

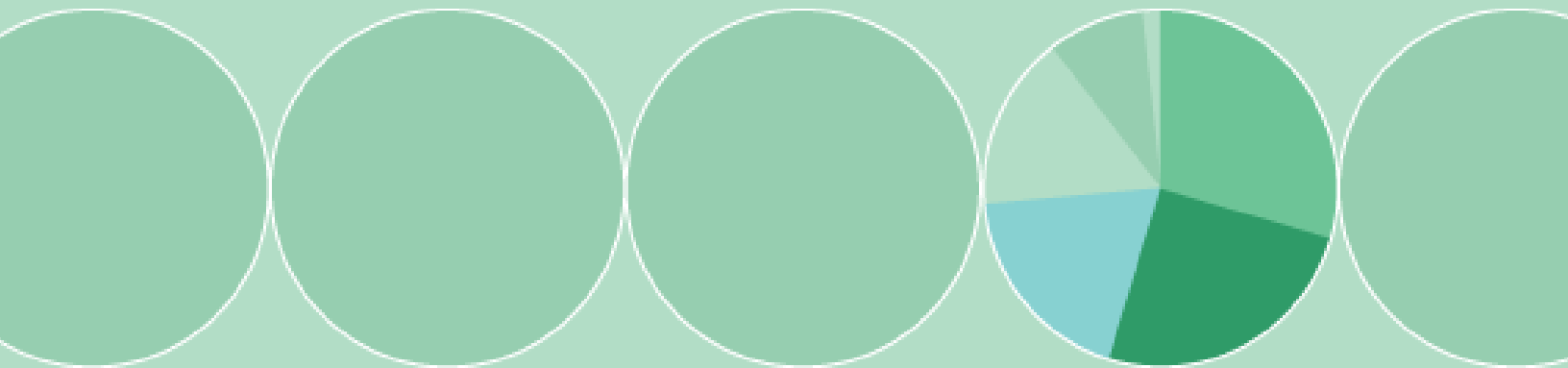


WHERE KNOWLEDGE IS POWER

IBISWorld Industry Report

16 March 2010

Global Motor Vehicle Parts and Accessories Manufacturing: **C2534-GL**

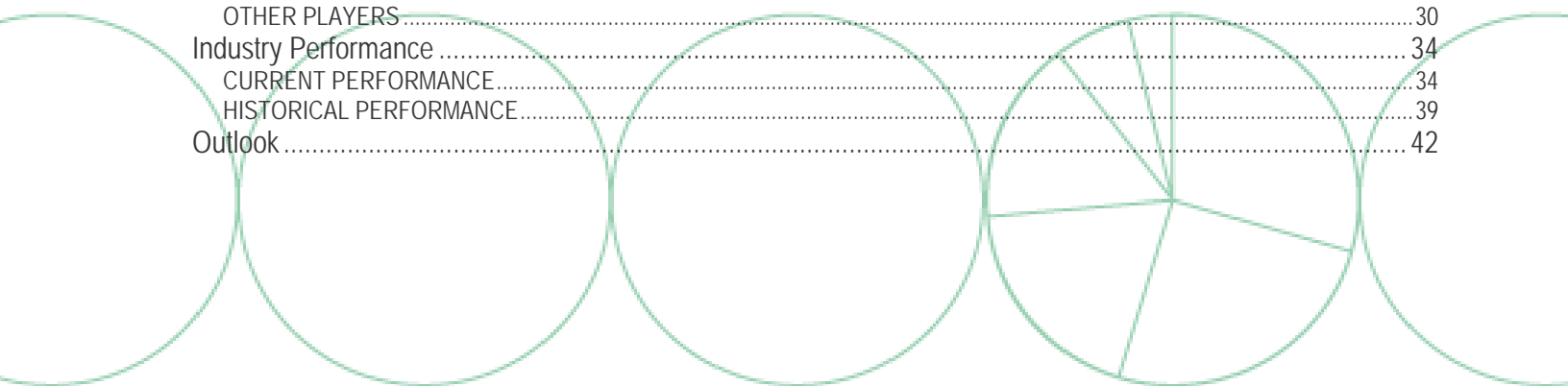


DISCLAIMER

This product has been supplied by IBISWorld Inc. ('IBISWorld') solely for use by its authorized licenses strictly in accordance with their license agreements with IBISWorld. IBISWorld makes no representation to any person with regard to the completeness or accuracy of the data or information contained herein, and it accepts no responsibility and disclaims all liability (save for liability which cannot be lawfully disclaimed) for loss or damage whatsoever suffered or incurred by any other person resulting from the use of, or reliance upon, the data or information contained herein. Copyright in this publication is owned by IBISWorld Inc. The publication is sold on the basis that the purchaser agrees not to copy the material contained within it for other than the purchaser's own purposes. In the event that the purchaser uses or quotes from the material in this publication - in papers, reports, or opinions prepared for any other person - it is agreed that it will be sourced to: IBISWorld Inc.

Contents

Industry Definition.....	3
ACTIVITIES (PRODUCTS AND SERVICES)	3
SIMILAR INDUSTRIES	3
DEMAND & SUPPLY INDUSTRIES	4
Key Statistics.....	5
CONSTANT PRICES	5
CURRENT PRICES	5
REAL GROWTH.....	6
RATIO TABLE	6
GRAPHS	6
Segmentation	8
PRODUCTS AND SERVICE SEGMENTATION	8
MAJOR MARKET SEGMENTS.....	10
INDUSTRY CONCENTRATION.....	10
GEOGRAPHIC SPREAD	11
Market Characteristics	13
MARKET SIZE	13
LINKAGES	13
DEMAND DETERMINANTS	14
DOMESTIC AND INTERNATIONAL MARKETS.....	14
BASIS OF COMPETITION.....	14
LIFE CYCLE.....	15
Industry Conditions.....	16
BARRIERS TO ENTRY.....	16
TAXATION	16
INDUSTRY ASSISTANCE	17
REGULATION AND DEREGULATION	17
COST STRUCTURE	19
CAPITAL AND LABOR INTENSITY.....	19
TECHNOLOGY AND SYSTEMS	20
INDUSTRY VOLATILITY.....	23
GLOBALIZATION.....	24
Key Factors	25
KEY SENSITIVITIES.....	25
KEY SUCCESS FACTORS.....	26
Key Competitors	27
MAJOR PLAYERS	27
PLAYER PERFORMANCE	27
OTHER PLAYERS	30
Industry Performance	34
CURRENT PERFORMANCE.....	34
HISTORICAL PERFORMANCE.....	39
Outlook	42



Industry Definition

Companies in this industry manufacture motor vehicle parts and accessories other than engines, engines parts, batteries, tires, bodies and chassis. Motor vehicle assembling is not included in this industry. Manufacturers typically supply parts and accessories to original equipment manufacturers (OEM) for use in the manufacturing of complete motor vehicles or for replacement parts in OEM dealerships. They also supply parts to the aftermarket.

ACTIVITIES (PRODUCTS AND SERVICES)

The primary activities of this industry are:

- Motor vehicle brake systems manufacturing
- Motor vehicle electrical and electronic parts manufacturing
- Motor vehicle parts metal stamping
- Motor vehicle seating and interior trim parts manufacturing
- Motor vehicle steering and suspension parts manufacturing
- Motor vehicle transmission and power train parts manufacturing

The major products and services in this industry are:

- Air conditioning, air bag, wheel and all other parts
- Transmission and power train
- Metal stamping
- Electrical and electronic components
- Seating and interior trim
- Brake systems
- Steering and suspension


SIMILAR INDUSTRIES

Industry:  C1941-GL - Global Tire Manufacturing


Description: Establishments primarily engaged in manufacturing tires are classified in Industry C1941, Global Tire Manufacturing.

Industry:  C2311-GL - Global Iron and Steel Mills

Description: Establishments primarily engaged in manufacturing iron and steel products are classified in Industry C2311, Global Iron and Steel Mills.

Industry:  C2531-GL - Global Automobile and Light Duty Motor Vehicle Manufacturing

Description: Establishments primarily engaged in manufacturing automobiles and light duty motor vehicles are classified in Industry C2531, Global Automobile and Light Duty Motor Vehicle Manufacturing.

Industry:  C2532-GL - Global Heavy Duty Truck Manufacturing

Description: Establishments primarily engaged in manufacturing heavy duty trucks are classified in Industry C2532, Global Heavy Duty Truck Manufacturing.

Industry:  C2533-GL - Global Motor Vehicle Engine and Engine Parts Manufacturing

Description: Establishments primarily engaged in manufacturing motor vehicle engines and engine parts are classified in Industry C2533, Global Motor Vehicle Engine and Engine Parts Manufacturing.

DEMAND & SUPPLY INDUSTRIES

- ☐ C2111-GL - Global Glass and Glass Products Manufacturing
- ☐ C2311-GL - Global Iron and Steel Mills
- ☐ C2321-GL - Global Alumina and Aluminum Production and Processing
- ☐ C2513-GL - Global Commercial and Service Machinery Manufacturing
- ☐ C2531-GL - Global Automobile and Light Duty Motor Vehicle Manufacturing
- ☐ C2532-GL - Global Heavy Duty Truck Manufacturing

Key Statistics

CONSTANT PRICES

	2006	2007	2008	2009	2010	
Industry Revenue	*1,254,281.4	*1,315,811.8	*1,318,443.5	*1,141,244.7	*1,263,307.7	\$Mill
Industry Gross Product	*268,579.5	*278,559.6	*258,924.0	*213,961.7	*247,257.7	\$Mill
Number of Establishments	*20,048	*20,132	*20,168	*17,788	*19,108	Units
Number of Enterprises	*13,634	*13,707	*13,570	*12,281	*13,411	Units
Employment	*3,345,627	*3,382,118	*3,319,390	*2,846,123	*3,038,216	Units
Exports	N/A	N/A	N/A	N/A	N/A	\$Mill
Imports	N/A	N/A	N/A	N/A	N/A	\$Mill
Total Wages	*136,879.9	*140,399.3	*140,264.1	*122,662.1	*133,560.0	\$Mill
Total Assets	N/A	N/A	N/A	N/A	N/A	\$Mill
Domestic Demand	NC	NC	NC	NC	NC	\$Mill
MVs In Use	*897,174.0	*920,500.0	*932,467.0	*937,129.0	*945,523.0	Thousands

CURRENT PRICES

	2006	2007	2008	2009	2010	
Industry Revenue	*1,156,262.7	*1,247,721.3	*1,276,924.6	*1,121,065.9	*1,263,307.7	\$Mill
Industry Gross Product	*247,590.7	*264,144.7	*250,770.3	*210,178.6	*247,257.7	\$Mill
Number of Establishments	*20,048	*20,132	*20,168	*17,788	*19,108	Units
Number of Enterprises	*13,634	*13,707	*13,570	*12,281	*13,411	Units
Employment	*3,345,627	*3,382,118	*3,319,390	*2,846,123	*3,038,216	Units
Exports	N/A	N/A	N/A	N/A	N/A	\$Mill
Imports	N/A	N/A	N/A	N/A	N/A	\$Mill
Total Wages	*126,183.1	*133,133.9	*135,847.1	*120,493.3	*133,560.0	\$Mill
Total Assets	N/A	N/A	N/A	N/A	N/A	\$Mill
Domestic Demand	NC	NC	NC	NC	NC	\$Mill
MVs In Use	*897,174.0	*920,500.0	*932,467.0	*937,129.0	*945,523.0	Thousands

REAL GROWTH

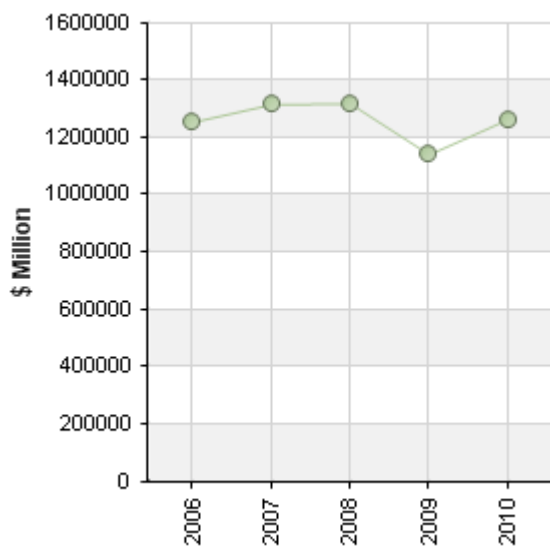
	2006	2007	2008	2009	2010	
Industry Revenue	*3.2	*4.9	*0.2	*-13.4	*10.7	%
Industry Gross Product	*2.5	*3.7	*-7.0	*-17.4	*15.6	%
Number of Establishments	*4.5	*0.4	*0.2	*-11.8	*7.4	%
Number of Enterprises	*0.8	*0.5	*-1.0	*-9.5	*9.2	%
Employment	*-0.3	*1.1	*-1.9	*-14.3	*6.7	%
Exports	N/A	N/A	N/A	N/A	N/A	%
Imports	N/A	N/A	N/A	N/A	N/A	%
Total Wages	*1.8	*2.6	*-0.1	*-12.5	*8.9	%
Total Assets	N/A	N/A	N/A	N/A	N/A	%
Domestic Demand	NC	NC	NC	NC	NC	%

