

# Review of World Investment Casting Markets

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**Blayson**

# Blayson Olefines Ltd

- Leading specialist manufacturer of high quality investment casting wax
  - Cambridge, UK
  - Chiba, Japan
- Extensive R&D to improve wax technology
- Manufacture full range of investment casting wax
- Specialist in recycling
- Fully monitored process control

# Introduction

- Knowledge of our markets and the performance of investment casting as an industry is essential
- The review of global markets gives an understanding of the changes and trends
- Assists the industry in forming a view of how investment casting will fare in the future
- In the present global economic climate a review of the state of the global investment casting industry is more important than ever
- Official statistics are not available for 2009 so figures shown are latest estimates

# Acknowledgements

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ICI (Investment Casting Institute - United States)

CAEF (Casting Association of European Foundries)

CFA (China Foundry Association)

JFS (Japan Foundry Society)

EICF (European Investment Casting Federation)

cmf (Cast Metals Federation, UK)

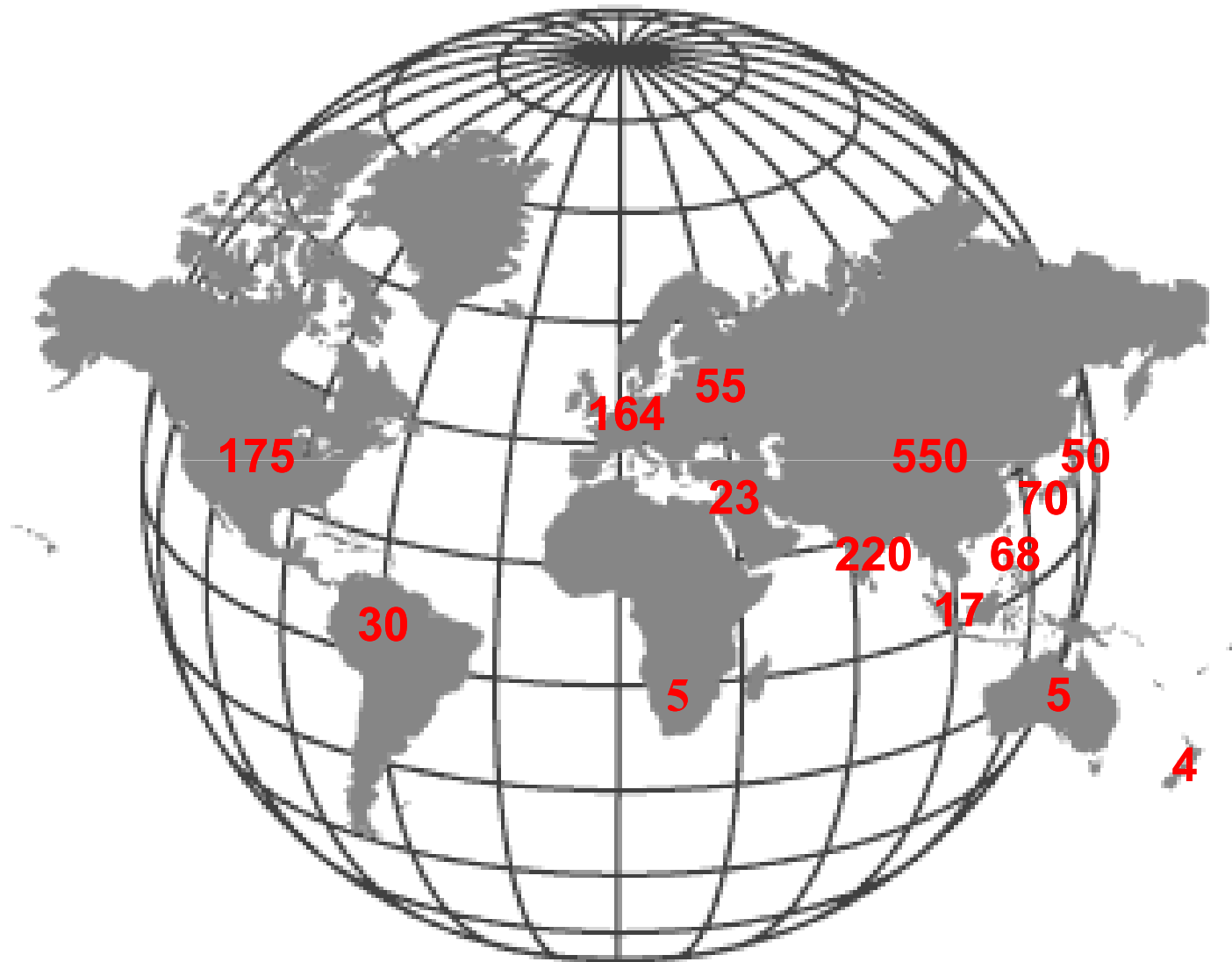
Individual contributors

The information given is based on official figures together with best estimates where statistics are not available. No legal responsibility is accepted for information, advice given or opinions expressed.

# Agenda

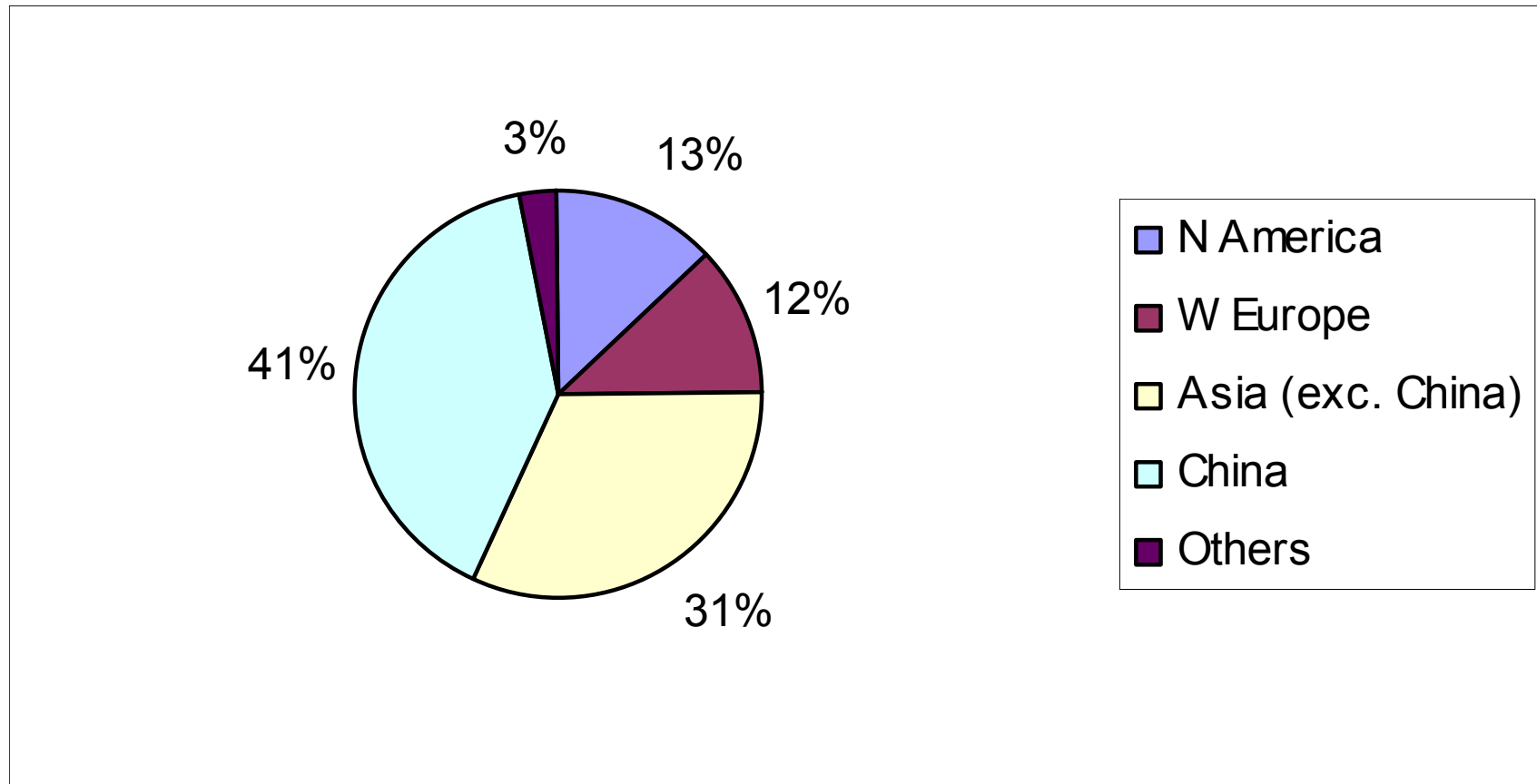
- Distribution of Investment Casting Foundries
- World Investment Casting Markets
  - 2008
  - 2009
- Market Sector Trends
- Future Prospects
- Summary

