# Group Management Report

(Combined Management Report of the Volkswagen Group and Volkswagen AG)

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# Goals and Strategies

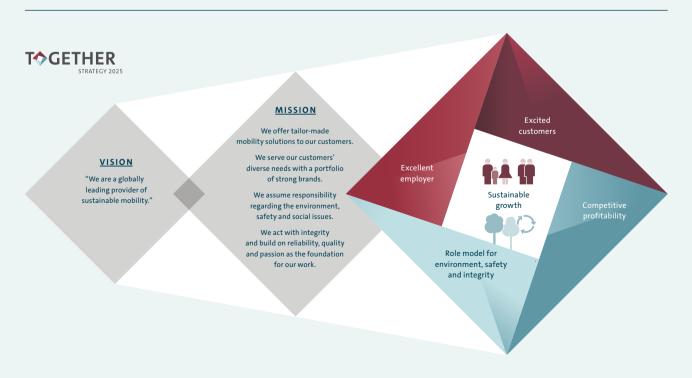
With its future program TOGETHER – Strategy 2025, the Volkswagen Group has launched the biggest change process in its history, laying the foundations for lasting success in tomorrow's world of mobility and for its evolution into a globally leading provider of sustainable mobility.

The automotive world is in a state of transformation, and autonomous driving, e-mobility and connected vehicle concepts are the dominant trends. Technological changes are influencing customer needs and business models; new competitors are entering the market from other industries; shorter innovation cycles and the establishment of new core competencies are requiring ever more capital; stricter emission standards and increased market

volatility are leading to more complex underlying conditions. All this poses new challenges for us as a vehicle manufacturer.

Against this backdrop and with the approval of the Supervisory Board, the Volkswagen Group's Board of Management resolved in June 2016 to launch the future program TOGETHER – Strategy 2025, the biggest change process in Volkswagen's history. We want to make a decisive contribution to shaping not only today's

# **FUTURE PROGRAM TOGETHER - STRATEGY 2025**



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mobility, but tomorrow's too. That is why the Group has reinvented itself, guided by the vision of becoming one of the world's leading providers of sustainable mobility. With the future program, we are making the Volkswagen Group more focused, efficient, innovative, customer-oriented and sustainable, and more systematically geared to generating profitable growth.

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Experts from all parts of the Company worked on developing TOGETHER - Strategy 2025, which builds on the successful Strategy 2018. The strategy arose at the core of the Company and unites the knowledge, experience and vision of the Volkswagen Group and its employees. The time horizon until 2025, which features in the strategy's name, stands for long-term, futureoriented thought and action. The term TOGETHER describes the mindset that will be even more vital to the Volkswagen Group's long-term success going forward. Our intention with the new Group strategy is for everyone in the Volkswagen Group to join us in producing fascinating vehicles and forward-looking, tailor-made mobility solutions that will continue to inspire our customers, meeting their diverse needs with a portfolio of strong brands. Every day, we actively assume and exercise responsibility in relation to the environment, society and safety, and we wish to be a role model in these areas. Integrity, reliability, quality and passion form the basis for our work. The realignment will enable us to maintain our technological leadership in the industry and at the same time ensure our competitive profitability. Volkswagen will thus remain an attractive investment and, what is more, an excellent, reliable and secure employer.

TOGETHER – Strategy 2025 creates the framework and lays the building blocks for the evolution of the Group, with its strong brands, its international production sites and its skilled, dedicated workforce. The Code of Collaboration formulated as part of the future program is the foundation on which the Group strategy rests. The Code describes how collaboration is to take place within the Group and between individuals in their day-to-day work. Its core values are encapsulated in the terms "open and honest", "uncomplicated", "without prejudice", "on an equal footing" and "for one another". The change process is complemented by the corresponding strategies of the brands and functional areas.

# FOUR KEY BUILDING BLOCKS OF THE FUTURE PROGRAM TOGETHER – STRATEGY 2025

The new Group strategy comprises a raft of far-reaching strategic decisions and specific initiatives essentially aimed at safe-guarding the Group's long-term future and generating profitable growth. A total of 16 strategic Group initiatives are assigned to the four key building blocks of the program. The latter are: comprehensively transforming our core automotive business; establishing a new mobility solutions business; strengthening the Group's innovative power; and secure funding of our investments.

# First key building block: transforming our core business

Developing, building and selling vehicles will remain essential for the Volkswagen Group going forward. However, there will be far-reaching and lasting changes to this business. That is why we are profoundly restructuring our core business to face this new era of mobility.

As part of this transformation process, we will prospectively sharpen the positioning of the Group brands and optimize the vehicle and drivetrain portfolio to focus on the most attractive and fastest-growing market segments. The Group's product portfolio will be geared to profitability, taking the needs of customers and regional markets into account. One focus will be on e-mobility. The regional growth strategy that has been launched will continue in particularly attractive automotive markets. Expansion and investment plans for North America and the expansion program in China will remain in place. In Asia, especially, we want to tap the economy segment, i.e. the segment comprising attractively priced entry-level products, forging partnerships with local companies to achieve this.

As part of its policy of generating profitable growth, the Volkswagen Group will review and streamline its modular toolkits so as to reduce complexity in development and production and simultaneously enhance efficiency. Transforming our core business also encompasses systematically promoting an entrepreneurial mindset and approach, which is why we have implemented a product line organization in the high-volume passenger car brands. The components business will be realigned, with the aim of improving competitiveness and efficiency, and making an important contribution to the trends that will shape the future.

With regard to vehicles and drivetrains, special emphasis will be placed on e-mobility. In the coming years, we intend to launch more than 30 different types of purely battery-powered electric vehicles (BEVs) and to sell between two and three million BEVs by 2025 – equivalent to around 20–25% of the Group's expected total unit sales.

In light of the expected rapid gains in market volume and unit sales of BEVs, the Volkswagen Group will develop battery technology as a new core competency, thus reducing the risk of becoming dependent on suppliers in these areas. On top of that, we will work together with partners.

A further lever for transforming our core automotive business is to develop new core competencies in forward-looking areas such as autonomous driving and artificial intelligence. We need to provide the necessary resources in order to develop a competitive technical solution for a self-driving system and have it licensed by the end of the decade.

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# 16 COMPREHENSIVE GROUP INITIATIVES



### RANSFORM **CORE BUSINESS**

Sharpen positioning of brands

Develop successful vehicle and drivetrain portfolio

Partner with regional players to win in economy segment

Streamline modular architectures

Implement model line organization

Realign "Components" business

Develop battery technology as new core competency

Develop self-driving system for autonomous vehicles and artificial intelligence

Develop best-in-class user experience across brands and customer touchpoints



# **MOBILITY SOLUTIONS** BUSINESS

Establish mobility solutions business

Develop and expand attractive and profitable smart mobility offering



### SECURE FUNDING

Improve operational excellence

Optimize business portfolio

Integrate strategy and planning process

Drive digital transformation



Create organization 4.0

Our goal and our aspiration is to systematically put ourselves in our customers' shoes. At three Volkswagen Group Future Centers in Germany, the USA and China, designers and digital experts are

working together on the vehicles of the future so that the Group can offer the best-possible customer experience and make optimum use of the latest technologies.

In the Commercial Vehicles Business Area, too, we are pursuing a future-oriented policy with the Scania, MAN and Volkswagen Commercial Vehicles brands, one of our goals being to become a provider of intelligent transport solutions. Offering vehicles under several different brands, Volkswagen Truck & Bus is to become a global industry champion, with a significant presence in all key regions of the world and with enhanced overall performance.

After the strategic realignment of the Volkswagen Group, the Financial Services Division will continue to support the brands' business models and remain an important source of revenue.

# Second key building block: establishing a mobility solutions business

The second key building block of the new Group strategy is the new cross-brand mobility solutions business, in which we are setting up mobility services. In this context, we have established a new business unit with MOIA. This will center on ride hailing. Subsequently, further attractive and profitable services that are tailored to customer requirements, such as robotaxis, carsharing, or on-demand transport for the logistics industry shall be developed or acquired. In order to achieve this, we will rely to a greater extent than previously on partnerships, acquisitions and venture capital investments. Investment selection will be managed centrally so as to generate maximum value for the Group and its brands.

We have secured the City of Hamburg as a strategic partner in our determination to become an end-to-end mobility provider. The focus of this partnership is on sustainable urban mobility concepts, intermodality, innovative vehicle concepts and technologies, autonomous driving and parking, and traffic flow management.

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# Third key building block: strengthening innovative power

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Both the transformation of our core business and the new mobility solutions business require us to strengthen our traditionally excellent power to innovate and place it on an even broader footing. To this end, the Volkswagen Group is pushing ahead with the digital transformation in all parts of the Company.

This involves operational aspects such as Industry 4.0 in production and logistics as well as digitalization in sales. In addition, the Organization 4.0 initiative will put in place a more attractive, up-to-date work organization. Structures and processes will be changed in everyday work situations and an environment created that encourages open, collaborative working relationships across all levels.

# Fourth key building block: secure funding

Becoming one of the world's leading providers of sustainable mobility calls for substantial capital expenditure. This expenditure is to be funded primarily through efficiency gains across all brands and functional areas: operational excellence is something that concerns the entire value chain, from product development and sourcing through to production and distribution. Additional funds for future investments can also be generated by optimizing the existing portfolio of brands and equity investments.

The continuity and even closer interlinking of strategic and operational planning enhances transparency when it comes to the financial assessment and the evaluation of directional decisions.

# GOALS AND KEY PERFORMANCE INDICATORS

# OF THE GROUP'S STRATEGY

The strategic initiatives describe how we intend to achieve our vision of becoming one of the world's leading providers of sustainable mobility. For this purpose, we have defined four target dimensions – excited customers, excellent employer, role model for environment, safety and integrity, and competitive profitability – which are designed to help us grow sustainably.

Although these target dimensions apply throughout the Group, the strategic KPIs that we will use to measure how well we have implemented our Group strategy will depend on the business model. The business model for our passenger car brands is thus different not only from that of our truck and bus brands, but also from that of power engineering and our services business. In the following we describe the Group's strategic goals attached to these targets. The strategic KPIs of the competitive profitability target dimension have been defined and anchored uniformly in the Group. As the new Group strategy has yet to be specified in detail, the content of the strategic KPIs in the other targets is still being determined.

# Target dimension: excited customers

This target dimension focuses on the diverse needs of our customers and on tailor-made mobility solutions. We aspire to exceed our customers' expectations, generating maximum benefit for them. That calls not only for the best products, the most efficient solutions and the best service, but also for flawless quality and an outstanding image. We want to excite our existing customers, win over new ones and retain their loyalty in the long term – because only loyal and faithful customers will recommend us to others.

The strategic KPIs include, for example, the loyalty rate, conquest rate and breakdowns.

# Target dimension: excellent employer

Skilled and dedicated employees are one of the keys to sustainable success. We wish to promote their satisfaction and motivation by means of equal opportunities, a modern and attractive working environment, and a forward-looking work organization. An exemplary leadership and corporate culture forms the foundation for this, enabling us to retain our core workforce and attract new talent.

The strategic KPIs of this target dimension include the Group's attractiveness as an employer as determined internally by means of the opinion survey and as perceived externally, as well as the equality index.

# Target dimension: role model for the environment, safety and integrity

Every day, we at the Volkswagen Group assume and exercise responsibility in relation to the environment, safety and society. This sense of responsibility informs all our thoughts and actions in equal measure in all the decisions we take.

We pay particular attention to the use of resources and the emissions of our product portfolio as well as those of our locations and plants, with the goal of continuously reducing our carbon footprint and lowering pollutant emissions. Through our innovations and outstanding quality, we offer our customers maximum product safety.

We want to regain and strengthen the trust of our customers and restore the Group's positive public image. The most important principles in this process include compliance with laws and regulations, the establishment of secure processes, and dealing openly with mistakes so that they can be avoided or rectified in the future. In terms of integrity, Volkswagen aims to become a role model for a modern, transparent and successful enterprise.

The strategic KPIs of this target dimensions include the decarbonization index and emissions figures, as well as compliance, process reliability and an error management culture.

