

World Investment Casting Market Review

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Agenda

- World Investment Casting Sales 2013
- Sales by Region
- Market Sector Analysis
- Market Sector Review
- 2013 Summary
- Prospects & Estimates for 2014



Introduction

- The IMF reports that world industrial output grew by 3% in 2013
- In comparison the global investment casting industry achieved growth of 6.1%
- The recent growth pattern for investment casting is encouraging for the industry
- This market presentation gives a summary for 2013 and estimates results for 2014



Acknowledgements

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cmf (Cast Metals Federation, UK)
ABIFA (Brazilian Foundry Association)
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

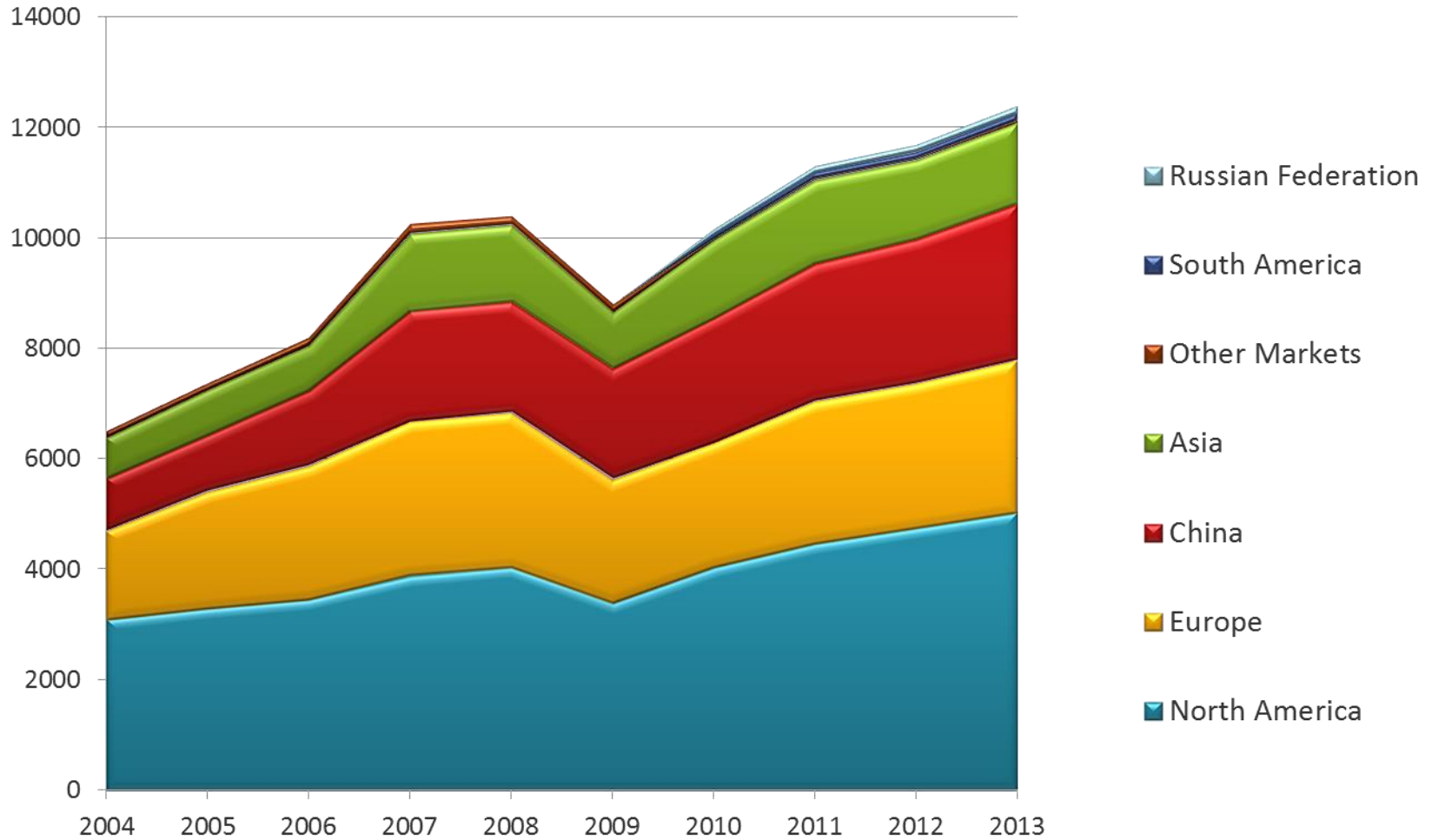


World Investment Casting Sales 2013

- Total global investment casting sales reached a new high at US\$12.4 Billion in 2013
- Representing an increase of 6%
- This continues the strong pattern of growth achieved since the 2008 banking crisis
- Castings for the commercial aircraft industry had a significant influence on the positive performance

