

Group management report

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OUTLOOK

“MAHLE—We shape future mobility”—our Vision is our compass. We strive to make mobility even more efficient, environmentally friendly, and comfortable.

We operate around 160 production locations and 16 research and development centers around the world, giving us a presence on every continent.

Our dual strategy is our guiding principle. It stands for innovations in alternative powertrain technologies while simultaneously optimizing the combustion engine.

Fundamental information about the MAHLE Group

Business activities and corporate structure

MAHLE is a leading global development partner and supplier to the automotive industry. As a technology pioneer for the mobility of tomorrow, we are committed to making transportation more efficient, more environmentally friendly, and more comfortable. That is why we are pushing forward the worldwide introduction of alternative drive concepts, thus laying the foundation for the widespread acceptance of e-mobility. At the same time, we are optimizing the combustion engine and advancing the use of alternative fuels.

Encompassing engine systems and components, filtration, and thermal management, our product portfolio addresses all the relevant issues relating to the powertrain and air conditioning technology as well as their combination. Thanks to our high level of systems competence and our expertise in electric and electronic components and systems, we can also offer integrated systems solutions for e-mobility.

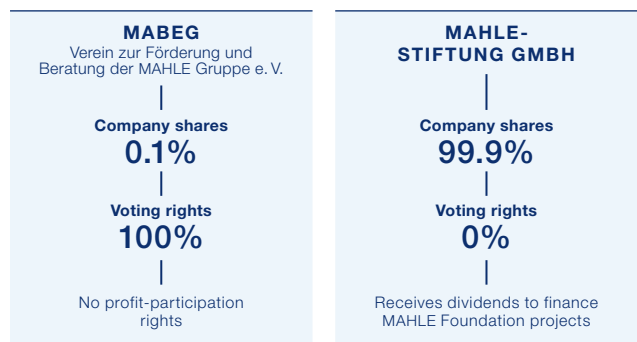
MAHLE products are fitted in millions of passenger cars and commercial vehicles. And that is not all: for decades, our components and systems have also been used off the road—in stationary applications as well as for mobile machinery, rail transport, and marine applications.

The MAHLE Group is organized into four business units: Engine Systems and Components, Filtration and Engine Peripherals, Thermal Management, and Aftermarket. Added to this are the Mechatronics division and six profit centers, which serve specific market and customer segments.

We took advantage of the chances presented by globalization at an early stage and enhanced our product portfolio by strategically founding and acquiring new business activities. With our around 160 production locations and 16 major research and development centers, we are represented on five continents and employ approximately 77,000 people overall.

The nonprofit MAHLE Foundation controls 99.9 percent of the company’s shares; 0.1 percent of the shares are held by Verein zur Förderung und Beratung der MAHLE Gruppe e. V. (MABEG), which also holds all of the voting rights and thus exercises the shareholder rights. This structure ensures our entrepreneurial independence, which creates the basis for long-term planning and farsighted investment decisions.

OWNERSHIP STRUCTURE OF THE MAHLE GROUP



MAHLE GROUP

Sales: EUR 12,049 million
Headcount: 77,015

BUSINESS UNITS				DIVISION	PROFIT CENTERS
Engine Systems and Components	Filtration and Engine Peripherals	Thermal Management	Aftermarket	Mechatronics	Engineering Services, Motorsports, and Special Applications
Sales: EUR 2,617 million Headcount: 26,482	Sales: EUR 2,092 million Headcount: 10,437	Sales: EUR 4,556 million Headcount: 22,850	Sales: EUR 950 million Headcount: 1,731	Sales: EUR 492 million Headcount: 4,771	Large and Small Engine Components
					Pumps
					Industrial Thermal Management
					Compressors
					Control Units
					Sales: EUR 1,342 million Headcount: 10,744

As at December 31, 2019

A core management tool for our group is our operating result—a key figure similar to EBIT. The main differences compared with EBIT lie in the amortization of goodwill, the depreciation and amortization of hidden reserves, which are disclosed in purchase price allocations, and in the treatment of income from the sale of business activities.

Business segments

Engine Systems and Components business unit

The Engine Systems and Components business unit is a mainstay of our business and represents one of our core fields of expertise. We have decades of development and systems know-how and are the global market leader in many product groups. Our range of products, which we manufacture at various locations around the world, includes steel and aluminum pistons, piston rings, cylinder liners, bearings, and valve train systems. These products are used around the globe in passenger cars, commercial vehicles, large engines, and two-wheeled vehicles. We are continuously developing our portfolio, focusing in particular on reducing energy consumption as well as CO₂ and other emissions from combustion engines.

Filtration and Engine Peripherals business unit

We are one of the global market leaders in many product groups in this area. In this business unit, we produce filter systems and components for the engine periphery with the aim of using our products to improve air cleanliness while also preventing contaminants in oil and fuel from damaging engines, in turn increasing their efficiency and service life. In recent years, we

have worked in close cooperation with our customers to develop a modular system for all the major product groups—after all, the product environment can vary significantly, even in identical basic engines. In addition, the production of special high-strength plastics has made it possible to replace metals, thereby achieving further weight savings. For example, we are developing all-plastic oil filter modules with fully integrated oil pumps and oil cooling technology for use in the powertrains of electric vehicles.

Thermal Management business unit

Our solutions from the Thermal Management business unit for batteries, fuel cells, power electronics, and electric drives make extended cruising ranges, high levels of efficiency, and long service lives possible. We are thus contributing to the development of zero-emissions powertrains. Thermal management is also becoming more and more important in the ongoing development of the combustion engine: Our increasingly effective and efficient cooling systems are helping to cut fuel consumption and thereby reduce CO₂ emissions. Our air conditioning innovations are laying the foundations for new design concepts for interiors and enabling a high degree of thermal comfort for vehicle occupants. In combination with powerful mechanical and electric compressors and electric auxiliary heaters in the overall automotive air conditioning system, this is leading to decisive advantages in terms of consumption and, more specifically, range. In the thermal management sector, we are one of the largest suppliers on the world market.

Aftermarket business unit

Our Aftermarket business unit supplies wholesalers and automotive workshops all around the world with spare parts in original equipment quality as well as service units and services. In addition to our standard spare parts, such as engine components, filters, turbochargers, and mechatronic components, we are increasingly offering products for thermal management, for example, thermostats, radiators, charge air coolers, and air conditioning compressors. To continue the expansion of this important product segment, we acquired the majority shareholding in the joint venture Behr Hella Service (BHS) on January 1, 2020, and are now offering our customers an even broader product range.

Vehicle diagnostics, exhaust gas analyzers, and service equipment for maintaining HVAC modules and automatic transmissions are also important elements of the MAHLE Aftermarket portfolio, which is completed by services, such as technical support via our global network, customer training, and service information. In view of the diversity of today's vehicle technologies in the fleet, innovative and solution-oriented support is a key building block in our business partners' success. That is why we aim to continue expanding our competences, services, and product areas and to position ourselves as a full-service provider. At the same time, we offer adaptive product management, fast and reliable logistics processes, strong brands, and fair market prices. We are thus able to provide our customers with individual repair solutions and further improve workshop efficiency.

Mechatronics division

The demand for electric passenger cars and commercial vehicles is steadily rising, a situation that means the portfolio offered by our Mechatronics division is gaining ever-greater importance with products including electric drive systems, actuators, auxiliary aggregates, and control and power electronics. Our activities in this area are founded on our expertise in the development and manufacture of electric motors and of electronic and mechatronic systems. In the year under review, we succeeded in entering the field of passenger car high-performance electronics with a highly integrated on-board charging system for battery electric vehicles and plug-in hybrids. At the same time, we are working with our customers to develop competitive concepts for traction inverters. However, our areas of competence extend beyond the bounds of the strictly automotive sector. For instance, we also supply electric drives for nonautomotive applications, such as for forklift trucks and golf carts. With the introduction of new systems for electric racing bikes, gravel bikes, and city bikes, we have also set a benchmark in the market for two-wheeled vehicles and, with a customer for e-scooters, we have entered the Indian market.

Profit centers

Six business fields serving special market and customer segments are organized as profit centers: Engineering Services, Motorsports, and Special Applications; Large and Small Engine Components; Pumps; Industrial Thermal Management; Compressors; and Control Units. This structure allows us to offer our customers a high degree of flexibility as well as tailor-made applications and components, meaning we are able to give them targeted support in the development of specific new products.

Group strategy

Our group strategy is based on the analysis of relevant megatrends, which we have used to develop various future scenarios. Five trends are having a particularly powerful impact on the automotive industry:

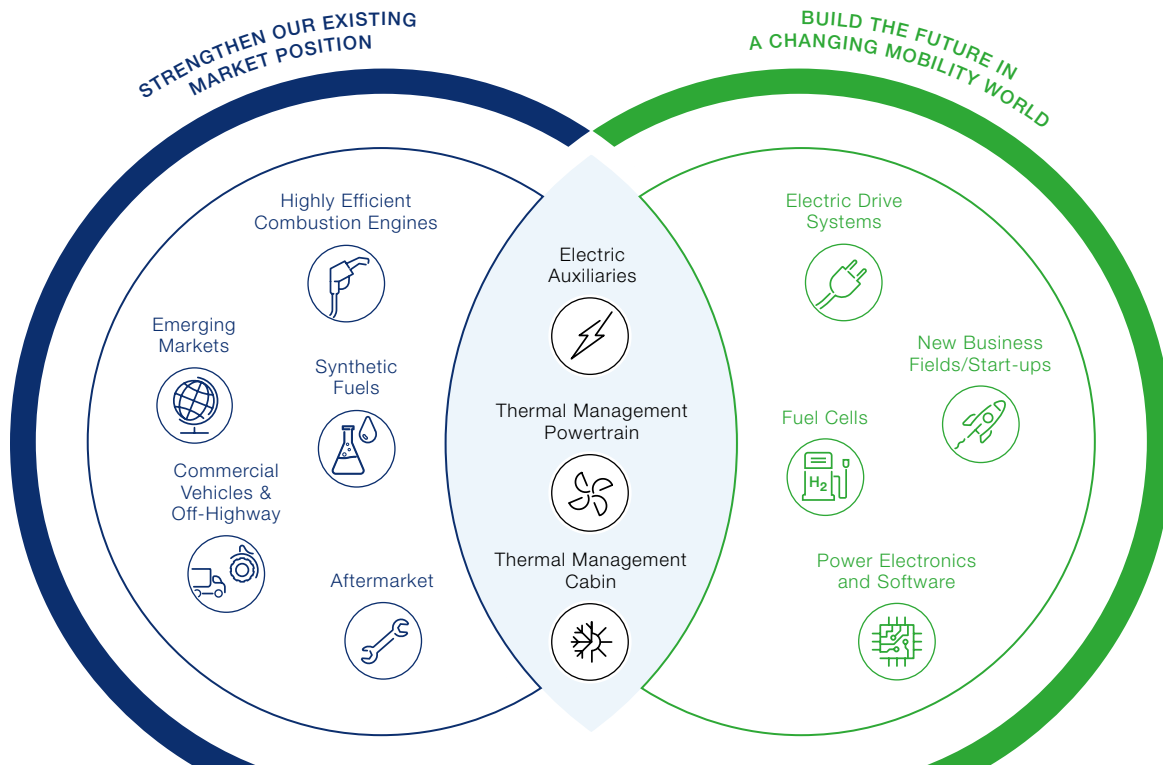
- Climate change (including the political climate targets)
- Advancing urbanization
- Global population growth
- The increasing importance of Asia as an economic region
- Digitalization

These developments demand innovative mobility solutions and present the automotive industry with new challenges. In addition to the expansion of car-sharing options and public transport, the increasing electrification of the powertrain, the growth in digital networking of vehicles, and autonomous driving are taking center stage. Digitalization is playing an ever-greater role, and not only on the roads, but also in our internal company processes, through subjects such as Industry 4.0, big data, and process automation. What's more, these megatrends go hand in hand with changes within our customer landscape, for example, due to new suppliers of electric vehicles or new digital business models.