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# Target dimension: competitive profitability

Investors judge us by whether we are able to meet our obligations as regards interest payments and debt repayments. As equity holders, they expect adequate dividends and a lasting increase in the value of their shares.

We make investments with a view to achieving profitable growth and strengthening our competitiveness, thus keeping the Volkswagen Group on a firm footing and ensuring it remains an attractive investment option.

The goals we have set ourselves are to achieve operational excellence in all business processes and to become the benchmark for the entire industry.

The strategic KPIs are operationalized for internal management purposes: target and actual data are derived from Volkswagen Group figures.

# STRATEGIC KPIS: COMPETITIVE PROFITABILITY

	2015	2025
Operating return on sales <sup>1</sup>	6.0%	7 to 8%
Research and development ratio (R&D ratio) in the Automotive Division	7.4%	~6%
Capex/sales revenue in the Automotive Division	6.9%	~6%
		Positive, to
Net cash flow in the		distribution
Automotive Division	€8,887 million	ratio of 30%
	€24,522	~10% of
	million,	consolidated
Net liquidity in the Automotive Division	11.5%	sales revenue
Return on investment (ROI) in the		
Automotive Division	-0.2%	>15%

<sup>1 2015</sup> before special items

# Internal Management System and Key Performance Indicators

This chapter describes, on the basis of the Group strategy, how the Volkswagen Group is managed and the key performance indicators used for this purpose. In addition to financial measures, our management system also contains nonfinancial key performance indicators.

The Volkswagen Group's performance and success can be measured using both financial and nonfinancial key performance indicators. In the following, we first describe the internal management process and then explain the Volkswagen Group's core performance indicators.

# INTERNAL MANAGEMENT PROCESS IN THE VOLKSWAGEN GROUP

The starting point for the Volkswagen Group's internal management process is the medium-term planning aligned with the corporate strategy that is conducted once a year and generally covers a period of five years. This forms the core of our operational planning and is used to formulate and check the requirements for realizing strategic projects designed to meet Group targets in both technical and economic terms – and particularly in relation to earnings and liquidity effects. In addition, it is used to coordinate all business areas with respect to the strategic action areas concerned: functions/processes, products and markets.

When planning the Company's future, the individual planning components are determined on the basis of the timescale involved:

- > the long-term unit sales plan, which sets out market and segment growth and then derives the Volkswagen Group's delivery volumes from them;
- > the product program as the strategic, long-term factor determining corporate policy;
- > capacity and utilization planning for the individual locations.

The coordinated results of the upstream planning processes are used as the basis for the medium-term financial planning: the Group's financial planning, including the brands and business fields, comprises the income statement, cash flow and balance sheet planning, profitability and liquidity, as well as the upfront investments needed for alternative products and the implementation of strategic options. The first year of the medium-term planning period is fixed and a budget drawn up for the individual months. This is planned in detail down to the level of the operating cost centers.

The budget is reviewed each month throughout the year to establish the degree to which the targets have been met. Key internal management instruments comprise target/actual comparisons, prior-year comparisons, variance analyses and, where necessary, action plans to ensure targets are met. For the current fiscal year, detailed revolving monthly forecasts are prepared for the coming three months and the full year, taking into account the current risks and opportunities. The focus of intrayear internal management is therefore on adapting ongoing operations. At the same time, the current forecast serves as a potential, ongoing corrective to the medium-term and budget planning that follows on from it.

# CORE PERFORMANCE INDICATORS IN THE VOLKSWAGEN GROUP

The Volkswagen Group's internal management system is based on nine core performance indicators, which are derived from our strategic goals. Two of these indicators will be added in 2017 under the future program TOGETHER – Strategy 2025:

- > Deliveries to customers
- > Sales revenue
- > Operating result
- Operating return on sales
- > Research and development ratio (R&D ratio) in the Automotive Division (from 2017)
- > Capex/sales revenue in the Automotive Division
- > Net cash flow in the Automotive Division
- > Net liquidity in the Automotive Division (from 2017)
- > Return on investment (ROI) in the Automotive Division

Deliveries to customers are defined as handovers of new vehicles to the end customer. This figure shows the popularity of our products and is the measure we use to determine our competitive position in the markets. Deliveries are closely related to our targets of exciting customers, being a role model in terms of the environment, safety and integrity, and being an excellent employer. One of the most important prerequisites for the Company's long-term success is a strong brand portfolio that - on the basis of outstanding quality offers tailor-made mobility solutions with safe, resourceefficient vehicles, thus meeting the diverse needs of customers. Demand for our products guarantees not only unit sales and production, but also full utilization of our locations and the jobs of our employees. The goals we are striving for cannot be achieved without a skilled, dedicated workforce and a consensus on shared values.

Sales revenue, which does not include the figures for our equity-accounted Chinese joint ventures, reflects our market success in financial terms. Following adjustment for our use of resources, the operating result reflects the Company's actual business activity and documents the economic success of our core business. The operating return on sales is the ratio of the operating result to sales revenue.

The research and development ratio (R & D ratio) in the Automotive Division shows total research and development costs in relation to sales revenue. Research and development costs comprise a range of expenses, from futurology through to the development of marketable products. Particular emphasis is placed on the environmentally friendly orientation of our product portfolio. The R&D ratio underscores the efforts made to ensure the Company's future viability: the goal of competitive profitability geared to sustainable growth.

The ratio of capex (investments in property, plant and equipment, investment property and intangible assets, excluding capitalized development costs) to sales revenue in the Automotive Division reflects both our innovative power and our future competitiveness. It shows our capital expenditure – largely for modernizing and expanding our product range and for environmentally friendly drivetrains, as well as for adjusting the production capacity and improving production processes – in relation to the Automotive Division's sales revenue.

Net cash flow in the Automotive Division represents the excess funds from operating activities available for dividend payments, for example. It is calculated as cash flows from operating activities less cash flows from investing activities attributable to operating activities.

Net liquidity in the Automotive Division is the total of cash, cash equivalents, securities, loans and time deposits not financed by third-party borrowings. To safeguard our business activities, we have formulated the strategic target that net liquidity in the Automotive Division should amount to approximately 10% of the consolidated sales revenue.

We use the return on investment (ROI) to calculate the return on invested capital for a particular period in the Automotive Division, including the Chinese joint ventures on a proportionate basis, by calculating the ratio of the operating result after tax to average invested capital. If the return on investment (ROI) exceeds the market cost of capital, the value of the Company has increased. This is how we measure the financial success of our brands, locations and vehicle projects.

You can find information and explanations of the sales figures and the Volkswagen Group's financial key performance indicators on pages 104 to 110 and on pages 118 to 135, respectively.

Detailed descriptions of our activities and additional nonfinancial key performance indicators in the areas of sustainability, research and development, procurement, production, sales and marketing, quality assurance, employees, information technology and the environment can be found in the chapter entitled "Sustainable Value Enhancement" beginning on page 140 of this annual report.

Structure and Business Activities Group Management Report

# Structure and Business Activities

This chapter describes the legal and organizational structure of the Volkswagen Group and explains the material changes in 2016 with respect to equity investments.

# OUTLINE OF THE LEGAL STRUCTURE OF THE GROUP

Volkswagen AG is the parent company of the Volkswagen Group. It develops vehicles and components for the Group's brands, but also produces and sells vehicles, in particular passenger cars and light commercial vehicles for the Volkswagen Passenger Cars and Volkswagen Commercial Vehicles brands. In its capacity as parent company, Volkswagen AG holds indirect or direct interests in AUDI AG, SEAT S.A., ŠKODA AUTO a.s., Dr. Ing. h.c. F. Porsche AG, Scania AB, MAN SE, Volkswagen Financial Services AG and a large number of other companies in Germany and abroad. More detailed disclosures are contained in the list of shareholdings in accordance with sections 285 and 313 of the Handelsgesetzbuch (HGB – German Commercial Code), which can be accessed at www.volkswagenag.com/ir and is part of the annual financial statements.

Volkswagen AG is a vertically integrated energy company within the meaning of section 3 no. 38 of the Energiewirt-schaftsgesetz (EnWG – German Energy Industry Act) and is therefore subject to the provisions of the EnWG. In the electricity sector, Volkswagen AG generates, sells, and distributes electricity together with a Group subsidiary.

Volkswagen AG's Board of Management is the ultimate body responsible for managing the Group. The Supervisory Board appoints, monitors and advises the Board of Management; it is consulted directly on decisions that are of fundamental significance for the Company.

# ORGANIZATIONAL STRUCTURE OF THE GROUP

The Volkswagen Group is one of the leading multibrand groups in the automotive industry. The Company's business activities comprise the Automotive and Financial Services divisions. All brands in the Automotive Division – with the exception of the Volkswagen Passenger Cars and Volkswagen Commercial Vehicles brands – are legally independent separate companies. The business activities of the various

companies in the Volkswagen Group focus on developing, producing and selling passenger cars, light commercial vehicles, trucks and buses. The product portfolio of the Passenger Cars Business Area ranges from motorcycles to fuel-efficient small cars and luxury vehicles. In the Commercial Vehicles Business Area, the collaboration between the MAN and Scania brands is managed and coordinated under the umbrella of Volkswagen Truck & Bus GmbH. The commercial vehicles portfolio ranges from pickups to heavy trucks and buses. Power Engineering manufactures large-bore diesel engines and special gear units, among other things. A wide array of financial services, which will be gradually expanded to include mobility services rounds off the Company's portfolio. With its brands, the Volkswagen Group has a presence in all relevant markets around the world, with Western Europe, China, the USA, Brazil, Mexico and Turkey currently representing its key sales

Volkswagen AG and the Volkswagen Group are managed by Volkswagen AG's Board of Management in accordance with the Volkswagen AG Articles of Association and the rules of procedure for Volkswagen AG's Board of Management issued by the Supervisory Board.

At Group level, committees also deal with key strategic issues relating to product planning, investments, liquidity and foreign currency, and management issues.

Each brand in the Volkswagen Group is managed by a board of management, which ensures its independent and separate development and business operations. The Group targets and requirements laid down by the Board of Management of Volkswagen AG must be complied with to the extent permitted by law. This allows Group-wide interests to be pursued while at the same time safeguarding and reinforcing each brand's specific characteristics. Matters that are of importance to the Group as a whole are submitted to the Group Board of Management in order to reach agreement between

Group Management Report Structure and Business Activities

the parties involved, to the extent permitted by law. The rights and obligations of the statutory bodies of the relevant brand companies remain unaffected.

The companies of the Volkswagen Group are managed separately by their respective management. In addition to the interests of their own companies, the management of each individual company takes into account the interests of the Group and of the individual brands in accordance with the framework laid down by law.

Following the realignment of Group structures, we finetuned the management model in the reporting period and made adjustments to its specific structure. The Group functions have been given a more pronounced strategic focus. They should:

- > sustainably enhance the leadership and management model;
- leverage substantial synergies across all brands and business fields; and
- > pool competencies and make them available to the brands. Operational fine-tuning at Group level has been reduced and, at the same time, greater entrepreneurial responsibility assigned to the brands and regions, making the Group more agile and speeding up decision-making processes. The Group Board of Management can concentrate more on strategy and the management of major areas in which synergies can be created, for example product strategy, toolkits, procurement, plant capacity utilization and key technologies such as digitalization. Further information on the Volkswagen Group's future organizational alignment can be found in the Report on Expected Developments on page 178.

# MATERIAL CHANGES IN EQUITY INVESTMENTS

The control and profit and loss transfer agreement between MAN SE, as the controlled company, and Volkswagen Truck & Bus GmbH, a wholly owned subsidiary of Volkswagen AG, as the controlling company, came into force upon its entry in the commercial register on July 16, 2013. The conclusion of the control and profit and loss transfer agreement replaced the group based on the de facto exercise of management control by a "contractual group", permitting considerably more efficient and less bureaucratic cooperation between the MAN Group and the rest of the Volkswagen Group. Noncontrolling interest shareholders of MAN SE have the right to tender MAN ordinary and preferred shares in Volkswagen Truck & Bus GmbH during and two months after the conclusion of the award proceedings instituted in July 2013 to review the appropriateness of the cash settlement set out in the agreement in accordance with section 305 of the Aktiengesetz (AktG – German Stock Corporation Act) and the cash compensation in accordance with section 304 of the

AktG. The Munich Regional Court ruled in the first instance at the end of July 2015 that the settlement payable to the shareholders should be increased from €80.89 to €90.29 per share. Both Volkswagen and a number of the noncontrolling interest shareholders have appealed to the Higher Regional Court in Munich. At the end of December 2016, Volkswagen Truck & Bus GmbH held 75.73% of the ordinary shares and 46.43% of the preferred shares of MAN SE.

