed before 2010



Note: Nominal or 'nameplate' capacity

Source: AISI, Salomon Smith Barney, Hatch Beddows

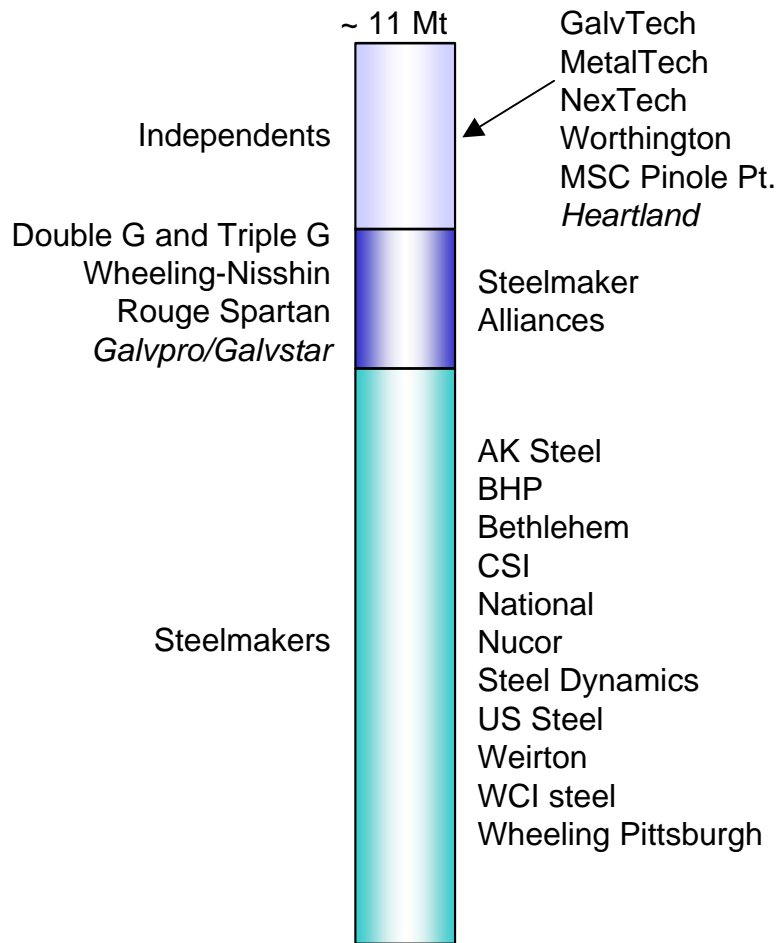
How did the overcapacity come about? Hot Dip galvanizing was perceived as an attractive opportunity to move into lucrative 'downstream' operations for steelmakers

- For steelmakers making returns on capital of an unsustainable 4%, moving into attractive 'downstream activities' has often been the strategy pursued to boost earnings
- In broad general terms, the pursuit of 'downstream' activities has been driven by the perception that they positive attributes compared to upstream:
 - Capital requirements are lower
 - Typically costs have a higher variable component allowing the capacity to be modulated to smooth cyclical effects
 - The capital market view of downstream operations is positive compared to the negative perception of steelmaking
 - The customer is nearer to the activity, providing the opportunity to add substantial value through service and product attributes
- Consequently, migrating into galvanizing activities has been pursued by integrated steelmakers as a move downstream and a route-to-market

So what happens next?

- How acute is the problem?
 - The shallow balance sheets of the independents leave them vulnerable:
 - Galvpro has closed, Heartland entered Chapter 11 Bankruptcy only to be purchased cheaply by CSN, the Tech's – Nextech, Metaltech and Galvtech – are for sale, as is Pinole Point
- Can adjustments to the overcapacity be expected?
 - Will capacity exit?
 - US steel producers in Chapter 11 bankruptcy account for 25% of the industry, so there is potential for capacity to exit. But the current trade cases and nature of the Chapter 11 process may prevent this
 - What options are there for consolidation?
 - Or will it be business as usual? Leaving options of careful market positioning or migrating further downstream yet
- We will discuss American Hot Dip Galvanizing in the two categories of automotive sheet and commodity/construction suppliers, but this comes with a health warning: in reality, the distinction between the two sets of suppliers is ambiguous with potentially some 4m tonnes of capacity actively supplying both sectors