How quickly this structural change takes place will depend on which technical solutions will hold their ground in the market and, more and more, on political demands. The importance of technologies such as hybrid or electric drives is growing for passenger cars and light commercial vehicles in urban distribution transport, as are alternative usage models like car sharing. The combustion engine will remain significant for medium-sized and heavy-duty commercial vehicles in the short and medium term, but alternative drive types such as hybrid, electric, and fuel cell drives are becoming more important and complementing existing technologies in this area too. Overall, we expect the combustion engine to remain a key element of mobility in global markets both for passenger cars and for commercial vehicles.

MAHLE has derived its dual strategy on the basis of these assumptions and findings:

1. Strengthen our existing market position: From a technology perspective, we would like to play a leading role in the ongoing development of the combustion engine and ensure the highest possible level of competitiveness in terms of quality and costs. In the process, we will primarily concentrate on exploiting further CO₂ savings potential with regard to friction, thermal management, and the air pathway. We believe that the use of synthetic fuels presents even greater potential for reductions in CO₂ emissions, which is why we are consistently adapting our product portfolio to suit their use. By doing so, we are offering our customers solutions that are consistent with current and future legislation and making a significant contribution to reducing emissions.



2. Build the future in a changing mobility world: At the same time, we will push ahead with the development of innovative solutions and products for alternative powertrain technologies and expand the affected business segments. Business segments that are independent of the OEM business for passenger car combustion engines are today already accounting for more than 50 percent of our group sales. We intend to further increase this share on a consistent basis.

Our dual strategy is also reflected in our thermal management activities. Overall, the importance of efficient thermal management will continue to grow—not only in conventional but also in alternative drive systems. In recent years, we have already systematically expanded this business segment for this purpose, developing and marketing many thermal soaking innovations—both for the interior and for the powertrain, including the battery. We will continue to pursue this innovative approach resolutely.

We will substantially amplify our activities in electronics and mechatronics over the years ahead. The organizational merger of core competences from these fields into the new Electronics and Mechatronics business unit as of January 1, 2020, underlines the importance we attach to this area. By taking this step, we plan to increase our extensive competence in electronics with the aim of offering our customers even better systems solutions for electric vehicles with regard to thermal management and the

powertrain. Our customers in Asia in particular prefer solutions of this kind. Furthermore, we intend to expand our portfolio for electric motors in passenger cars and commercial vehicles as well as in two-wheeled vehicles, which are playing an ever-greater role in urban mobility around the world.

We are pursuing a holistic approach in terms of both the development of solutions for alternative powertrain technologies and the optimization of the combustion engine. It is not only the electric motor that is decisive for efficiency in an electric vehicle, but also the interplay of various technologies. This is demonstrated by the example of MEET (MAHLE Efficient Electric Transport), our vehicle concept for future urban mobility. Commercial vehicles also benefit from the combination of different technologies. For instance, a combustion engine's entire system can be operated even more efficiently by using systems designed to recover heat from exhaust gases.

As part of our dual strategy, we review our portfolio as well as the strategic direction and economic performance of the group on an ongoing basis. One of our strategic goals is to evenly distribute sales across our core markets of Europe, North and South America, and Asia/Pacific—giving special attention to the Asian growth market. We consider our global presence to be an important prerequisite for proximity to our customers and for developing innovations in line with the demands of the individual markets.



Compared with the previous year, our sales declined organically by 3.0 percent, but developed more favorably than the market.



The result from business activities fell sharply, mainly due to special effects.



With our Performance Lift program, we aim to achieve a sustained increase in profitability.

Report on economic position

Economic conditions

Overall economic development

According to the January report by the International Monetary Fund (IMF), the global economy grew by almost 3 percent in the year under review, thus showing a weakening in the rate of growth in comparison with 2018. Economic activity in industrial nations and in the emerging markets and developing economies lost considerable momentum. IMF cites as the cause the risks and uncertainties that rose significantly in 2019, among them trade policy restrictions and geopolitical tensions as well as structural problems, such as demographic change in advanced economies.

Economic growth in the euro zone was a good 1 percent. By way of comparison, growth was still almost 2 percent in 2018. Even in France and Germany—the two largest European economies—the growth rate has fallen owing to lower exports and declining industrial production. However, the persistent level of high demand, the positive employment situation, and the expansive monetary policy of the European Central Bank had a stimulating effect on the economy.

Economic activity also weakened in the United States in the period under review, with growth here slightly above 2 percent. Although the labor market continued to appear robust, trade disputes with China and the European Union impaired the US economy. In our important South American market of Brazil too, the rate of economic growth was around 1 percent below the previous year.

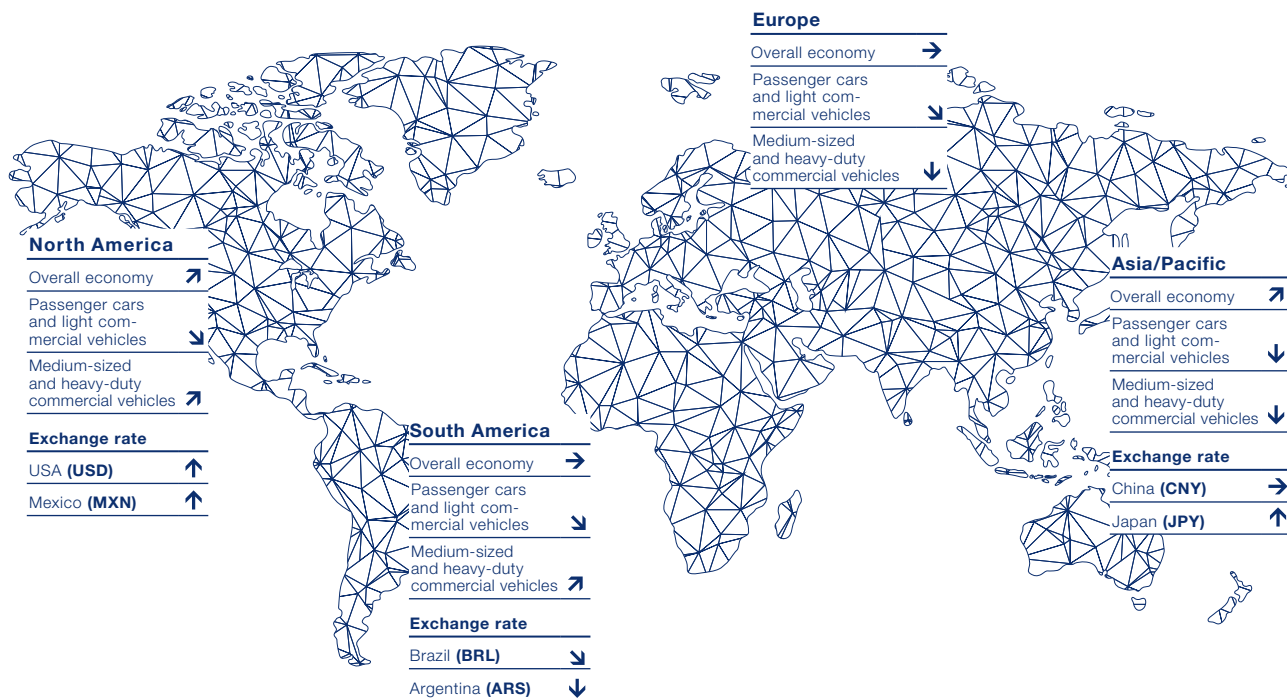
In the Asia/Pacific region, the Chinese national economy continued to grow comparatively strongly in 2019, but, with growth of somewhat more than 6 percent (previous year: 6.6 percent), the market has continued to lose momentum—also as a consequence of the trade war with the USA. With an increase of 1.0 percent, economic output in Japan was above the previous year's level (previous year: 0.3 percent).

Exchange rate development

As an internationally operating group, MAHLE also transacts business in foreign currencies. Exchange rate movement is of central importance in this respect, because it affects the conversion of financial data for accounting purposes.

The trading currencies of particular significance for our company developed in a variety of ways in the 2019 business year. Measured by the average market price (direct quotation), the US dollar rose in value against the euro (+6 percent) with similar trends for the Japanese yen (+7 percent), the Mexican peso (+5 percent), and the Chinese renminbi (+1 percent). Other currencies depreciated, in some cases losing significant value—including the Argentine peso (–36 percent), the Turkish lira (–11 percent), and the Brazilian real (–2 percent).

For MAHLE, exchange rate fluctuations are closely linked to financial and economic risks. Where possible, we minimize these risks using a process known as natural hedging: by operating production locations in all major sales regions around the world, the group is less affected by currency turbulence and exchange rate fluctuations.



Exchange rate development of various foreign currencies against the euro (EUR) as measured by the average market price compared with the previous year: Argentine peso (ARS), Brazilian real (BRL), Chinese renminbi (CNY), Japanese yen (JPY), Mexican peso (MXN), US dollar (USD)

Development of the markets for passenger cars and light commercial vehicles

In the year under review, the production of passenger cars and light commercial vehicles fell significantly worldwide by around 6 percent. The trend from 2018 has thus not only continued, but even intensified.

After a slight decline in the previous year, the production volume in Europe decreased substantially. The uncertainty caused by Brexit, falling export volumes, and the overall decline in industrial production had a negative impact on the motor vehicle sector. In North America, restructuring measures at major US vehicle manufacturers were accompanied by a declining market. The sector was also adversely affected by the trade dispute with China. The South American market for passenger cars and light commercial vehicles contracted sharply in the year under review, primarily due to sustained market weakness in Argentina. In China, the negative trend of the previous year intensified significantly. The trade war with the United States, increased living costs, and tougher vehicle financing conditions were reflected in falling private demand. Vehicle production in India likewise experienced a significant decline. In addition to a variety of difficulties, increased financing costs in particular depressed demand.

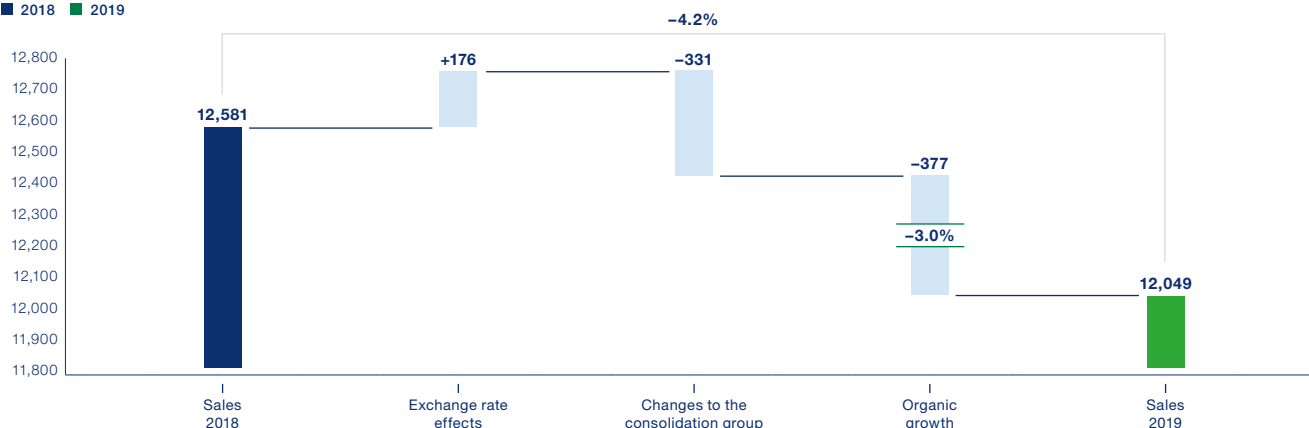
Development of the markets for medium-sized and heavy-duty commercial vehicles

The market for medium-sized and heavy-duty commercial vehicles also experienced a downward trend in the year under review, falling by around 4 percent below the previous year's value in terms of production figures. This is attributable to significant declines in India as well as in Europe. India suffered particularly badly from the shadow banking crisis, which made financing conditions much more difficult. This led to a massive slump in the sales of commercial vehicles. In Europe, the markets showed a marked decline, especially in the second half-year. Alongside anticipatory effects in the first half-year due to the introduction of smart tachographs—digital trip recorders for newly registered vehicles—this is mainly due to the economic slowdown. In North America, the sector continued to benefit from the full order books of 2018; however, new orders have already fallen sharply. In South America, the market for medium- and heavy-duty commercial vehicles once more showed solid growth in the year under review. Production in China, the largest commercial vehicle market, initially declined sharply, but stabilized slightly above the previous year's level in the second half of the year.