On March 14, 2014, Volkswagen AG made a voluntary tender offer to Scania's shareholders for all shares not previously held by Volkswagen either directly or indirectly. Following completion of the offer, Volkswagen increased its interest in Scania's share capital to 99.57% at the end of 2014. A squeeze-out was initiated for the Scania shares not tendered in the course of the offer and, on November 11, 2014, the Swedish court of arbitration ruled in the squeeze-out proceedings that all Scania shares outstanding would be transferred to Volkswagen AG. Volkswagen AG has been the indirect and direct legal owner of all Scania shares since January 14, 2015, when the decision became final and unappealable. In its ruling of June 30, 2016, the court of arbitration confirmed that the bid price paid by Volkswagen was an appropriate settlement.

Through its 50% interest in the joint venture Global Mobility Holding B.V. (GMH), Amsterdam, the Netherlands, the Volkswagen Group held a 50% indirect stake in the joint venture's subsidiary, LeasePlan Corporation N.V., Amsterdam, the Netherlands (LeasePlan). LeasePlan is a Dutch financial services group whose core business is leasing and fleet management. The final approvals for the sale of LeasePlan to an international consortium of investors were issued by the competent authorities in January 2016. Legal transfer of the LeasePlan shares to the consortium was completed on March 21, 2016.

# LEGAL FACTORS INFLUENCING BUSINESS

Like other international companies, Volkswagen companies are affected by numerous laws in Germany and abroad. In particular, there are legal requirements relating to development, production and distribution, as well as to tax, company, commercial, financial and capital market regulations, and those relating to labor, banking, state aid, energy, environmental and insurance law.

VOLKSWAGEN AG SHAREHOLDINGS www.volkswagenag.com/ir Corporate Governance Report Group Management Report

# **Corporate Governance Report**

Corporate governance is defined as responsible, transparent corporate management and supervision that aims to add long-term value. For us, good corporate governance not only forms the basis for lasting success; it is also an important prerequisite for strengthening the trust of our stakeholders in our work.

# THE GERMAN CORPORATE GOVERNANCE CODE – A BLUEPRINT FOR SUCCESSFUL CORPORATE GOVERNANCE

Corporate governance provides the regulatory framework for corporate management and supervision. This includes a company's organization and values, and the principles and guidelines for its business policy. The German Corporate Governance Code contains recommendations and suggestions for sound, responsible corporate management and supervision. It was prepared by a dedicated government commission on the basis of the material provisions and nationally and internationally accepted standards of corporate governance. The government commission regularly reviews the Code in light of current developments and updates it as necessary. The Board of Management and the Supervisory Board of Volkswagen AG base their work on the recommendations and suggestions of the German Corporate Governance Code. We consider good corporate governance to be a key prerequisite for achieving a lasting increase in the Company's value. It helps strengthen the trust of our shareholders, customers, employees, business partners and investors in our work and meet the steadily increasing demand for information from national and international stakeholders.

# DECLARATIONS OF CONFORMITY (VALID AS OF THE DATE OF THE RELEVANT DECLARATION)

On March 14, 2016, the Board of Management and the Supervisory Board of Volkswagen AG issued a supplement to the declaration of conformity with the Code as required by section 161 of the Aktiengesetz (AktG – German Stock Corporation Act) of November 20, 2015 with the wording quoted below.

"The Board of Management and the Supervisory Board declare that:

1) In their Declaration of Conformity dated November 20, 2015, the Board of Management and the Supervisory Board of Volkswagen AG declared that they would fully comply with the recommendations of the Government Commission of the German Corporate Governance Code (DCGK) in the version dated May 5, 2015 that had been published by the German Ministry of Justice in the official section of the Federal

Gazette (Bundesanzeiger) on June 12, 2015 with the exception of the following numbers:

- > a) 4.2.3(4) (severance pay cap)
- > b) 5.1.2(2) sentence 3 (age limit for members of the Board of Management)
- > c) 5.3.2 sentence 3 (independence of the Chair of the Audit Committee)
- > d) 5.4.1(5 to 7) (disclosure regarding election recommendations)
- e) 5.4.6(2) sentence 2 (performance-related compensation of members of the Supervisory Board)

2) Due to the currently still unanswered questions relating to the consequences of the emissions issue and the resulting assessment questions, the Board of Management and the Supervisory Board have decided that the 2015 Consolidated Financial Statements and the interim report for the first quarter of 2016 will not be made publicly accessible within 90 days of the end of the fiscal year or within 45 days of the end of the quarter. As such, the supplement to the Declaration of Conformity from November 20, 2015 will include an explanation of the deviation from number 7.1.2 sentence 4 of the German Corporate Governance Code (deadlines for publication). The deviation is limited to the publications listed and the recommendation will be complied with once again as of the 2016 Half-Yearly Financial Report."

On April 22, 2016, the Board of Management and the Supervisory Board of Volkswagen AG issued a further supplement to the declaration of conformity with the Code as required by section 161 of the AktG of November 20, 2015 with the wording quoted below.

"The Board of Management and the Supervisory Board declare the following:

1) In their Declaration of Conformity dated November 20, 2015, the Board of Management and the Supervisory Board of Volkswagen AG declared that they would comply with the recommendations of the Government Commission of the German Corporate Governance Code (the Code) in the version dated May 5, 2015 published by the German Ministry of Justice in the official section of the Federal Gazette (Bundesanzeiger) on June 12, 2015 with the exception of the following articles:

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- > a) 4.2.3(4) (severance payment cap)
- b) 5.1.2(2) sentence 3 (age limit for members of the Board of Management)
- > c) 5.3.2 sentence 3 (independence of the Audit Committee Chair)
- > d) 5.4.1(5 to 7) (disclosure regarding election recommendations)
- e) 5.4.6(2) sentence 2 (performance-related remuneration of members of the Supervisory Board)
- 2) In their supplement to the declaration described under 1) above, decided on March 14, 2016, the Board of Management and the Supervisory Board of Volkswagen AG further declared that an exception would be made in respect of article 7.1.2 sentence 4 of the Code (date of publication of financial statements).
- 3) The Supervisory Board today adjusted the performance targets and comparison parameters used to determine the variable remuneration for the members of the Board of Management in fiscal year 2015 in agreement with the individual members of the Board of Management. Article 4.2.3(2) sentence 8 of the Code excludes retroactive changes to the performance targets and comparison parameters for the variable remuneration components. However, the Supervisory Board and members of the Board of Management were of the opinion that continued adherence to the previous performance targets and comparison parameters would have led to results that do not adequately reflect the current situation of the company. A retroactive adjustment of the performance targets and comparison parameters was therefore considered advisable.

As such, a second supplement to the Declaration of Conformity dated 20 November 2015 is being issued in which the company declares that an exception will be made in respect of article 4.2.3(2) sentence 8 of the Code (exclusion of retroactive changes to the comparison parameters)."

On November 18, 2016, the Board of Management and the Supervisory Board of Volkswagen AG issued the annual declaration of conformity with the German Corporate Governance Code as required by section 161 of the AktG with the following wording:

"The Board of Management and the Supervisory Board declare the following:

The recommendations of the Government Commission of the German Corporate Governance Code in the version dated May 5, 2015 ("the Code"), that was published by the German Ministry of Justice in the official section of the Federal Gazette (Bundesanzeiger) on June 12, 2015, was complied with in the period from the last Declaration of Conformity from November 20, 2015 and will continue to be complied with, with the exception of the recommendations and their stated reasons and periods listed below.

 a) 4.2.3(2) sentence 8 (exclusion of retroactive changes to comparison parameters)

On April 22, 2016, the Supervisory Board adjusted the performance targets and comparison parameters used to determine the variable remuneration for the members of the Board of Management in fiscal year 2015 in agreement with the individual members of the Board of Management. Article 4.2.3(2) sentence 8 of the Code excludes retroactive changes to the performance targets and comparison parameters for the variable remuneration components. However, the Supervisory Board and the members of the Board of Management were of the opinion that continued adherence to the previous performance targets and comparison parameters would have led to results that do not adequately reflect the situation of the company. A retroactive adjustment of the performance targets and comparison parameters was therefore considered advisable. As such, a supplement to the Declaration of Conformity dated November 20, 2015 was issued on April 22, 2016 in which the company declares that an exception will be made in respect of article 4.2.3(2) sentence 8 of the Code (exclusion of retroactive changes to the comparison parameters). The deviation is limited to the changes listed and since then the recommendation was and continues to be complied with once again.

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> b) 4.2.3(4) (severance pay cap)

A severance pay cap will be included in new contracts concluded with members of the Board of Management, but not in contracts concluded with Board of Management members entering their third term of office or beyond, provided a cap did not form part of the initial contract. Grandfather rights have been applied accordingly.

 c) 5.1.2(2) sentence 3 (age limit for members of the Board of Management)

Previously, the members of the Supervisory Board had not considered an age limit for members of the Board of Management to be appropriate because the ability to manage a company successfully does not necessarily cease when a specific age is reached and a fixed age limit could be discriminating. The Supervisory Board has come to the conclusion that this concern can be allayed by drafting an appropriate definition for an age limit and has therefore determined a corresponding age limit today for members of the Board of Management. This recommendation shall therefore be approved again from today onwards.

 d) 5.3.2 sentence 3 (independence of the chair of the Audit Committee)

It is unclear from the wording of this recommendation whether the Chairman of the Audit Committee is "independent" within the meaning of number 5.3.2 sentence 3 of the Code. Such independence could be considered lacking in view of his membership of the Supervisory Board of Porsche Automobil Holding SE, kinship with other members of the Supervisory Board of the company and of Porsche Automobil Holding SE, his indirect minority interest in Porsche Automobil Holding SE, and business

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relations with other members of the Porsche and Piëch families, who also have an indirect interest in Porsche Automobil Holding SE. However, in the opinion of the Supervisory Board and the Board of Management, these relationships do not constitute a conflict of interest, nor do they interfere with his duties as the Chairman of the Audit Committee. This exception is therefore being declared purely as a precautionary measure.

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e) 5.4.1(5 to 7) (disclosure regarding election recommendations)

With regard to recommendation number 5.4.1(5 to 7) of the Code stating that certain circumstances must be disclosed by the Supervisory Board when making election recommendations to the Annual General Meeting, the stipulations of the Code are vague and the definitions unclear. Purely as a precautionary measure, the Board of Management and the Supervisory Board therefore declare a deviation from the Code in this respect. Notwithstanding this, the Supervisory Board will make every effort to satisfy the requirements of the recommendation.

 f) 5.4.6(2) sentence 2 (performance-related remuneration of members of the Supervisory Board)

The remuneration of members of the Supervisory Board is regulated by the shareholders in article 17(1) of our Articles of Association. This regulation includes the linking of remuneration to dividend distribution. We therefore assume that we have complied with the Code and that the variable compensation component is oriented toward the sustainable growth of the enterprise as defined in number 5.4.6(2) sentence 2 of the Code. However, as it cannot be ruled out that other views will be taken in this respect, a deviation from this recommendation in the Code is being declared as a precautionary measure.

> g) 7.1.2 sentence 4 (deadlines for publication)

Due to the unresolved questions relating to the consequences of the emissions issue and the resulting assessment questions, the Board of Management and the Supervisory Board have decided that the 2015 Consolidated Financial Statements and the interim report for the first quarter of 2016 will not be publicly accessible within 90 days of the end of the fiscal year or within 45 days of the end of the quarter. As such, the supplement to the Declaration of Conformity issued on November 20, 2015 included an explanation on March 14, 2016 of the deviation from item 7.1.2 sentence 4 of the German Corporate Governance Code (deadlines for publication). The deviation was limited to the publications listed and the recommendation was and continues to be complied with once again since the 2016 Half-Yearly Financial Report."

The current declaration of conformity is also published on our website, www.volkswagenag.com/ir.