RATIO TABLE

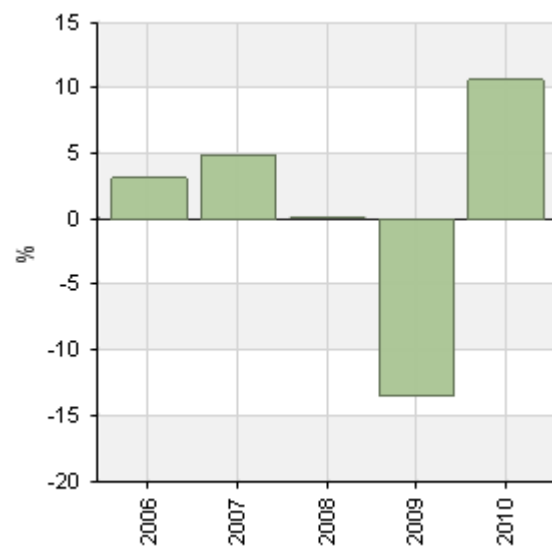
	2006	2007	2008	2009	2010	
Imports share of domestic demand	N/A	N/A	N/A	N/A	N/A	%
Exports Share of Revenue	N/A	N/A	N/A	N/A	N/A	%
Average Revenue per Employee	*0.37	*0.39	*0.40	*0.40	*0.42	\$Mill
Wages and Salaries Share of Revenue	*10.91	*10.67	*10.64	*10.75	*10.57	%

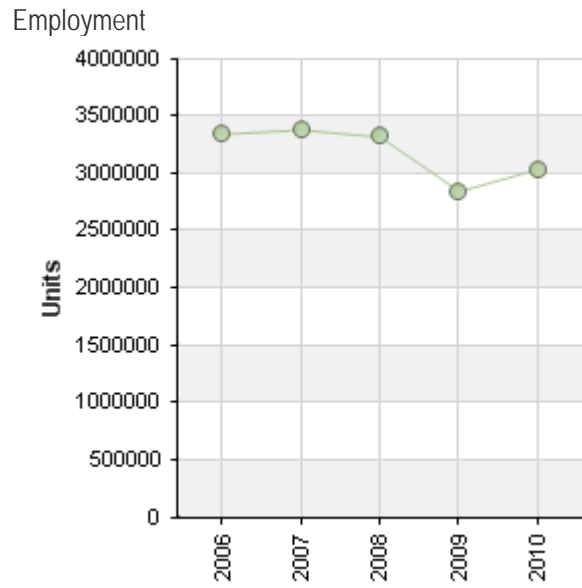
GRAPHS

Revenue



Revenue Growth Rate

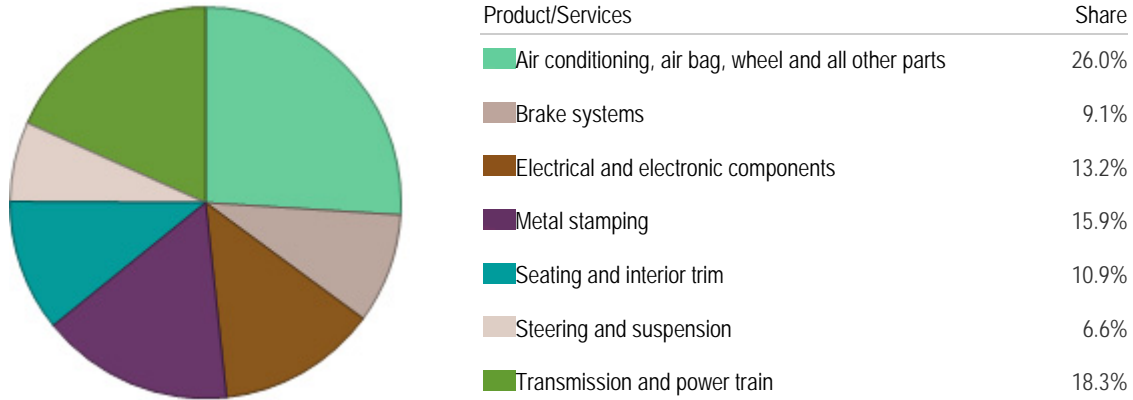




Note: Unless specified, an asterisk (*) associated with a number in a table indicates an IBISWorld estimate and references to dollars are to US dollars.

Segmentation

PRODUCTS AND SERVICE SEGMENTATION



There are two main types of motor vehicle parts and accessories: original equipment and parts and accessories for the aftermarket. Original equipment refers to motor vehicle parts and accessories that are manufactured to the specification of motor vehicle manufacturers. These standards are global, and motor vehicle manufacturers typically source the same part from different suppliers. Although manufactured by companies in this industry, original equipment carries the name of the final vehicle assembler. For example, electronic systems manufactured by Delphi and supplied to GM would carry the GM brand name. Original parts are also available in the dealerships of motor vehicle manufacturers.

In contrast, aftermarket parts do not necessarily meet original equipment standards. Due to licensing reasons, original equipment cannot be sold in the aftermarket (except through authorized motor vehicle manufacturers' dealers) until years after they are first developed. When licensing agreements expire, manufacturers of original equipment parts can produce those parts for the aftermarket under their own brand names. For example, parts manufactured by Bosch and sold to auto parts retailers would carry the Bosch name. There is no guarantee that parts destined for the aftermarket carry the same specifications as those destined for motor vehicle assembling, even if they are manufactured by the same company. There is a wide range of generic brands of parts and accessories in the aftermarket, particularly from China.

Electrical and electronic

Non-engine products can be segmented into body electronics and electric vehicle systems providing driving control and safety. Body electronics include windshield washer pumps and various relays, while body control products include door-lock controllers, anti-theft alarms, remote keyless entry and smart keys. Safety related products include sensors such as pressure and speed sensors, and instrument clusters. Vehicle lighting products include headlamps, main headlamps, fog and driving lamps, signal lamps, indicator lamps, tail lights, hazard lights and reflex reflectors, and interior lamps and interior lighting systems.

There has been a move from electrical distribution systems to electronic and electrical distribution systems that facilitates the integration of wiring, electronics and switch/control products within the overall electrical architecture of a vehicle. Electric motors perform a variety of functions that were formerly performed by cranks, gears and levers. All systems such as intelligent brake-control, throttle-by-wire and steer-by-wire require a sensor, a control unit and an electric motor.

Applications are found window-lifts, fuel pumps, mirror and headlight adjusters, anti-lock brake systems, clutches, automatic manual transmissions, parking brakes and electric steering. With the push towards plug-in electric vehicles and plug-in hybrid vehicles gaining momentum, the electrical and electronic content in motor vehicles is expected to rise over the next five years.

Steering and suspension

Steering and suspension component requirements have become sophisticated with an increasing emphasis on safety and ease of operations. The segment is developing a number of steer-by-wire systems that will eliminate the steering column, steering shaft, pump, intermediate shaft, hoses, fluids, and belts that are associated with a traditional power steering system. Other drive-by-wire systems include damping-by-wire and roll-by-wire systems, where actuators and controllers replace conventional dampers and roll bars on the suspension system.

Brake systems and transmission

Disc brakes have been replacing drum brakes over the last few years. Brake linings segment has also been declining over the past few years as disc brakes replace drum brakes. Other products in the segment include brake valves, brake shoes, brake power actuation units, brake hose assemblies and brake caliper assemblies.

Broad economic improvements continue to be made in emerging countries, increasing demand for smaller, less expensive vehicles that satisfy basic transportation needs that require simple transmission components. Increasingly stringent government regulations regarding vehicle safety and environmental standards are driving new product development in developed countries.

All other parts

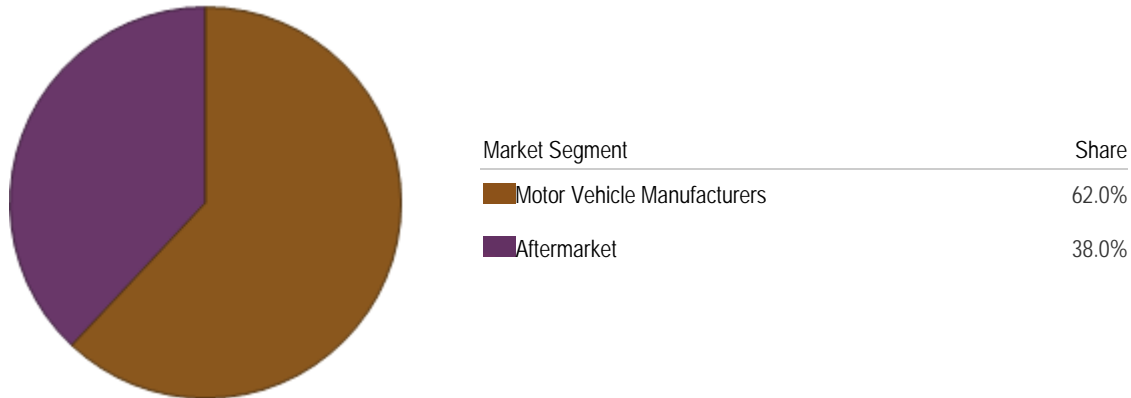
Consumer demand for comfort, safety and to a certain extent, gadgetry to enhance the desirability of the car journey has led to the development of various products relating to seating and interior trim. The use of electronics in seat adjustment and lumbar support has been the norm for several years. Modular interior trim and luggage compartment modules have increasingly been developed.

Stamping involves passing metal through dies in a stamping press to form into three-dimensional parts. Products are generally multi-component stamped assemblies and include the following: control arm assemblies; crossmembers; frame rails; front/rear impact systems; fuel tank skid plates; mastic assemblies; pillar assemblies; plenum assemblies; quarter panel inners and wheel house assemblies. Production processes include the design, development and mass manufacturing of stamped and welded components and modules.

Pressure from regulators has forced the industry to develop new products that are safer and less harmful to the environment. In the airbag product segment, the main focus lies in the development of next-generation airbag sensing systems. The goal is to make airbag sensing systems more accurate in detecting collisions, more responsive in deployment, and increasingly sensitive to the size, weight, and position of vehicle occupants. To achieve this, the industry is targeting the development of dispersed sensing and car occupant sensing technologies, while more advanced electric control units will improve the speed and deployment of the airbag itself using data gleaned from these sensors. The industry produces a wide range of innovative airbag systems and modules and adaptive restraint technologies. Products include driver, passenger, side curtain and head/torso airbag systems, as well as adaptive knee bolsters, variable output airbag modules, adaptive seat belt systems and power adjustable pedals.

The majority of the world's car air conditioners use a hydro fluorocarbon refrigerant called HFC-134a. Although this substance does not harm the ozone layer, it does have a high global warming potential. The industry's response is the development of air-conditioning systems that utilize naturally occurring compounds such as carbon dioxide. Natural refrigerants have an exceptionally low global warming potential compared with fluorocarbon refrigerants. Other parts include: wheels, automotive mirrors, air filters, catalytic converters, exhaust systems, tailpipes and mufflers.

MAJOR MARKET SEGMENTS



The automotive parts market is divided into two distinct areas. Motor vehicle manufacturers (known as OEMs, original equipment manufacturers) purchase parts from this industry to manufacture complete new motor vehicles. Parts are not sold separately. The aftermarket refers to parts required by motor vehicles that have already been sold. These include cases where the vehicle is in need of repairs, has been involved in an accident or needs retrofitting (adding new technology to older vehicles). Motor vehicle parts and accessories can also be demanded by the aftermarket for aesthetic purposes.

The motor vehicle manufacturers market is relatively volatile in developed countries as new motor vehicle sales experience cyclical pressures. Western Europe, North America and certain parts of North Asia, such as Japan all experienced cyclical pressures in the last five years. However, this was more than compensated by a growing market in China, India, Eastern Europe and South America. In 2009, global motor vehicle production is forecast to contract, and this will mitigate demand from OEMs. Several manufacturers in this industry are in dire straits due to massive production cuts from OEMs.

North America, Europe and North Asia collectively generate more than 60% of world's demand for aftermarket motor vehicle parts and accessories. The more mature markets of Western Europe, US and Japan constitute nearly 50% of the aftermarket. The world's demand for aftermarket parts and accessories is expected to rise over the five years to 2010, due to new and better products. However, demand in 2009 fell due to the global recession. This is particularly true for unessential accessories and the retrofitting sub-segment. In 2010, motor vehicle manufacturers are expected to gain some market share due to rising production and consumers starting to buy new cars again.

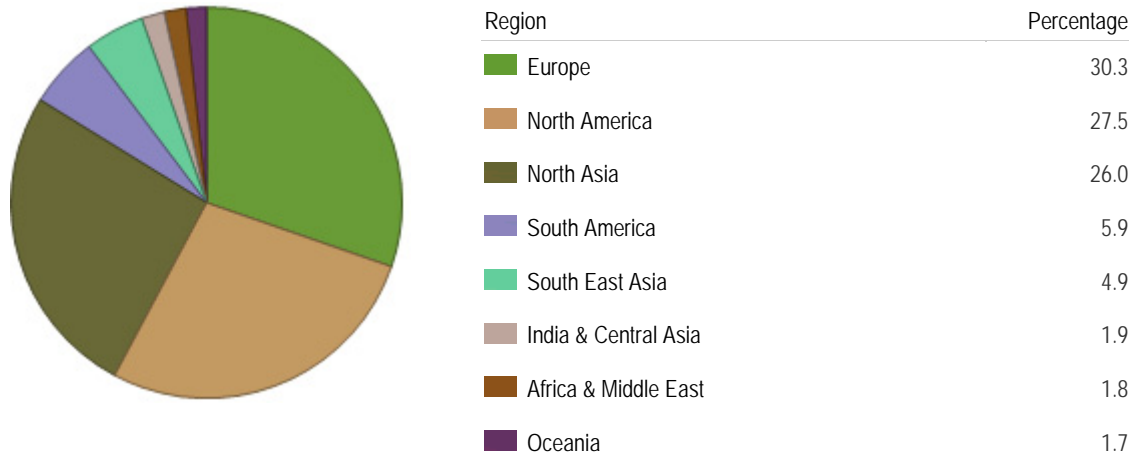
INDUSTRY CONCENTRATION

Industry concentration is low

Concentration levels are low in this industry as it is characterized by a large number of small players. Even the 'big name' OEM suppliers, or the tier one manufacturers as they are known, account for less than 5% of revenue each. IBISWorld believes that in 2010, the top four players will account for about 9.5% of revenue. Consolidation among the larger OEM suppliers is set to rise over the next five years, as they take cost cutting measures and consolidate to become more competitive.