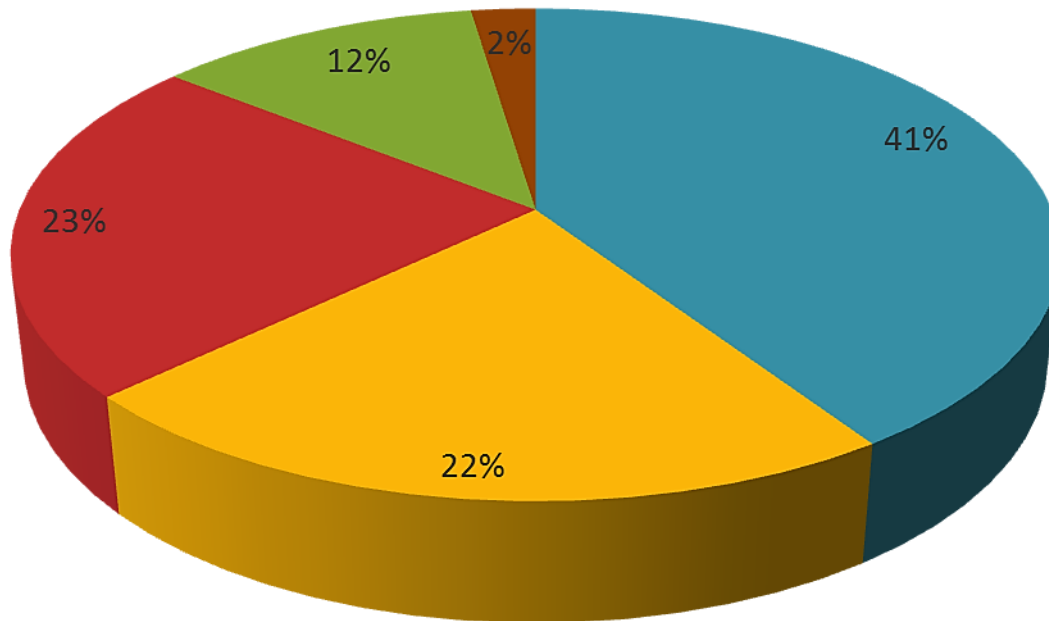


Recent Sales by Region (US\$M)