With the exception of article 5.1.2(2) sentence 1 (appointment period for first-time appointments to the Board of Management), the suggestions of the current version of the Code have been complied with. The Supervisory Board decides the appointment period for each first-time appointment to the Board of Management on an individual basis, taking the best interests of the Company into account. The suggestion made in article 2.3.2 (availability of the proxy during the Annual General Meeting) was implemented at the 2016 Annual General Meeting in such a manner that the shareholders were able to reach, by electronic means and until 1:00 pm on the day of the Annual General Meeting, the proxies named by the Company to exercise their voting rights. The suggestion made in article 2.3.3 (broadcasting of the Annual General Meeting) was implemented at the 2016 Annual General Meeting in such a manner that the introductory remarks of the Chairman of the Supervisory Board and the speech of the Chairman of the Board of Management were broadcast.

Our listed subsidiaries AUDI AG, MAN SE and Renk AG have also issued declarations of conformity with the German Corporate Governance Code.

The declarations of conformity of our listed subsidiaries can be accessed at the websites shown on this page.

# COOPERATION BETWEEN THE BOARD OF MANAGEMENT AND THE SUPERVISORY BOARD

The Supervisory Board advises and monitors the Board of Management with regard to the management of the Company and is directly involved in decisions of fundamental importance to the Group. The Board of Management and the Supervisory Board of Volkswagen AG consult closely on the strategic orientation of the Volkswagen Group. The two bodies jointly assess, at regular intervals, the progress made in implementing the strategy. The Board of Management reports to the Supervisory Board regularly, promptly and comprehensively in both written and oral form on all issues of relevance for the Company with regard to strategy, planning, the development of the business, the risk situation, risk management and compliance.

More information on the cooperation between the Board of Management and the Supervisory Board of Volkswagen AG

- DECLARATION OF CONFORMITY OF VOLKSWAGEN AG www.volkswagenag.com/ir
- DECLARATION OF CONFORMITY OF AUDI AG www.audi.com/cgk-declaration
- DECLARATION OF CONFORMITY OF MAN SE
  www.man.eu/corporate
- DECLARATION OF CONFORMITY OF RENK AG http://www.renk.biz/corporated-governance.html

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and on the work and structure of the committees of the Supervisory Board can be found in the Report of the Supervisory Board on pages 12 to 17 of this annual report.

Information on the members of the Board of Management and Supervisory Board as well as on the Supervisory Board committees can be found on pages 84 to 87.

# OBJECTIVES FOR THE COMPOSITION OF THE SUPERVISORY BOARD, BOARD OF MANAGEMENT AND SENIOR EXECUTIVE POSITIONS

In view of the purpose of the Company, its size and the extent of its international activities, the Supervisory Board of Volkswagen AG strives to take the following criteria into account in its composition:

- At least three members of the Supervisory Board should be persons who embody in particular the characteristic of internationality.
- > At least four shareholder representative members of the Supervisory Board should be persons who do not represent potential conflicts of interest, particularly conflicts of interest that could arise through a position as a consultant or member of the governing bodies of customers, suppliers, lenders, or other third parties.
- In addition, at least four of the shareholder representatives must be persons who are independent as defined in article 5.4.2 of the German Corporate Governance Code.
- > Furthermore, proposals for elections should not normally include persons who will have reached the age of 75 by the time the election takes place or who will have been members of the Supervisory Board for more than 15 years by the time the election takes place.

The above criteria have been met. The statutory quota of at least 30% women and 30% men will apply to new appointments to the Supervisory Board of Volkswagen AG from January 1, 2016 in accordance with the Gesetz für die gleichberechtigte Teilhabe von Frauen und Männern an Führungspositionen in der Privatwirtschaft und im öffentlichen Dienst (FührposGleichberG – Act on the Equal Participation of Women and Men in Leadership Positions in the Private and Public Sectors). Shareholder and employee representatives have resolved that each side shall meet this quota separately. The election of Ms Hessa Sultan Al-Jaber to the Supervisory Board at the 2016 Annual General Meeting meant that the quota of at least 30% women and 30% men was achieved separately for the shareholder representatives; the quota was still complied with as of December 31, 2016. As far as the employee representatives are concerned, the minimum quota does not have to be met until the next scheduled election of employee representatives to the Supervisory Board in 2017. As of yearend 2016, 10% of the employee representatives on the Supervisory Board of Volkswagen AG were women.

In 2015, the Supervisory Board of Volkswagen AG set itself the long-term goal of increasing the proportion of female members on the Board of Management to 30%. As of the date stipulated in the FührposGleichberG for determining a specific target, the Supervisory Board did not see any opportunity to increase the proportion of female members on the Board of Management before the end of 2016 and consequently resolved a target quota of zero for December 31, 2016. Since the appointment of Dr. Christine Hohmann-Dennhardt, who was responsible for Integrity and Legal Affairs on the Board of Management from January 1, 2016 to January 31, 2017 and Ms. Hiltrud Dorothea Werner, who has been responsible for the position since February 1, 2017, the proportion of female members on the Group Board of Management has been 11.1%; the target quota as of December 31, 2016 has thus been exceeded.

In accordance with the aforementioned act, the Supervisory Board was required to set a target quota for the proportion of female members on the Board of Management for the period after December 31, 2016. This target quota was set at 11.1% and has to be achieved by December 31, 2021.

In the reporting period, Volkswagen AG reached the target quotas it had set for the proportion of women in management in accordance with FührposGleichberG: by the end of the year, the proportion of women was 9.8% (target: 9.8%) in the first management level and 13.5% (target: 13.3%) in the second management level. For the new period up to the end of 2021, Volkswagen AG is aiming to have 13.0% women in the first management level and 16.9% women in the second management level.

# REMUNERATION REPORT

Extensive explanations of the remuneration system and the individual remuneration of the members of the Board of Management and the Supervisory Board can be found in the Remuneration Report on pages 67 to 83 of the management report, in the notes to the consolidated financial statements on page 319, and on page 57 of the notes to the annual financial statements of Volkswagen AG.

# CORPORATE GOVERNANCE DECLARATION

The corporate governance declaration forms part of the combined management report and is permanently available at www.volkswagenag.com/ir.

# COMPLIANCE

Compliance with international rules and the fair treatment of our business partners and competitors are among our Company's guiding principles. Volkswagen's commitment has gone beyond statutory and internal requirements; voluntary commitments and ethical principles also form an integral part of our corporate culture. Compliant behavior is a cornerCorporate Governance Report Group Management Report

stone of economic success and must be self-evident for all Group employees. One of our Company's main tasks at the present time is to enhance awareness of this.

# Commitment to compliance at the highest level

This view is expressly shared by the Company's management. At a management event in Wolfsburg in 2016, Matthias Müller, Chairman of the Board of Management of Volkswagen AG, said: "We want to make integrity the basis for all of our actions, anchored deeply throughout the entire Group. To this end, we will redouble our efforts as regards compliance with rules and regulations across the Group." He continued: "Compliance is not the task of a single person or department: we as managers are all called upon to play a part."

In an article for the Volkswagen intranet, the member of the Board of Management responsible for Integrity and Legal Affairs emphasized: "We at Volkswagen want our business to be respectable – in both senses of the word. We can achieve that only by complying with laws and regulations, obeying our internal rules and honoring the voluntary commitments we have entered into. One thing is certain: we will enjoy long-term success only if our actions are marked by honesty and integrity. Let us all do everything in our power to ensure that we can be proud not only of what we achieve, but also of how we achieve it."

# Preventive compliance management system

Since 2016, responsibility for compliance has been assigned to the new Integrity and Legal Affairs position on the Board of Management, and it is also a key component of the Governance, Risk & Compliance (GRC) organization (see also Report on Risks and Opportunities starting on page 180). Volkswagen adopts, above all, a preventive approach to compliance that is designed to stop potential breaches before they occur by raising awareness and educating employees. This particularly includes the Code of Conduct and guidelines, communicating compliance, tutorials, training and advice measures, the business partner check as well as the ombudsman system (individual details pertaining to this listed below).

In addition, Volkswagen adopts a repressive approach to compliance. Group Internal Audit and Group Security regularly perform the necessary investigative activities, systematically monitor compliance and perform random checks regardless of any suspicion of infringements, and investigate specific suspected breaches. Responses are implemented by the Human Resources and Group Legal departments. These processes are closely interrelated, in line with the concept of a comprehensive compliance management system. Nevertheless, we are aware that even the best compliance management system can never entirely prevent the criminal actions of individuals.

The Group Chief Compliance Officer is supported by 14 chief compliance officers and compliance contact persons (staff who are responsible at the brands, Volkswagen Finan-

cial Services and Porsche Holding GmbH, Salzburg). They are supported by compliance officers in the Group companies. Networking activities of this organization during the reporting period included the major GRC Global Conference in Berlin, in which some 300 employees from 30 countries and representing 12 Group brands took part. In a variety of workshops and presentations, the participants had an opportunity to share their ideas on current and future aspects of compliance and risk management.

In addition, various bodies support the work of the compliance organization at Group and brand company levels. These include the Compliance Council at senior management level and the Compliance Core Team, which pools compliance expertise from different departments.

# Focal points in 2016

Each year, detailed compliance risk assessments are carried out across the Group as part of the standard GRC process. The results are factored into the risk analyses performed by the Volkswagen Group, the brands and the companies, as well as into compliance program planning.

In response to the diesel issue, we worked on measures to ensure enhanced product compliance, both in the development and production process and as regards quality assurance. Furthermore, the way development processes are designed makes it even easier to identify and prevent even the mere attempt to circumvent binding rules. In this context, we have further strengthened, among other things, the conformity assessments for our products.

What is more, in the reporting period we expanded the range of services aimed at providing employees with advice and support, extending our advisory services and our range of online tutorials. We also published a new information guide for our staff on the prevention of money laundering.

The structure and processes of the Volkswagen Group's whistleblower system were reorganized. The Board of Management has adopted a Group-wide guideline for the whistleblower system that sets out, in particular, clear rights for protecting whistleblowers and those under investigation. As of 2017, the Integrity and Legal Affairs position on the Board of Management will be responsible for the process of recording and analyzing the information reported by whistleblowers. In particular, Group Internal Audit and Group Security will be tasked with investigating whistleblower reports.

# Code of Conduct and guidelines

We have communicated the Code of Conduct, including the obligation to comply with laws, to employees at the brand companies; it is a key component of our compliance training. It is also integrated into our operational processes. For example, all new employment contracts entered into between Volkswagen AG on the one hand and both management staff and employees covered by collective agreements on the other

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hand include a reference to the Code of Conduct and the obligation to comply with it. In addition, compliance with the Code of Conduct remained a component of our employees' annual reviews in the reporting period and was thus taken into account when calculating their variable, performance-related remuneration.

In addition to the Code of Conduct, the Volkswagen Group's compliance framework incorporates the anti-corruption guidelines, including checklists and the express prohibition of facilitation payments, as well as guidelines on competition, antitrust law and anti-money laundering. Organizational instructions on dealing with gifts and invitations as well as on making donations also apply across the Group.

Employees have access to the compliance rules and regulations via the special compliance pages on the Company intranet.

# Communicating compliance

The GRC organization provided information on various compliance issues to the Group's brands and companies over the year, using a wide range of traditional communication channels. These include reports in various employee magazines produced by the brands, companies and locations. Digital media such as intranet portals, smartphone and tablet apps, blogs and newsletters are also frequently used to provide compliance information.

# Learning programs, training and advice

Providing information to employees at all levels continues to be a core component of our compliance activities. In 2016, approximately 187,000 employees across the Group participated in a variety of training courses on compliance-related topics such as the Code of Conduct, anti-corruption, human rights, anti-money laundering, and competition and antitrust law. In addition to traditional lectures and online tutorials, case studies, role-playing games and other interactive formats form an integral part of the training provided to employees and managers. In addition, a management talk on risk management and compliance is offered to newly appointed senior managers of Volkswagen AG. All new Volkswagen AG employees are required to complete an online tutorial and an online test on the Group's Code of Conduct. The subject of human rights forms an integral part of this tutorial. Among other things, a compliance app for smartphones and tablets is available to Volkswagen AG's employees as a self-learning tool. Employees of all brand companies and a large number of Group companies are able to obtain personal advice about compliance issues, usually by contacting the compliance organization via a dedicated e-mail address. An IT-based information and advisory tool is available at Volkswagen AG's German locations.