GEOGRAPHIC SPREAD

Year: 2010
 Revenue



Europe is the largest region in terms of revenue generated, although no single country in Europe generates revenue greater than the US. The US has the largest number of vehicles in use and production volume of new vehicles. The mature market of Western Europe and fast growing market of Eastern Europe together dominate revenue generation of this industry. Eastern Europe is a low-cost base of production compared to Germany or France, which adds to its attraction as a close location to Western Europe. Automotive parts manufacturing plants have flourished in Poland, Slovenia and Russia. Europe also supports 11.5% of the world's population and generates about 35% of world's GDP. In 2010, demand from European replacement markets will grow, while revenue from motor vehicle manufacturers will decline relative to other regions due to dismal production prospects.

The next largest region is North America, which consists of the US, Canada and Mexico. This region hosts the most number of motor vehicles in use and therefore has a thriving aftermarket. In terms of world GDP, North America's proportion is about 33% and supports 6.6% of world's population. North Asia is the fastest growing region, with China and South Korea leading the way in the growth rate stakes, while Japan's motor vehicle parts and accessories market is more mature. North Asia is host to 24% of the world's population and accounts for 18.2% of the world's GDP. Revenue generated by the vehicle parts and accessories industry in China has been growing at about 28% per year. Chinese revenue is still relatively small though, as the price of parts and accessories manufactured there is very low. This is in contrast to the US, where parts are more expensive and this tends to inflate revenue. In 2010, revenue from US manufacturers will improve due to a rise in production. China's continued growth will be from both the OEM market and the replacement market.

The majority of revenue is derived from these three regions (Europe, North America and North Asia) due to motor vehicle manufacturers being located in those regions. Over 80% of car, light truck and heavy truck production takes place in those regions. South America accounts for 3.3% of world GDP and 6.8% of world's population. Brazil is the fastest growing

country in the region in terms of demand for motor vehicle parts and accessories. South East Asia accounts for 1.9% of world GDP and 7.9% of world's population. Thailand, Indonesia and Malaysia are the fastest growing countries in terms of number of vehicles in use and new motor vehicles produced.

Market Characteristics

MARKET SIZE

The Global Motor Vehicle Parts and Accessories Manufacturing industry cannot exist without motor vehicle production. Over the past five years, motor vehicle production has been supported by furious growth in China and other emerging economies. Income levels in China have been on the rise, which has created new demand for motor vehicles. Motor vehicle manufacturers began opening plants to satisfy demand and parts manufacturers soon followed. The aftermarket parts segment has also been supported by a rise in the number of vehicles in use globally. Yet, industry revenue is forecast to grow by a mere 0.8% annually to \$1.26 trillion over the five years to 2010.

The slow performance of the industry over the five year period can be explained by the global automotive crisis, which started in the US, but had spread to most Western economies by the end of 2008. The demand for motor vehicles manufactured by domestic US companies has been falling over the past five years. High fuel prices shifted consumers away from the types of motor vehicles manufactured by US companies, to smaller, more fuel-efficient imported vehicles. By 2008 though, most Western economies entered into a recession, and falling income along with low consumer confidence caused the demand for cars and trucks to plummet. Motor vehicle parts manufacturers felt the brunt of this as their own production had to be slashed due to falling car and truck manufacturing. They were left to deal with overcapacity issues and lack of credit on their own, which in 2009, were translated into bankruptcies for the weakest companies.

Things worsened in 2009 but are expected to improve in 2010. Once the global economy recovers, motor vehicle production will rebound. The demand for parts will also bounce back as they will be needed to support car and truck production. In particular, areas of growth will include electric and electronic car parts for hybrid electric vehicles. China will also continue on its expansion curve, which will further support growth. IBISWorld believes that industry revenue will rise by 2.3% annually over the five years to 2015 to reach \$1.42 trillion.

LINKAGES

Demand Linkages

C2531-GL - Global Automobile and Light Duty Motor Vehicle Manufacturing

The automobile and light duty motor vehicle manufacturing industry is a major demand determinant of automotive parts.

C2532-GL - Global Heavy Duty Truck Manufacturing

The heavy duty truck manufacturing industry is a major buyer of products produced by this industry.

Supply Linkages

C2111-GL - Global Glass and Glass Products Manufacturing

Substantial glass is used in manufacturing certain automotive parts such as windscreens and windows.

C2311-GL - Global Iron and Steel Mills

Iron and steel mills provide the basic raw material for the manufacture of many automotive parts.

C2321-GL - Global Alumina and Aluminum Production and Processing

Aluminum has been increasingly used as raw material in the manufacture of many automotive parts.

C2513-GL - Global Commercial and Service Machinery Manufacturing

Supplies machinery for the manufacture of tools and dies that transform metal raw material to automotive parts.

DEMAND DETERMINANTS

The two main markets include motor vehicle manufacturers and the replacement market. Determinants of demand for new vehicle production include vehicle prices (which are determined largely by wage, material and equipment costs and to some extent, exchange rates), income which determine affordability, interest rates, product quality and product innovation. Determinants of demand for the aftermarket include income, the size and age of the vehicle fleet as well as the number of miles driven. The replacement market is also sensitive to the rate at which old or damaged vehicles are scrapped instead of being repaired.

Another factor influencing demand for automotive parts and accessories is the required demand for high technological content in new vehicles by regulatory authorities. These include parts designed to lower emission levels, improve fuel economy and enhance safety.

DOMESTIC AND INTERNATIONAL MARKETS

Domestic and International Markets Trade

Trade in this industry is low

The trade trend is steady

Domestic and International Markets Analysis

International trade in the Motor Vehicle Parts and Accessories Manufacturing industry is medium with a growing trend in sourcing product from low cost producing countries such as China. All major players have some presence in China either operating as a wholly-owned subsidiary or as joint ventures. The amount of products sourced from China has been growing significantly over the last five years, as they are relatively cheaper. Chinese parts are also increasingly seen as safe alternatives rather than as cheap products. However, established automotive nations and regions such as North America, Japan and Europe have also experienced increases in exports, mainly due to the global nature of the automotive industry.

BASIS OF COMPETITION

Industry competition is high

Industry competition is increasing

This industry is a globalized one and as such, companies compete in similar ways independently of where they are located. Price and quality are clear winners when it comes to bases of competition, although parts manufacturers also compete on the following principles: technology leadership, engineering excellence, customer service, delivery time, product differentiation and proprietary position.

In a fiercely competitive market such as the global motor vehicle parts and accessories market, there is more than one supplier for any given part or accessory. Price therefore becomes a significant competitive factor. In the past, component manufacturers came under increasing pressure from North American motor vehicle manufacturers/assemblers to provide an annual price reduction so as to retain preferred supplier status. With rising costs of raw materials, component manufacturers servicing North American motor vehicle producers became increasingly vulnerable financially.

Companies in this industry gain competitive advantage by staying ahead of the pack and this requires considerable expenditure in research and development. This will be particularly important in the next five years as most economies around the globe will be striving for a greener industry. Investment into research and development will be required to meet emission targets and to ensure that parts for environmentally-friendly vehicles are available. Engineering excellence is also an important competitive factor as it leads to systems and procedures that produce quality products that do not attract expensive recalls due to defects.

Customer service is the key to keeping strong relationship with car makers. Close collaboration with clients and exchange of information will lead to repeat orders and extension of contracts. Companies in this industry also need to have a good grasp of delivery and lead times in order to remain competitive. Motor vehicle manufacturers often use production techniques that rely heavily on proper inventory control and timely parts sourcing. Parts manufacturers can provide additional value to their customers by retaining proprietary position, which leads to product differentiation.

Product differentiation is more likely to work in the aftermarket though, as motor vehicle manufacturers are often very inflexible when it comes to the type of parts they want to source. Product differentiation in the aftermarket stems from used parts that have been re-built and modified to suit individual applications. The intensity of competition from such external activities is believed to be low and will remain less significant in the future as motor vehicle parts become more sophisticated and modular in nature.

LIFE CYCLE

Life Cycle Stage

This industry is in the mature stage of its life cycle

Life Cycle Reasons

- The industry is in decline in some regions, but in a growth phase in others
- There has been a gradual introduction of technology
- Some new products have been developed
- The market is strongly competitive, with some mergers and acquisitions common

Life Cycle Analysis

The Motor Vehicle Parts and Accessories Manufacturing industry is in decline in mature economies such as the US, while it is enjoying a growth phase (nearing maturity) in emerging economies. The majority of the rise in establishments in this industry has been due to the explosion of the automotive sector in China. The story is completely different in the US for example, where companies are going bankrupt, being taken over and consolidating furiously in order to survive. Global companies have been able to hedge against domestic downturn by expanding into new locations such as China, India, Mexico, Brazil and Russia.

The industry has also enjoyed new products, brought on by technological advances over the past ten years. Some new products are also being introduced with the aim to enhance comfort and safety, reduce emissions and improve fuel efficiency without trade-offs in vehicle performance. Industry value added is expected to rise by 2.6% annually over the ten years to 2010, while world GDP is expected to grow between 2% and 5% every year (except for 2009 when world GDP declined). The industry's performance is slightly below that of the world as a whole. This difference stems in the fact that this industry relies heavily on metal during the production process. Steel prices have been skyrocketing over the five years to 2010 (although they fell in 2009), which has curtailed profit margins in this industry.

Industry Conditions

BARRIERS TO ENTRY

Barriers to entry in this industry are medium
These barriers are steady

Barriers to entry vary based on the type of part manufacturers. Companies that supply parts to motor vehicle manufacturers typically have higher barriers to entry than those supplying parts to the aftermarket. Motor vehicle assemblers require component suppliers to reduce prices periodically, which requires a new entrant to be a low-cost producer. New companies would need to invest heavily on technology and R&D before they can become a low-cost producer. Innovative products are required to maintain competitiveness, and as such extensive capital is required in research and development investment. As such, new entrants will find it challenging to obtain funds to carry out such ventures.

Motor vehicle assemblers also require parts to be manufactured according to very strict specifications, some of which may be too technical or expensive for a new entrant. However, to overcome these barriers, entrants can undertake collaborative ventures with global companies where exchange of capabilities may take place. Since automotive companies increasingly participate globally, any new entrant would require the establishment of a global network to compete with existing players anyway. Barriers to entry are less formidable when supplying to the aftermarket as aftermarket products need not meet specific requirements from automakers.

TAXATION

No specific taxation issues apply to this industry.

INDUSTRY ASSISTANCE

The level of Industry Assistance is low
The trend of Industry Assistance is steady

There are no specific tariffs for this industry

With free trade agreements and tough WTO rules, tariffs have either been falling or are not significant anymore in this industry. In the US, the impact of tariffs has been minimal as both exports and imports are relatively low and trade is predominantly conducted with neighboring Canada and Mexico, with which the US has a free trade agreement. The implementation of the North American Free Trade Agreement (NAFTA) enhanced the importance of Mexico and Canada, providing US suppliers with increased access to the growing Mexican market and an opportunity to structure their overall North American manufacturing operations to achieve cost effectiveness and maximize quality. For instance, the Canadian firm, Magna International performs contract stamping for a number of auto assemblers in the US. In other regions of the world such as Mexico and Thailand, bilateral Free Trade Agreements have made tariffs irrelevant.

Protection provided by China to its automotive parts industry is deemed to be skewed towards non-alignment with World Trade Organization rulings. In 2008, The WTO found that China was breaking trade rules by taxing imports of auto parts at the same rate as foreign-made finished cars. Chinese rules on taxes for the import of automotive parts impose 15% charge (in addition to 10% customs duty) on imported car parts when they are destined to a model that fulfills the "characteristics of a whole vehicle." The classification is easily triggered, either by a specific combination of a few imported parts, or if the imported parts represent 60% or more of the price of the complete vehicle. The system results in imported parts being subject to duties and charges effectively equivalent to the ones borne by a complete vehicle (25%), and favors the use of Chinese parts. The rules oblige EU and other non-Chinese car makers who wish to avoid higher duties to source car parts in China. The WTO Panel also found that, even if the 15% charge were to be considered a customs duty instead of an internal charge, it would still be in breach of China's WTO obligations. WTO cases tend to take years before retaliatory sanctions can be authorized. If China foregoes an appeal, it will be given a "reasonable period of time" to make legislative changes. A separate panel would then have to resolve the issue.

Government to the rescue

Due to the global financial crisis and strife within the auto sector around the globe, Governments have been ramping up their assistance over the first half of 2009. Assistance schemes range from cash rebates when purchasing cars (which does not affect manufacturers directly, but boosts demand), tax breaks for businesses and funds injected into car companies to keep them afloat. The French Government bailed out PSA and Renault in early 2009, thereby saving thousands of jobs. The US Government also bailed out Chrysler and GM. By ensuring the survival of motor vehicle manufacturers, parts suppliers are also being given a lifeline as they depend on car production for a majority of their sales.

REGULATION AND DEREGULATION

The level of Regulation is medium
The trend of Regulation is steady

The automotive safety industry is subject to medium level of regulation, both in the US and in many other countries. These regulations are subject to frequent review by applicable regulatory authorities and other governmental entities, and are subject to change.

