CBI
Ministry of Foreign Affairs

CBI Product Factsheet: Shock Absorbers in the EU5

'Practical market insights for your product'

The EU5 automotive market for shock absorbers is challenging for two reasons. Firstly, the automotive OEMs value vehicle safety and comfort, and so the technical specifications for components are high. This demand for safety and comfort can also be seen in the EU5 aftermarket sector, where vehicle manufacturing networks are dominant and advise consumers to install new shock absorbers on vehicles, even when they are fairly new. Secondly, the market for non-OEM parts is limited, as shock absorbers for older vehicles are changed only when deemed necessary. Outside of the passenger car market, there are significant opportunities with respect to shock absorbers, such as the OEMs that manufacture commercial vehicles, agricultural equipment and trailers in the EU5 area.

Product definition

Shock absorbers are grouped under the product category "Automotive parts and components" – "Parts, components and accessories for all kinds of common automotive vehicles" – "Suspension systems" (HS codes 87088010; 87088020; 87088035; 87088090). This Product Factsheet analyses the market for shock absorbers in EU5 countries (i.e. the biggest EU economies: Germany, France, the UK, Italy and Spain).

Product specifications

Quality: Compliance with international standards and the European standards on safety is required, as is as conformity with existing EU and national legislation and practices. The ISO/TS 16949 standard is considered to be the highest level of quality. This standard is important for the European automotive industry as it outlines best practices for the design, development, manufacture, installation and servicing of automotive products.

Materials

Shock absorbers are sophisticated piston systems that comprise of a steel shaft mounted to a piston, a cylinder, various gaskets, cushions and bushes. In gas-type shock absorbers, there is also a floating piston that separates the gas and the shock absorbing fluid. Shock absorbers are stamped with the brand of the manufacturer and with manufacturing codes and serial numbers.

European car manufacturers and legislators consider security and comfort to be very important. So shock absorbers are an essential component of the chassis, as they reduce the vibrations of the vehicle and springs. The shock absorbers and springs together form the link between suspension and body, which is beneficial to traction, steering and comfort. Coil springs or leaf springs are commonly used. Vehicles typically employ both hydraulic shock absorbers and springs or torsion bars.

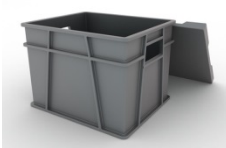
Packaging & Labelling:

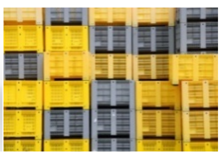
In general, packaging is dependent on the buyer: either the OEM or end user (the aftermarket sector). In the aftermarket sector, the packaging is typically disposable, as it is discarded after being used just once. Returnable packaging is most often used by OEM suppliers, so as to reduce cost and to improve the efficiency of packaging operations. Returnable packaging is not discarded after use and the empty packaging is recycled by the OEM or by a designated packaging operator. In order to export to the EU, product packaging must comply with EU standards. To reduce the harmful impact of packaging on the environment, the EU has instituted legislation concerning the management of packaging and packaging waste.

Considerations for action

- For more information on requirements for exporting casting and forgings to the EU, please refer to the CBI Buyer Requirements database Labels and Standards: Sustainability in Casting and Forging
- For more information on packaging and packing waste requirements, please refer to the European Commission.

Figure 1: Shock absorber





Source: Fotolia

Buyer Requirements

Legislative Requirements: The most important requirement for automotive components is that they comply with the technical standards set by EU legislation in order to guarantee vehicle and environmental safety.

Type-approval is a certification for various types of motor vehicles and their components, which includes agricultural and forestry tractors. The type-approval or certification is valid in all EU Member States and is required when selling any products in the EU. Many automotive components are not approved until the final assembly, in which case certification of individual components is not necessary, although these components will still have to comply with type-approval requirements.

The End of Life Vehicles (ELV) Directive aims to avoid environmental pollution during the scrapping process through reducing the hazardous materials used in vehicle production. Vehicles must be designed to facilitate proper dismantling and recycling (by coding the components), and the use of heavy metals such as lead, mercury, cadmium and hexavalent chromium is prohibited (with the exception of a few applications).