# Business partner check

We also expect our business partners to act with integrity and ensure regulatory compliance. For this reason, Volkswagen verifies the integrity of its business partners (business partner check) in a risk-oriented approach. This check allows us to find out about potential business partners before entering into a relationship with them, thus reducing the risk of starting a partnership that could be damaging to the Company or its business.

### Ombudsman system

The Group-wide ombudsman system can be used to report any breaches or suspicions regarding corruption, illegal economic activity, or other irregularities, such as violations of human rights and unethical conduct. The reports, which are sent to two external lawyers appointed by the Group, may be submitted in any of the major languages used by the Group. Since 2014, employees providing information have had the option of communicating with the ombudsmen via an additional online channel; breaches can be reported using a technically highly secure electronic mailbox. It goes without saying that the people providing the information need not fear any sanctions from the Company for their actions. After carrying out a corresponding plausibility check, the ombudsmen passed on 125 reports from people - whose details were kept confidential if requested - to Volkswagen AG's Group Internal Audit department in 2016. Furthermore, 110 reports were submitted directly to the Head of Group Internal Audit. The local auditing departments of the brands and Group companies received a total of 481 reports. All information was or is being followed up. By the time the project has been categorically completed, all reports will have been processed and a final evaluation prepared.

OMBUDSMAN SYSTEM www.ombudsmen-of-volkswagen.com

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# Effectiveness review

We review the effectiveness of the compliance measures taken at the Volkswagen Group's brands and companies annually using an integrated survey, which forms part of the standard GRC process. We check the effectiveness of selected countermeasures as well as the management controls used to respond to compliance risks. In addition, independent reviews by the Group Internal Audit function at the corporate units and the regular exchange of information with external bodies help ensure continuous improvement of the compliance management system.

In accordance with the normative standards issued by Deutsches Institut für Interne Revision e.V. (German Institute for Internal Auditing – DIIR), internal audit functions should be audited externally every five years. An external quality assessment of the Volkswagen Group's internal audit system was carried out by an audit firm in the period between the third quarter of 2014 and the first quarter of 2015. In addition to central management and supervisory processes, this took into consideration the quality of the brands' and regions' internal audit functions (sample size: Volkswagen AG, AUDI AG, SEAT S.A., Volkswagen de Mexico, Volkswagen Group China). The auditors confirmed that all of the internal audit units examined are fully compliant with the underlying DIIR Standard No. 3 "Quality management in the internal audit activity" and, in many areas, use leading internal audit methodologies and practices. During the reporting period, the internal quality management process was further developed and a continuous improvement process was also performed under the direction of Group Internal Audit.

# RISK MANAGEMENT, AUDIT

Carefully managing potential risks to the Company is a key component of our daily work. Volkswagen Group's risk management system is oriented toward identifying, assessing, communicating and responding to risks at an early stage. This system is reviewed on an ongoing basis and adjusted if and when conditions change. A detailed description of the risk management system and our accounting-related internal control system can be found in the Risk Report on pages 180 to 183 of this annual report.

The Supervisory Board has established an Audit Committee, which above all monitors the financial accounting processes and the effectiveness of the internal control system, the risk management system and the internal audit system. It also supervises the audit of the financial statements, particularly the independence of the auditors and the additional services provided by them. The Committee offers a recommendation for the Supervisory Board proposal on the election of the auditor. In addition, it conducts a pre-audit of the financial reporting and considers questions related to accounting and compliance. Furthermore, the Audit Committee obtains a declaration of independence from the auditor, prepares the audit

engagement resolution, thereby giving consideration to the annual audit planning, the areas of emphasis for the audit, the agreed fee and the auditor's information obligations.

# COMMUNICATION AND TRANSPARENCY

The Volkswagen Group publishes a financial calendar listing all the relevant dates for its shareholders in its annual report and interim reports as well as on its website at www.volkswagenag.com/ir. Among other things, invitations to and the agendas for the shareholders' meetings and any countermotions received are also available on this website. At the shareholders' meetings, shareholders may exercise their voting rights themselves, have this right exercised on their behalf by a third-party proxy whom they have appointed, or use a proxy designated by the Company who votes on their behalf in accordance with their voting instructions. We also give our shareholders the opportunity to watch the introductory remarks of the Chairman of the Supervisory Board and the speech of the Chairman of the Board of Management on the Internet. In addition, news and information on the Volkswagen Group are available on our website. The press releases and other information are published in both English and German.

Immediately after their publication in accordance with legal requirements, the Company's ad hoc releases are also published on the same website under the heading "IR News, Financial Publications & Presentations", menu item "Ad-hoc releases".

We publish directors' dealings pursuant to section 15a of the Wertpapierhandelsgesetz (WpHG – German Securities Trading Act) and Article 19 of the Market Abuse Directive under the heading "Corporate Governance", menu item "Directors' Dealings".

On the same web page – under the heading "IR News, Financial Publications & Presentations", menu item "Financial Publications" – you can also access details of the notifications filed in the reporting period in compliance with sections 21 ff. of the WpHG as well as notifications relating to other legal issues.

The supervisory body appointments held by Board of Management members and Supervisory Board members can be found on pages 85 to 87 of this annual report. The shareholder structure is presented on page 113.

MANDATORY PUBLICATIONS OF VOLKSWAGEN AG www.volkswagenag.com/ir Group Management Report Remuneration Report 67

# **Remuneration Report**

The Remuneration Report details the individualized remuneration of the Board of Management and the Supervisory Board of Volkswagen AG, broken down into components, as well as individualized pension provision disclosures for the members of the Board of Management. In addition, we explain in this chapter the main elements of the variable remuneration system for the Board of Management.

# PRINCIPLES OF AND CHANGES TO BOARD OF MANAGEMENT REMUNERATION

The full Supervisory Board resolves on the remuneration system and the total remuneration for each individual member of Volkswagen AG's Board of Management on the basis of the Executive Committee's recommendations. The remuneration of current members of the Board of Management complies with the requirements of the Aktiengesetz (AktG – German Stock Corporation Act) and the recommendations of the German Corporate Governance Code. In particular, the remuneration structure is focused on ensuring sustainable business growth in accordance with the Gesetz zur Angemessenheit der Vorstandsvergütung (VorstAG – German Act on the Appropriateness of Executive Board Remuneration) and section 87(1) of the AktG.

The remuneration system of the members of the Board of Management was approved by the 50th Annual General Meeting on April 22, 2010 by 99.44% of the votes cast. At the same time, the Volkswagen Group's positive business performance made it necessary in 2013 to modify and realign Board of Management remuneration and the comparative parameters on which it is based. The remuneration of the Board of Management was modified with the assistance of a remuneration consultant, whose independence has been assured by the Supervisory Board and by the Company.

The level of the Board of Management remuneration should be appropriate and attractive in the context of the Company's national and international peer group. Criteria include the tasks of the individual Board of Management member, their personal performance, the economic situation, the performance of and outlook for the Company, as well as how customary the remuneration is when measured against its peer group and the remuneration structure that applies to other areas of Volkswagen. In this context, comparative studies on remuneration are conducted on a regular basis.

# COMPONENTS OF BOARD OF MANAGEMENT REMUNERATION

The remuneration of the Board of Management comprises non-performance-related and performance-related components. The non-performance-related components of the package ensure firstly a basic level of remuneration enabling the individual members of the Board of Management to perform their duties in the interests of the Company and to fulfill their obligation to act with proper business prudence without needing to focus on merely short-term performance targets. On the other hand, performance-related components, dependent among other criteria on the financial performance of the Company, serve to ensure the long-term impact of behavioral incentives.

Upper limits are in place for both the overall remuneration and the performance-related remuneration components.

Annual minimum remuneration of  $\in 3.5$  million (sum of basic and variable remuneration) was contractually agreed with both Ms. Hohmann-Dennhardt and Mr. Blessing. In its meeting on February 24, 2017, the Supervisory Board accepted Mr. Blessing's offer to irrevocably relinquish the top-up amount of  $\in 512.5$  thousand for fiscal year 2016 to reach the minimum remuneration.

# Non-performance-related remuneration

The non-performance-related remuneration comprises fixed remuneration and fringe benefits. In addition to the basic level of remuneration, the fixed remuneration also includes differing levels of remuneration for appointments assumed at Group companies. The fringe benefits result from the granting of noncash benefits and include in particular the use of operating assets such as company cars and the payment of insurance premiums. Taxes due on these noncash benefits are mainly borne by Volkswagen AG.

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To compensate for lost entitlements resulting from the change in employer, Ms. Hohmann-Dennhardt received the partial payment of  $\in$ 2.1 million due in fiscal year 2016, which corresponds to one-third of the agreed total of  $\in$ 6.3 million. The other partial payments will be made in 2017 and 2018.

The basic level of remuneration is reviewed regularly and adjusted if necessary.

# Performance-related remuneration

The performance-related/variable remuneration comprises a business performance bonus, which relates to business performance in the reporting period and in the preceding year, and, since 2010, a Long-Term Incentive (LTI) plan, which is based on the reporting period and the previous three fiscal years. Both components of performance-related/variable remuneration are therefore calculated on a multiyear basis and reflect both positive and negative developments. Members of the Board of Management can also be awarded bonuses that reflect their individual performance.

The amounts shown in the Board of Management remuneration (benefits received) tables in accordance with the German Corporate Governance Code correspond to the amounts paid out for the fiscal year in question.

The amounts shown in the Board of Management remuneration (benefits granted) tables in accordance with the German Corporate Governance Code are based on a mean probability scenario at the beginning of fiscal year 2016.

The Supervisory Board may cap the performance-related/variable remuneration components in the event of extraordinary developments.

# Bonus

The bonus rewards the positive business development of the Volkswagen Group.

The business performance bonus is calculated on the basis of the average operating result, including the proportionate operating result in China, over a period of two years. A calculation floor below which no bonus will be paid is in place. This floor was set at 6.0 billion. In addition, a cap for extraordinary developments is explicitly provided for by limiting the maximum theoretical bonus which, subject to the individual performance-related bonus, is 6.75 million for the Chairman of the Board of Management and 2.5 million for the other members of the Board of Management. The system and the cap are regularly reviewed by the Supervisory Board to establish whether any adjustments are necessary.

Accordingly, the method resolved by the Supervisory Board in 2013 for calculating the business performance bonus for members of the Board of Management was changed for fiscal year 2015 and led to the operating result, including the proportionate operating result in China, for fiscal year 2015 that was used to calculate the business performance bonus for fiscal year 2015 being reduced to €0.

In addition, the Supervisory Board may increase the theoretical business performance bonus, which is calculated on the basis of the average operating result, by up to 50% by applying individual adjustment factors that are not linked to the theoretical cap so as to reward members of the Board of Management for extraordinary individual performance (individual performance bonus). This may take into account extraordinary performance in the area of integration, or the successful implementation of special projects, for example.

# Long-Term Incentive (LTI)

The amount of the LTI depends on the achievement of the targets laid down in Strategy 2018 on which the remuneration system applicable for fiscal year 2016 is based. The target areas are:

- Leader in customer satisfaction, measured using the Customer Satisfaction Index,
- > Leading employer, measured using the Employee Index,
- > Unit sales growth, measured using the Growth Index, and
- > Increase in the return on sales, measured using the Return Index.

The Customer Satisfaction Index is calculated using indicators that quantify the overall satisfaction of our customers with the delivering dealers, new vehicles and the service operations based on the previous workshop visit.

The Employee Index is determined using the "employment" and "productivity" indicators as well as results of employee surveys.

The Growth Index is calculated using the "deliveries to customers" and "market share" indicators.

The Return Index is derived from the return on sales and the dividend per ordinary share.

The indices on customer satisfaction, employees and unit sales are aggregated and the result is multiplied by the Return Index. This method ensures that the LTI is only paid out if the Group is also financially successful. If the 1.5% threshold for the return on sales is not exceeded, the Return Index is zero. This would mean that the overall index for the fiscal year concerned is also zero.