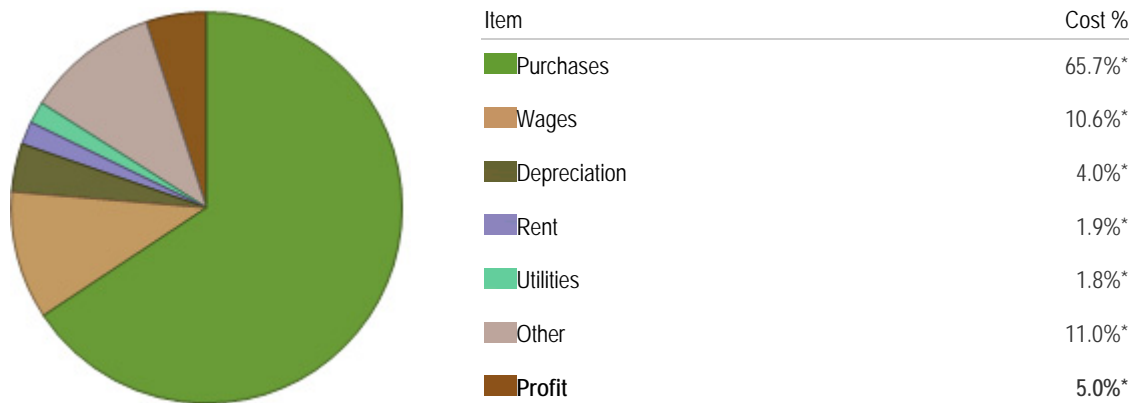
In the US, Title 49 U.S.C. 3011 authorizes the National Highway Traffic Safety Administration (NHTSA) to issue safety standards for new motor vehicles and new motor vehicle equipment. All motor vehicles and items of motor vehicle equipment manufactured or imported for sale in the United States must comply with all applicable Federal Motor Vehicle Safety Standards (FMVSS). The FMVSS applicable to this industry include Standards 101 - Controls and Displays; 104 - Windshield and Wiping and Washing; 108 - Lamps, Reflex Devices and Associated Equipment; 114 - Theft Protection; and 118 - Power Operated Windows, Partitions and Roof Panel Systems. Similar regulations exist in Western Europe, North Asia, South America and other parts of the world.

The industry is also subject to requirements of federal, state, local and foreign environmental and occupational safety and health laws and regulations. These include laws regulating air emissions, water discharge and waste management. The industry is also subject to environmental laws requiring the investigation and cleanup of environmental contamination at properties the industry uses; and at third party disposal or treatment facilities to which these sites sent or arranged to send hazardous wastes. Occupational safety and health laws and regulations impact directly on operations and employee safety.

Industry products are required to comply with motor vehicle safety standards and regulations of the various countries around the world. Standards are also set by specific motor vehicle makers. Part manufacturers have to adhere to those specifications in order to be able to sell parts to motor vehicle producers.

COST STRUCTURE

Year: 2010



Profitability can vary depending on the type of product being manufactured, the labor and technology mix of a component supplier's manufacturing process, and the structure and size of the company. In general though, parts manufacturers enjoy relatively low profit levels (between 6% to 10%). This is due to the maturity level of the industry, the high level of competition from a large number of competitors, and pressures from automotive assemblers for lower priced products. Due to rising materials costs over the past five years, coupled with the global automotive downturn, profit margins have been falling. Profitability is expected to rise in 2010 due to better capacity utilization in production plants and rising demand.

The major component of a typical company's expenses is made up of purchases, which includes buying raw materials, semi-finished products and completed parts for module assembly. Purchases account for over 60% of revenue and managing the supply chain efficiency has become a top priority with a number of major players. For instance, Delphi has significantly reduced the number of suppliers that it deals with. Purchasing costs declined slightly in 2009 due to the expected contraction in the price of steel. They are forecast to rise again in 2010.

Labor costs make up a moderate proportion of a firm's expenses at about 10.6%. Labor costs are set to decline further as larger players based in matured markets such as Western Europe, Japan and the US restructure themselves and opt for locations with relatively lower wage cost structures such as Eastern Europe, South America, China, India and South East Asia. However, the average industry wage has been on the rise, as economic booms in those traditionally low wage countries have narrowed the wage difference gap. Wages in China have been rising rapidly over the past couple of years and will continue to grow.

An indication of the high level of capital costs within the industry is the relatively large proportion of depreciation allowed for. This is 4.0% for the typical firm and is allocated for repair and servicing manufacturing machinery, office equipment, computer technology and software. Other expenses include research and development, advertising, insurance and freight costs. As firms attempt to gain an advantage in the market, research and development, advertising and promotion costs increase. Insurance costs have increased in the past several years as firms attempt to maximize security.

CAPITAL AND LABOR INTENSITY

The level of Capital Intensity is high

- Investment in automated production machinery is a significant capital cost
- Businesses gain competitive advantage by investing substantially in capital equipment

Expenditure on wages accounts for a larger proportion of revenue than does capital, with a typical firm in the industry using approximately 2.7 units of labor for each unit of capital. Over the past five years, the average industry wage has been on the rise, due to strong economic growth in low-wage countries. This has led to a rise in skills levels and wages in those countries. Capital intensity has been falling as a result of this rise in wages.

Capital expenditure is confined to the purchase of production machinery and tools, which usually have a lengthy lifespan and are replaced infrequently. Capital costs are also expended on specialized premises and can be significant for larger establishments.

TECHNOLOGY AND SYSTEMS

The level of Technology Change is medium

Technological innovation is crucial for the survival of companies in this industry. Technological advancement varies from product segment to product segment, although there has been a clear trend towards more electronic and electrical integration in traditional car parts over the past decade. Innovation is also in the form of improving efficiency - be it for production processes, vehicle safety or for fuel economy.

Electrical and electronics

The transition from electrical distribution systems to electronic and electrical distribution systems is facilitating the integration of wiring, electronics and switch/control products within the overall electrical architecture of a vehicle. For instance, US based Lear Corporation's attempt to integrate electronic and electrical products into vehicle interior systems has been successful. It provides the company a competitive edge by producing products that are less costly and lighter in weight. Lear Corporation has also developed the smart junction box which combined traditional junctions box functions (connection point for multiple wire harnesses) with electronic capabilities by incorporating electronic control functions traditionally located elsewhere in the vehicle.

The segment has also developed advanced automotive electronics such as intelligent sensors for proximity control, on-board structures with 42 Volt technology, passive entry and keyless entry, electrical actuators for adjusting turbine geometrics in turbochargers, contactless inductive position sensor, efficient AC to DC power conversion technology for battery charging especially in electric vehicles and fiber optic distributed lighting system, which is used in locations with restrictive design, packaging and styling requirements.

New products being developed include central electronic systems with integrated electronics and CAN-bus interfaces as well as self-diagnosis; inductive vehicle level sensor; navigation systems; and tire pressure monitoring systems. The development in technology is geared to provide assemblers with products that enhance safety and increase fuel efficiencies.

The introduction of web-based industry exchanges has been gaining momentum. The major players now have the capability to trade electronically and have been transmitting Material Release Schedules over the internet to their

suppliers. Also the implementation of Japanese material control methods or "Kanban" significantly reduced raw material and semi-finished inventories.

As vehicle electrical and electronic applications become more demanding on a vehicle's electrical and electronic distribution system (EEDS), alternative solutions to the traditional wire harness loom include multiplexing, fiber optics and flexible printed circuit boards. Multiplexed systems need fewer wires, thereby reducing bulk and weight. Information is shared rather than duplicated, improving service repair, diagnostics and the flexibility to change options. Fiber optic systems transmit information and data throughout the vehicle for signaling and communications. Claimed advantages of using fiber optics over copper wires include weight saving and higher data quality, reliability and integrity, ability to send large amount of data quickly and has good electromagnetic compatibility. However, the downside is, fiber optics is more expensive than traditional wire harness technology as it requires more parts to convert electrical signals to light pulses and back again.

Driver assistance systems are being developed by nearly all major players, while some such as Germany based Hella are advanced and its applications include an ultrasonic-based parallel parking system, rear-end collision warning, lane-departure warning, rearview cameras and sensors with advanced image-processing software.

Steering and suspension

Efficiency improvements within the industry have come from implementation of tool life management programs, quick die change mechanisms and preventative maintenance generated substantial reductions in machine down time and scrap. The implementation of Japanese material control methods or "Kanban" significantly reduced inventories. However, motor vehicle assemblers expect their component suppliers to pass on annual price decreases achieved through productivity enhancement.

Delphi Automotive Systems have also developed the Dynamic Body Control System and MagneRide Suspension System. MagneRide dampens wheel and body motion through the use of Magneto-Rheologic (MR) fluid and a new piston design. It provides the industry's first semi-active, continuously variable suspension technology with no electro-mechanical valves or small moving parts. The MR fluid is a suspension of magnetically chargeable particles, in monotube struts and shocks. When MR fluid is not magnetized or "off", the particles are in a random pattern in monotube struts and shocks. However, in the magnetized state, the applied magnetic field aligns the particles into fibrous structures, changing the fluid characteristics to a near plastic state. The change is fast, reversible, and temperature independent. Since applying a magnetic current changes the MR fluid's consistency, MagneRide can create any state between the low forces of "off" to the high forces of "on" by fine-tuning the current. The result is continuously variable real-time damping with quick response time, lag and fade resistance, and noise free operation.

Delphi's Dynamic Body Control System has the ability to reduce roll bar forces under normal driving conditions and road impacts, while applying only the required roll bar forces to maintain up to zero body roll angle in corners. During higher body-roll maneuvers, the Dynamic Body Control System's vehicle sensors measure real-time steering angle, lateral acceleration, vehicle speed, and more to provide the necessary data input to the Electronic Control Unit (ECU). The software then instantaneously analyzes and determines the appropriate measures required. The system responds via hydraulically actuated active stabilizer bar modules to provide the necessary negating roll moments. This technology, which can be active or semi-active, offers automakers the ability to improve handling for all vehicles, and in particular, vehicles with high centers of gravity like Sport Utility Vehicles and light trucks.

The industry is also developing a number of drive-by-wire technologies. In steer-by-wire systems, the mechanical links between the steering wheel and the front wheels are replaced with two motorized assist mechanisms, a handwheel feedback unit, and an electronic controller. As a result, the steering column, steering shaft, pump, intermediate shaft,

hoses, fluids, and belts that are associated with a traditional power steering system are completely eliminated. Other drive-by-wire systems include damping-by-wire and roll-by-wire systems, where actuators and controllers replace conventional dampers and roll bars on the suspension system.

Delphi has also developed an active energy absorbing steering column, which reduces the impact of a crash on the upper body by absorbing up to 20% of the driver's energy during a collision. The device uses a pyrotechnic actuator to optimize the energy absorbed prior to a collision by responding to seat position and seat belt usage. The active energy absorbing steering column acts in conjunction with a dual-stage airbag as part of an integrated driver safety system.

Brake systems

Modular brake assemblies are increasingly replacing stand alone units. A key development in brake technology in the near future is advances in electric brake-by-wire technology. Electric brake-by-wire systems will stop a vehicle using electromechanical actuators located at the wheels, which are commanded through electronic signals transmitted from the driver, versus the conventional hydraulic powered systems used currently. The technology will be applied to vehicles with conventional powertrains, as well as vehicles with advanced power sources, like hybrid electric, fuel cell and advanced battery electric propulsion. When available, brake-by-wire will offer many advances, including improved brake response time and reduced stopping distances. It will be an enabling technology for active safety systems by providing control of each wheel independently, optimizing vehicle stability under most driving conditions. In addition to increased safety, brake-by-wire technology also helps provide improved fuel efficiency by reducing brake system weight and eliminating brake drag, which also increases brake pad life. Brake-by-wire also eliminates hydraulic brake fluid, helping to protect the environment.

Transmissions

To simplify the vehicle design and assembly processes and reduce their costs, vehicle manufacturers increasingly look to their suppliers to provide fully engineered systems and pre-assembled combinations of components rather than individual components. By offering sophisticated systems and modules rather than individual components, Tier One suppliers have assumed many of the design, engineering, research and development and assembly functions traditionally performed by the vehicle manufacturers.

A number of technologies have been developed that are specific to this segment. For instance, Visteon's Electro-Mechanical Drive system, a belt driven integrated starter alternator, will help automobile manufacturers move towards the implementation of hybrid powertrain strategies. It permits a smaller motor to provide the same amount of starting torque as traditional starter/alternator systems and allows implementation of start/stop, torque assistance at launch and regenerative braking in one compact package. The system can be a part of hybrid strategy used with a 42-volt electrical architecture or added to existing engines and transmissions with minimal design changes. Automotive manufacturers preparing to meet stricter fuel economy and emissions standards by developing hybrid powertrains can do so with minimal capital investment.

In September 2004, US based BorgWarner introduced two new technologies for improved vehicle traction and stability. The Pre-emptive Torque Management system's differentiating feature is its ability to deliver torque before a wheel slips. A precise amount of torque is transferred prior to wheel rotation, through the use of electronic sensors and microcomputer controls. Managing the power between the front and rear wheels, and eliminating power to the rear wheels when it is not needed, results in better handling, traction and fuel economy. The second technology is the InterActive Differential Control system, which uses electronic sensors and controls to deliver optimal biasing torque across the centre differential automatically. When the system senses that the wheels are slipping, it automatically transfers power to the tractive wheels

through the centre differential. When the slipping stops, biasing to the tractive wheels is reduced, thus improving vehicle handling.

Seating and interiors

The electronic and technological content of vehicles continues to expand, largely driven by consumer demand for functionality and affordable convenience options as well as safety. Electronic integration, which generally refers to products which combine integrated circuits, software algorithms, sensor technologies and mechanical components within the vehicle, allows assemblers to achieve substantial reductions in weight and mechanical complexity, resulting in easier assembly and better vehicle performance.