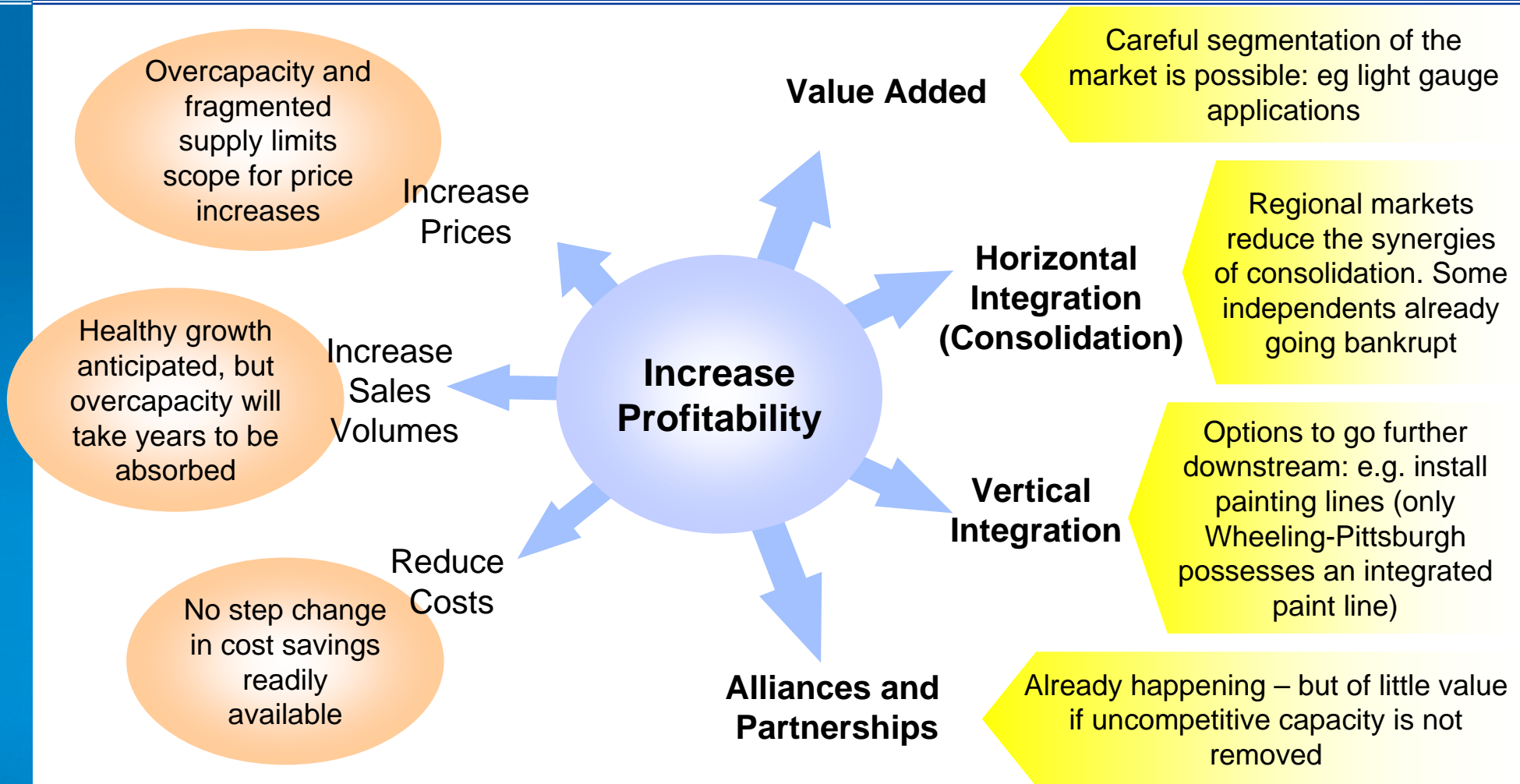
Supply of HDG to the construction sector is fragmented with around twenty providers of comparable size: the largest producer has a market share of ~15%