The maximum LTI amount is capped at  $\le$ 4.5 million for the Chairman of the Board of Management and  $\le$ 2.0 million for the other members of the Board of Management and is based on the four-year average of the overall indices, i.e. the reporting period and the three preceding years.

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# Other agreements

Members of the Board of Management with contracts entered into on or after January 1, 2010 are entitled to payment of their normal remuneration for six to twelve months in the event of illness. Contracts entered into before that date grant remuneration for six months. In the event of disability, they are entitled to the retirement pension.

Surviving dependents receive a widow's pension of 66 2/3% and orphans' benefits of 20% of the former member of the Board of Management's pension. Contracts with members of the Board of Management whose first term of office begins after April 1, 2015, provide for an entitlement – in line with the principles of the works agreement that also applies to employees of Volkswagen AG covered by collective agreements – to a widow's pension of 60%, an orphan's benefit of 10% for half-orphans and an orphan's benefit of 20% for full orphans, based in each case on the former member of the Board of Management's pension.

### BENEFITS BASED ON PHANTOM SHARES

At its meeting on April 22, 2016, Volkswagen AG's Supervisory Board accepted the offer made by the members of the Board of Management to withhold 30% of the variable remuneration described above for fiscal year 2015 for the Board of Management members active on the date of the resolution and to make its payment subject to future share price performance.

This will be effected by first converting the amount withheld based on the average share price for the 30 trading

days preceding April 22, 2016 (initial reference price) into phantom preferred shares of Volkswagen AG with a three-year holding period and, at the same time, defining a target reference price corresponding to 125% of the initial reference price. During the holding period, the phantom preferred shares will be entitled to a dividend equivalent in the amount of the dividends paid on real preferred shares.

Following the expiry of the holding period, the average share price for the 30 trading days preceding the last day of the holding period, i.e. April 22, 2019, will be determined (closing reference price). The difference between the target reference price and the initial reference price will be deducted from the closing reference price and the dividends distributed on one real Volkswagen preferred share during the holding period (dividend equivalent) will be added to the closing reference price. This will ensure that – excluding any dividend equivalents accrued - the amount withheld is only paid out in full if the initial reference price of the preferred share has increased by at least 25%. Otherwise, the amount will be reduced accordingly down to €0. The amount thus calculated will be disbursed to the members of the Board of Management. The amount disbursed must not be more than twice the amount originally withheld. Where members of the Board of Management retire from office before the expiry of the holding period, the disbursement amount will be calculated and paid out proportionately based on the date of termination of employment.

# REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT IN ACCORDANCE WITH THE GERMAN COMMERCIAL CODE

		2016			2015	
€	Non-performance- related renumeration	Performance- related renumeration	Total renumeration	Total renumeration	Of which amount withheld (fair value)	Amount withheld (notional)
Matthias Müller (since March 1, 2015) <sup>1</sup>	1,762,651	5,489,278	7,251,929	4,757,924	880,522	1,185,912
Karlheinz Blessing (since January 1, 2016)	1,403,440	1,931,500	3,334,940	_	_	_
Herbert Diess (since July 1, 2015) <sup>2</sup>	1,295,087	1,931,500	3,226,587	7,174,465	359,181	483,720
Francisco Javier Garcia Sanz	1,284,179	1,931,500	3,215,679	4,264,232	718,279	967,440
Jochem Heizmann	1,224,008	1,931,500	3,155,508	4,168,979	718,279	967,440
Christine Hohmann-Dennhardt (January 1, 2016 until January 31, 2017) <sup>2, 3</sup>	7,607,621	2,444,000	10,051,621	_		_
Andreas Renschler (since February 1, 2015) <sup>2</sup>	1,292,205	1,931,500	3,223,705	15,573,361	658,457	886,820
Rupert Stadler	1,118,817	1,931,500	3,050,317	4,092,306	718,279	967,440
Frank Witter (since October 7, 2015)	1,105,827	1,931,500	3,037,327	939,697	165,571	223,049
Members of the Board of Management who left in the previous year		_		22,273,497		_
Total	18,093,835	21,453,778	39,547,612	63,244,460	4,218,566	5,681,821

<sup>1</sup> The 2016 single-entity financial statements of Volkswagen AG show performance-related remuneration of €4,657,500 and total remuneration of €6,420,151.

<sup>2</sup> To compensate for lost entitlements resulting from the change in employer, Ms. Hohmann-Dennhardt received €6.3 million in 2016 and Mr. Diess and Mr. Renschler received €5.0 million and €11.5 million respectively in 2015.

<sup>3</sup> Includes top-up amount on minimum remuneration of €3.5 million; variable remuneration determined by termination agreement.

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The number of shares granted on April 22, 2016 to the members of the Board of Management who were in office in 2015 as part of the benefits based on phantom shares for that year remained unchanged in fiscal year 2016. The fair value as of December 31, 2016 was determined using a recognized valuation technique. The intrinsic value was calculated in accordance with IFRS 2 and corresponds to the amount that the members of the Board of Management would have received if they had stepped down on December 31, 2016. The

intrinsic value was calculated based on the average share price for the 30 trading days (Xetra closing prices) preceding December 31, 2016, taking the initial reference price and the dividend for fiscal year 2016 into account. "Comprehensive income 2016 arising from phantom shares" in accordance with IFRS records the amount withheld (nominal) based on the adoption of the Board of Management statement by the Supervisory Board on April 22, 2016, less the corresponding fair value as of December 31, 2016.

# INFORMATION ON THE PHANTOM SHARES HELD IN 2016

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€	Number of shares	Fair value December 31, 2016	Intrinsic value December 31, 2016	Comprehensive income 2016 arising from phantom shares
Matthias Müller (since March 1, 2015)	10,583	1,046,032	1,058,194	139,880
Herbert Diess (since July 1, 2015)	4,317	426,696	431,657	57,024
Francisco Javier Garcia Sanz	8,633	853,293	863,214	114,147
Jochem Heizmann	8,633	853,293	863,214	114,147
Andreas Renschler (since February 1, 2015)	7,914	782,226	791,321	104,594
Rupert Stadler	8,633	853,293	863,214	114,147
Frank Witter (since October 7, 2015)	1,990	196,693	198,980	26,356
Total	50,703	5,011,525	5,069,793	670,296

As benefits are not received until the three-year holding period has expired or – in the event that members retire prematurely from office – at that time, and no members of the Board of Management retired from office in 2016, the Board of Management (benefits received) tables in accordance with the German Corporate Governance Code do not contain any entries. Since the benefits based on phantom shares were first agreed upon after the end of fiscal year 2015,

consideration of the impact of these agreements will be incorporated into the Board of Management remuneration (benefits granted) tables in accordance with the German Corporate Governance Code in the column for fiscal year 2016. The revised amount listed there is the difference between the fair value of the phantom shares and the amount withheld on the date they were granted (April 22, 2016).

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# REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS RECEIVED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>

The figures shown here as benefits received under variable remuneration correspond to the amounts paid out for the fiscal year in question.

	MATTHIAS MÜLL	ER
	Chairman of the Board of M	anagement
	Joined: March 1, 20	15
€	2016	2015
Fixed renumeration	1,584,000	1,020,800
Fringe benefits	178,651	89,474
Total	1,762,651	1,110,274
One-year variable remuneration	1,499,278	629,440
Multiyear variable remuneration	3,990,000	2,137,688
Business performance bonus (two-year period)	1,335,000	387,688
LTI (four-year period)	2,655,000	1,750,000
Total	7,251,929	3,877,402
Pension expense	526,589	295,754
Total renumeration	7,778,518	4,173,156

	KARLHEINZ BLESSING	G	
	Human Resources and Organia	zation	
	Joined: January 1, 2016		
€	2016	2015	
Fixed renumeration	1,056,000	_	
Fringe benefits	347,440	_	
Total	1,403,440	_	
One-year variable remuneration	250,500	_	
Multiyear variable remuneration	1,681,000	_	
Business performance bonus (two-year period)	501,000	_	
LTI (four-year period)	1,180,000	_	
Total	3,334,940	_	
Pension expense	742,542	_	
Total renumeration	4,077,482	_	

 $<sup>{\</sup>bf 1} \ \ {\sf All \ figures \ shown \ are \ rounded, so \ minor \ discrepancies \ may \ arise \ from \ addition \ of \ these \ amounts.}$ 

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# REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS RECEIVED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>

The figures shown here as benefits received under variable remuneration correspond to the amounts paid out for the fiscal year in question.

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	HERBERT DIES	5
	Chairman of the Brand Board of I Volkswagen Passenge	
	Joined: July 1, 201	5
€	2016	2015
Fixed renumeration <sup>2</sup>	1,260,000	5,630,000
Fringe benefits	35,087	56,604
Total	1,295,087	5,686,604
One-year variable remuneration	250,500	246,400
Multiyear variable remuneration	1,681,000	882,280
Business performance bonus (two-year period)	501,000	132,280
LTI (four-year period)	1,180,000	750,000
Total	3,226,587	6,815,284
Pension expense	699,856	311,850
Total renumeration	3,926,443	7,127,134

	FRANCISCO JAVIER GAR	CIA SANZ
	Procurement	
€	2016	2015
Fixed renumeration	1,079,009	1,102,017
Fringe benefits	205,170	186,576
Total	1,284,179	1,288,593
One-year variable remuneration	250,500	492,800
Multiyear variable remuneration	1,681,000	1,764,560
Business performance bonus (two-year period)	501,000	264,560
LTI (four-year period)	1,180,000	1,500,000
Total	3,215,679	3,545,953
Pension expense	760,864	816,242
Total renumeration	3,976,543	4,362,195

All figures shown are rounded, so minor discrepancies may arise from addition of these amounts.
 The previous year includes compensation of lost entitlements resulting from the change in employer in the amount of €5.0 million.

# REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS RECEIVED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>

The figures shown here as benefits received under variable remuneration correspond to the amounts paid out for the fiscal year in question.

	JOCHEM HEIZMA	NN
	China	
€	2016	2015
Fixed renumeration	1,102,017	1,102,017
Fringe benefits	121,991	91,323
Total	1,224,008	1,193,340
One-year variable remuneration	250,500	492,800
Multiyear variable remuneration	1,681,000	1,764,560
Business performance bonus (two-year period)	501,000	264,560
LTI (four-year period)	1,180,000	1,500,000
Total	3,155,508	3,450,700
Pension expense		0
Total renumeration	3,155,508	3,450,700

	CHRISTINE HOHMANN-DENI	NHARDT		
	Integrity and Legal Affair	S		
	Joined: January 1, 2016, Left: January 31, 2017			
€	2016	2015		
Fixed renumeration <sup>2</sup>	7,346,000	_		
Fringe benefits	261,621	_		
Total	7,607,621	_		
One-year variable remuneration	0	_		
Multiyear variable remuneration	0	_		
Business performance bonus (two-year period)	0	_		
LTI (four-year period)	0	_		
Other <sup>3</sup>	2,444,000	_		
Total	10,051,621	_		
Pension expense	704,657	_		
Total renumeration	10,756,278	_		

- ${\bf 1} \ \ {\sf All figures shown are rounded, so \ minor \ discrepancies \ may \ arise \ from \ addition \ of \ these \ amounts.}$
- 2 Includes compensation of lost entitlements resulting from the change in employer in the amount of €6.3 million.
- 3 Top-up amount on minimum remuneration of €3.5 million; variable remuneration determined by termination agreement.

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# REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS RECEIVED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>

The figures shown here as benefits received under variable remuneration correspond to the amounts paid out for the fiscal year in question.