SALES BRIDGE

in EUR million

■ 2018 ■ 2019



Business development

Development of the MAHLE Group

In the year under review, our group generated sales of EUR 12.0 billion. Our sales therefore fell organically (i.e., after adjustment for exchange rate effects and changes to the consolidation group) by 3.0 percent. Compared with the world market for passenger cars and commercial vehicles, this decrease was less pronounced.

The principal reasons for the total drop in sales of 4.2 percent were, on the one hand, the marked economic slowdown in the automobile and commercial vehicle sector and, on the other, changes to the consolidation group to the amount of minus EUR 331 million. This was primarily caused by the sale in June 2018 of our shares in the joint venture Hella Behr Plastic Omnium (HBPO), which had previously been consolidated on a proportionate basis. Certain smaller transactions in 2019 resulted in opposing sales effects. These include the acquisition of MAHLE Ebikemotion S.L.U. in October 2018 and of MAHLE ZG Transmissions GmbH in January 2019 as well as the increased shareholding in MAHLE Aftermarket Italy S.p.A. in May 2018 and in the previous joint venture MAHLE Behr Grugliasco S.p.A. in August 2018. Exchange rate effects of EUR 176 million also had a positive impact on the development of sales.

Against the backdrop of the difficult market situation faced by the automotive industry, the transformation throughout the sector is making progress. We continue to focus on our dual strategy. Consequently, 2019 was also marked by a stronger orientation toward promising technologies and fields of application. This strategy requires a high level of investment and of development effort. These steps are in turn associated with cost increases, which we must counter around the world through savings in areas of weak added value. We initiated Performance Lift at the start of 2019 for this purpose—an internal program to

increase profitability that brings together and selectively expands existing cost-cutting initiatives. However, Performance Lift is much more than just a cost reduction program. It allows us to work together to introduce improvements quickly and effectively. The so-called Plant Performance Initiative sprints at our plants are an excellent example of this approach. In concentrated four-week periods, interdisciplinary teams cooperate to develop measures to increase the performance of our plants around the world. We are now gradually rolling out the resulting improvement ideas throughout our organization and have already made good progress during the year under review—although we must continue to work on the full implementation in order to identify and realize all areas of potential. In this context, we decided on a series of restructuring measures at various European locations in the business year and have already begun implementing some of them.

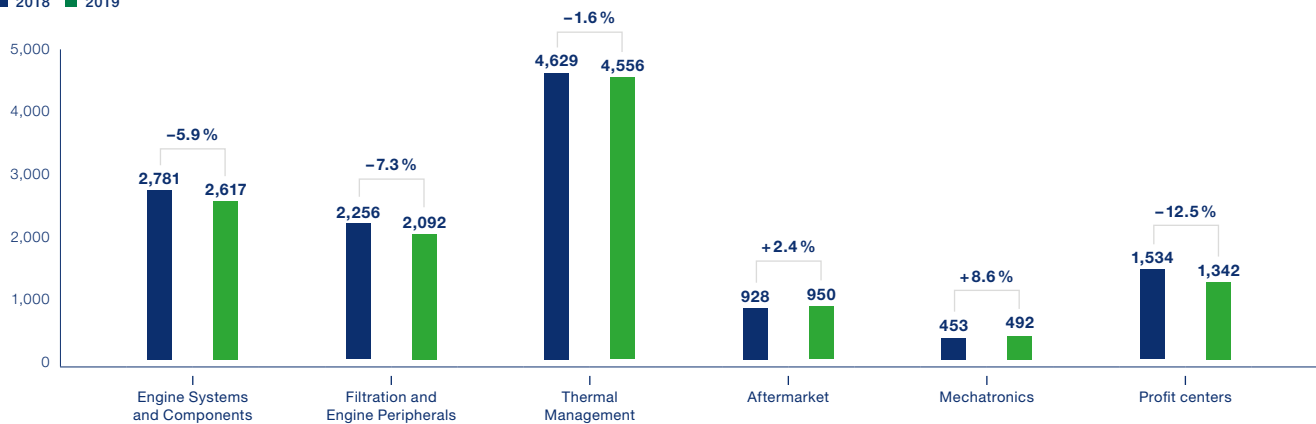
At the end of 2018, we formulated and explicitly set out our Vision for the first time: “MAHLE—We shape future mobility.” In one example of how we are making this commitment a reality, we acquired the transmission specialist MAHLE ZG Transmissions GmbH in January 2019, thereby expanding our expertise to include the transmission—a key component. With the purchase of a license package from WiTricity for the wireless charging of electric vehicles, we have continued to build our portfolio with the addition of an element that is vital to the long-term expansion of e-mobility.

Furthermore, we are strengthening our established business units: On the one hand, this relates to our core business in thermal management, with the increase in our shareholding in the MAHLE Behr Group. On the other, we are creating an even better position for ourselves in the aftermarket business segment in terms of thermal management products with the acquisition of all the shares in the former joint venture Behr Hella Service (BHS) in early 2020.

SALES BY BUSINESS SEGMENT

in EUR million

■ 2018 ■ 2019



Development of the business segments

The difficult market conditions also had an impact on many of our business segments in the form of declining sales. However, key future business areas bucked this trend and developed positively. Our Aftermarket business unit, the Mechatronics division, and our profit centers thus achieved organic growth in the year under review.

Engine Systems and Components business unit

Sales in our Engine Systems and Components business unit amounted to EUR 2,617 million in 2019 and were therefore 5.9 percent below the previous year's value. Revenue from passenger car gasoline and diesel engine pistons, piston rings, commercial vehicle steel pistons, and bearings declined. In contrast, sales of steel pistons for passenger cars and of assembled camshafts increased, primarily as a result of project ramp-ups in Europe. Despite the successes in these two product groups, a marked drop in sales was recorded in Europe. Sales also declined in North America and Asia/Pacific. Sales in China fell appreciably, especially as a result of the general market downturn due to the trade dispute between

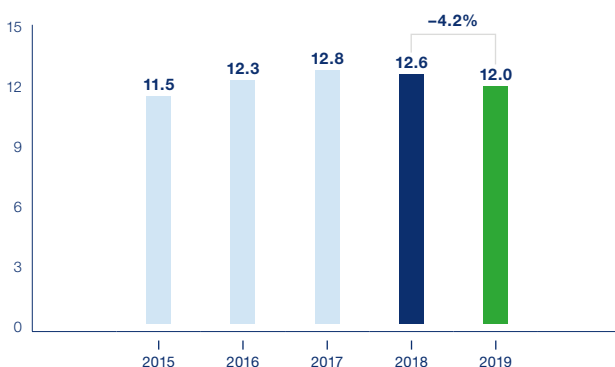
the USA and China. In India, regulatory interventions by the government caused a fall in sales of camshafts and passenger car diesel pistons in particular. Sales of valves rose in South America; however, revenue fell under the previous year's level owing to significant negative effects arising from currency conversion.

Filtration and Engine Peripherals business unit

At EUR 2,092 million, sales generated in the Filtration and Engine Peripherals business unit were 7.3 percent below the 2018 level. Adjusted for the reorganization of the pumps business into a separate profit center, the decline was 2.7 percent. At product level, tank ventilation modules achieved the strongest sales growth, while the greatest losses were recorded in air intake modules and air filters. The regions predominantly experienced a downward trend. However, significant organic sales growth was generated in Asia/Pacific. In this region, we mainly have business relationships with customers that were not as strongly affected by the downturn in China and India. As far as development is concerned, we are continuing to increase our focus on customer solutions that are unrelated to the combustion engine, such as applications involving high-strength plastics and battery systems.

DEVELOPMENT OF SALES 2015 – 2019

in EUR billion



Thermal Management business unit

Sales in the Thermal Management business unit declined from EUR 4,629 million to EUR 4,556 million. Adjusted for consolidation effects and for positive exchange rate effects, the organic sales deficit amounted to 3.6 percent. Higher sales in the battery cooling product group could not offset the effects of the general market trend. From a regional perspective, North and South America in particular developed positively. In North America, we achieved sales increases in comparison with the previous year owing to high order volumes in air conditioning and cooling for passenger cars as well as trucks. Sales in South America exceeded those of the previous year appreciably, with mid-single digit organic growth in percentage terms. This was due to the recovery in the market, in particular for commercial vehicles. In Europe, revenues were markedly lower than in the previous year—especially as a result of

the high level of uncertainty caused by Brexit and the general market weakness in the passenger car and truck sectors. In the Asia/Pacific region, the difficult market environment in China and India led to sharp drops in sales.

Aftermarket business unit

In the Aftermarket business unit, we recorded sales totaling EUR 950 million, over 2 percent more than in the previous year. Negative effects from currency translation were virtually balanced out by the positive effect on sales associated with the first consolidation of MAHLE Aftermarket Italy S.p.A. In terms of our global markets, Europe and South America showed the strongest growth after adjustment for exchange rate effects. The successful expansion of our business with Service Solutions products in Europe is one reason for this, and it is also due to exports to North America and the positive development of the filter products business in Europe.

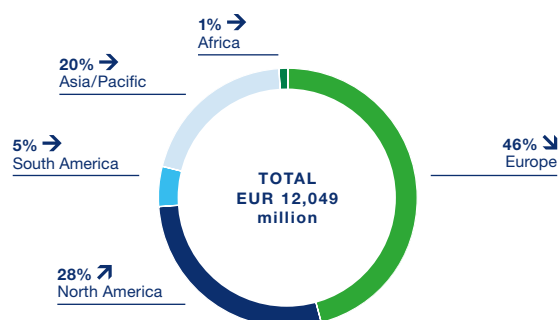
Mechatronics division

Sales in our Mechatronics division grew strongly by 8.6 percent to EUR 492 million in the year under review. A significant boost in sales resulted from the acquisition of MAHLE Ebikemotion S.L.U. in 2018; adjusted for this effect, growth of 5.2 percent was achieved. The two most important regions in terms of sales, Europe and Asia/Pacific, recorded significant revenue growth. We want to continue strengthening these regions, which is why we invested in increasing capacity in China and in expanding the production of electric drive motors in Slovenia in the year under review. We likewise developed our location in Motilla del Palancar/Spain into a production center for power electronics. Certain production ramp-ups are worthy of note too, such as that of pedelec drives in China as well as new generations of input filters and EPS motors. We also successfully entered the starter motor business in the heavy-duty segment in the year under review.