Johnson Controls introduced its next generation of seating, electronics, and overhead and interior components in early 2006. Examples include Fast Forward seating and the Genus seat, featuring alternative seating materials. Fast Forward seating is claimed to be the fastest people-to-cargo seating system in the industry, which can translate passenger seats into a flat load floor in 10 seconds.

Air-cons and airbags

In the air-conditioning segment, Denso Corporation has developed a Carbon Dioxide (CO₂) based refrigerant that is more environmentally friendly than the traditional hydro fluorocarbon refrigerant (HFC-134a). Denso claims the impact of CO₂ on global warming is 1/1,300 of HFC-134a. In addition, a conventional fluorocarbon air-conditioner requires a heater core to use heat from the vehicle engine to heat air in the cabin. In contrast, the non-fluorocarbon air conditioner heats air to rapidly raise cabin temperature by heat exchange between the CO₂ refrigerant and air, without using heat from the engine. The application is standard equipment on Toyota's fuel cell hybrid vehicle (FCHV).

In the airbag segment, Delphi has developed the dual-depth passenger bag. The new airbag can be deployed in a small or large size based on seat position, seat belt use and crash severity. The airbag's inflation energy is also adjusted at two different pressures according to the crash severity. The dual-depth airbag represents the next generation of airbag technology because of its potential to help restrain a front-seat passenger in a greater variety of seating and crash situations. A conventional dual-stage airbag inflates to a single shape with different pressures.

Delphi has won a deal with Volkswagen and Audi, starting from 2007 to supply its latest generation compact variable compressor (CVC Compressor). It features an energy-saving six-piston continuously variable mechanism and clutchless, allowing for significant weight reduction and better fuel efficiency. External electronic control of the compressor capacity allows for optimum integration with vehicle powertrains and more fuel efficient air-conditioning load management.

INDUSTRY VOLATILITY

Industry revenue volatility is medium

Volatility in this industry has been on the rise due to the amount of uncertainty surrounding the automotive sector. Motor vehicle manufacturing plummeted in 2009, which dragged down the revenue of parts manufacturers. Similarly, production is expected to grow in 2010, by double-digits, which will affect parts manufacturers and add to the volatility of revenue.

The demand for heavy duty trucks and parts is also highly sensitive to legislative changes, more so than the demand for cars. There have been numerous changes in regulations in the past five years across the globe, contributing to some

erratic results within the segment. These volatile factors are slightly offset by the relatively steady demand from the aftermarket segment.

GLOBALIZATION

The level of Globalization is high

The trend of Globalization is increasing

Over the past decade, the Motor Vehicle Parts and Accessories Manufacturing industry has gone through a complete remodeling leading to the emergence of highly competitive global industry. Multinational vehicle manufacturers have not only become a prominent part of the components industry supply chain but have also started using local suppliers for their regional and global components needs.

OEM Suppliers such as Robert Bosch, Denso, Delphi, Magna International, Johnson Controls, Visteon and Aisin Seiki all have global reach. They have also been strengthening their relationship with non-domestic raw materials suppliers. German based Robert Bosch GmbH had 159,000 associates located outside of Germany in 2007, contributing to 75% of its revenue, which was generated outside Germany. Bosch operates approximately 290 production sites worldwide of which more than 200 are located outside Germany. Similarly, Japan based Denso Corporation has over 60% of consolidated subsidiaries located outside of Japan.

Globalization has been increasing as manufacturers in the developed world such as Japan, Western Europe and North America seek to firstly reduce their production cost base; and secondly locate closer to fast growing markets such as China, South America, South East Asia, Eastern Europe and India.

Key Factors

KEY SENSITIVITIES

The key sensitivities affecting the performance of the Global Motor Vehicle Parts and Accessories Manufacturing industry include:

Domestic Goods Prices - Metals - Steel

Steel is one of the major inputs in the manufacturing of motor vehicle parts and accessories. Rises in the price of steel put upward cost pressures on manufacturers. Over the past five years, the price of steel has been on the rise due to excessive worldwide demand (particularly from emerging economies such as China). This has had a negative impact on the profitability of this industry.

Downstream Demand - Manufacturing

The motor vehicle manufacturing industry is the major user of parts and accessories produced by this industry. Over the past five years, production in the BRIC countries (Brazil, Russia, India and China) has been rising sharply. China in particular has been a shining star, with growth exceeding expectations. China became the world's largest light vehicle manufacturing in 2009, overtaking Japan and the US.

Downstream Demand - Truck Transportation

The level of truck transportation and capacity in the trucking sector dictate the demand for new trucks and by extension, truck parts and accessories. The sector is highly volatile and until the global downturn, has been affected by legislative changes and strong international trade. In 2009, falling demand from the ailing world economy mitigated trade levels severely and the demand for truck transportation suffered.

Growth (GDP) & Inflation - World GDP

Due to the global nature of the business, the industry is sensitive to world economic growth. It all started with the financial crisis in the US in 2008, which turned into a full-blown recession. In late 2008, major Western economies were in recession and due to interdependency, emerging economies suffered 2009. China depends on exports to the Western world for a major part of its revenue and as a result, is not immune to the recession in those countries.

Legislative Compliance Requirements - Automobile and Light Duty Motor Vehicle Mfg

Any increase legislative compliance requirements associated with motor vehicle safety, fuel efficiency and emission controls would provide the impetus for product innovation and expand product offerings. Over the past five years, most nations have introduced more stringent regulations regarding emissions and fuel efficiency. This is expected to continue over the next five years.

Pervasive Technology - Total Motor Vehicles

The number of vehicles in use determines the size and growth of the aftermarket. Approximately 40% of industry revenue is generated by the aftermarket. The more vehicles there are on the roads, the higher the need for replacement parts for repair purposes. The amount of vehicles in use has been rising over the past five years.

KEY SUCCESS FACTORS

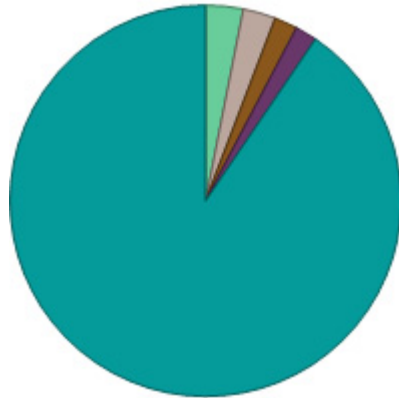
The key success factors in the Global Motor Vehicle Parts and Accessories Manufacturing industry are:

- Access to the latest available and most efficient technology and techniques
Access to production technology is critical in reducing costs and ensuring the smooth running of plants.
- Effective cost controls
Continued pressure from automakers to reduce prices and competitive nature of the aftermarket require effective cost controls.
- Undertaking technical research and development
Product innovation and expanded expenditure on research and development are required so as to gain competitiveness.
- Degree of globalization in the firm
The sourcing of parts is fast becoming global. In order to expand, companies must have global presence.
- Ability to control stock on hand
Understanding JIT, kanban and value chain concepts are key factors required to facilitate inventory control and meet stringent supply criteria of motor vehicle assemblers

Key Competitors

MAJOR PLAYERS

Market Share



Major Player	Market Share Range
Robert Bosch GmbH	3.1% (2010)
DENSO CORPORATION	2.7% (2010)
Magna International Inc.	1.9% (2010)
Aisin Seiki Co., Ltd.	1.8% (2010)
Other	90.5% (2010)

PLAYER PERFORMANCE

Robert Bosch GmbH

Market Share: 3.1%

The global orientation of the German-based Bosch Group is almost as old as the Bosch company itself. The first international Bosch branches were set up at the end of the 19th century, and work on the construction of a Bosch factory in the United States began in 1909. Currently, Bosch is active on every continent and has subsidiaries and associated companies in more than 50 countries. Bosch operates roughly 270 production sites worldwide, of which more than 200 are located outside Germany - in Europe, North and South America, Africa, Asia and Australia.

Its automotive technology operations generates around 61% of total revenue, while the consumer goods and building technology operations contribute 26%, with the rest (13%) being generated by its industrial technology operations. Its Automotive Technology business segment has a number of divisions and these include: Diesel Systems Division; Chassis Systems Brakes Division; Chassis Systems Control Division; Electrical Drives Division; Starter Motors and Generators Division; Car Multimedia Division; Automotive Electronics Division; Automotive Aftermarket Division; and ZF Steering Systems Joint Ventures.

Going global

Bosch has grown rapidly in the Americas, Asia, and Eastern Europe and intends to extend its presence in these regions in the future. In 2006, Bosch opened a new automotive electrical component manufacturing plant in Changsha, central China. In 2006, Bosch agreed to set up a fifty-fifty joint venture company with DENSO Corporation of Japan, which is expected to commence manufacturing ceramic elements in Eastern Europe in 2009. These will be used in diesel particulate filters. Bosch acquired a 50% stake in Pacifica Group Ltd., an Australian brake technology company in early 2007. Acquisition activities continued into 2008 when Bosch agreed to acquire K&H Eppensteiner, a Germany based filter manufacturer. The acquisition strengthens its line of filters for heavy duty trucks and the market for hydraulic filters used in offshore operations.

According to Automotive News, Bosch's global OEM automotive parts sales in 2008 amounted to \$33.90 billion. Consolidated financial performance is summarized in the table. The company's positive financial statement was the result

of its broad Asian-pacific and European customer base. Robert Bosch counts emerging companies such as Tata among its clients, which has helped it keep revenue growing. Over the five years to 2008, revenue grew by 5.8% annually. There were a few hiccups along the way though. In 2006, profit fell due to skyrocketing raw materials prices and profit also plummeted in 2008 due to the downturn in the auto industry. Over the five year period, net profit after tax fell by 18.4% annually.

Robert Bosch - financial performance

Year	Million Dollars Revenue	% change Growth	Million Dollars NPAT	% change Growth
2003	47966	3.9	1451	83.0
2004	51392	7.1	2467	70.0
2005	54700	6.4	3232	31.0
2006	57654	5.4	2863	-11.4
2007	68229	18.3	4198	46.6
2008	63607	-6.8	524	-87.5

Source: Annual Report

DENSO CORPORATION

Market Share: 2.7%

Japan based Denso Corporation is a motor vehicle parts manufacturer and produces automotive components for most of the world's major automakers. The majority shareholder is Toyota Motor, which owns 23% of Denso. Products offered include automotive air conditioners, spark plugs, antilock brake system controls, and windshield wipers. Non-automotive parts product offerings include car navigation systems, electronic toll collection systems, bar-code readers, factory automation robots, and programmable logic controllers.

Denso deliberately expanded its presence outside Japan so as not to depend on its home market for growth. Sales outside Japan contributed 49% of total revenue in fiscal year 2009, compared to 33% in 2005. This achievement was in no small part due to increasing presence in China and Europe. Denso's plan for China is to develop products tailored to the Chinese market while establishing a supply network in China. In this regard it added four new Chinese production facilities that make navigation systems, air conditioners compressors, instrument panels, and oil filters. In Europe, Denso is concentrating on developing air conditioners and automotive diesel common rail systems (which reduce pollution) - two products in which Denso is a major player. Its European presence is beefed up in these product segments by establishing low-cost operations in Hungary and Turkey.

Financial performance

According to Automotive News, Denso's global automotive parts revenue amounted to \$27.76 billion in 2008. Denso managed to increase revenue over the five years to 2009 despite the challenges from ailing markets in North America and Japan. Denso experienced steady demand from customers in most of its traditional markets (North America, Japan and Europe), but the significant growth came from emerging automotive markets such as China and India. Over the five years ending March 2009, Denso's consolidated revenue rose by 4.7% annually.

Things did not go so well for Denso in fiscal 2009 though. This is mainly because Denso's major customer is Toyota, which until late 2008, has been recording above-average sales and demand in the US and steady sales globally. Toyota has been slashing production radically due to inventory build-up and falling demand since. Denso's profit plummeted during the last quarter of fiscal 2009 and the company recorded a net loss margin during the year.

Denso Corporation - financial performance

Year	Million Dollars Revenue	% change Growth	Million Dollars NPAT	% change Growth	Employees
2004	24256	24.6	1041.5	12.4	95461
2005	26034	7.3	1233.1	18.4	104183
2006	27114	4.1	1442.7	17.0	105723
2007	30610	12.9	1739.8	20.6	112262
2008	40537	32.4	2461.5	41.5	119000
2009	30484	-24.8	-815.6	N/C	N/A

Source: hoovers.com

Magna International Inc.

Market Share: 1.9%

Canadian based Magna International is a diversified global automotive supplier. Magna designs, develops, and manufactures automotive systems, assemblies, modules and components, and engineer and assemble complete vehicles, primarily for sale to original equipment manufacturers (OEMs) of cars and light trucks, in the following geographical regions: North America, Europe and Rest of World. Magna has 240 production and 86 engineering and R&D centers in 25 countries on five continents. General Motors, Ford, BMW, and Chrysler accounted for more than 80% of Magna's sales revenue.

Magna's capabilities include the design, engineering, testing and manufacture of automotive interior systems, mirror systems, closure systems, metal body and chassis systems, seating systems, exterior systems, roof systems, electronic systems and powertrain systems. Magna has also shown interest in purchasing the Opel brand from GM. This would make the company a new player in the Global Automobile and Light Duty Motor Vehicle Manufacturing industry if the deal goes through.

Growth by acquisition

Magna's ability to survive and expand its revenue base has been due partly to its capability to hold costs down and grow its business through acquisitions. In early 2006, Magna added car tops to its extensive line of automotive component offerings when it completed the purchase of CTS Fahrzeug-Dachsysteme GmbH from Porsche. In North America, it purchased Porsche's Michigan-based Porsche Engineering Services Inc. The move gave Magna increased engineering capability in North America, particularly in the field of body panels. In 2007, Magna announced that Russian conglomerate Basic Element would acquire 20% of Magna for \$1.54 billion, providing Magna with a cash war chest and more importantly entry into the fast growing Russian automotive market. Magna also intends to seek out opportunities in Eastern Europe and Asia. In 2008, it did so by purchasing Technoplast, a Russian-based manufacturer of plastic interior and exterior parts.