Commodity/Construction Focused Lines

- 24% of supply is in the hands of independents
- Market is regional. The relatively high transportation costs vis-à-vis the product costs means HDG does not travel well. Regional markets allow the producer to locate close to the customer
- Customer base is fragmented, allowing access for independents
 - ...but supplier base is fragmented too, so there is a balance of bargaining power,
 - ...and the number of equally sized producers undermines market discipline
- Product quality for construction applications is less than that for automotive products allowing lower cost facilities

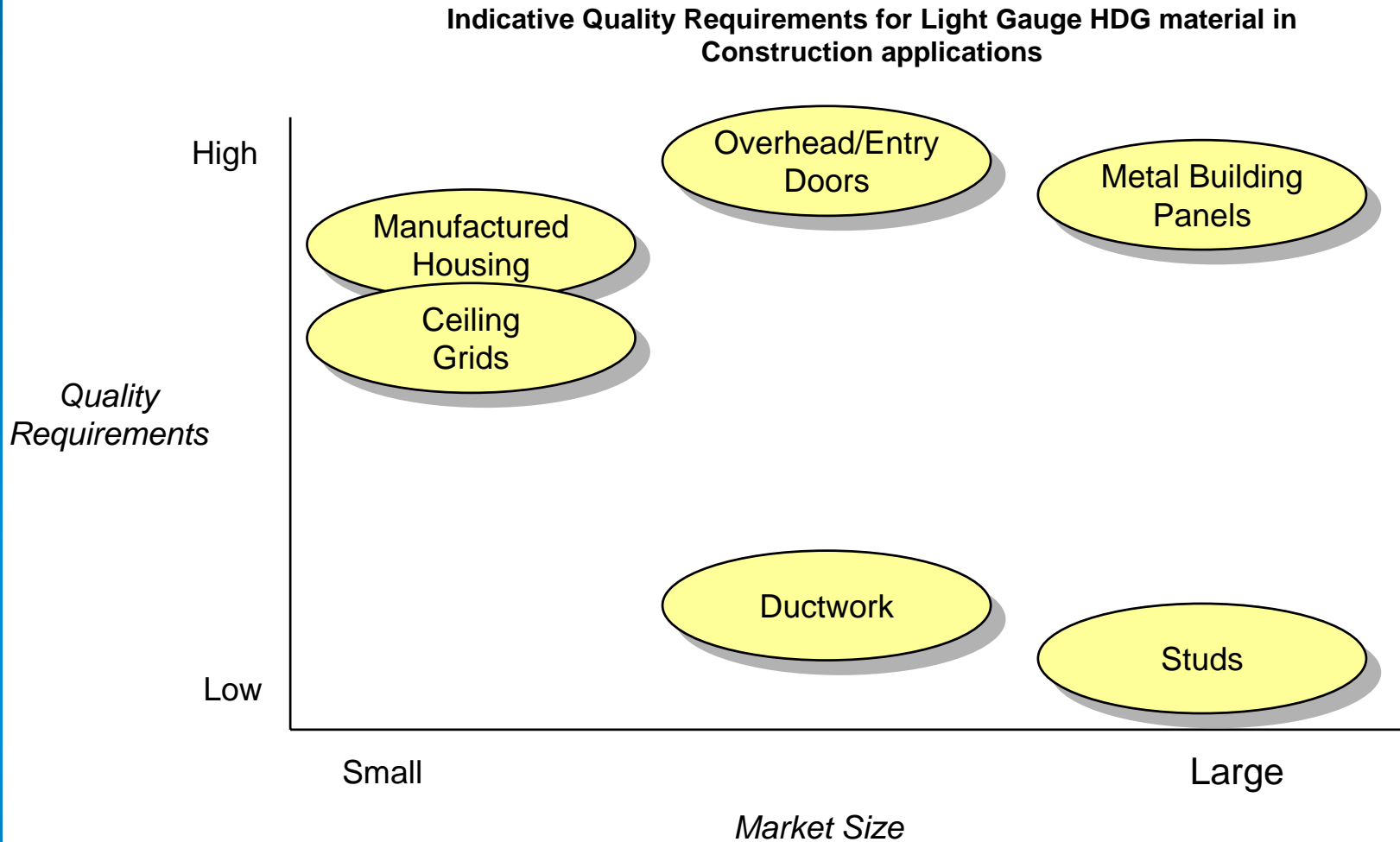
Focusing on higher value added product applications within the construction sector is a viable option for some