Profit centers

In our profit centers, we achieved sales amounting to EUR 1,342 million. Several effects must be taken into account when making a comparison with the previous year: the separation of the pumps product group from the Filtration and Engine Peripherals business unit, the acquisition of the transmission specialist MAHLE ZG Transmissions GmbH in January 2019, and the sale of our shares in the joint venture HBPO in 2018, which had been run as the Front-end Modules profit center. After adjustment for these effects, sales growth is 4.1 percent. Compressors—our strongest profit center in terms of sales—contributed to this result with growth of 4.3 percent. Despite a challenging market environment, revenue in this area developed especially positively in China; this is attributable to our main customer, which was able to improve its market share. Sales in South America also grew significantly. Our Large and Small Engine Components, Industrial Thermal Management, and Control Units profit centers also increased their sales.

SALES BY REGION



The directional arrows (↗ → ↘) show the change in the proportion of sales compared with the previous year

Development of the regions

With production and development locations in 32 countries, the MAHLE Group has a presence around the globe. Thanks to our broad international positioning, we are close to our customers and able to cooperate with them directly while also responding flexibly to regional market fluctuations.

Challenging automotive markets around the world have contributed to declines in sales in most regions. The only exceptions were South America and Africa, where we achieved organic growth after adjustment for exchange rate effects that were in part substantially negative. At the same time, our revenues in North America and Asia/Pacific benefited from positive currency effects in 2019, which stabilized sales in these regions. In the following, we provide an overview of the detailed development in the regions, based on sales by country of production.

Europe

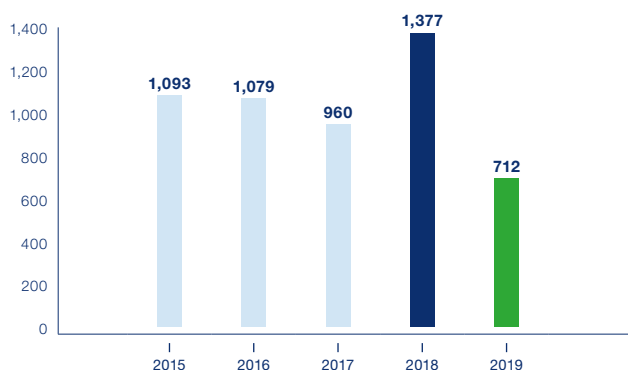
Sales in the Europe region amounted to EUR 5,569 million—a fall of 9.6 percent in comparison with the previous year. In terms of organic growth, however, the drop in sales was significantly lower at around 4 percent. In addition to changes to the consolidation group, a variety of factors had a negative effect on revenue: the impacts of the cooling situation in terms of the market and economic climate in the automotive and commercial vehicle industry, falling non-European exports, the diesel issue, and the weak order situation at British locations as a result of Brexit. With regard to our business segments, our Aftermarket business unit, our Mechatronics division, and our profit centers showed the most growth.

North America

In North America, we generated revenue of EUR 3,391 million, which is almost 3 percent above the previous year's value. Our sales increased, both in the market for passenger cars and light commercial vehicles and in the market for medium-sized and heavy-duty commercial vehicles. We were not able to continue the very strong organic sales increase from the previous year in 2019. Adjusted for markedly positive translation effects from

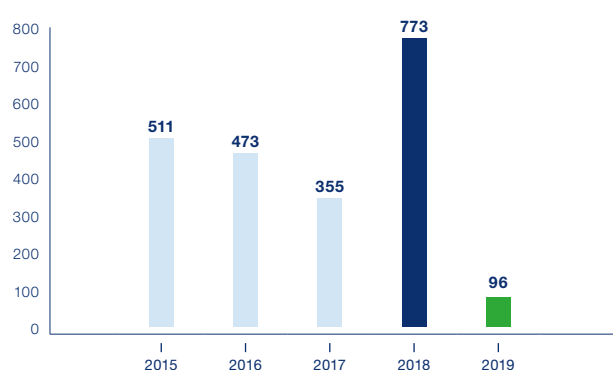
DEVELOPMENT OF EBITDA 2015–2019

in EUR million



DEVELOPMENT OF EBIT 2015–2019

in EUR million



exchange rate movements primarily in the US dollar, the overall result showed an appreciable decline. Strike-related difficulties on the customer side were the main reason for this.

South America

Sales in South America rose by 0.9 percent to EUR 630 million. However, account must be taken of negative exchange rate effects of EUR 55 million arising from the devaluation of the Argentine and Brazilian currencies against the euro. Excluding these effects, a strong rise in organic sales of 10 percent was achieved. Our growth in the region was thus noticeably above the general market trend. We were able to increase our revenues in local currency significantly in almost all business areas, particularly in the medium-sized and heavy-duty commercial vehicles segment.

Asia/Pacific

In the Asia/Pacific region, sales in the year under review were 1.3 percent below the previous year's value at EUR 2,404 million. Decisive factors here included the cyclical market downturn in China and the particularly low number of registrations in India in the year under review—a consequence of declining consumer demand. These impacts were reflected in significant drops in sales in the Engine Systems and Components and Thermal Management business units. By contrast, our Mechatronics division and our Compressors profit center in particular were able to withstand these influences. The Filtration and Engine Peripherals and Aftermarket business units also recorded sales increases.

Africa

With a rise of 4.4 percent, sales from our locations in Africa rose to EUR 55 million despite negative exchange rate effects. The revenues in our group's smallest region were primarily generated by the Thermal Management business unit.

Net assets, financial position, and results of operations

Results of operations

In the 2019 business year, MAHLE generated sales of EUR 12.0 billion; adjusted for changes to the consolidation group and exchange rate effects, this corresponds to a decrease of 3.0 percent. Due to the declining automotive market, our expectation from the start of the year—at which time we anticipated a slight organic sales increase in a stable market situation—was thus not fulfilled. As anticipated, at EUR 10 million, the result from business activities was significantly lower than in the previous year (EUR 614 million), in part owing to non-recurring income from previous years and extraordinary burdens in the current year. Specifically, the following one-time effects were involved: while disposal gains from the sale of the shares in the joint venture HBPO exerted a strong positive impact on the previous year's value, high levels of expenditure were incurred in the year under review in relation to several planned restructuring measures, for which accounting provisions had to be made. Adjusted for these two special effects, the decrease in the result from business activities was significantly lower and amounted to a figure in the high-double-digit millions, for which sales losses resulting from the economic slowdown in the automobile and commercial vehicle sector were largely responsible. These effects had an equally severe negative influence on our operating income figures EBITDA and EBIT and, to some extent, on the operating result used for internal steering—a key figure similar to EBIT but adjusted for individual circumstances.

The key income statement items developed as per the following details: Cost of sales amounted to EUR 10,136 million, which is EUR 208 million below the previous year's value. The cost of sales ratio increased markedly, from 82.2 percent to 84.1 percent. In addition to operational inefficiencies at individual locations, a particular reason for this rise is the development of restructuring accruals in connection with capacity adjustments. We have reduced our selling expenses by a good 6 percent to

CONSOLIDATED INCOME STATEMENT

in EUR million	2019	in %	2018	in %
Sales	12,049	100.0	12,581	100.0
Cost of sales	-10,136	-84.1	-10,344	-82.2
Gross profit on sales	1,913	15.9	2,237	17.8
Selling expenses and general administrative expenses	-1,080	-9.0	-1,109	-8.8
Research and development expenses	-751	-6.2	-751	-6.0
Other operating income and expenses	31	0.3	409	3.3
Financial result	-104	-0.9	-172	-1.4
Result from business activities	10	0.1	614	4.9
Taxes on income	-189	-1.6	-136	-1.1
Result after taxes	-180	-1.5	478	3.8
Other taxes	-32	-0.3	-32	-0.3
Consolidated net loss/net income	-212	-1.8	446	3.5
EBIT	96	0.8	773	6.1
EBITDA	712	5.9	1,377	10.9

EUR 560 million. The ratio in relation to sales also fell to 4.6 percent (previous year: 4.7 percent), which was achieved by general cost reduction measures in Sales and lower costs of expedited freight. By contrast, general administrative expenses rose from EUR 512 million to EUR 520 million, which is due in particular to provisions for restructuring measures aimed at reducing administrative structures. Expenditure on research and development was close to the previous year's level; however, the ratio in relation to sales rose by 0.2 percentage points owing to lower sales. This high level of R&D expenditure shows that our work to implement our dual strategy is resolute and goal-oriented. The balance of other operating income and expenses decreased significantly by EUR 378 million in comparison with the same period of the previous year. The main reason for this was the absence of one-time income from the sale of holdings in 2018. Owing to the acquisitions made in previous years—with the exception of research and development expenses and administration costs—all cost items were adversely impacted by the effects of purchase price allocations in accordance with the German Commercial Code (HGB). In total, these amount to EUR 113 million and include EUR 48 million relating to planned amortization of goodwill.

The development of the items in the income statement resulted in a substantial decrease in EBIT from EUR 773 million in 2018 to EUR 96 million in the year under review. The EBIT margin thus fell significantly to 0.8 percent (previous year: 6.1 percent), mainly due to the one-time effects outlined above. Adjusted for the effects of the purchase price allocations and the amortization of goodwill, the EBIT margin was at 1.7 percent (previous year: 7.2 percent).

The financial result significantly improved by EUR 68 million in 2019 in comparison with the previous year. This was largely the result of a positive market development in pension assets and

the absence of negative effects in connection with the sale of shares in the joint venture Bosch MAHLE Turbo Systems (BMTS), which took place in 2018.

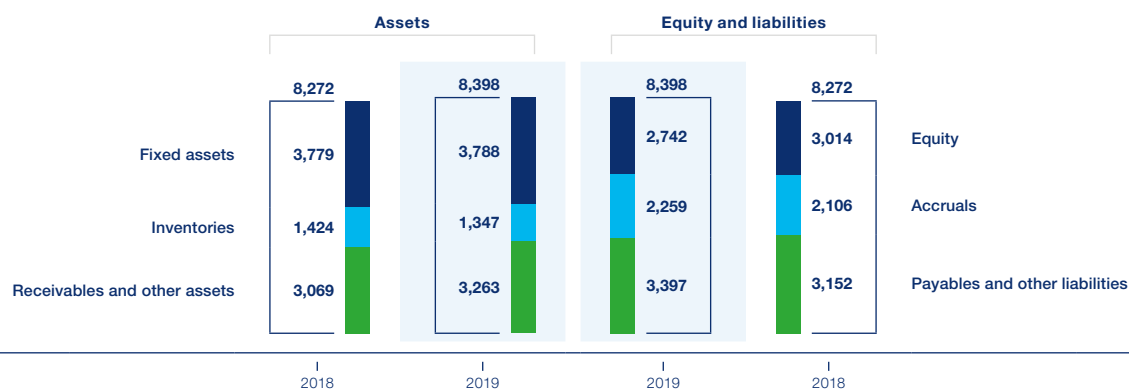
Despite the considerably lower result from business activities, taxes on income increased by EUR 54 million to EUR 189 million. This clearly disproportionately high tax burden in relation to the profit before tax can be attributed to a number of factors. First, the accrual of local profits was relatively greater in high-tax countries. Second, although high amortization of goodwill reduced the commercial result, it did not lower the tax base to the same extent. And third, expenditure increased due to a marked rise in loss allowances on deferred tax in respect of temporary differences and to the nonrecognition of deferred tax assets with regard to tax loss carryforwards. The lower income tax rate in 2018 was largely influenced by the fact that the income from the sale of the HBPO shares had not increased the tax base to the same degree as it had the commercial result. Consequently, the overall result was a net loss for the year of EUR 212 million (previous year: net income for the year of EUR 446 million).