Considerations for action

- Check with your buyer, or with the approval authority of the country you want to export to, what the specific standards are for the parts you are manufacturing.
- Read more about type approval at the EU Export Helpdesk.
- Check if your buyer uses the International Material Data System (IMDS). This is a collective, computer-based data system developed by automotive OEMs to manage environmentally relevant aspects of the different parts used in vehicles. It has been adopted as the global standard for reporting on material content in the automotive industry.

Common buyer requirements: In addition to the legislative approval, there are other common buyer requirements. While these not obligatory in the legal sense, they are implemented by various competitors in the market and are thus necessary in order to compete effectively.

Quality Management: In order to apply for type-approval, production processes need to meet quality management criteria. ISO TS/16949 and ISO 9001 are accepted as standard requirements and EU buyers and manufacturers often insist on them.

Corporate social responsibility (CSR) and the extent to which buyers expect a certain level of social and environmental performance is becoming increasingly important. Bigger EU companies have developed their own CSR policies and require their suppliers (and their sub-suppliers) to conform to these. Signing a supplier code of conduct is often a prerequisite. These codes of conduct generally cover compliance with local laws, protection regarding workers' health and safety, respecting basic labour rights and also business ethics. The implementation of an environmental management system is often a requirement for

Considerations for action

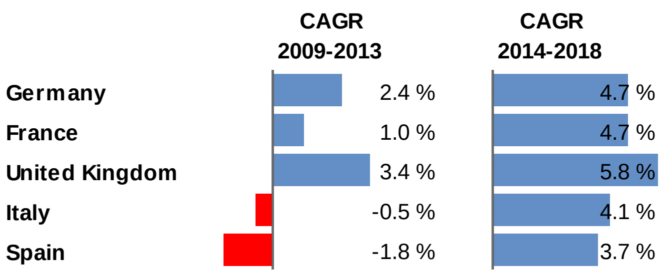
- Implement ISO 9001 and ISO TS/16949, as it is a standard requirement of EU buyers. Click here for more information on ISO TS/16949 at the ISO website
- Most big car brands publish their CSR policies and supplier code of conduct on their websites. An internet search for these may give valuable insight into assessing your company's performance by comparison.
- Implement an environmental management system, such as ISO 14001, as it is a common requirement.

core suppliers.

Macroeconomic statistics

The GDPs of the EU5 countries grew by only 1.3% on average between 2009 and 2013. However, the IMF predicts a considerable rise in the GDPs of all of the EU5 countries between 2014 and 2018. The estimated UK GDP CAGR for 2014-2018 is an impressive 5.8%, followed by solid increases in all other EU5 countries. Italy and Spain, in particular, went from negative growth in 2009-2013 to a predicted growth of close to 4% for 2014-2018.

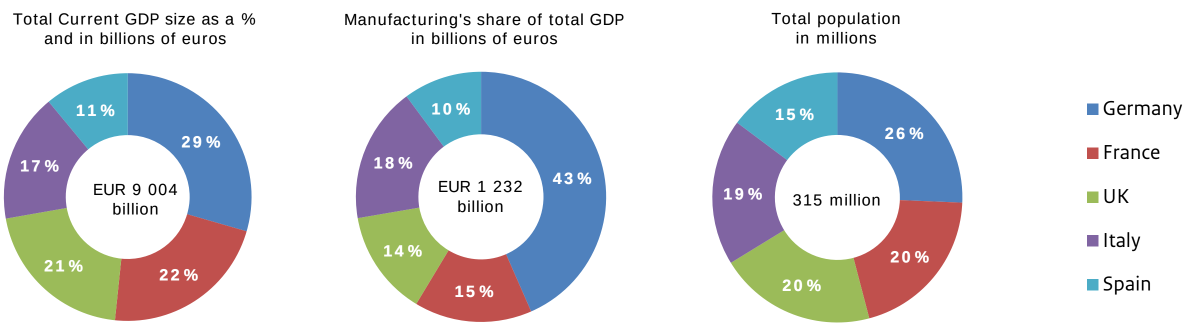
Figure 2: GDP Compound (current prices) Annual Growth Rate (CAGR) for 2009-2013 and 2014-2018 in the EU5



Data source: IMF 2014, World Economic Outlook Database

The total GDP for the EU5 countries was estimated at more than €9 trillion in 2013. Germany is the largest market in the EU5 with a GDP of €2.65 trillion, accounting for almost one-third of the total GDP, and with by far the strongest manufacturing base of all the EU5 nations (€535 billion in 2013). Germany is followed by France and the UK, each of which represent roughly one-fifth of the GDP value and 15% of total manufacturing for the five countries. With its GDP in 2013 close to €1 trillion and manufacturing at €125 billion, Spain is the smallest of the five economies.