2013 Sales by Region (US\$M)

■ North America ■ Europe ■ China ■ Asia ■ Others

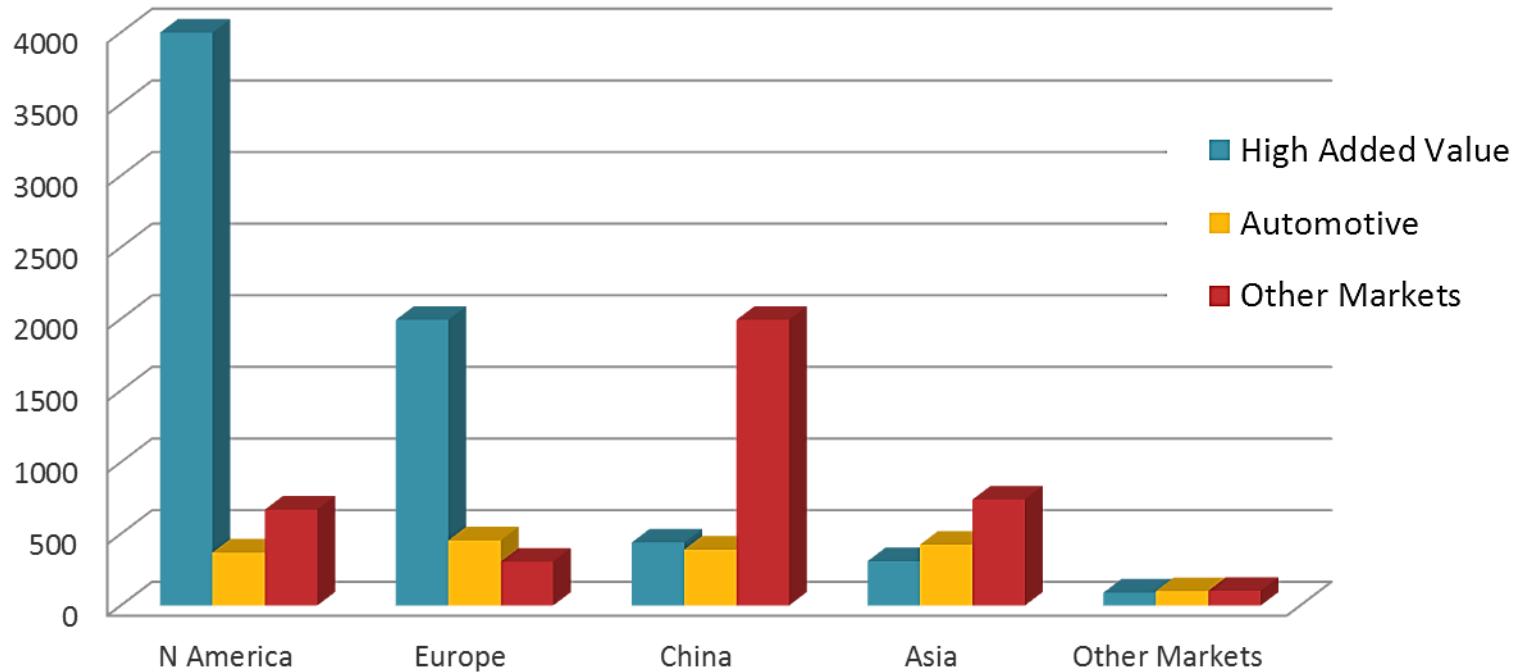


2013 Sales by Region

- North America continues as the largest manufacturing region with a 41% share of sales
- China now has a 23% share of global sales
- Europe has a 22% share of global sales
- Asia in total now produces 35% of global investment casting sales