Over the five years to December 2009, consolidated revenue declined by 3.4% annually and in 2009, the company reported net losses. The North American automotive crisis took its toll on the company in the second half of 2008. In the face of falling demand, Magna had no choice but to close down three plants in Canada. During the year, the company also laid off about 10,000 workers. This is in sharp contrast to its strategy in emerging economies. Magna is planning on building a parts plant in St Petersburg, Russia. The plant is expected to be ready by 2011. Net income suffered as well, due to high raw materials costs.

Magna International - financial performance

Year	Million Dollars Revenue	% change Growth	Million Dollars NPAT	% change Growth	Employees
2004	20653	34.6	668	38.3	81000
2005	22811	10.4	639	-4.3	82000
2006	24180	6.0	548	-14.2	83000
2007	26067	7.8	663	21.0	83900
2008	23704	-9.1	71	-89.3	N/A
2009	17367	-26.7	-493	N/C	72500

Source: hoovers.com

Aisin Seiki Co., Ltd.

Market Share: 1.8%

An affiliate of Toyota Motor, Aisin Seiki manufactures automotive parts such as transmissions, brakes, cooling and lubrication systems, door frames and latches, and car navigation systems. About 4% of its revenue is derived from the manufacture of lifestyle products such as beds, sewing machines, and toilet seats with jet sprays. Aisin Seiki has subsidiaries throughout the Americas, Europe, Asia and Oceania, which are mostly committed to manufacturing. Toyota owns more than 23% of Aisin Seiki and accounts for 66% of its sales.

To extend its global presence, Aisin Seiki has opened nine new production companies, including five in China, three in North America, and one in Europe. It has also launched several new products, such as the HD-10 hybrid drive used in the Ford Escape Hybrid to control both the motor for power generation and the drivetrain. In 2006, Aisin Seiki announced that it was in the process of building its newest North American plant in California for the manufacture of door frames and other parts. The plant opened in March 2008 and is manufacturing door frames for use at Toyota and General Motors joint venture New United Motor Manufacturing, Inc. (NUMMI). According to Automotive News, Aisin's global automotive parts revenue amounted to \$20.80 billion in 2008. Aisin's revenue rose by 8% annually over the five years to March 2009 through organic growth assisted by acquisitions. However, the company, quite like the other major players, was unable to withstand the decline in demand in 2008 and posted net losses for the year ended March 2009.

Aisin Seiki Co Ltd - financial performance

Year	Million Dollars Revenue	% change Growth	Million Dollars NPAT	% change Growth	Employees
2004	15195	29.3	328.7	-17.9	56386
2005	17007	11.9	434.4	32.2	53237
2006	18034	6.0	519.6	19.6	59587
2007	20174	11.9	567.3	9.2	65800
2008	27220	34.9	924.3	62.9	73500
2009	22322	-18.0	-253.5	N/C	73201

Source: hoovers.com

OTHER PLAYERS

There are a large number of players in this industry and most of them account for about 1.5% or less of industry revenue. Some of the more important ones are discussed below.

Delphi Automotive LLP

Delphi Automotive LLP (formerly known as Delphi Corporation) was incorporated in late 1998, as a wholly owned subsidiary of General Motors Corporation. In 1999, GM decided to spin-off Delphi, as it was putting too much pressure on the automaker's business. Since then Delphi has been operating as a separate entity and increasing its share of revenue from non-General Motors and affiliates. By 2007, revenue from GM and affiliates amounted to 37% of total revenue. Delphi operates its business along four major product sectors, which work closely to coordinate product development and marketing efforts. The four product sectors are Electrical/Electronics Architecture (vehicle electrical systems); Powertrain Systems (engine management, fuel, and emissions systems); Electronics and Safety (sensors, security systems, seat belts, airbags, navigation and entertainment systems), and Thermal Systems (climate control, radiators, heat exchangers).

Delphi filed for Chapter 11 bankruptcy protection on October 8, 2005, after failing to wrest wage and employment concessions from unions and financial assistance from General Motors. Since 2005, Delphi shed a number of non-core businesses so as to improve its chances to exit Chapter 11. Non-core business/product lines identified include brake and chassis systems, catalysts, cockpits and instrument panels, door modules and latches, ride dynamics, steering and wheel bearings. Delphi was hoping to emerge from bankruptcy protection in 2008. Due to the recession, Delphi's bankruptcy exit did not occur until October 2009.

Over the five years to December 2008, revenue fell by 8.5% annually to \$18.06 billion, drawing similarities with its former parent GM, which has been in major strife since 2005. Since filing for bankruptcy, Delphi has failed to keep revenue up or make a profit. In terms of the profit margin, 2006 was a dismal year for Delphi, posting a net loss of \$5.46 billion. The net loss included \$3.0 billion of charges related to the attrition of more than 20,000 traditional employees through its US hourly special attrition programs. Delphi's losses were concentrated in the US as it continued to experience lower volumes, partially reflecting market share losses by GM, and commodity price increases, in addition to the charges associated with implementing its US hourly attrition. Its performance in 2008 was abysmal, mainly due to falling demand from GM and price reduction pressures. Delphi recorded a net profit of \$3.04 billion in 2008 due to settlement money from outstanding issues with GM. IBISWorld believes that without taking the settlement money into account, Delphi would still be in a loss position.

Delphi emerged from bankruptcy protection in October 2009 and is still in the process of re-organization. As a result, 2009 information is not comparable to the predecessor company. The company was able to emerge from the filing after being acquired by its then-creditors. Current owners include: Elliott Management and Silver Point Capital.

Johnson Controls

US based Johnson Controls manufactures car seats, interior systems, batteries, environmental control systems for commercial buildings and HVAC systems through York International. Interior components include consoles and instrument panels. General Motors, Ford and Chrysler collectively account for approximately 32% of total sales. Similar to most global automotive suppliers, Johnson Controls has developed a significant presence in China since 1997. It has 12 plants in China to meet growing demand especially in seating and interior products. Johnson Controls has indicated that it will expand its component offerings beyond seating in China by entering the interior electronics, overhead systems, and cockpit markets.

In mid-2006, Johnson Controls embarked on a restructuring process that reduced its cost base in the US interiors business and European seating operations. The process included the cutting of 5,000 jobs and closure of 16 plants. The restructuring costs were estimated to be between \$130 million and \$140 million. During late 2007, Johnson Controls agreed to buy an interior components plant based in Saline, Michigan from Ford, subject to the approval of unionized

workforce. In 2008, Johnson Control expanded its interiors business by purchasing Plastech Engineered Products' automotive interiors operations in 2008.

Consolidated revenue expanded by 1.4% annually over the five years ended September 2009, mainly through some organic growth, acquisitions and expansion overseas in countries such as China. The first sign of trouble for JCI came in the year ended September 2009, when net losses were recorded. The company blames the downturn in the global automotive sector, as well as skyrocketing raw materials prices, in particular lead, steel and zinc for the contraction in income.

Valeo SA

Valeo is one of Europe's largest car parts suppliers, manufacturing components for most major car and truck manufacturers. It has four divisions: electronics and electrical systems, thermal systems, transmissions and distribution. Valeo operates approximately 125 plants, 62 R&D centers, and nine distribution centers, and employs approximately 61,300 people in 28 countries worldwide. Revenue amounted to \$12.26 billion in 2009, while the company recorded net losses of \$287.9 million due to falling motor vehicle production and restructuring charges.

The electronics and electrical systems division makes wiper systems, motors and actuators, security systems, electrical components, electronics and lighting products. The thermal systems division offers climate-control and engine-cooling components. The transmissions division manufactures clutch systems, torque converters, and friction products. Valeo's distribution division conducts aftermarket activities. Evidence of its Asian growth strategy was shown when Valeo established its thirteenth Chinese joint venture in 2006, in the form of an automotive lighting enterprise in cooperation with Japan-based Ichikoh. A second Chinese research and development center was opened in mid-2006. Valeo has also formed a joint venture with Iranian auto parts maker Armco and acquired the engine electronics business of Johnson Controls as a means to strengthen its electronics offerings. It sold its motors and actuators business to Nidec of Japan for 253 million euros.

In July 2007, Valeo created a joint venture for the production of alternators and starter motors with N.K. Minda Group, a leading manufacturer of automotive systems in India. The new company, Valeo Minda Electrical Systems India Private Limited, is 66.7% owned by Valeo and 33.3% by Minda. Located in Pune near Mumbai, the joint venture will develop, produce and sell Valeo Electrical Systems products, including alternators and starter motors for passenger cars. In June 2008, Valeo signed an agreement for the creation of a joint venture for the production of HVAC (heating, ventilation and air-conditioning) systems with Itelma, a Russian supplier of automotive systems to Russian automakers. The new company, Valeo Climate Control Tomilino LLC, is 95% owned by Valeo and 5% by Itelma. Located in Tomilino, close to Moscow, the joint venture develops, produces and sells Valeo Climate Control products and systems, including HVAC modules for passenger cars.

Visteon Corporation

Visteon Corporation is a manufacturer of automotive parts, and until 2000 was a wholly-owned subsidiary of Ford Motor Company. The company still relies heavily on Ford for business and has kept close ties with its former parent. Visteon is headquartered in Michigan and employed about 33,500 employees in 2008. Visteon operates the following groups: electronics products, climate products, interior product and other products. The electronics group manufactures a wide range of automotive electronics. Products include: engine control systems, lighting and audio systems. The climate products group manufactures climate systems, the interior products group is involved in the manufacturing of cockpit modules and other interior components. Visteon manufactures a variety of other automotive related products, such as emissions control parts, within the other products group.

Visteon has been struggling since its separation from Ford. In 2006, the company announced a three year plan to put 23 of its plants under Ford's management, in an attempt to improve profitability. Visteon has also been taking cost cutting, downsizing and employee reduction measures to improve the financial position of the business. Divestitures have been limited to non-US businesses so far, with the company selling its Indian powertrain system business and UK chassis component business in 2007. The company expects to make profit once again by 2010 due to these strict restructuring endeavors. Consolidated revenue fell by 11.6% annually over that five year period to 2008 to \$9.54 billion. This was mainly due to falling motor vehicle production, tightening credit markets and the bankruptcy of suppliers (including tier two and tier three component manufacturers). Losses were recorded in every single year, as the company was unable to offset rising materials and labor costs. In 2008, the company recorded a net loss of \$681 million. Visteon, like many other US automotive parts manufacturers, filed for chapter 11 bankruptcy protection in 2009.

Industry Performance

CURRENT PERFORMANCE

All good things must come to an end and after booming for years, the global economy is feeling weary. GDP growth in mature economies has been slow over the past five years and these countries were in a recession in 2009. Emerging economies have been recording double-digit growth rates but did feel the side-effects of the Western economies recession in 2009 and expanded at much slower rates. The Global Motor Vehicle Parts and Accessories Manufacturing industry depends principally on motor vehicle production for demand. Over the past five years, the motor vehicle manufacturing industry has been plagued with a string of issues, including skyrocketing fuel and metal prices and a series of stringent emissions and fuel economy regulations. These problems have led to uncertainty in the motor vehicle production industry and over the five years to 2010, global motor vehicle production is forecast to contract by 0.1% annually.

A tale of two economies

The global automotive sector has one common feature: two-speed growth. Emerging economies such as Brazil, Russia, India and China have been growing rapidly. Their motor vehicle parts and accessories manufacturing industries have been expanding just as fast. This is in sharp contrast to motor vehicle parts manufacturers in mature economies such as the US, England, Germany and Japan. They operate in a shrinking market and are in dire need of consolidation due to overcapacity and high raw material costs. Distinction between the two types of economies is important to understand the Global Motor Vehicles Parts and Accessories Manufacturing industry. Over the five years to 2010, industry revenue will rise by a mere 0.8% annually to \$1.26 trillion, implying that growth in the East will only partially offset the woes of the West. In fact, some of the positive growth rates in revenue were driven by price hikes by manufacturers when the price of raw materials rose. As mentioned, volume (total production) is forecast to decline over the period.

Hung out to dry

Motor vehicle manufacturers may be big enough to have room for restructuring should they fail, but parts manufacturers are not always so lucky. The largest parts manufacturers depend significantly on demand from motor vehicle manufacturers (also known as OEMs or original equipment manufacturers) for work. Parts manufacturers that supply to OEMs are known as OEM suppliers. They derive most of their revenue from contracts with motor vehicle manufacturers and have been significantly affected by the global automotive downturn. OEM suppliers are generally located close to motor vehicle manufacturers for supply chain synergies. Some of them are even located within motor vehicle assembly plants due to just-in-time production techniques. Just-in-time is an inventory management process which has the aim of improving lead times and minimizing overstocking. When motor vehicle production was thriving, this strategy proved to be beneficial to all parties.

The United States is a good example of how things can turn sour. Motor vehicle production (in particular, light trucks) has been plummeting in the US over the past five years and suppliers have seen the demand for parts and accessories fall along with motor vehicle manufacturing. US automakers started shutting down their plants, which left OEM suppliers with massive overcapacity and not much choice about whether or not to close down their own plants. Several US OEM suppliers have gone into bankruptcy protection over the past five years (most notably, Delphi Corp and Dana Corp), after losing work from OEMs. The situation was better in other Western economies until 2008.

In 2009, Chrysler and GM filed for bankruptcy protection as they were unable to withstand the severity of the decline in demand. This had repercussions across the global automotive industry as GM in particular operates in various regions.