Net assets position

As at the balance sheet date of December 31, 2019, our balance sheet total had increased by EUR 126 million to EUR 8,398 million. At EUR 3,788 million, fixed assets were only slightly above the previous year's level. Tangible fixed assets increased by EUR 66 million in comparison with the previous year, in particular owing to investments in technical equipment and machinery, whereas intangible fixed assets decreased by EUR 62 million. Additions to intangible assets, which were mainly connected with the acquisition of further shares in MAHLE Behr as at January 1, 2019, were more than offset by amortization. This essentially related to the amortization of goodwill and hidden reserves, which was disclosed as part of purchase price allocations.

BALANCE SHEET STRUCTURE OF THE MAHLE GROUP

in EUR million



Current assets of the MAHLE Group exceeded the previous year's level by EUR 133 million, amounting to EUR 4,300 million in the year under review. In contrast, our inventories fell sharply by EUR 78 million to EUR 1,347 million. This is a reflection of our efforts to reduce our capital commitment and is largely attributable to the decrease in inventory levels of raw materials, consumables, and supplies. While trade receivables adjusted for exchange rate effects were more or less at the same level as in the previous year, other assets rose by EUR 28 million as at the balance sheet date. Owing to new German private placement loans (Schuldscheindarlehen) taken up in the year under review, our liquid funds increased by EUR 160 million as well.

liabilities to banks rose by EUR 362 million, largely due to the issue of German private placement loans. This led to an increase in net debt on our balance sheet to EUR 1,340 million in the year under review.

Besides the circumstances depicted in the balance sheet, we recorded the following significant off-balance-sheet transactions as at December 31, 2019: on the one hand, rental and leasing agreements particularly for land and buildings to a total sum of EUR 166 million (previous year: EUR 125 million) and, on the other, factoring amounting to EUR 30 million (previous year: EUR 108 million), which we utilized to diversify financing sources.

SIGNIFICANT INCREASE OF

21%

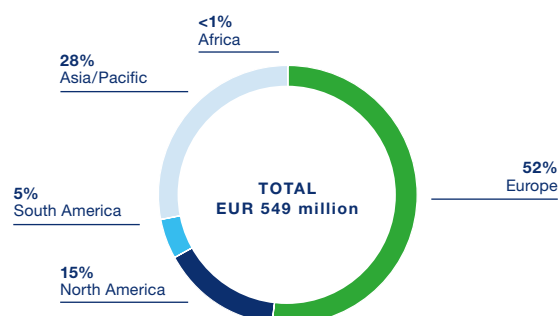
in operating cash flow in 2019

Due to the net loss for the year and the dividend distribution, the MAHLE Group's equity reduced significantly by EUR 272 million to EUR 2,742 million in the year under review. This led to a corresponding reduction in our equity ratio, from 36.4 percent to 32.7 percent. Accruals rose to EUR 2,259 million, which corresponds to an increase of EUR 153 million in comparison with the end of 2018. Major factors in this were, on the one hand, the setup of extensive restructuring accruals and accruals for other personnel-related obligations. On the other, accruals for pensions increased by EUR 45 million, primarily owing to interest effects. Liabilities grew in comparison with the previous year by a total of EUR 248 million, with trade payables and other liabilities falling by EUR 83 million and EUR 40 million respectively. In contrast,

Investments

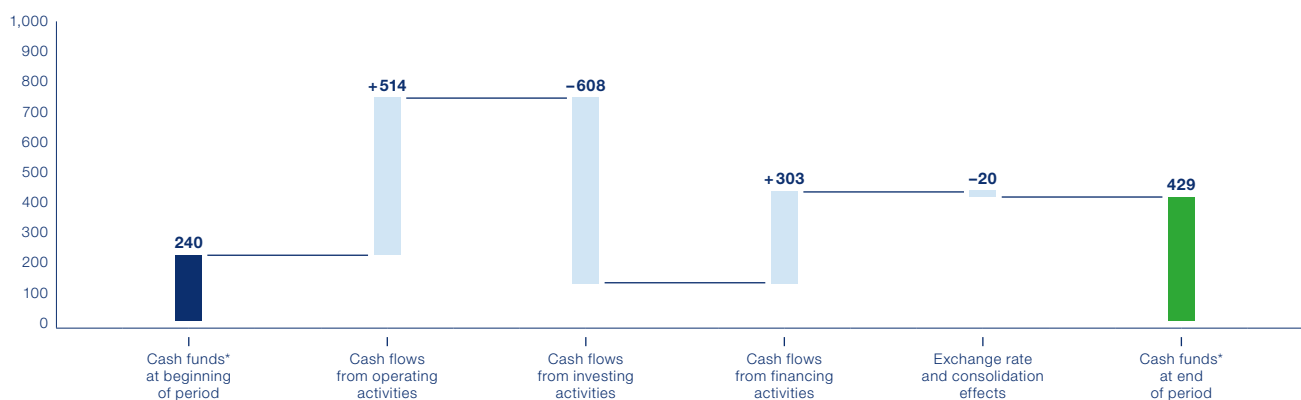
At EUR 549 million, our investments in tangible fixed assets were EUR 60 million lower than in 2018. The investment ratio, which shows the relationship between investments and sales, decreased to 4.6 percent (previous year: 4.8 percent). With a ratio of 113 percent, investments exceeded the depreciation on tangible fixed assets, although to a lesser degree than in 2018 (136 percent).

INVESTMENTS BY REGION



CASH FLOWS

in EUR million



* Cash in hand, bank balances with an initial term less than 3 months, and checks less liabilities to banks with an initial term of less than 3 months

Our investments in the year under review focused on Europe and the Asia/Pacific region. More than half of these investments were made in Europe, where Germany was the country with the highest level of capital expenditure. With regard to other European countries, production facilities and plants in Poland, Spain, Romania, and Slovenia were among the locations where expansions took place. The Asia/Pacific region accounted for around 28 percent of our investments. As in the previous year, the majority of our investment here was directed toward our Chinese locations. In doing so, new production capacity was added, and existing capacity expanded, as in the case of the extensive investments in the expansion and construction of production lines at the mechatronics plant in Taicang. By contrast, we scaled back investments in North America somewhat in 2019. As a result, only around 15 percent of our capital expenditure was made in this region in the year under review. Our investments in South America, on the other hand, remained at the previous year's level.

In addition to capital expenditure on tangible fixed assets, we also took advantage of strategic acquisitions during the year under review to expand our business activities as part of our dual strategy. We thus increased our participation in MAHLE Behr to strengthen our core business in thermal management. Furthermore, we acquired the transmission specialist MAHLE ZG Transmissions GmbH in January 2019 in order to expand our expertise to include the transmission—a key component.

Financial position

As part of its global growth, MAHLE has established a broad basis for its group financing over the past few years and improved its diversification. Our financing portfolio not only includes syndicated credit lines, German private placement loans, and bilateral loans, but also euro-denominated corporate bonds.

With our conservative financing policy, we are pursuing the objective of an implicit investment grade risk. This positioning is also reflected in the moderate leverage and solid equity ratio.

In the 2019 business year, we increased the existing syndicated credit line with our core banks to EUR 1.8 billion, fixing a term until 2024. In July, to gain greater room for maneuver, we also issued euro- and US dollar-denominated German private placement loans amounting to EUR 175 million and USD 213 million. In addition, a new private placement bond totaling EUR 30 million was issued in connection with the maturity of a bond. As at the end of the year, the unused but firmly committed credit lines amounted to EUR 1,887 million, which, as in the case of the liquid funds, contributed to the financial stability of the group. Our cash holding was diversified across various banks that were selected according to rating criteria.

The proceeds from the issuance of a private placement bond and the take-up of German private placement loans also meant that we closed the 2019 business year with positive cash flows of EUR 209 million. Despite the net loss for the year of EUR 212 million, cash flows from operating activities amounted to EUR 514 million and were thus appreciably higher than the previous year's value. This is a reflection of our efforts with regard to working capital management and—in comparison with 2018—the substantially lower cash outflows in connection with warranty claims, among other factors. Conversely, at EUR 608 million, the net cash outflow arising from our investing activities substantially exceeded the previous year's value. This was because disposals in 2018 had led to an extraordinarily high level of cash income—an effect that was not offset by the low expenditure on tangible fixed assets and on strategic acquisitions in the year under review. Cash flows from financing activities showed total net cash inflows of EUR 303 million as a result of the abovementioned issuances.

We want to secure our long-term success. Our research and development activities continue to be central to this goal.

Following its successful pilot phase, we are gradually introducing the MAHLE Production System at other plants.

The quality of our products was recognized by numerous customers in 2019. In total, we received around 85 awards.

Additional key performance indicators

Human resources

As at the end of 2019, the MAHLE Group employed 77,015 people worldwide, 3.2 percent fewer than in the previous year. The fall of 2,549 employees is mainly due to the declining order situation.

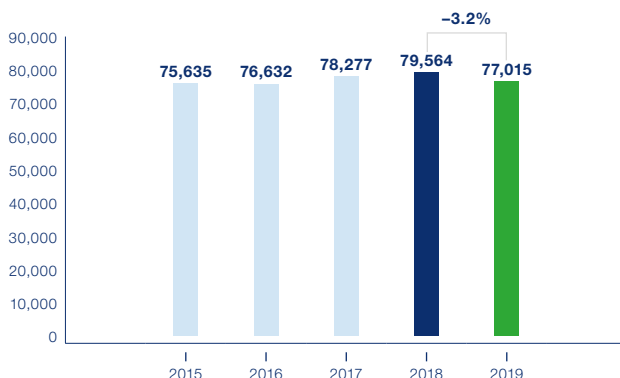
Our employees are the key to the future viability of the MAHLE Group. Their know-how, motivation, and commitment are the foundation of our successful development. This is why we invested in the training and further education of our workforce to the sum of EUR 9.3 million in the year under review – despite the difficult economic situation in the sector. In addition to a variety of workplace-related briefings, our employees took part in 99,724 qualification activities in the year under review (previous

year: 93,835). The global absence rate (excluding joint ventures) amounted to 3.9 percent in the year under review (previous year: 3.8 percent).

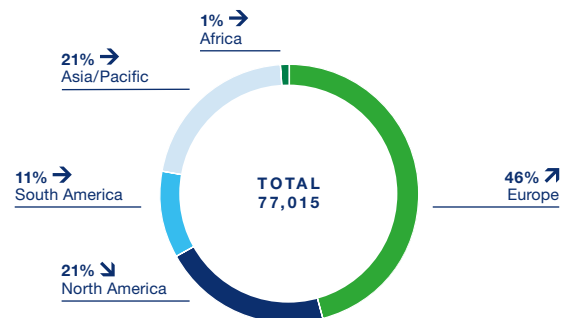
Headcount by region

As at the reference date, we employed 35,336 people in Europe, corresponding to a reduction in the workforce of 319 employees (–0.9 percent) in comparison with the previous year. We had to lay off staff at our locations in Czechia, Great Britain, France, Germany, and Austria due to falling demand. Thanks to new product lines, we expanded our team in Romania by 210 employees. An increase in production capacity also led to the appointment of 230 people at the Mechatronics division's locations in Spain.