Figure 3: Key 2013 macroeconomic indicators for the EU5, in billions of euros (population in millions)



Data source: IMF and OECD 2014

Trade Statistics

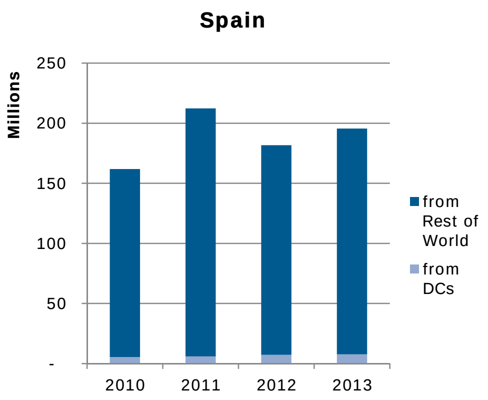
Imports and exports

The EU5 imported roughly €1.3 billion worth of shock absorbers in 2013. Germany alone represents over 42% of the imports, standing at €562 billion in 2013. It is followed by the United Kingdom at €246 million and Spain at €196 million. Shock absorbers are shipped mainly from Western and Eastern Europe as well as from other developed countries such as Japan and the United States.

Imports of shock absorbers from the DCs to the EU5 represented almost €122 million (9.2% of total imports) in 2013 and grew at a CAGR of 5.2% between 2010 and 2013. Germany and Italy together represent over 74% of DC shock absorber imports.

The biggest DC exporters of shock absorbers to the EU5 are Turkey (€46 million) and China (€41 million), together accounting for approximately 71% of shock absorber imports from the DCs to the EU5. Italy and Germany have the largest shares of shock absorber imports from the DCs, with 10% and 14% respectively, indicating a willingness to source those materials from the developing countries.

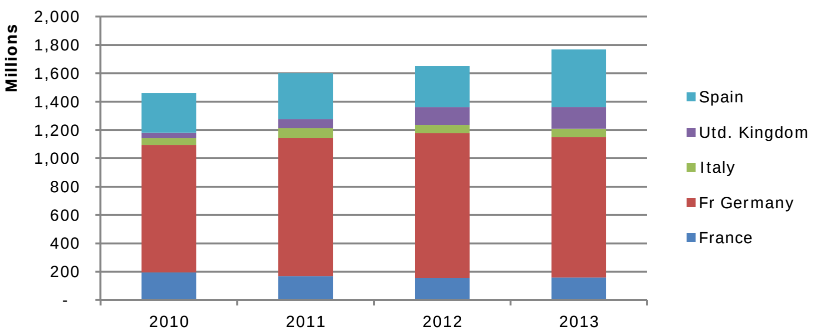
Figure 4: Import of shock absorbers in the EU5, in millions of euros (the range of the y-axes varies by country due to different import levels)



Data source: Eurostat 2014

The EU5 is a net exporter of shock absorbers. In 2013, it exported close to €1.8 billion worth of them. Germany is by far the largest exporter of shock absorbers among the EU5 countries, with nearly €991 million in exports (comprising a 56% share of all EU5 shock absorber exports). EU5 shock absorber exports grew at a 6.6% CAGR between 2010 and 2013. The export market is subject to demand by developed countries, as roughly 85% of the exports are eventually sold in Western and Eastern Europe and in other developed countries. China, Turkey and Mexico are the largest importers and together account for roughly €137 million.