The company is downsizing to become viable. It sold Saab in February 2010. It initially planned to sell the Opel, another European operation, but has since changed its mind. GM is also in the process of looking for sellers for the Hummer, and is phasing out the Pontiac brand. Chrysler was on the verge of going into liquidation when it was rescued by Italian automaker, Fiat. The new GM and the new Chrysler have since emerged from the bankruptcy filing. The fact that they were saved does not spell the end of troubles for suppliers. Some suppliers will have to re-forge contracts and relationships with the new owners. Additionally, GM is still in the process of selling many of its businesses, which means that uncertainty is still rife. There is a risk that brands will be phased out and plants shut down, which will negatively affect the demand for auto parts and accessories.

The threat for OEM suppliers during the crisis was a global one. Motor vehicle manufacturers around the globe slashed production. There is the fear that what has been happening in the United States for years, also happened to parts manufacturers in other mature economies where the demand for motor vehicles has been plummeting due to the global financial crisis. IBISWorld believes that in 2009, revenue of the Global Motor Vehicle Parts and Accessories Manufacturing industry contracted by an estimated 13.4% as motor vehicle manufacturers around the world slashed production by over 10%. On the flip side, China's automobile production reportedly grew by almost 50% in 2009, in sharp contrast to almost every other country in the world. Unfortunately, China alone was not enough to offset the dismal performance of the rest of the world completely. Additionally, Chinese automakers typically source components domestically, so, the global automotive supply chain as a whole did not benefit.

Governments across the globe intervened in the first half of 2009 to boost the demand for cars. Measures have been in the form of scrappage incentive, that is, giving would-buy buyers some money back for scrapping an existing old vehicle in order to purchase a new one. New car rebates were also introduced throughout Europe in the first half of 2009, while some countries (for example, Spain) implemented zero-interest on loans to purchase a new vehicle. Others (for example, Australia) took a fiscal approach by provided tax concessions to stimulate business expenditure on new fleets. In the more dire cases, the US and Canadian Government have intervened by taking a large stake in car companies, most notably, Chrysler and GM. The French Government has also bailed out its automakers, under heavy conditions that they do not close down plants or lay-off workers. All these incentives helped offset some of the sharp declines in production and sales in 2009, but IBISWorld believes that they were not nearly enough.

Bucking trends

The speed at which China's automotive sector grew over the past decade took everyone by surprise. Over the five years to 2010, the volume of motor vehicles manufactured in China will grow by an estimated 21.6% annually. Year-on-year growth rates were as high as 47.5% (in 2009) during the period. The motor vehicle production boom in China was supported by the expansion the auto parts industry. Despite GM's financial woes, GM China has been going strong. Quite like in the US and other mature economies, auto parts manufacturers in China are generally located close to motor vehicle manufacturers. In 2004 alone, the number of establishments in China's Automobile Parts and Accessories Manufacturing industry rose by 55.1%. These trends contributed significantly to rises in global establishment numbers and global industry revenue prior to the economic downturn.

The demand for motor vehicle parts in other emerging economies such as Brazil, India and Russia, as well as parts of the Eastern European block has also backed industry demand over the past five years. In 2009, emerging countries also felt the global recession and the demand for motor vehicle parts in those countries was lower than expected.

The good news is that in 2010, production is forecast to rise again. It will be increasing off a low-base and in countries such as China, will not be as high as 2009 due to lower government incentives. The recovery of production will differ from country to country. In the US, it will be rising off a very low-base and will be backed by a restructured and downsized car industry, which is in part owned by the government (which now has a major stake in GM for example). In Europe,

production is expected to continue to be fairly slow as many European economies are not expected to recover from the recession in 2010. The sub-standard performance of some countries will have an overall negative effect on the Europe area. Economic pessimism and highly-indebted governments will hinder the recovery of the car industry in the region.

Dismal conditions

Operators in this industry have been experiencing healthy profit margins until 2008. However, the margin has been falling due to the rise in steel prices, which has been squeezing profitability. Motor vehicle manufacturers typically have power along the automotive supply chain, and have constantly demanded lower parts prices. Parts manufacturers have not been able to completely pass on the rise in the cost of materials. The industry was less profitable in 2009 due to plummeting demand and rising overcapacity. The profit margin will improve in 2010, although the growth will be mitigated by an expected increase in raw material prices.

Companies in this industry will not forget 2009 anytime soon. Given the pessimistic outlook for motor vehicle production during the year, parts manufacturers around the globe have already started taking cost cutting measures. In December 2009, Valeo SA announced that it would slash 5,000 jobs, mostly in France and the rest of Europe. In March 2009, Robert Bosch GmbH announced that it would slash 170 jobs in Australia. IBISWorld expects that employment will contract by 2.0% over the five years to 2010, mainly due to the detrimental effects of the global recession in 2009.

There will also be a rise in the number of bankruptcies over the five year period. Credit is drying up for the relatively small (compared to motor vehicle manufacturers) parts manufacturers. Companies are increasingly finding it more difficult to obtain loans. OEM suppliers in particular are being affected by the woes of their major markets (that is, motor vehicle manufacturers). IBISWorld believes that over the five years to 2010, the number of establishments will contract by 0.1% annually.

In recessions, cheaper is better

International trade in this industry has been rising in the aftermarket segment. China's rapid growth in this industry has contributed significantly to this trend. Generic parts imported from China can be as much as half of the price of an OEM supplier branded part in the US. Growth in China's exports of parts and accessories has also been supported by rising safety standards and regulatory compliance requirements in the country. IBISWorld believes that cheap imports from China into the US and other mature economies will account for a larger share of the aftermarket, as customers become more price-sensitive and less brand-minded about motor vehicle parts.

Over the past decade the Global Motor Vehicle Parts and Accessories Manufacturing industry has gone through a complete remodeling leading to the emergence of a highly competitive global industry. Multinational vehicle manufacturers have become a prominent part of the local suppliers' networks for their regional and global parts needs. IBISWorld believes that this presents challenges for local and global suppliers respectively. Small and medium size local suppliers are being forced to advance technological expertise as rapidly as possible. Development of much improved quality and delivery performance is also paramount. Although targeted initially at servicing the burgeoning local vehicle manufacturing sector, new investments by suppliers could also become future substantial low-cost export bases for parts.

Motor vehicle electronics in China

As mentioned, China played a major role in supported industry revenue over the past five years. Manufacturers operate globally and tend to follow their customers into regions with substantial growth in demand for motor vehicles and low cost manufacturing bases. One such region has been China and its automotive electronics industry still has great potential for growth, according to a report prepared by Beijing-based CCID Consulting, which operates throughout the country.

In 2006, directly driven by the fast-expanding automotive industry, China's automotive electronics market maintained growth as full-year automotive electronics sales revenues grew almost 40% to 86.8 billion yuan. The power and chassis control systems and safety systems respectively accounted for 28.5% and 29.2% of China's automotive electronics market. The chassis control system upgrading was much faster after basic penetration had been achieved and, in addition to simple anti-locking braking systems (ABS), more and more chassis safety and stability systems were used in new vehicles. Diversified, complex and intelligent chassis systems have become the main trend in product evolution. This trend was notably obvious in China's automotive electronics market in 2006. For example, ABS configuration achieved a penetration of over 80% in domestic cars while diversified chassis products including traction control, brake assist and vehicle stability systems, were also introduced in the domestics. Airbags also achieved a fitment rate of over 80% among Chinese-made cars in 2006. The market for on-board electronics grew by almost 50% and accounted for 17.5% of China's overall automotive electronics market, a significant rise over 2005.

Foreign firms moving capacity to China and the rapid rise of local automotive electronics firms were the two most direct driving forces for the fast growth of China's automotive electronic parts industry. Indigenous automotive electronics firms are also active in almost all automotive electronics sectors, developing most strongly in on-board electronics, while sound systems and on-board GPS products are also showing growth.

GDP growth, selected countries

Years	Percentage US	Percentage Japan	Percentage China	Percentage EU
2006	2.7	2.0	11.1	3.2
2007	2.1	2.4	11.4	2.9
2008	0.4	-0.6	9.3	0.8
2009	-2.6	-5.3	7.8	-4.1
2010	1.8	1.5	9.0	0.6

Source: Various industry sources

Global motor vehicle production

Year	Thousands Cars and light truck	% change Growth	Thousands Heavy trucks and bus	% change Growth
2005	62973	3.2	3510	11.9
2006	65467	4.0	3791	8.0
2007	69193	5.7	3960	4.5
2008	66234	-4.3	4292	8.4
2009*	57000	-13.9	3670	-14.5
2010*	62800	10.2	3288	-10.4

Source: OICA
 Note: * estimates

Automobile production in China

Year	Million Automobiles	% change Growth
2005	5.71	12.6
2006	7.28	27.5
2007	8.89	22.1
2008	9.35	5.2
2009	13.79	47.5
2010	15.20	10.2

Source: IBISWorld Database

HISTORICAL PERFORMANCE

The Global Motor Vehicle Parts and Accessories Manufacturing industry dates back to the early days of motor vehicle production. Ever since Ford started the assembly line mode of production of motor vehicles in the early 1990s, there has been some form of outsourcing of materials as input into the assembly line. Although early motor vehicle manufacturers tended to own their own component companies, a number of them started to operate at an arms-length from their 'suppliers'. This allowed specialization and economies of scale to be present in the manufacturing process allowing motor vehicle manufacturers to focus on design and assembly work.

Traditionally, the overall automotive industry supply chain was organized in tiers. Original equipment manufacturers (OEMs) would design and assemble the car. First tiers would manufacture and supply components directly to the automaker. Second tiers would produce some of the simpler individual parts that would be included in a component manufactured by a first tier, and third and fourth tiers would mostly supply raw materials. This simple configuration has given way to direct suppliers who have grown and have a global reach. These firms are either specialized in complex systems, or integrators of several simpler subsystems. They are also expected to have a substantial responsibility in the design and engineering of these systems and to coordinate the supply chain necessary for their manufacturing and assembly.

The modern motor vehicle parts and accessories manufacturer follow a more complex structure. The systems integrator is a supplier capable of designing and integrating components, sub-assemblies and systems into modules that are shipped or placed directly by the supplier in the automakers' assembly plants. The global standardizer-systems manufacturer sets the standard on a global basis for a component or system. These firms are capable of design, development and manufacturing of complex systems. Systems manufacturers may supply motor vehicle manufacturers directly or indirectly through Systems Integrators.

Component specialists design and manufacture a specific component or subsystem for a given car or platform. These can include process specialists, such as metal stamper, die caster, injection molder, or forging shop that builds parts to print. They might also have additional capabilities such as machining and assembly, supplying components such as a steering column or pedal system. These firms increasingly work as suppliers to system integrators and standardizers. Raw material suppliers supply raw materials to the OEMs or their suppliers. This includes products ranging from steel coils or blanks, to aluminum ingots or polymer pellets. The presence and competitive structure of the specific market varies, with steel and polymers mostly a regional business, and aluminum or magnesium a global market. Some of the raw material suppliers have also moved into component specialists to add value to their products.

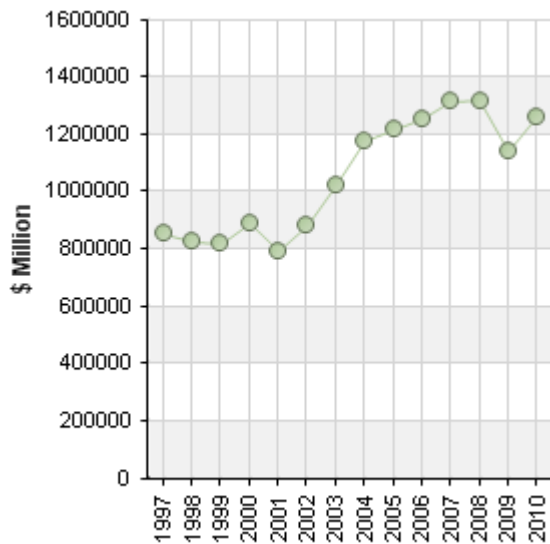
Most existing suppliers were not equipped to respond to the challenges associated with these new supply responsibilities. They were mostly regional, focusing on particular components and had limited resources to withstand financial outlays on

product development for several years before experiencing positive returns. As a result, a wave of foreign investments and consolidation swamped the supplier industry in the middle 1990s to the end of the 20th century. In the early 2000s, the number of vehicles produced only rose slightly owing to declines in 1998 due to the Asian financial crisis and in 2001, when the US economy slowed. This mitigated the demand for OEM parts. In contrast, the size of the aftermarket, as represented by the volume of motor vehicles in use, grew healthily as sales in China, Brazil, Eastern Europe and India increased significantly, while sales in Western Europe, Japan and the US softened.