HEADCOUNT DEVELOPMENT 2015–2019



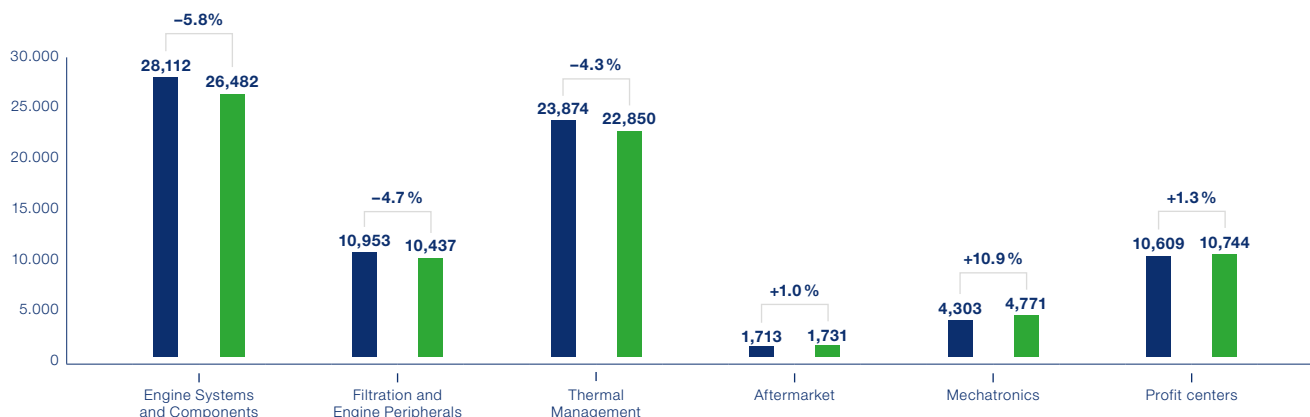
HEADCOUNT BY REGION



The directional arrows (↗ → ↘) show the change in the proportion of employees compared with the previous year

HEADCOUNT BY BUSINESS SEGMENT

■ 2018 ■ 2019



In North America, our employees numbered a total of 16,136 as at the end of 2019 and thus 954 (-5.6 percent) fewer than in the previous year. To offset decreasing orders through improvements in efficiency, we reduced our headcount in Mexico by 753 employees.

Compared with the previous year, our staffing level in South America fell by 7.5 percent to 8,391. The reduction of a total of 683 employees is likewise attributable to declining order volumes and the impact of improvement initiatives.

In the Asia/Pacific region, our employees numbered 16,161 as at the end of the year under review, 536 fewer people (-3.2 percent) than in the previous year. In Asia too, the reduction in staffing levels was associated with declining sales and optimization measures—primarily in China.

In Africa, we employed 991 staff as at the reference date, 57 people fewer in total than in the previous year (-5.5 percent).

Headcount by business segment

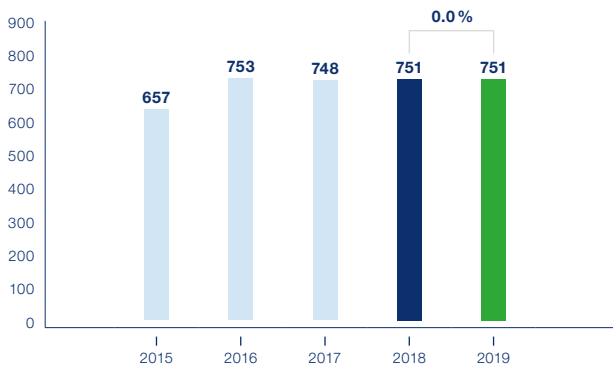
In our Engine Systems and Components business unit, the staffing level decreased by 1,630 employees. At 34.4 percent, the majority of our group's employees still worked at one of the 43 locations belonging to this business unit. We employed around 30 percent of our total workforce at the 37 locations of the Thermal Management business unit. In comparison with the previous year, we numbered 1,024 fewer employees in this area. Around 13.6 percent of the group's workforce worked in the Filtration and Engine Peripherals business unit's 36 plants, 516 employees or 4.7 percent fewer than in 2018. Adjusted for the reorganization of the pumps business into a separate profit center, the decline was 2.6 percent. The staffing level in Aftermarket, our smallest business unit in terms of personnel, grew by 18 employees—a slight rise in comparison with the previous year. With an increase of 468 employees (+10.9 percent), the Mechatronics division expanded considerably through the implementation of our dual strategy and reached a 6.2 percent share of our total workforce. In the profit centers, we recorded a slight rise in personnel amounting to 135 employees compared with the previous year, due to the integration of the Pumps profit center.

Technology and innovation

We maintained our group-wide research and development activities at a high level in the year under review, despite the difficult market conditions, investing EUR 751 million as in the previous year. In relation to sales, that is a ratio of 6.2 percent, following on from 6.0 percent in the previous year. This high level serves to highlight the great importance attached to research

R&D EXPENDITURE 2015–2019

in EUR million



and development (R&D) in our group. In terms of personnel, we continued to expand the R&D function and hired new development engineers and technicians. As at December 31, 2019, this area of our business employed 6,167 staff. In the year under review, we registered around 345 new patents in addition to a good 600 records of inventions. In order to further accelerate our R&D projects in the future, we encourage flexible cooperation in our globally active teams and take advantage of short reporting lines, flat hierarchies, digitalization, and Industry 4.0. One good example is our MAHLE Incubator, which we use to empower our employees to develop new business models themselves. This means that ideas arising in R&D have the potential to quickly become corporate start-ups. The best examples of this are chargeBIG and Retromotion.

TOTAL RECORDS OF INVENTIONS IN 2019:

600

with 6,167 R&D employees

In 2019, we continued to pursue our dual strategy. On the one hand, we consistently drove forward the development of systems and components for alternative drive concepts, including hybrid and battery-powered electric drives as well as fuel cells

and products designed for use with synthetic fuels. The goal is demand-oriented mobility, which, irrespective of the technology, uses drive types that match the specific application. On the other hand, we worked to further optimize the combustion engine—with the goal of making it even cleaner and more efficient. Not only did conventional engine testing come into play here, but new concepts from the fields of additive manufacturing and the rapid prototyping of pistons and charge air coolers, for example, were also involved.

With a battery management system including integrated thermal management, we developed a solution in the year under review that further increases the rapid charging capability of **electric vehicle** batteries. As a result, traction batteries can be designed to be significantly smaller, because they can be charged more quickly. In this way, we are not only improving the carbon footprint of the electric vehicle, but also lowering the demand for raw materials for battery production, which are becoming increasingly scarce worldwide.

The fact that batteries and power electronics need to be cooled simultaneously gives rise to complex circuits that substantially increase the demands on the individual components and on thermal management control systems. The diversification of the powertrain has increased the complexity of design and production as well. In 2019, we developed a modular cooling system to allow vehicle manufacturers to use different powertrains on one platform, thereby minimizing the design effort required when it comes to **thermal management**.

In terms of **synthetic fuels**, we studied the influence of alternative fuels on filter media and engine components in the business year. At the same time, we ran engine tests through which we determined the proportions up to which engine operation is possible without adjustments to hardware or software if fuels outside the current standard are admixed. Our investigations have shown that we would be able to leverage areas of environmental and financial potential in the event of changes to the corresponding conditions.

As regards **fuel cells**, we worked within the scope of an interdisciplinary project in 2019 to transfer research and development findings relating to conventional transport to fuel cell technology and to make thermal, air, and liquid management and filtration work together as a system. The long-term objective of this work is to achieve cost parity with the conventional combustion engine, especially for heavy vehicles used over long distances.

In view of the market development of **hybrid vehicles**, we have designed a new, fully integrated, and modular hybrid drive that can be tailored to suit a wide range of vehicle applications. The MAHLE Modular Hybrid Powertrain is a fully integrated, plug-in hybrid drive incorporating a two- or three-cylinder turbocharged gasoline engine, a substantially simplified transmission, and two electric motors.

Purchasing

In the business year, we made preparations to secure supplies to our plants in the event of Brexit, or indeed of a “no-deal” Brexit. For example, we made sensible adjustments to our stock levels—where necessary—and increased availability times in some cases. In addition, we raised awareness of the subject of Brexit among the companies in our supply chain, called for appropriate preparatory action, and initiated further precautions.

Purchasing was also influenced by international trade disputes. The impact of punitive tariffs and other trade restrictions on material costs could only be partially offset. However, the situation with regard to raw material prices eased in comparison with previous years—although only for those raw materials unaffected by trade restrictions.

Macroeconomic effects and the associated drop in volumes put our supply chain under pressure. In addition, the economic situation led to an increasing number of business failures among our suppliers, resulting in additional expenditure for our group.

We want to make our purchasing processes more efficient overall by, for example, increasing the digitalization of process flows. We introduced the ePAID (early PAyment, Invoiced Digitally) program for this purpose in 2019. On the one hand, our suppliers can prefinance their receivables from us, and on the other, we are able to use this platform to digitize incoming invoices at MAHLE with the aim of receiving only digital invoices in the future. We also successfully implemented the pilot version of our eBuy purchasing portal in the year under review, which we are using to advance the digitalization of our purchasing activities with respect to indirect materials and services as well.

Production, quality, and environment

Production at MAHLE

In the year under review, we continued to push ahead with our continuous improvement process, which involves all of MAHLE's approximately 160 production locations and business areas. Here, a global team discusses the most successful processes around the world and uses this exchange to identify the most important principles, methods, and standards for the MAHLE Production System (MPS) in order to make manufacturing at MAHLE even more efficient. We have been testing MPS at eight lighthouse plants in four regions since 2017. Following the successful conclusion of the pilot phase in 2019, the system was introduced to other plants alongside additional methods beginning in the middle of the year. Part of the rollout involves the creation of an MPS training academy, which will open in Krotoszyn/Poland in the second half of 2020. The academy will train internal MPS experts with the intention of avoiding the need for external support in the future. The first employees successfully qualified as MPS experts in the 2019 business year.

The subject of Industry 4.0 remained another area of focus for Production in the year under review. To address this topic, we created a new central function that aims to intensify international cooperation, specialist knowledge-sharing, and internal communication and thus accelerate the digital transformation at group level and in particular at the level of individual production locations. Following the successful conclusion of the pilot project, MAHLE decided to implement the standardized manufacturing execution system (OneMES) in 2019. This system's benefits include the ability to evaluate machine data and improve the traceability of parts. In addition, an “i4.0 project monitor” helped us to make numerous pilot projects for Industry 4.0 transparent for MAHLE around the world. In the process, some of the projects were made more concrete and developed into technical standards for MAHLE. We launched new concepts and pilot projects, such as augmented reality (AR) communication smart glasses.

Quality management at MAHLE

Innovative, defect-free, and reliable products and systems are the foundation of our long-term success. Quality targets are therefore core elements of our annual business plan: they are defined from the top down, fleshed out from the bottom up, and consolidated across the operational business areas. In addition, we have been using a group-wide quality management system for many years now, which is integrated into all our business processes.

In 2019, we pushed ahead with our group-wide MAHLE Quality Improvement Program in order to carry on continuously improving quality and strengthen our quality mind-set. The program encompasses the training and education of our workforce as well as projects through which we coordinate activities, standardize process flows, and optimize our products and processes. The goal is to reduce quality costs and risks and to eliminate potential sources of defects as early as the product development stage. The quality management system also supports series production.

NUMBER OF CUSTOMER COMPLAINTS
REDUCED BY

19%

compared with the previous year

Our teams regularly discuss the outcomes of the MAHLE Quality Improvement Program and the challenges with respect to quality management; their findings feed into and optimize our process flows.

Data relating to our quality performance is presented by our customers in a variety of ways, which is why we are currently compiling a group-wide database featuring consistent reporting. The aim is to standardize the information so that we are able to make even better use of any potential for improvement it offers.