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	ANDREAS RENSCI	HLER
	Commercial Vehic	les
	Joined: February 1, 2	2015
€	2016	2015
Fixed renumeration <sup>2</sup>	1,056,000	12,446,000
Fringe benefits	236,205	399,658
Total	1,292,205	12,845,658
One-year variable remuneration	250,500	451,733
Multiyear variable remuneration	1,681,000	1,617,513
Business performance bonus (two-year period)	501,000	242,513
LTI (four-year period)	1,180,000	1,375,000
Total	3,223,705	14,914,904
Pension expense	4,660,006	0
Total renumeration	7,883,711	14,914,904

	RUPERT STADLE	R
	Chairman of the Board of Manage	ment of AUDI AG
€	2016	2015
Fixed renumeration	1,056,000	1,056,000
Fringe benefits	62,817	60,667
Total	1,118,817	1,116,667
One-year variable remuneration	250,500	492,800
Multiyear variable remuneration	1,681,000	1,764,560
Business performance bonus (two-year period)	501,000	264,560
LTI (four-year period)	1,180,000	1,500,000
Total	3,050,317	3,374,027
Pension expense	665,679	723,954
Total renumeration	3,715,996	4,097,981

All figures shown are rounded, so minor discrepancies may arise from addition of these amounts.
 The previous year includes compensation of lost entitlements resulting from the change in employer in the amount of €11.5 million.

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# REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS RECEIVED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>

The figures shown here as benefits received under variable remuneration correspond to the amounts paid out for the fiscal year in question.

	FRANK WITTER	
	Finance and Controlli	ng
	Joined: October 7, 20:	15
€	2016	2015
Fixed renumeration	1,056,000	243,467
Fringe benefits	49,827	10,212
Total	1,105,827	253,679
One-year variable remuneration	250,500	113,618
Multiyear variable remuneration	1,681,000	406,829
Business performance bonus (two-year period)	501,000	60,996
LTI (four-year period)	1,180,000	345,833
Total	3,037,327	774,126
Pension expense	587,216	130,680
Total renumeration	3,624,543	904,806

<sup>1</sup> All figures shown are rounded, so minor discrepancies may arise from addition of these amounts.

Remuneration Report **Group Management Report** 

# REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS GRANTED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>

The figures shown here as benefits granted under variable remuneration are based on a mean probability scenario.

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		MATTHIAS MÜLLER			
	Chairman of the Board of Management				
	Joined: March 1, 2015				
€	2015	2016	2016 (Minimum)	2016 (Maximum)	
Fixed renumeration	1,020,800 1,584,000 1,584,000			1,584,000	
Fringe benefits	89,474	178,651	178,651	178,651	
Total	1,110,274	1,762,651	1,762,651	1,762,651	
One-year variable remuneration	1,276,615	1,313,200	0	3,375,000	
Multiyear variable remuneration	5,337,133	6,352,610	0	12,435,912	
Business performance bonus (two-year period)	3,003,800	3,283,000	0	6,750,000	
LTI (four-year period)	2,333,333	3,375,000	0	4,500,000	
Benefits based on phantom shares (three-year period)		-305,390	0	1,185,912	
Total	7,724,022	9,428,461	1,762,651	17,573,563	
Pension expense	295,754	526,589	526,589	526,589	
Total renumeration	8,019,776 9,955,050 2,289,240 18			18,100,152	

		KARLHEINZ BLESSING			
	Human Resources and Organization				
	Joined: January 1, 2016				
€	2015	2016	2016 (Minimum)	2016 (Maximum)	
Fixed renumeration	_	1,056,000	1,056,000	1,056,000	
Fringe benefits		347,440	347,440	347,440	
Total		1,403,440	1,403,440	1,403,440	
One-year variable remuneration		492,800		1,250,000	
Multiyear variable remuneration		2,732,000		4,500,000	
Business performance bonus (two-year period)		1,232,000	0	2,500,000	
LTI (four-year period)		1,500,000	0	2,000,000	
Total <sup>2</sup>		4,628,240	3,847,440	7,153,440	
Pension expense		742,542	742,542	742,542	
Total renumeration		5,370,782	4,589,982	7,895,982	

All figures shown are rounded, so minor discrepancies may arise from addition of these amounts.
 Includes top-up amount on minimum remuneration of €3.5 million.

The figures shown here as benefits granted under variable remuneration are based on a mean probability scenario.

	HERBERT DIESS  Chairman of the Brand Board of Management of Volkswagen Passenger Cars				
	Joined: July 1, 2015				
€	2015	2016	2016 (Minimum)	2016 (Maximum)	
Fixed renumeration <sup>2</sup>	5,630,000	1,260,000	1,260,000	1,260,000	
Fringe benefits	56,604	35,087	35,087	35,087	
Total	5,686,604	1,295,087	1,295,087	1,295,087	
One-year variable remuneration	496,825	492,800	0	1,250,000	
Multiyear variable remuneration	2,169,000	2,607,461	0	4,983,720	
Business performance bonus (two-year period)	1,169,000	1,232,000	0	2,500,000	
LTI (four-year period)	1,000,000	1,500,000		2,000,000	
Benefits based on phantom shares (three-year period)		-124,539	0	483,720	
Total	8,352,429	4,395,348	1,295,087	7,528,807	
Pension expense	311,850	699,856	699,856	699,856	
Total renumeration	8,664,279	5,095,204	1,994,943	8,228,663	

	FR	FRANCISCO JAVIER GARCIA SANZ				
		Procui	rement			
ε	2015	2016	2016 (Minimum)	2016 (Maximum)		
Fixed renumeration	1,102,017	1,079,009	1,079,009	1,079,009		
Fringe benefits	186,576	205,170	205,170	205,170		
Total	1,288,593	1,284,179	1,284,179	1,284,179		
One-year variable remuneration	1,169,000	492,800	0	1,250,000		
Multiyear variable remuneration	4,338,000	2,482,839	0	5,467,440		
Business performance bonus (two-year period)	2,338,000	1,232,000	0	2,500,000		
LTI (four-year period)	2,000,000	1,500,000	0	2,000,000		
Benefits based on phantom shares (three-year period)		-249,161	0	967,440		
Total	6,795,593	4,259,818	1,284,179	8,001,619		
Pension expense	816,242	760,864	760,864	760,864		
Total renumeration	7,611,835	5,020,682	2,045,043	8,762,483		

<sup>1</sup> All figures shown are rounded, so minor discrepancies may arise from addition of these amounts.

<sup>2</sup> The previous year includes compensation of lost entitlements resulting from the change in employer in the amount of €5.0 million.

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# REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS GRANTED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>

The figures shown here as benefits granted under variable remuneration are based on a mean probability scenario.

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	JOCHEM HEIZMANN				
		Ch	ina		
	2015	2016	2016 (Minimum)	2016 (Maximum)	
Fixed renumeration	1,102,017	1,102,017	1,102,017	1,102,017	
Fringe benefits	91,323	121,991	121,991	121,991	
Total	1,193,340	1,224,008	1,224,008	1,224,008	
One-year variable remuneration	701,400	492,800	0	1,250,000	
Multiyear variable remuneration	4,338,000	2,482,839	0	5,467,440	
Business performance bonus (two-year period)	2,338,000	1,232,000	0	2,500,000	
LTI (four-year period)	2,000,000	1,500,000	0	2,000,000	
Benefits based on phantom shares (three-year period)		-249,161	0	967,440	
Total	6,232,740	4,199,647	1,224,008	7,941,448	
Pension expense	0	0	0	0	
Total renumeration	6,232,740	4,199,647	1,224,008	7,941,448	

	CHRISTINE HOHMANN-DENNHARDT				
	Integrity and Legal Affairs				
	Joined: January 1, 2016, Left: January 31, 2017				
€	2015	2016	2016 (Minimum)	2016 (Maximum)	
Fixed renumeration <sup>2</sup>	_	7,346,000	7,346,000	7,346,000	
Fringe benefits		261,621	261,621	261,621	
Total		7,607,621	7,607,621	7,607,621	
One-year variable remuneration		492,800	0	1,250,000	
Multiyear variable remuneration		2,732,000	0	4,500,000	
Business performance bonus (two-year period)		1,232,000	0	2,500,000	
LTI (four-year period)		1,500,000	0	2,000,000	
Total <sup>3</sup>		10,832,421	10,051,621	13,357,621	
Pension expense		704,657	704,657	704,657	
Total renumeration		11,537,078	10,756,278	14,062,278	

<sup>1</sup> All figures shown are rounded, so minor discrepancies may arise from addition of these amounts.

<sup>2</sup> Includes compensation of lost entitlements resulting from the change in employer in the amount of €6.3 million.

<sup>3</sup> Includes top-up amount to reach minimum remuneration of €3.5 million.

# REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS GRANTED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>

The figures shown here as benefits granted under variable remuneration are based on a mean probability scenario.

	ANDREAS RENSCHLER				
	Commercial Vehicles				
	Joined: February 1, 2015				
E	2015	2016	2016 (Minimum)	2016 (Maximum)	
Fixed renumeration <sup>2</sup>	12,446,000	1,056,000	1,056,000	1,056,000	
Fringe benefits	399,658	236,205	236,205	236,205	
Total	12,845,658	1,292,205	1,292,205	1,292,205	
One-year variable remuneration	910,846	492,800	0	1,250,000	
Multiyear variable remuneration	3,976,500	2,503,637	0	5,386,820	
Business performance bonus (two-year period)	2,143,167	1,232,000	0	2,500,000	
LTI (four-year period)	1,833,333	1,500,000	0	2,000,000	
Benefits based on phantom shares (three-year period)		-228,363	0	886,820	
Total	17,733,004	4,288,642	1,292,205	7,929,025	
Pension expense		4,660,006	4,660,006	4,660,006	
Total renumeration	17,733,004	8,948,648	5,952,211	12,589,031	

		RUPERT STADLER				
	Chairma	n of the Board of	Management of AU	IDI AG		
Ε	2015	2016	2016 (Minimum)	2016 (Maximum)		
Fixed renumeration	1,056,000	1,056,000	1,056,000	1,056,000		
Fringe benefits	60,667	62,817	62,817	62,817		
Total	1,116,667	1,118,817	1,118,817	1,118,817		
One-year variable remuneration	935,200	492,800	0	1,250,000		
Multiyear variable remuneration	4,338,000	2,482,839	0	5,467,440		
Business performance bonus (two-year period)	2,338,000	1,232,000	0	2,500,000		
LTI (four-year period)	2,000,000	1,500,000	0	2,000,000		
Benefits based on phantom shares (three-year period)		-249,161	0	967,440		
Total	6,389,867	4,094,456	1,118,817	7,836,257		
Pension expense	723,954	665,679	665,679	665,679		
Total renumeration	7,113,821	4,760,135	1,784,496	8,501,936		

<sup>1</sup> All figures shown are rounded, so minor discrepancies may arise from addition of these amounts.

<sup>2</sup> The previous year includes compensation of lost entitlements resulting from the change in employer in the amount of €11.5 million.

Remuneration Report Group Management Report

# REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT (BENEFITS GRANTED) IN ACCORDANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE<sup>1</sup>

The figures shown here as benefits granted under variable remuneration are based on a mean probability scenario.

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	FRANK WITTER				
	Finance and Controlling  Joined: October 7, 2015				
€	2015	2016	2016 (Minimum)	2016 (Maximum)	
Fixed renumeration	243,467	1,056,000	1,056,000	1,056,000	
Fringe benefits	10,212	49,827	49,827	49,827	
Total	253,679	1,105,827	1,105,827	1,105,827	
One-year variable remuneration	229,092	492,800	0	1,250,000	
Multiyear variable remuneration	1,000,150	2,674,522	0	4,723,049	
Business performance bonus (two-year period)	539,039	1,232,000	0	2,500,000	
LTI (four-year period)	461,111	1,500,000	0	2,000,000	
Benefits based on phantom shares (three-year period)		-57,478	0	223,049	
Total	1,482,920	4,273,149	1,105,827	7,078,876	
Pension expense	130,680	587,216	587,216	587,216	
Total renumeration	1,613,600	1,613,600 4,860,365 1,693,043			

 $<sup>{\</sup>bf 1} \ \ {\sf All figures shown are rounded, so minor discrepancies may arise from addition of these amounts.}$ 

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# POST-EMPLOYMENT BENEFITS

In the event of regular termination of their service on the Board of Management, the members of the Board of Management are entitled to a pension, including a surviving dependents' pension, as well as the use of company cars for the period in which they receive their pension. The agreed benefits are paid or made available when the Board of Management member reaches the age of 63. As a departure from this principle, Mr. Renschler is able to start drawing his pension when he reaches the age of 62.