Light gauge construction applications provide sufficient value added to exceed increased production costs

- Many light gauge markets are specialized, service oriented, and not subject to the same cyclical demand drivers as heavier gauges
- In construction (vs. automotive) markets, there are positive inter-material substitution developments (e.g., metal buildings, residential construction)
- While 6 Mtonnes of new coating capacity has been added since 1996, only a fraction of this new capacity is light gauge “friendly”
- The absence of (economical) domestic supply has resulted in significant market positions by imports which should be viewed as vulnerable
- We estimate demand for light gauge HDG for construction applications is nearly 2 Mtonnes

Within the light gauge market there is a segmentation of quality requirements



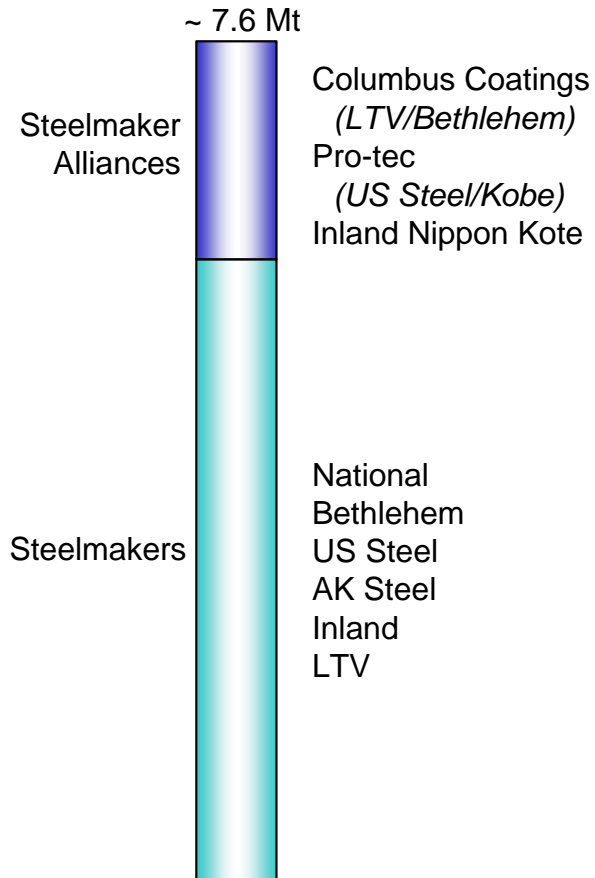
As ever, careful management of capital is critical: Significant amounts of capital are often aimed at improvements in product quality; but do markets pay higher prices?

Recent HDG Investments focused on Construction applications

Line	Location	Capacity	Est. Total Capital	Est. Capital/Ton	Fixed Cost/Ton*
Bethlehem	Sparrows Point, MD	260	\$140M	540	98
Triple G	Granite City, IL	270	\$85M	315	58
Double G	Jackson, MS	270	\$85M	310	58
Galvstar	Jeffersonville, IN	300	\$85M	285	52
US Steel	Fairfield, AL	280	\$60M	210	39
GalvTech	Pittsburgh, PA	350	\$37M	110	19
Nucor	Berkeley, SC	500	\$45M	90	17

* Assuming 12 year depreciation, 10% WACC

Automotive HDG sheet supply is dominated by the integrated steelmakers – but the bargaining power remains with the automotive producers