Figure 5: Export of shock absorbers in the EU5 countries, in millions of euros



Data source: Eurostat (Prodcom) 2014

Market trends and opportunities

Although the European market is expected to stagnate over the short/medium term, there are still opportunities to be explored by the DC exporters within the EU5. In particular, there are opportunities outside the conventional passenger car industry. The companies active in truck, bus, tractor and earth moving equipment manufacturing are on a smaller scale and have fewer requirements for components than the passenger car industry. Here, the Tier 1 system suppliers for the OEMs should be primarily targeted. There is less potential in the aftermarket sector of the same equipment. The EU5 automotive market for shock absorbers is challenging for two reasons. Firstly, the automotive OEMs value vehicle safety and comfort, thus there are high technical specifications for components. This demand for safety and comfort can also be seen in the EU5 aftermarket sector, where vehicle manufacturing networks are dominant and advise consumers to install new shock absorbers on vehicles that are fairly new. Secondly, the market for non-OEM parts is limited, as shock absorbers for older vehicles are changed only when deemed necessary. Outside of the passenger car market, there are significant opportunities with respect to shock absorbers, such as the OEMs that manufacture commercial vehicles, agricultural equipment and trailers in the EU5 area.

Germany is the biggest European market for shock absorbers with estimated imports of €562 million in 2013 (up from €408 million in 2010). With an average compound growth of 11.3% per year and a share of nearly 14% of imports originating from the DCs, Germany is an excellent market for DC shock absorber exporters. The UK and Spain are the second and the third largest EU5 markets for shock absorbers, with 2013 import values of €246 million and €196 million respectively. Germany and Italy have the highest shares of the DC imports for shock absorbers with 14% and 10% respectively, which indicates a willingness to source shock absorbers from developing countries.

For more information on automotive market trends and opportunities, please refer to [CBI Trend Mapping for Automotive Parts and Components.]

Price

Apart from the distribution of new parts, the aftermarket for automotive parts also encompasses the vigorous distribution of used or overhauled parts and components. Pricing depends on supply chain positioning. The aftermarket sector, in particular, is very discount-driven and has varied mark-ups at each distribution step for different parts and components. Due to the large variation in parts types and models, it is difficult to provide a general overview of shock absorber prices, but it is possible to provide some insight into the margins imposed by different players in the supply chain. Based on the margin ranges, DC suppliers selling to a tier 3 supplier in the OEM supply chain could price their products at between 64% and 81% of the OEM delivery price. In order to better ascertain prices of specific products and models, check the internet to determine the appropriate range, or talk directly to wholesalers and/or retailers. The price of branded spare parts will not differ greatly among the various countries. Those players who are active in several European countries have largely harmonised their prices, and any differences in pricing may be because of different logistical and local costs. In the Original Equipment sector, the price is set by contracts of four years or more, which usually include a 3-5% price reduction each year after the first year. In the aftermarket sector, the prices are negotiated every year.

OEM supply chain	Margin
Tier 1 supplier delivering to OEM	6-8%
Tier 2 supplier delivering to tier 1	6-15%
Tier 3 supplier delivering to tier 2	10-25%
Aftermarket OES supply chain	**Margin**
Tier 1 delivering to OEM for OES sales through approved service chain	10-30%
Tier 1 delivering to OEM for OES sales through independent outlets	10-25%
OEM delivering OES parts through its approved service chain	25-65%
OEM delivering OES parts through independent outlets	30-40%

Main sources

- European Commission's macroeconomic publications
- IMF – a good source for macroeconomic information
- OECD – a good source for macroeconomic and industry-specific information
- European Commission's Directives and Regulations pertaining to motor vehicles, their trailers, systems and components
- CLEPA - the European Association of Automotive Suppliers

- ACEA - the European Automobile Manufacturers Association
- Ernst & Young's Automotive information - Automotive information – a good source of automotive information
- Ernst & Young's European Automotive Survey 2013 – interviews mostly with automotive suppliers
- Inovev - Worldwide automotive knowledge platform that offers free-of-charge and fee-based content

- Trade fairs are a good place to network, to meet buyers and to promote your company. The most prominent automotive trade fairs in Western Europe are: Hannover Messe - the world's leading trade fair for industrial technology taking place in Germany; Internationale Automobil-Ausstellung (annual) – German automotive trade fair; the Barcelona Motor Show (biennial) – Spanish automotive trade fair; the British International Motor Show (organized by SMMT once every two years); the Paris Motor Show (biennial) – French automotive trade fair and the Bologna Motor Show (annual) – Italian automotive trade fair.

More information
CBI market information:
- CBI Buyer Requirements: Automotive Parts and Components
- CBI Buyers' Black Box: Automotive Parts and Components
- CBI Market Channels and Segments Automotive Parts and Components
- CBI Market Competitiveness Automotive Parts and Components

This survey was compiled for CBI by the Global Intelligence Alliance