# Distribution of Investment Casting Foundries

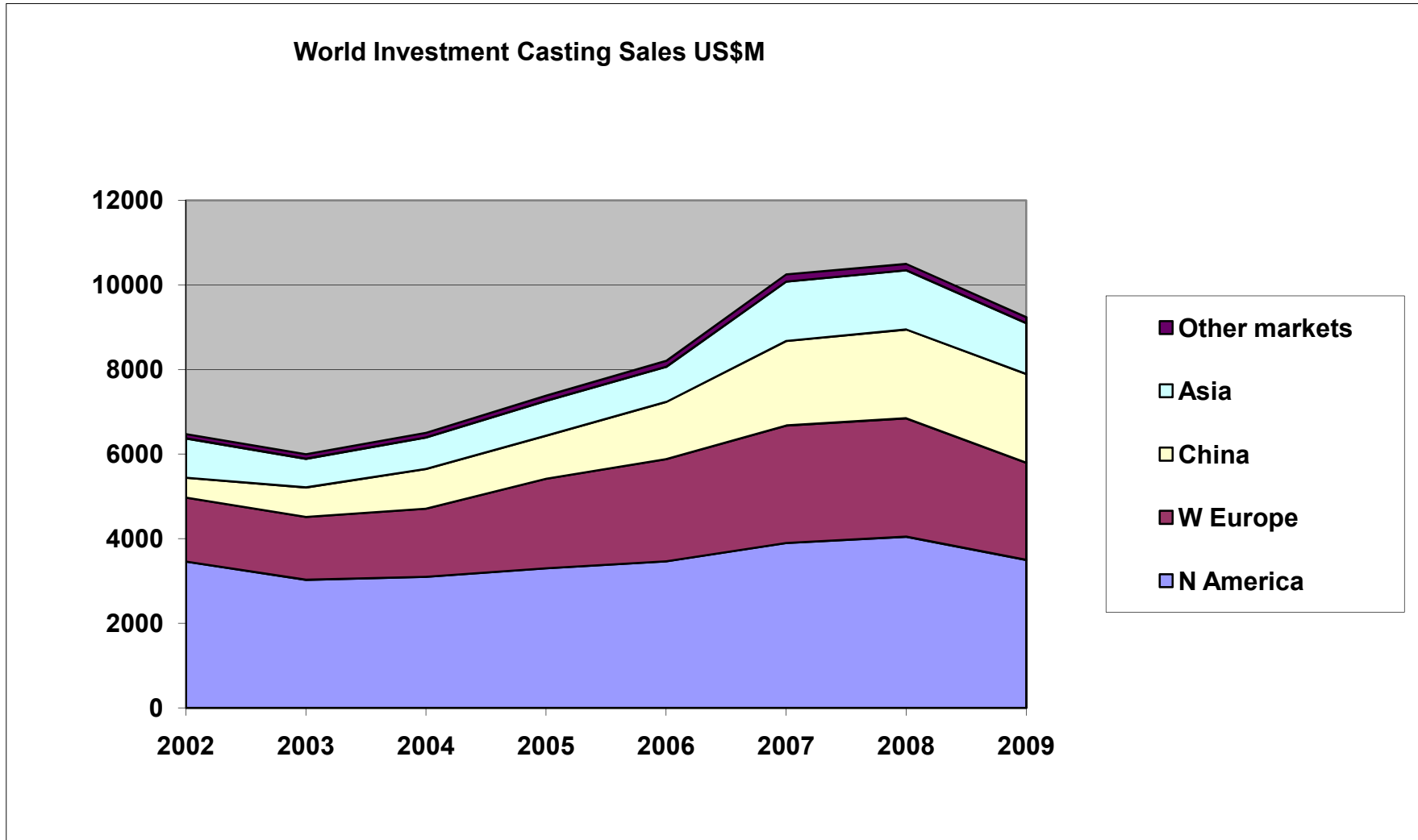


# % Distribution of Foundries

Total Identified 1600



# World Investment Casting Sales

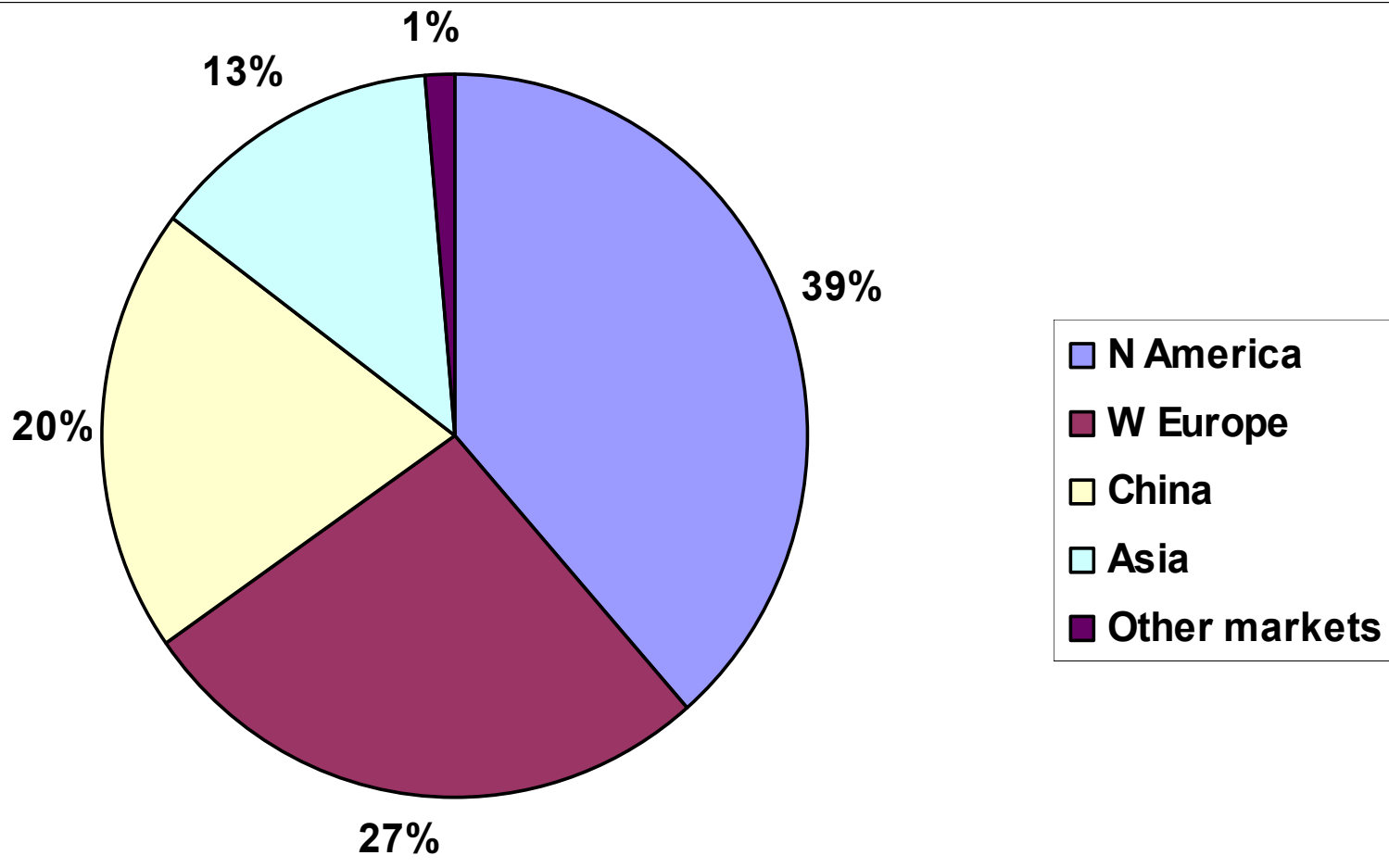




## Global Investment Casting Sales – 2008

- 2008 total World sales US\$10,500M (US\$10.5B)
  - + 2% v 2007
- Economic downturn did not have a serious impact on sales value until the 4<sup>th</sup> quarter
- High Added Value sector remained resilient
- Automotive badly affected in N America, Europe
- Asian exports reduced by transfer of some commercial work back to West