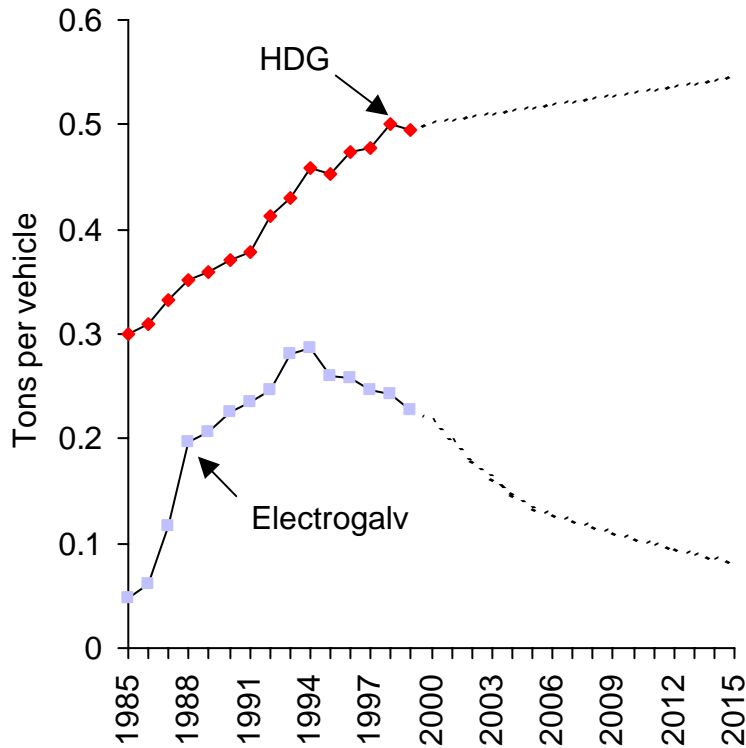
Automotive Focused Lines

Source: Hatch Beddows estimates

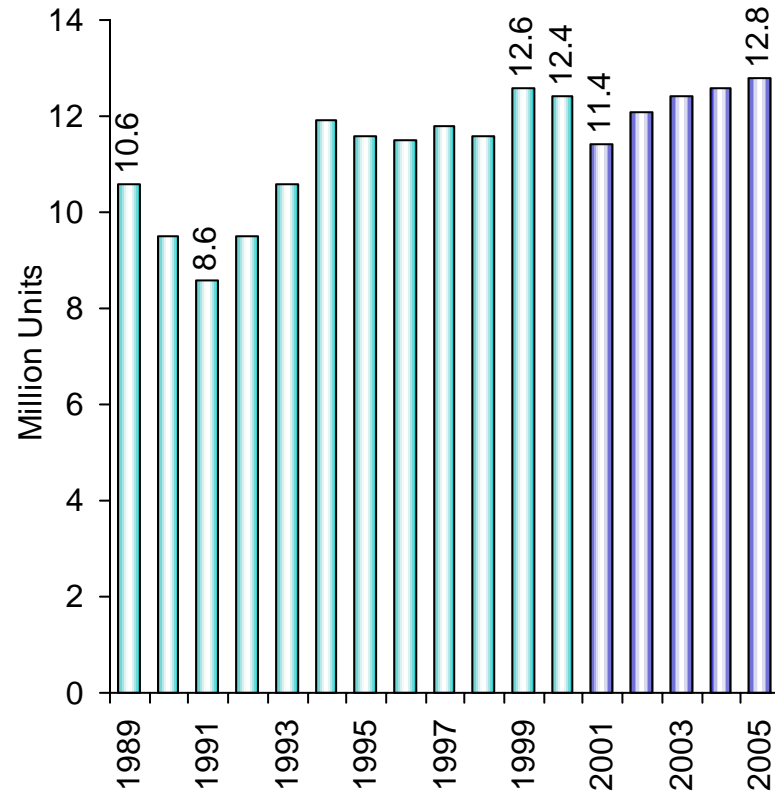
- Supply of automotive HDG is dominated by the integrated steelmakers
- Market is national, but concentrated around the Great Lakes
- High quality and service requirements of the market
- The contract nature of sales provides some insulation to price trends
- The greater concentration of automotive producers gives them the greatest bargaining power
- ...but even with this advantage, automakers are still only delivering around 6% return on capital

Despite positive substitution of HDG sheet in vehicles, falling automotive production following the record year of 1999 will squeeze automotive HDG providers further