MAHLE RECEIVED AROUND

85

quality awards in 2019

Our work with regard to quality is paying off: The number of customer complaints fell by 19 percent in the year under review in comparison with the previous year, and we achieved a further reduction in the number of faulty delivered parts. In 2019, numerous customers once again recognized the quality of our products; we received a total of 85 awards.

Safety at work and environment

To protect the health of our employees and the environment, we take a holistic approach that ranges from research and development through production and recycling. In 2019, we made further progress with the implementation of our group-wide guidelines and requirements. In this context, we also further developed our reporting system in order to better monitor the impact and success of the measures we have taken.

In terms of safety at work, in 2019, we consistently pushed ahead with the safety campaign we began in 2017. This work prioritized the harmonization of internal processes with the result that we were able to significantly cut our accident rate for the third consecutive year: from 6.8 accidents per million hours worked in 2017 to around 5.7 accidents in 2018 and 4.8 accidents in the year under review. Despite these positive trends, we will continue to drive the subject of workplace safety forward and establish it even more firmly in all our employees' minds. For example, our action plan comprises round-table discussions on safety and regular safety tours at our locations. In addition, we extended the certification of the safety at work management system according to ISO 45001 to further locations in the year under review. In the future, we plan to gradually introduce this certification at all our locations.

ACCIDENT RATE FELL BY

16%

in comparison with the previous year

When it comes to environmental protection, our focus also continues to be on energy management, with the aim of making the operation of all our locations as energy efficient as possible. By using our database, which documents lessons learned and successful processes, we are striving to tap areas of energy efficiency potential. Furthermore, we are encouraging dialog on energy-related topics at various levels.



Our corporate activities are consistently geared to opportunities and risks, which serve as our guidelines.



We are continuously developing our portfolio in the field of mechatronics and electronics. By doing so, we benefit from the expansion in the market for electric vehicles.



We use early warning systems and action plans to limit the consequences of the global decline in the production of passenger cars and commercial vehicles as effectively as possible.

Opportunity and risk report

We use a management system to evaluate the opportunities and risks associated with our business operations. In this way, we gain knowledge from which we draw conclusions and adapt our actions accordingly. Our globally active internal audit regularly verifies the compliance and efficiency of our processes and control systems by means of an audit plan, which changes on an annual basis. Because we expect the group to continue to grow and since the transformation of the automotive industry may change the key areas of risk, we have introduced a systematic risk management process—with the following areas of focus.

Market and technological trends

We identify long-term market and technological trends using a systematic scenario approach. As a framework, it provides a baseline scenario including the developments in our business areas, regions, products, and markets until 2030. On this basis,

EXTREME SCENARIOS FOR

2030

Stress test for market and technology trends

and using “extreme scenarios 2030,” we subject our company to stress tests on various aspects—such as markets, regions, drive types, quantities, and technologies. By taking market and technological trends into account in this systematic way, we ensure that we identify opportunities and risks at an early stage. The findings from these analyses are used to make decisions about future business segments and new production processes; we include the measures derived in our strategic and budget planning. In the course of preparing management reports, we monitor whether and how the agreed steps are implemented.

Opportunities and risks arise from the markets' increasing awareness of environmental considerations and from new standards to reduce emissions, for example. We therefore include all relevant topics in our international research and development activities at an early stage and focus our attention on a wide range of technologies to increase the efficiency of the combustion engine, on alternative drive configurations, and on a holistic, intelligent thermal management system. As a result, we are able to offer our customers competitive, innovative products. With our steadily growing portfolio of electric drives and auxiliary components, we are benefiting from the expanding market for electric vehicles. We have specifically strengthened these activities through multiple acquisitions, which have been pooled within our Mechatronics division and are now integrated into the group. Through acquisitions made in recent years, we have significantly expanded our thermal management business and our product portfolio to include air conditioning compressors. MAHLE therefore has the necessary resources to develop electric air conditioning compressors for the growing plug-in hybrid and electric vehicle market.

Impediments to trade such as Brexit and the tariff dispute between the USA and China, economic fluctuations, changes to the political framework in individual regions or countries, other developments that affect the global economy, and the growing number of competitors from Asia in particular can have a major impact on market developments and thus on the business development of our company. On the subject of Brexit, we have set up a working group that is continually monitoring the developments and drawing up response options. As things stand at present, this has not resulted in any significant effects on business activities. In general, our broad market base and global presence serve as important stabilizing factors and help us to counter market and customer risks. Our highly diversified customer and product portfolio is also helpful in this respect. Consequently, possible declines in demand in individual markets or from individual customers can at least be partially offset. We therefore consider a global market slump—as in the economic crisis of 2009—the impact of which could have a major negative effect on our profit, to be one of the greatest risks for our group. These adverse conditions also include largely unforeseeable events such as the SARS-CoV-2 pandemic and its consequences. In comparison with the previous year, global production of passenger cars and light commercial vehicles has already decreased markedly in the year under review with negative repercussions for the group's profit situation. We limit the resulting consequences as effectively as possible by means of appropriate early warning systems and action plans. The discussions about diesel emissions and further driving bans on older diesel models are significant uncertainty factors for the whole automotive industry. By implementing suitable measures, we aim to mitigate the potential economic effects of a shift in technology at an early stage. These effects could also be due to possible legislative changes—such as a ban on combustion engines in passenger cars applicable from a certain point in time. Through our dual strategy of playing a leading role in the ongoing development of the combustion engine from a technology perspective while also driving forward innovative solutions for alternative powertrain technology, we are readying ourselves for future scenarios of this kind. Business segments that are independent of the OEM business for the passenger car combustion engine today already account for more than 50 percent of group sales. We want to continuously increase this proportion of sales that is unrelated to the passenger car combustion engine.

PROPORTION OF SALES BY BUSINESS SEGMENT

> 50%

independent of the OEM business
for the passenger car combustion engine

Procurement and production

Our risk management system is also focused on minimizing the negative impacts stemming from the procurement markets. Regular supplier assessments prevent unexpected supply bottlenecks and/or price increases in purchasing. We have stepped up these activities in recent years and are making sure that the independence of our suppliers is maintained. In addition, we have been using a tool to monitor risks worldwide, which enables a rapid overview of the impact of natural disasters, strikes, and insolvencies. This increases transparency and thus decreases risk in the supply chain. Appropriate safety stocks and hedging transactions also serve to reduce procurement risks. Specific emerging risks that could lead to bottlenecks in the supply of purchased parts and thus to production interruptions, such as the SARS-CoV-2 coronavirus, which became known in January 2020, are managed in Supplier Risk Committees. These committees are headed by Central Purchasing management and, depending on the topic, include employees from Sales, Logistics, Production, Development, and Quality to achieve the best possible coordination to limit risks. To optimize our business processes further, our production locations all around the world cooperate with each other at all times. The existing production systems from all business areas are in the process of being consolidated into one uniform MAHLE production system. In the business year, we continued our Safety First campaign, which was launched two years ago and comprises extensive measures to guarantee safety at work. By means of improved production processes and high quality standards, we aim to ensure that operational risks—such as unforeseen circumstances, unexpected technical malfunctions, accidents, and human error—hinder production operations as rarely as possible. Thus far, the increasing number of extreme weather events, such as floods, inundations, and droughts, have impacted our production locations only in isolated cases. MAHLE counters the associated risks using an established environmental management system.

Our group has been audited and certified in accordance with recognized ISO standards and similar specifications relevant to our sector—in terms of quality, environmental protection, and safety at work, for example—and is thus subjected to important external checks that serve to limit risks. We have arranged an economically prudent degree of cover by means of insurance policies for the disruption of operations resulting from damage as well as liability risks. However, there were again quality incidents and warranty claims in the year under review, although their impact on profit was significantly less severe than in previous years. To prevent similar risks in the future, we have defined cross-functional countermeasures. In this way, our development processes will, for example, be continually scrutinized and optimized with the additional goal of limiting the risks that could arise from increasing demands from our customers to accept warranty coverage. Where legally required, financial burdens resulting from quality incidents and warranty claims originating and known as at the balance sheet date, and which are expected to result in cash outflows, are covered by accruals as part of risk provisioning.

Finance management

Using our systematic and group-wide finance management system, we aim to ensure our optimized use of financing opportunities from the banking and capital market. The liquidity risk is covered by diversified financing facilities with staggered maturity profiles that considerably exceed our group's foreseeable financial requirements. When designing our financing mix, we take security, flexibility, and cost factors into account. Our aim is to secure the financial independence of our group, limit the financing risks, and ensure we are able to exploit business opportunities at all times. We detect currency risks by means of our group-wide planning and reporting system. In accordance with standardized group-wide principles, we counter these risks extensively using non-predictive hedging transactions over a horizon of up to 24 months. As a rule, hedging transactions relate to OTC FX forwards or swaps in the form of portfolio hedges. The use of derivative financial instruments is necessarily linked to the existence of an operational underlying transaction; expected and not yet invoiced currency risks are covered with continuously declining hedging grades. The resulting hedging relationship generates valuation units in accordance with the critical term match method. The interest rate risk is subjected to value-at-risk analyses. OTC hedging activities and other financial transactions give rise to counterparty risks with financial institutions, which we identify and evaluate across the group in our uniform reporting system. If predefined thresholds are exceeded, the counterparty risk is lessened by the targeted spread of risks.

Human resources, IT, and accounting

Highly qualified and motivated employees are a cornerstone of our success both today and in the future. That is why it is important for us to attract suitable staff, support them on a continuous basis, help them gain further qualifications, and retain them in our company over the long term. We have developed a comprehensive personnel marketing concept and established a recruitment organization in order to initiate direct contact with potential candidates at an early stage and recruit qualified employees. We are thereby reducing the risk of not filling vacant positions or filling them only after some delay. In order to guarantee our group's long-term success and take advantage of the opportunities arising from market and technological changes, our personnel

requirement planning is geared toward developments in the relevant markets as well as strategically significant technologies and business segments. Performance-related remuneration systems, modern pension schemes, and advanced training activities counter the risk of losing employees in strategically important positions. In the IT function, security technologies protect against unauthorized access to or misuse of data by internal and external parties. Server and storage systems are set up in such a way that they can be restored at short notice in the event of a disaster and in crisis situations. Defined security standards not only encompass the technical specifications of the hardware and software, but also the functional security structures and organizational provisions. Detailed backup and recovery procedures reduce the risk of severe disruptions, for example, by securing access procedures as well as mirroring and archiving data on a daily basis. With regard to the accounting process, the internal control and risk management system is aimed at ensuring the compliance and effectiveness of accounting and financial reporting. Besides guidelines and principles, the system also includes measures to prevent and uncover reporting errors. The consolidated financial statements are compiled centrally on the basis of data reported by subsidiaries. We guarantee compliance with the MAHLE guidelines by means of systemic controls, specialist advice, and manual checks as well as through the validation of data plausibility by the group accounting function.

Regulations and legislation

The introduction and implementation of directives alongside organizational and work instructions ensure that statutory requirements are observed. By integrating internal and external experts into the processes from an early stage, we minimize risks and exploit opportunities that could arise, for example, from fiscal, occupational, competition, patent, antitrust, and environmental regulations and legislation as well as from trade rules. Key elements of our compliance structure include the MAHLE Business Code, the global compliance organization, the whistleblower system for internal and external compliance-related communications, as well as the training concept for risk areas relevant to compliance, and preventive measures.

Overall assessment

Overall, no risks are currently observable that could endanger the continued existence of our group.



In 2020, the global production of passenger cars and light commercial vehicles is likely to continue to decline considerably.