# World Sales by Region, 2008

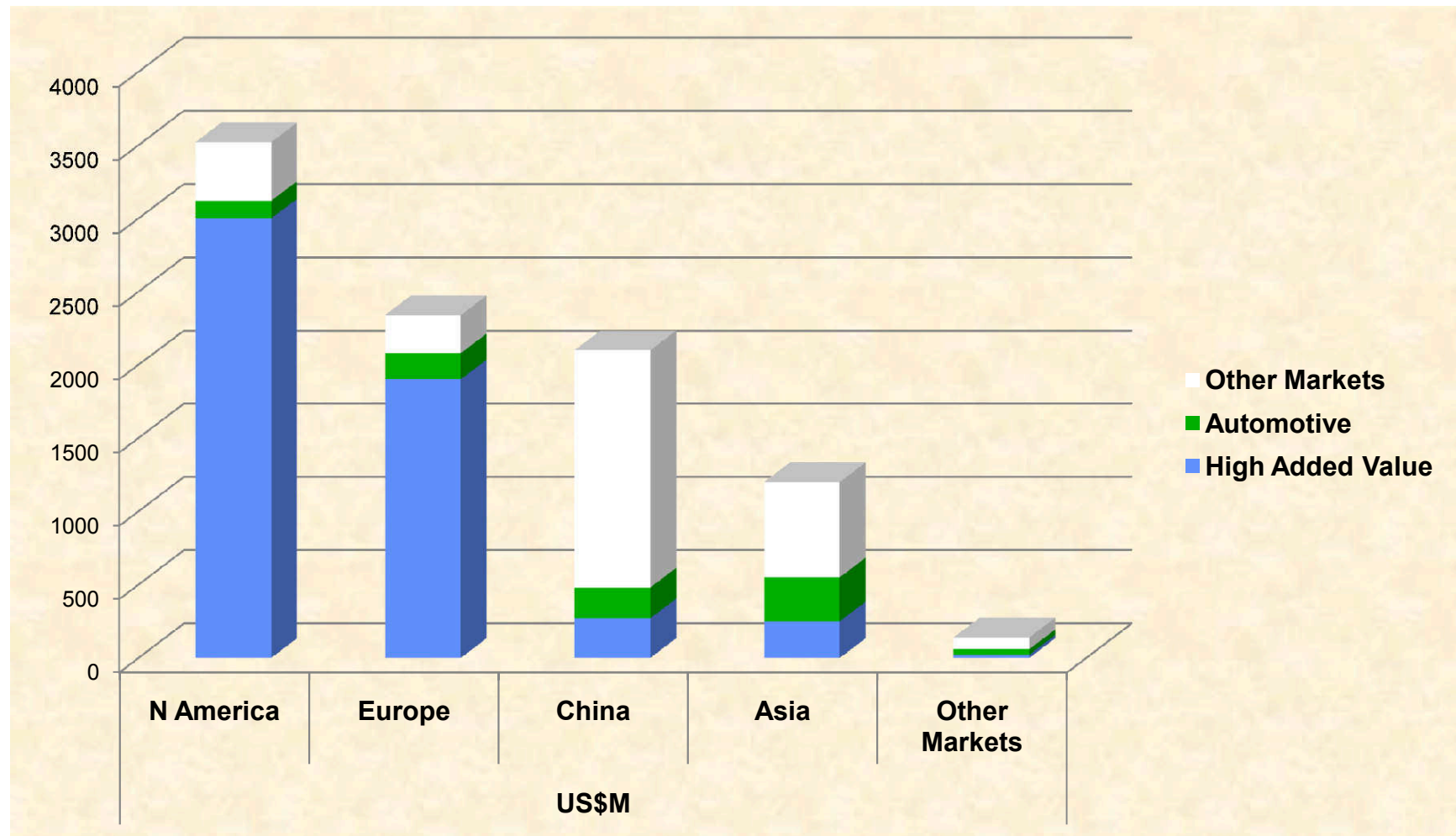


# Global Investment Casting Sales 2009

- No official statistics available yet
- Market information suggests sales will be down by 12% overall to US\$9.2 Billion
  - -15% to 20% in N America & Europe
  - -0% to 14% across Asia
- High Added Value castings performed well till mid 2009
- China – increased sales of High Added Value castings offset the fall of <50% in Commercial casting sales

# Sales by Market Sector 2009

## US\$M



## Market Trends - Aerospace

- Rescheduling has resulted in drop in sales of 15<20% during 2009
- Further delays to Boeing Dreamliner has exacerbated situation
- However order books remain strong
- China entered commercial jet market with inaugural flight of ARJ21-700
  - C919 'Jumbo' scheduled for 2014

## Market Trends – Industrial Gas Turbines

- IGT market remained very strong till 3<sup>rd</sup> qtr of 2009
- Since then rescheduling of orders has resulted in fall in production of 20%
- Job losses in USA & Europe
- In the long term the continued demand for power generation expected to return sales to former levels

# Automotive

- Car and Truck sales badly affected by recession from mid 2008
  - Many job losses
  - Long shut downs
- Asian automotive industry less badly affected
- In USA & Europe government scrappage schemes have boosted car sales through 2009
- Smaller fuel efficient cars selling well
- Turbocharger wheel production now improving in Japan

# Market Trends

## MEDICAL

- Fall in elective surgery has reduced sales in West
- Order books reasonable
- Slow improvement anticipated

## COMMERCIAL

- New opportunities being found/created
- N American & European sales steady
  - Some short time working
- Castings transferred back from Asia



# Looking to the Future

- Market conditions are stabilising following global economic difficulties
- New investment casting potential exists:
  - Advanced fuel & exhaust systems
  - Multiple turbochargers & direct fuel injection
  - Hybrids & electric vehicles
- Medical Products keep developing:
  - Implants
  - Diagnostic equipment
  - Injury stabilising appliances
- IGT growth to restart
- Aerospace will require more complex castings

# Summary

- World investment casting sales have fallen back towards 2006 levels
- Global economic problems continue to cause difficulties
- High cost of all industrial raw materials impacting on industry
- Pressure on foundries to reduce prices
- Aerospace and IGT production down by 15<20%
- Automotive showing signs of improvement
- Commercial sector reasonable
- Future for investment casting remains good but sales are unlikely to reach 2008 levels for some time