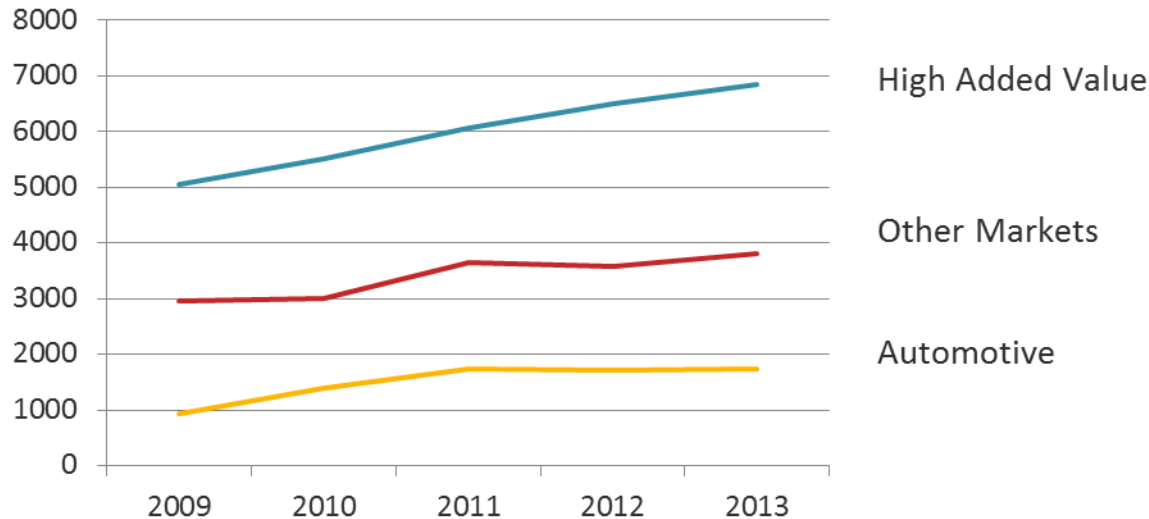


2013 Sales by Sector (US\$M)



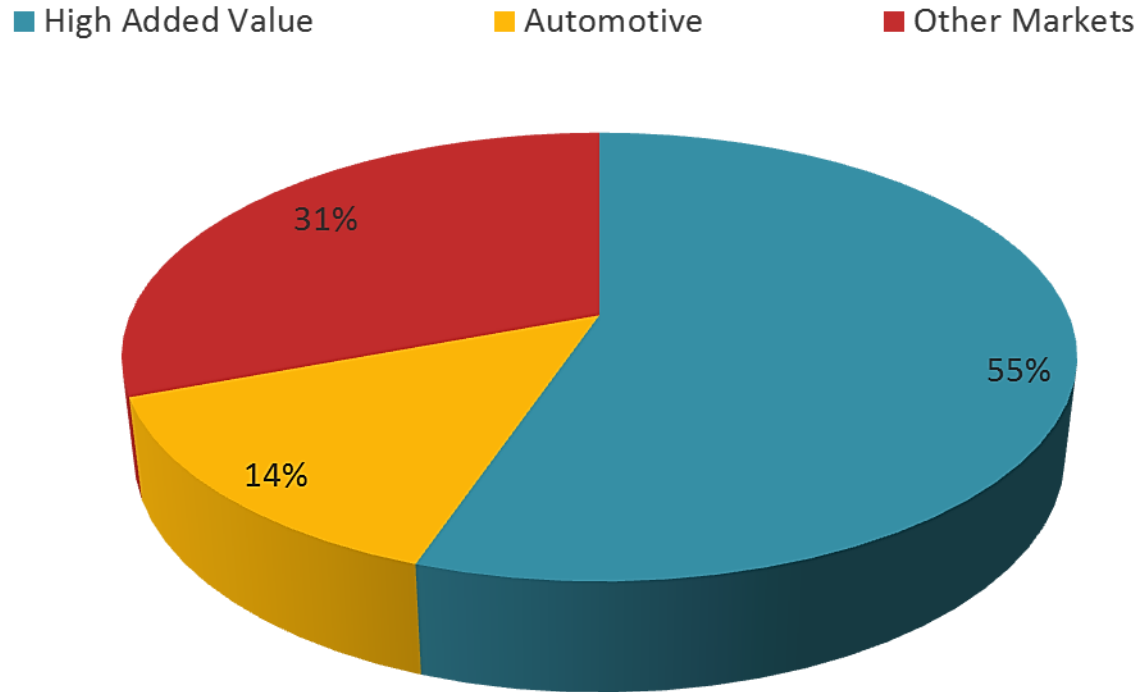
High Added Value casting production leads in North America and Europe and is in contrast to other regions

Investment Casting Sector Trends (US\$M)



- Continued growth in commercial aircraft has driven demand for High Added Value castings
- The Other Markets sector is just beginning to show improvement in all regions
- Overall Automotive has remained flat since 2010 but there are individual market differences

Investment Casting Sectors 2013



High Added Value castings now account for 55% of world market

Aerospace

- In 2013 demand for Airbus and Boeing commercial aircraft resulted in a record 2,887 new orders
- There are around 10,000 planes currently on order
- Airlines requirement for more fuel efficient aircraft is driving demand
- Resulting in new casting applications and creating new opportunities
- Rolls Royce new advanced blade casting facility commenced production in 2014 with a capacity of 100,000 blades a year



Industrial Gas Turbine

- IGT continues to show a mixed picture with regional variation
- North America is seeing increased demand for medium size turbines
- The European market remains at a low level of activity
- Consolidation of turbine manufacturing in progress
- Installed capacity continues to create demand for spare parts



Automotive

- Globally 75.7 million cars were sold in 2013
- An increase of over 5% from the previous year
- Most regions have seen growth in 2013 returning sales to pre 2008 levels
- Europe manufacturing and sales slow with exception of UK and German luxury manufacturers
- Turbocharger wheel market remains a growth area
- Chinese government reported plans to eliminate 6 million high polluting vehicles before the end of 2014



Other Sectors

Medical

- The world's growing and ageing population means increased sales of prosthetic castings for joint replacement
- The medical castings sector is becoming more competitive as cost reduction programmes are implemented

Commercial

- Overall commercial casting sales increased by 2% in 2013
- Regional variation is noticeable also considerable difference between foundries
- One area of growth noted is the oil industry where there is an increased demand for castings

Prospects for 2014

- Aerospace - Airbus and Boeing combined production levels for aircraft expected to reach 960 units in 2014
- IGT - longer term the demand for increased generation capacity should offer an improving future
- Automotive - with economies improving continued growth throughout 2014 is predicted
- Medical - casting applications are increasing for surgical instruments, injury stabilising appliances and diagnostic equipment
- Commercial - oil industry demand for parts increasing



2014 Estimates

- The industry estimates growth in 2014
 - High Added Value 7%
 - Automotive 4%
 - Commercial 3 - 4%
- Activity is expected to improve further into 2015 largely due to recovery in the advanced economies
- IMF projects global growth at 3.7% in 2014
- Rising to 3.9% in 2015
- Investment casting is well placed to capitalise on this projected global growth



Thank You

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- now and in the future **Blayson**

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