Galvanized Sheet Consumption per Vehicle Forecast to 2015

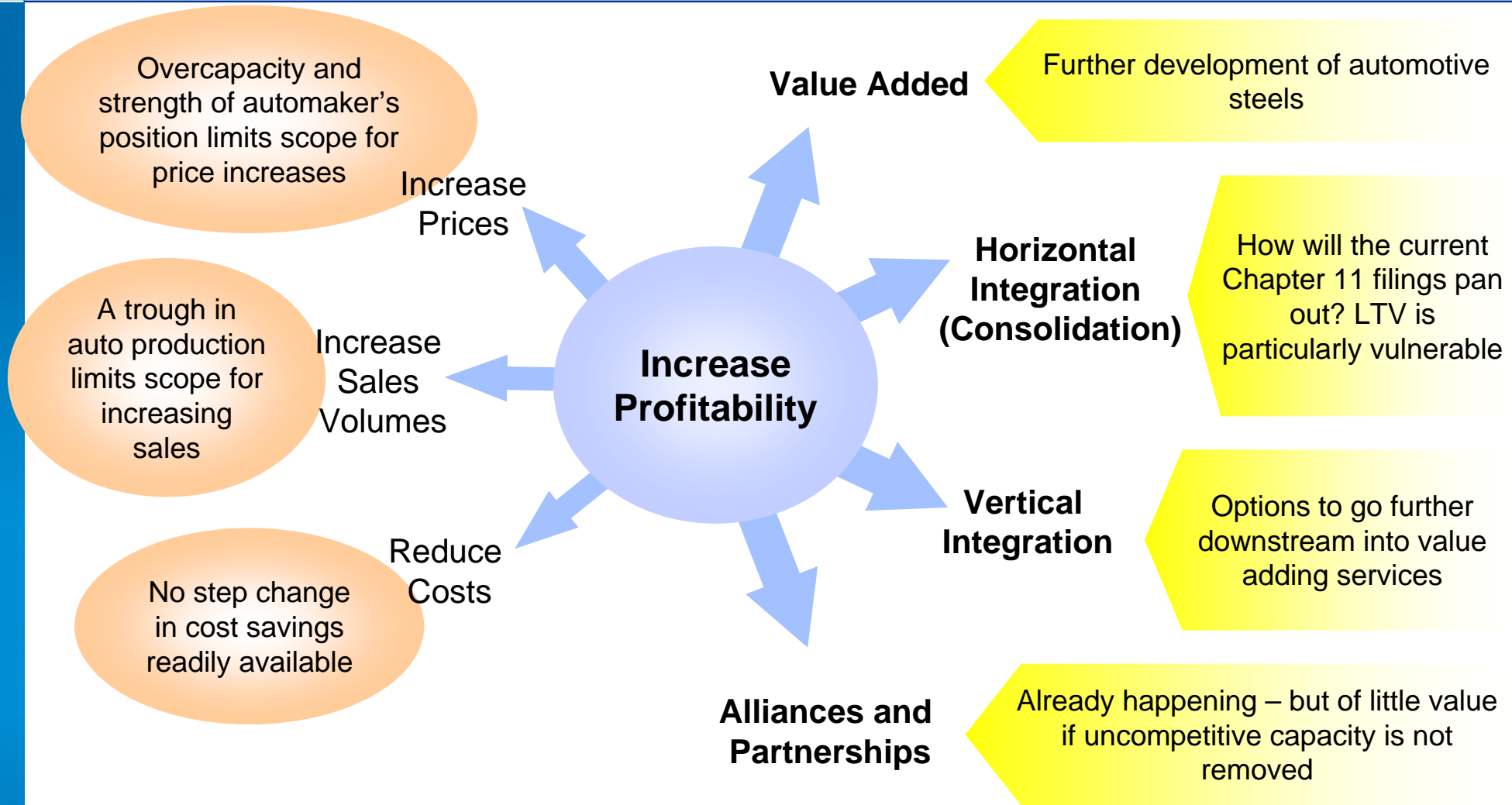


Automotive Production and Forecast



Source: WEFA, Wards, Hatch Beddows estimates and forecast

On a macro basis, the options for integrated producers appear limited. However each company is likely to have a strategic avenue



CONCLUSION

Current conditions are difficult. With no real expectation for current overcapacity to be removed in the short term, each company needs to find a new value configuration

- The value added of hot dip galvanizing has been severely eroded, essentially due to domestic overcapacity
- The construction orientated hot dip galvanizing sector serves regional markets with a fragmented customer base and a fragmented supply base
 - Recognizing the segmentation of the construction market and careful positioning in a value added niche such as light gauge applications appears a potential strategy to survive the current economic conditions
- The automotive orientated hot dip galvanizing sector is dominated by the integrated steelmakers, but the bargaining power is in the hands of the automotive producers.
 - Options for automotive HDG producers appear limited – but do exist
 - If the current conditions in the US carbon steelmaking industry as a whole force closures, the prohibitive capacity overhang may be removed before 2010. LTV appears particularly vulnerable