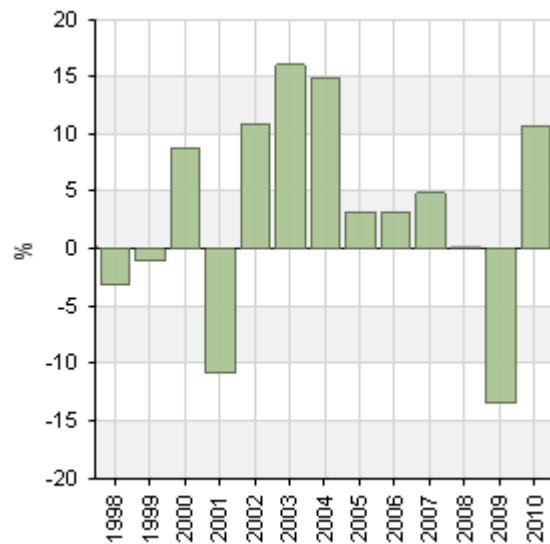
Revenue (constant prices)

	Revenue \$ Million	Growth %
1997	853,247.6	N/A
1998	826,582.9	-3.1
1999	817,921.8	-1.0
2000	890,710.1	8.9
2001	794,681.4	-10.8
2002	882,080.7	11.0
2003	1,024,292.1	16.1
2004	1,177,849.4	15.0
2005	1,215,909.3	3.2
2006	1,254,281.4	3.2
2007	1,315,811.8	4.9
2008	1,318,443.5	0.2
2009	1,141,244.7	-13.4
2010	1,263,307.7	10.7

Revenue



Revenue Growth Rate

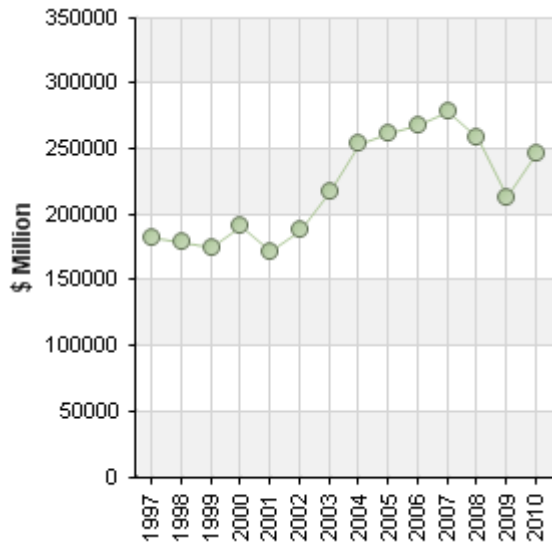


Gross Product (constant prices)

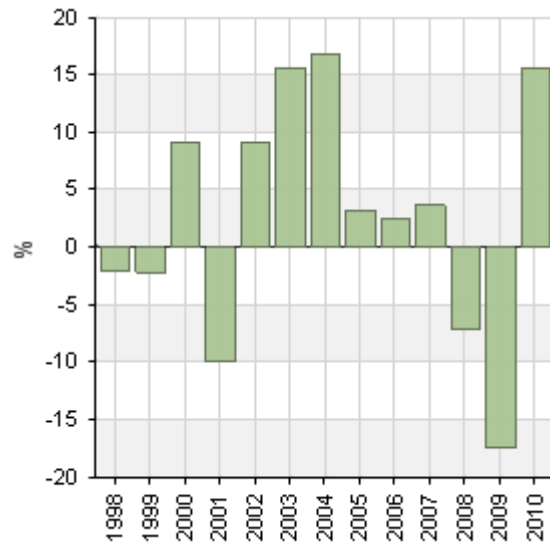
	Gross Product \$ Million	Growth %
--	--------------------------	----------

1997	182,781.3	N/A
1998	179,127.1	-2.0
1999	175,287.7	-2.1
2000	191,395.2	9.2
2001	172,445.8	-9.9
2002	188,052.6	9.1
2003	217,476.6	15.6
2004	253,968.0	16.8
2005	262,066.9	3.2
2006	268,579.5	2.5
2007	278,559.6	3.7
2008	258,924.0	-7.0
2009	213,961.7	-17.4
2010	247,257.7	15.6

Gross Product



Gross Product Growth Rate

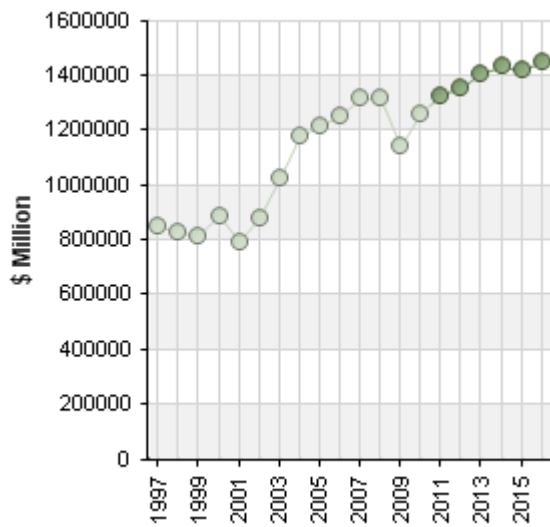


Outlook

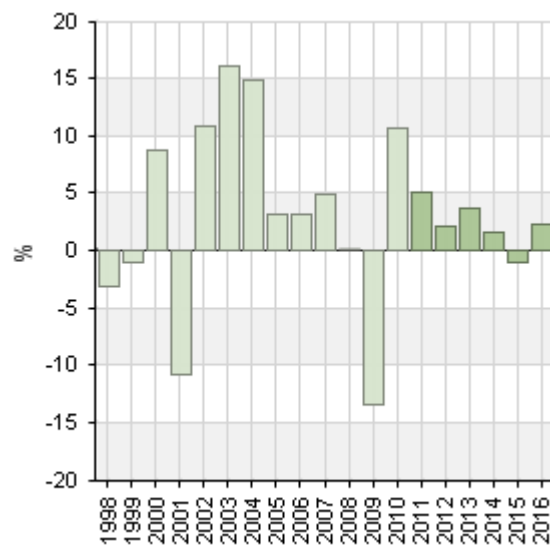
Revenue (constant prices)

	Revenue \$ Million	Growth %
2011	1,329,452.3	5.2
2012	1,356,765.4	2.1
2013	1,407,737.1	3.8
2014	1,432,281.3	1.7
2015	1,417,697.5	-1.0
2016	1,450,304.5	2.3

Revenue



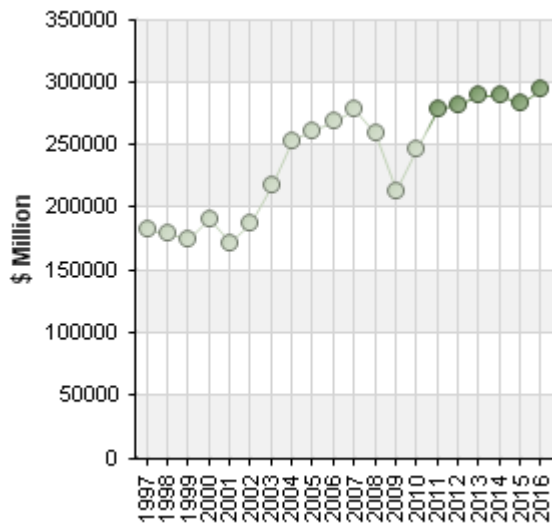
Revenue Growth Rate



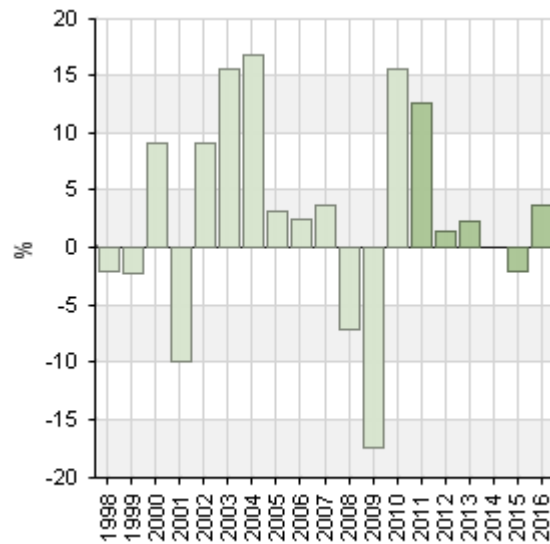
Gross Product (constant prices)

	Gross Product \$ Million	Growth %
2011	278,651.9	12.7
2012	282,735.6	1.5
2013	289,422.6	2.4
2014	289,320.8	0.0
2015	283,539.5	-2.0
2016	294,411.8	3.8

Gross Product



Gross Product Growth Rate



There will be light at the end of the tunnel for the world economy over the next five years. China and some emerging economies will get back to business without much ado in 2010, while the road to recovery will be a long and slow one for the more mature economies such as the United States and Japan. Motor vehicle production will bounce back and will be supported by pent-up demand during the recession, environmental concerns and continued expansion in emerging economies. On the downside though, the demand for steel is forecast to rise once the global economy recovers, which will negatively affect profit margins. The increase in the price of steel will not be as significant as that experienced during the five years to 2008 though.

Back on track

Over the five years to 2015, industry revenue is forecast to rise by 2.3% annually to \$1.42 trillion. Revenue will be supported by an increase in motor vehicle production. IBISWorld believes that global car and light truck production will grow by 5.4% annually over the five years to 2015. After slashing production in an attempt to reduce inventory in 2009 and slowly getting back on their feet in 2010, car makers around the globe will be back in business by 2011. The demand for truck transportation will also rise over the next five years, backed by international trade and rising business activity globally. Demand in emerging economies will increase at a faster rate than demand in Western economies. The Chinese Government for example is committed to expand the country's road infrastructure - and it can so do in a relatively small timeframe. Infrastructure support in the BRIC (Brazil, Russia, India and China) countries will contribute to the demand for motor vehicles and by extension, parts used in motor vehicles.

The aftermarket is also expected to perform fairly well over the outlook period, as the number of vehicles in use will keep on rising. The one threat to the aftermarket will be that new vehicles tend to break down less often than older vehicles. IBISWorld believes that the average age of the vehicle fleet will be falling over the next five years, which implies that drivers will be replacing their old cars with new ones. This could mitigate growth in the aftermarket, particularly in the short term. The demand for non-essential accessories is expected to rise over the next five years though, due to rising income worldwide.

The profitability of companies will rise along with revenue over the next five years. Consolidation will be on the rise as manufacturers will strive to reduce capacity and close inefficient units in order to be more competitive in the global market. China and other countries that can manufacture parts and accessories at a relatively lower price will continue to put upward pressure on competition over the next five years. IBISWorld expects that the 1.3% annual growth in establishments expected in this industry will mainly be within emerging economies, although there will be some expansion in mature economies as well. For example, Volkswagen intends on opening a motor vehicle assembly plant in the US by 2011, which will generate new demand for parts in that country and could require capacity extensions. Over the next five years, expansion will be supported by a 0.9% growth in employment annually.

Green growth

High fuel prices and environmental concerns have changed the way politicians and households alike view scarce resources and the damage caused by fuel emissions. Over the next five years, there will be growing interest in electric hybrid vehicles, electric vehicles, fuel cell vehicles and vehicles that are able to run on alternative fuels. According to a research report by RNCOS, global demand for hybrid vehicles will rise by 12% annually between 2008 and 2015.

Interest in hybrid vehicle technology has primarily arisen from the quest for improved fuel efficiency and lower emissions, as the issues of pollution and a finite global oil supply gains increasing worldwide attention. The 'green' credentials of hybrids are attractive to consumers, national and state governments, and manufacturers, with the latter also wishing to cultivate an image of technological leadership. In order to support production of this new era of green vehicles, motor vehicle parts manufacturers need to keep up with the technological requirements of automakers. Automakers have voiced concerns about the possibility of a lack of appropriate parts for use in hybrid vehicles, although this is limited to lithium-ion batteries, which are not included in this industry. Hybrid and electric vehicles generally have more electrical parts than a traditional car and the parts required differ from those used in traditional cars. Electronic parts in hybrid and electric vehicles typically use copper, as it is more conducive than other metals. Traditional parts generally use steel.

Technological drivers

It is predicted that some 10.7 million electric power steering (EPS) systems will be fitted to vehicles built in Western Europe by 2013, up from 6.1 million passenger vehicles in 2007. In the past, power steering technology was focused on hydraulic systems but demand is now favoring EPS, mainly due to fuel consumption and logistical benefits. Electric power steering systems effectively eliminate the traditional hydraulic system's power steering pump, hoses, hydraulic fluid, and drive belt and pulley on the engine.

Technology development in transmissions is driven by several factors, with lowering of emissions rapidly gaining in importance as carbon dioxide reduction legislation looms. Weight is also an emissions issue and packaging and torque density considerations are set to increase in significance as consumers shift to smaller fuel-efficient vehicles. Passenger comfort is a factor, particularly with respect to transmission shift quality, and this remains an issue for the current range of single-clutch automated manual transmissions (AMTs), which must compete against the significant improvements that have been made with conventional automatics and dual clutch transmissions (DCTs).

Cost is the other important market driver and here too, the newer technologies are under pressure to compete with the steady cost reductions being achieved in the production of conventional automatics. Although patterns differ in different market regions, the mix of light vehicle transmission types has been changing during recent years and the rate of change is currently accelerating as automated manual transmissions make inroads into both manual and automatic transmission market shares and continuously variable transmission increase in popularity, particularly in the lighter vehicle segments. Automatics are becoming more efficient, lighter and relatively less expensive to manufacture, and as a consequence are forecast to soon gain more than half of the new vehicle transmission market share and gain ground in medium and small

vehicle applications. Amid this, manuals are forecast to continue to lose market share despite their popularity in emerging markets where cost and efficiency are primary considerations.

The efficiency and cost advantages of AMTs and DCTs are prompting rapid growth forecasts and this strong potential is expected to stimulate new partnerships and joint ventures among vehicle manufacturers and transmission component and systems suppliers. DCTs, in particular, require collaboration with clutch suppliers, especially with respect to the advancement of wet, powershift clutch systems. Vehicle manufacturers and suppliers are also taking licenses for the production of some of the newer AMT technologies, from developers such as Antonov and Zeroshift, for example, and it is likely that some joint venture manufacturing facilities will be set up, such as the one between Chrysler and Getrag.

GDP growth rates, selected countries

Years	Percentage China	Percentage Japan	Percentage EU	Percentage US
2011	9.4	2.5	1.2	2.3
2012	9.9	3.4	2.3	2.5
2013	10.4	3.1	2.9	2.9
2014	10.6	2.7	2.7	3.2
2015	10.4	2.5	2.5	3.2

Source: IBISWorld Database