In the light of the worldwide spread of the coronavirus pandemic, there is considerable uncertainty concerning the 2020 business year.



We are driving forward global restructuring measures to safeguard our competitiveness. We are continuing the systematic review of our locations around the world.

Outlook

Overall economic development

In its January 2020 report, the International Monetary Fund (IMF) projected global economic growth of 3.3 percent for 2020. At the time of writing, the IMF has departed from its original forecast in view of the spreading global uncertainty surrounding the SARS-CoV-2 coronavirus. Instead, growth is now expected to be lower than in 2019 (2.9 percent). Trade restrictions and growing political instabilities represent further barriers to growth. The following estimates relating to individual regions are based on the IMF's expectations from January 2020.

IMF FORECAST

< 2.9%

global economic growth in 2020

In the euro zone, the economy is likely to grow slightly in 2020. Falling unemployment and the continued loose monetary policy are expected to contribute. Further growth is anticipated in the countries in the west of the European Union, with a slight decline in Spain.

The IMF projects less dynamic growth than in 2019 for the USA. Here, strong domestic demand and full employment are likely to offset higher imports and increasingly strict trade barriers. South America's largest national economy, Brazil, is expected

to continue to expand at around 2 percent in the coming year, driven by rising private demand.

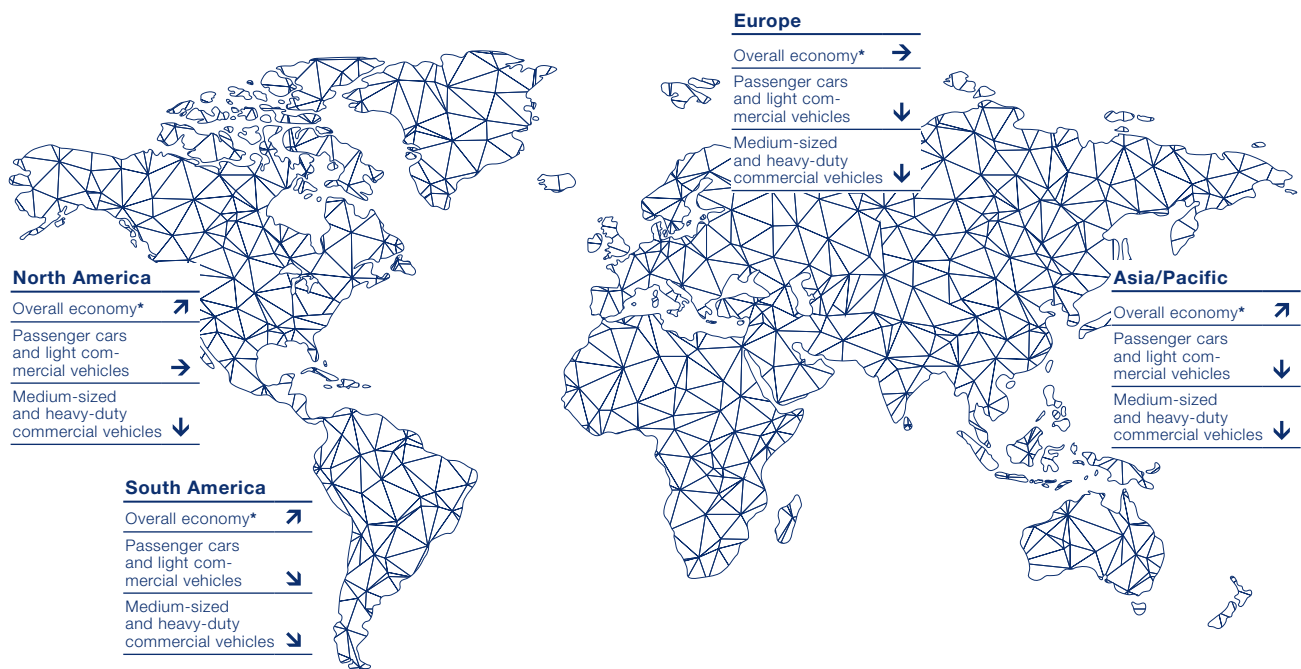
In the Asia/Pacific region, economic growth in China will again probably be lower than in previous years. Aside from the impacts of the SARS-CoV-2 coronavirus, reasons for this include the trade dispute with the United States and increasing national debt. In Japan, the fall in private consumption due to higher consumer taxes is likely to lead to economic output growing somewhat less strongly as well.

Development of the vehicle markets

In 2020, we expect a further significant fall in the global production of passenger cars and light commercial vehicles. The cyclical decline in the production of medium- and heavy-duty commercial vehicles is expected to continue in 2020 too. Overall, there is great uncertainty regarding the weakening of the global economy, in particular due to the repercussions of the SARS-CoV-2 coronavirus, which are so far difficult to predict. We anticipate that this will have a negative impact on all vehicle markets.

In Europe, we anticipate that the market downturn in the passenger car and light commercial vehicle classes will continue in 2020, and we expect medium-sized and heavy-duty commercial vehicles to experience even greater losses. Ultimately, falling export volumes, the uncertainty associated with Brexit, and shrinking industrial production are hampering the development of the vehicle sector.

In North America, the production of passenger cars and light commercial vehicles is, at best, likely to remain only at the previous year's level as a result of restructuring by major US vehicle manufacturers and due to weaker demand. We even expect a significant cyclical downturn for the medium-sized and heavy-duty



* IMF forecast from January 2020

commercial vehicle class in 2020, which was already reflected in the declining order intake in the second half of 2019. In South America, we also anticipate a downswing in both vehicle categories.

In the Asia/Pacific region, the Chinese market for passenger cars and light commercial vehicles will probably contract in the year ahead as well. According to current estimates, the impact of the SARS-CoV-2 coronavirus will cause significant declines. In addition, there are possible effects on the supply chain of vehicle parts from China for other markets. A significantly lower production volume than in 2019 is also predicted here in the commercial vehicle sector. Vehicle production in Japan and India is also unlikely to recover substantially in the coming year.

Development of the MAHLE group

For the 2020 business year, our forecast—prepared before the outbreak of the coronavirus pandemic—projects a flat trend in terms of organic sales development (when adjusted for changes to the consolidation group and exchange rate effects) in view of the volatility and likelihood of continued decline in the automotive markets. We expect a marked improvement in the year ahead with regard to the result from business activities owing to reduced restructuring costs and the successful implementation of rationalization measures.

In the light of the worldwide spread of the coronavirus pandemic, there is considerable uncertainty concerning the 2020 business year. The resulting negative effects on global economic momentum and on the automotive markets in particular are likely to interfere with our production operations and supply chains. Against this backdrop, we plan to make immediate volume adjustments for a phase lasting several weeks, initially beginning at the European locations by using flexitime accounts, reducing holiday entitlements, and introducing short-time work. This turn is expected to impact our sales figures and results that cannot be reliably estimated at the time of preparing this report. We have set up a task force to monitor and evaluate the heightened level of uncertainty on an ongoing basis.

Our aim is to position our company for long-term future success and to safeguard our competitiveness. For this purpose, we are pushing ahead with the global realignment of our group and continuing the systematic review of our locations around the world. We are readying ourselves for continued volatility in the markets, a flagging economic climate, and political uncertainties like trade disputes. Added to this is the considerable effort involved in managing the technological transformation. So far, our intensive audits of our locations and structures have indicated the need to make adjustments, with a focus on production and development locations in Europe.

For example, we will strategically reorganize the production and development location in Rouffach/France with the aim of maintaining the plant's long-term prospects there. It has become

apparent that—despite an extensive package of measures—the location in Öhringen/Germany is no longer able to operate competitively, and it will therefore be closed at the end of 2020. The situation is similar at our plant in Telford/Great Britain. This location is no longer competitive and profitable, as the order situation—which was already in decline—is further impaired by the strategic realignment of the automobile manufacturers located in the area. In addition, a decision has been taken to close the locations of the Italian sister plants in La Loggia and Saluzzo. The two plants produce exclusively diesel engine pistons. With the continuing fall in demand for diesel engines and the vehicle manufacturers' change in strategy, their prospects are no longer sustainable. At our headquarters in Stuttgart, too, adjustments to the staffing level are necessary as part of a cost reduction program. All activity at our research and development center in Foetz/Luxembourg, which specializes in the development of air conditioning compressors, will cease by mid-2021, and this work will be absorbed into other MAHLE locations. Because of the strong trend toward electric vehicles, the integrated product development of the electric compressor is seen as an important factor in our long-term competitiveness. By taking this step, we have laid the appropriate foundations and will continue to strengthen and expand this product segment.

FOCUS FOR

2020

Press ahead with global restructuring measures

Against this background, we combined our expertise in the fields of electronics and mechatronics in a new business unit as at January 1, 2020. This business unit encompasses the former Mechatronics division and the two profit centers Compressors and Pumps. This strategic merger serves as the basis on which we will further increase our innovative strength and create synergies in electric drives, auxiliary components, and electronics. With our new business unit, we are consistently pursuing our dual strategy and clearly focusing on the future business areas for mobility.

In all our business areas and functions, digital technologies support the ongoing development of our group, with the aim of making us more efficient and more innovative as well as helping us to develop new products and business models. To consolidate our digital competence even more strongly in the future, we established the MAHLE Digital Circle. This is a network of employees responsible for digitalization from all business units

and representatives from central functions who coordinate and systematically drive forward our digital strategy as well as ensure transparency of digital activities and projects. The Digital Circle will also support the business areas and central functions in their digitalization tasks, create digital guidelines, and develop digitalization solutions. Additional tasks undertaken by the network will include analyzing trends, monitoring the competition, and enhancing our digital skills. We are pushing the subject of artificial intelligence (AI) forward with equal commitment. A study in August 2019 initially led to the formulation of a definition of AI specific to MAHLE and to practical ideas regarding its application. During the MAHLE AI hackathon in November, seven highly promising options emerged from these ideas and were tested in conjunction with external AI experts. In the next step, we will develop these possible uses further to create pilot projects and implement them together with a project team.

We are pursuing a large number of initiatives with the aim of tapping into new areas of growth. As part of MAHLE Piloting, for example, we run trailblazing pilot projects to gain early access to innovative products and technologies. One such example is our cooperation with the German-Israeli start-up TinyInspektor, in which we purchased shares after the successful conclusion of the pilot project. We want to step up venture capital investments of this kind in the future too, in order to tap into growth areas and develop new ideas and solutions together with start-ups. With the MAHLE Incubator, we empower our employees to identify, analyze, and develop new business ideas, models, and markets. One initiative with origins in the Incubator is our corporate start-up chargeBIG, which has developed an intelligent charge management system for electric vehicles that can be integrated into the existing infrastructure at low cost and without complex conversion work. We are also increasing our focus on so-called project houses, in which experts discuss and work closely together on certain technology topics on a cross-functional and global basis. One of our project houses is currently developing a groundbreaking modular systems portfolio for fuel cell applications.

Our economic success is the foundation on which we implement our future strategies. It enables us to invest in research and development, establish new business areas, and make acquisitions that complement our portfolio. To maintain and enhance a strong base, we are striving for further sales growth while seeking to increase profitability at the same time. Our financial independence and ability to withstand potential crises are always our priorities. We therefore set great store by a healthy balance sheet structure and moderate net gearing. The mainstays of our financial policy are thus a solid equity base and liquidity that is secured over the long term and built on stable operating cash flows as well as diversified financing sources and instruments.

This report contains forward-looking statements that rely on current estimates of future developments and are therefore subject to risks and uncertainties that are beyond our control or precise assessment. Consequently, the actual results may differ from the statements made here.