The retirement pension is calculated as a percentage of the basic level of remuneration. Starting at 50%, the individual percentage increases by two percentage points for each year of service. In specific cases, credit is given for previous employment periods and retirement pensions earned. The Supervisory Board has defined a maximum of 70%. These benefits are not broken down any further into performance-related components and long-term incentive components. Mr. Garcia Sanz and Mr. Heizmann have a retirement pension entitlement of 70%, and Mr. Renschler and Mr. Stadler have a retirement pension entitlement of 64% of their basic level of remuneration as of the end of 2016. In a departure from this rule, a retirement pension entitlement of 62% of the basic level of remuneration was set for Mr. Renschler on his appointment. Mr. Müller had a retirement pension entitlement of 53% of the basic level of remuneration as of the end of 2016; this increases by three percentage points every year.

Ms. Hohmann-Dennhardt and Mr. Blessing, Mr. Diess and Mr. Witter received a defined contribution plan, which is based in principle on a works agreement that also applies to the employees of Volkswagen AG covered by collective agreements and includes retirement, invalidity and surviving dependents' benefits. A pension contribution in the amount of 50% of the basic level of remuneration is contributed to Volkswagen Pension Trust e.V. at the end of the calendar year for each year they are appointed to the Board of Management. The annual pension contributions result in modules of what is, in principle, a lifelong pension in line with the arrangements that also apply to employees covered by collective agreements. The individual pension modules vest immediately upon contribution to Volkswagen Pension Trust e.V. Instead of a lifelong pension, benefits can optionally be paid out as a lump sum or in installments when the

beneficiary reaches retirement age – currently 63 at the earliest. Volkswagen AG has assumed responsibility for pension entitlements due to Mr. Witter from the time before his service with the Company, although these cannot be claimed before he reaches the age of 60.

On December 31, 2016, the pension obligations for members of the Board of Management in accordance with IAS 19 amounted to €113.5 (86.6) million; €11.7 (6.4) million was added to the provision in the reporting period in accordance with IAS 19. Other benefits such as surviving dependents' pensions and the use of company cars are also factored into the measurement of pension provisions. The pension obligations measured in accordance with German GAAP amounted to €77.2 (70.2) million; €7.0 (14.6) million was added to the provision in the reporting period in accordance with German GAAP. Current pensions are indexlinked using the same method as for the highest collectively agreed salary, insofar as the application of section 16 of the Gesetz zur Verbesserung der betrieblichen Altersversorgung (BetrAVG – German Company Pension Act) does not lead to a larger increase.

Retired members of the Board of Management and their surviving dependents received  $\in$ 11.1 (51.3) million, or  $\in$ 11.1 (51.3) million measured in accordance with German GAAP, in the past year. Obligations for pensions for this group of persons measured in accordance with IAS 19 amounted to  $\in$ 270.0 (242.7) million, or  $\in$ 205.6 (209.9) million measured in accordance with German GAAP.

The following rule applies to Board of Management contracts entered into for the first term of office before August 5, 2009: the retirement pension to be granted after a member of the Board of Management leaves the Company is payable immediately if the member's contract is not renewed by the Company, and in other cases when the member reaches the age of 63. Any remuneration received from other sources until the age of 63 is deductible from the benefit entitlement up to a certain fixed amount.

The following general rule applies to contracts for the first term of office of members of the Board of Management entered into after August 5, 2009: the retirement pension to be granted after a member of the Board of Management leaves the Company is payable when the member reaches the age of 63.

Remuneration Report Group Management Report

# EARLY TERMINATION BENEFITS

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If the appointment to the Board of Management is terminated for cause through no fault of the Board of Management member, the claims under Board of Management contracts entered into since November 20, 2009 are limited to a maximum of two years' remuneration, in accordance with the recommendation in section 4.2.3(4) of the German Corporate Governance Code (severance payment cap). For Board of Management members who are commencing their third or later term of office, existing rights under contracts entered into before November 20, 2009 are grandfathered.

No severance payment is made if the appointment to the Board of Management is terminated for a reason for which the Board of Management member is responsible.

The members of the Board of Management are also entitled to a pension and to a surviving dependents' pension as well as the use of company cars for the period in which they receive their pension in the event of early termination of their service on the Board of Management.

Please refer to notes 43 and 45 to the consolidated financial statements for more detailed individual disclosures relating to members of the Board of Management who left the Company in fiscal year 2015.

# PENSIONS OF THE MEMBERS OF THE BOARD OF MANAGEMENT IN 2016 (PRIOR-YEAR FIGURES IN BRACKETS)1

		Present values as of
€	Pension expense	December 31 <sup>2</sup>
Matthias Müller (since March 1, 2015)	526,589	27,254,749
	(295,754)	(22,563,065)
Karlheinz Blessing (since January 1, 2016)	742,542	742,542
		_
Herbert Diess (since July 1, 2015)	699,856	1,298,635
	(311,850)	(365,736)
Francisco Javier Garcia Sanz	760,864	21,752,138
	(816,242)	(17,622,337)
Jochem Heizmann	_	19,836,613
	_	(18,000,356)
Christine Hohmann-Dennhardt (January 1, 2016 until January 31, 2017)	704,657	704,657
	_	_
Andreas Renschler (since February 1, 2015)	4,660,006	11,231,016
	_	(5,025,366)
Rupert Stadler	665,679	21,530,818
	(723,954)	(16,442,455)
Frank Witter (since October 7, 2015)	587,216	9,100,545
	(130,680)	(6,582,389)
Members of the Board of Management who left in the previous year	(1,097,443)	-
Total	9,347,409	113,451,713
	(3,375,923)	(86,601,704)

<sup>1</sup> All figures shown are rounded, so minor discrepancies may arise from addition of these amounts.

<sup>2</sup> The amount is reported in the total amount for defined benefit plans reported in the balance sheet (see note 29 to the consolidated financial statements).

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# SUPERVISORY BOARD REMUNERATION

Under Article 17 of Volkswagen AG's Articles of Association, the remuneration of Volkswagen AG's Supervisory Board is composed of a fixed component (plus attendance fees) and a variable component that depends on the amount of the dividend paid. The duties performed by the respective member on the Supervisory Board are also taken into account. Several members of the Supervisory Board are also members of the supervisory boards of subsidiaries. The

# REMUNERATION OF THE MEMBERS OF THE SUPERVISORY BOARD<sup>1</sup>

	FIXED	VARIABLE	TOTAL	TOTAL
<b>€</b> 			2016	2015
Hans Dieter Pötsch	74,500	511,300	585,800	13,400
Jörg Hofmann <sup>2</sup>	22,000	308,333	330,333	3,367
Hussain Ali Al-Abdulla	16,000	154,167	170,167	11,000
Akbar Al Baker (until June 22, 2016)	6,858	73,443	80,302	5,925
Hessa Sultan Al-Jaber (since June 22, 2016)	9,142	80,723	89,865	
Birgit Dietze <sup>2</sup> (since June 1, 2016)	13,067	130,185	143,252	_
Annika Falkengren	18,000	231,250	249,250	17,000
Hans-Peter Fischer <sup>2</sup>	17,000	154,167	171,167	14,000
Uwe Fritsch <sup>2</sup>	18,642	196,348	214,990	14,000
Babette Fröhlich² (until June 1, 2016)	6,763	96,675	103,438	17,000
Uwe Hück <sup>2</sup>	80,500	154,167	234,667	44,750
Johan Järvklo <sup>2</sup>	16,000	154,167	170,167	1,650
Louise Kiesling	17,000	154,167	171,167	11,017
Olaf Lies <sup>3</sup>	19,000	231,250	250,250	14,700
Peter Mosch <sup>2</sup>	34,000	267,850	301,850	33,000
Bernd Osterloh <sup>2</sup>	20,000	231,250	251,250	17,000
Hans Michel Piëch	80,375	186,361	266,736	80,500
Ferdinand Oliver Porsche	73,000	344,933	417,933	65,500
Wolfgang Porsche	108,500	332,733	441,233	109,200
Stephan Weil <sup>3</sup>	19,000	231,250	250,250	17,000
Stephan Wolf <sup>2</sup>	20,000	231,250	251,250	17,000
Thomas Zwiebler <sup>2</sup>	20,000	231,250	251,250	14,342
Members of the Supervisory Board who left in the previous year				175,603
Total	709,346	4,687,220	5,396,565	696,953

- ${\bf 1} \ \ {\sf All figures shown are rounded, so minor discrepancies may arise from addition of these amounts.}$
- 2 These employee representatives have stated that they will transfer their Supervisory Board remuneration to the Hans Böckler Foundation in accordance with the guidelines issued by the German Confederation of Trade Unions (DGB).
- 3 Under section 5(3) of the Niedersächsisches Ministergesetz (Act Governing Ministers of the State of Lower Saxony), these members of the Supervisory Board are obliged to transfer their Supervisory Board remuneration to the State of Lower Saxony as soon as and to the extent that it exceeds €6,200 per annum. Remuneration is defined for this purpose as Supervisory Board remuneration and attendance fees exceeding the amount of €200.

The members of the Supervisory Board have declared to the Management Board that they waive their claims for all remuneration payments for fiscal year 2016. Such waiver shall apply to the extent that these claims exceed the amount

that would be due if the stipulations to be resolved by the General Meeting on May 10, 2017 regarding the remuneration for the Supervisory Board for the current and future fiscal years were applied to fiscal year 2016.

**Executive Bodies Group Management Report** 

# **Executive Bodies**

# Members of the Board of Management and their appointments

Appointments: as of December 31, 2016 or the leaving date from the Board of Management of Volkswagen AG

# MATTHIAS MÜLLER (63)

Chairman (since September 26, 2015)

March 1, 2015<sup>1</sup>

Member of the Executive Board of

Porsche Automobil Holding SE

October 13, 2010<sup>1</sup>

# DR. RER. SOC. KARLHEINZ BLESSING (59)

Human Resources and Organization

January 1, 2016<sup>1</sup>

# Appointments:

O Wolfsburg AG, Wolfsburg

# DR. ING. HERBERT DIESS (58)

Chairman of the Brand Board of Management of Volkswagen Passenger Cars

July 1, 2015<sup>1</sup>

# Appointments:

O Infineon Technologies AG, Neubiberg

DR. RER. POL. H.C. FRANCISCO JAVIER GARCIA SANZ (59)

Procurement

July 1, 2001<sup>1</sup>

# Appointments:

- O Hochtief AG, Essen
- Criteria CaixaHolding S.A., Barcelona

PROF. DR. RER. POL. DR.-ING. E.H. **IOCHEM HEIZMANN (64)** 

China

January 11, 2007<sup>1</sup>

# Appointments:

O Lufthansa Technik AG, Hamburg

# DR. JUR. CHRISTINE HOHMANN-DENNHARDT

Integrity and Legal Affairs

January 1, 2016 - January 31, 2017<sup>1</sup>

Appointments: (as of January 31, 2017):

Messe Frankfurt GmbH, Frankfurt am Main

# ANDREAS RENSCHLER (58)

**Commercial Vehicles** 

February 1, 2015<sup>1</sup>

# Appointments:

O Deutsche Messe AG, Hanover

### PROF. RUPERT STADLER (53)

Chairman of the Board of Management of AUDI AG

January 1, 2010<sup>1</sup>

# Appointments:

O FC Bayern München AG, Munich

# HILTRUD DOROTHEA WERNER (50)

Integrity and Legal Affairs

February 1, 2017

# FRANK WITTER (57)

**Finance and Controlling** October 7, 2015

As part of their duty to manage and supervise the Group's business, the members of the Board of Management hold other offices on the supervisory boards of consolidated Group companies and other significant investees.

- O Membership of statutory supervisory boards in
- Comparable appointments in Germany and abroad.
- 1 Beginning or period of membership of the Board of Management.

#### Members of the Supervisory Board and their appointments

Appointments: as of December 31, 2016 or the leaving date from the Supervisory Board of Volkswagen AG

#### HANS DIETER PÖTSCH (65)

(Chairman; since October 7, 2015)
Chairman of the Executive Board and
Chief Financial Officer of
Porsche Automobil Holding SE

October 7, 2015<sup>1</sup>

#### Appointments:

- O AUDI AG, Ingolstadt
- O Autostadt GmbH, Wolfsburg (Chairman)
- O Bertelsmann Management SE, Gütersloh
- O Bertelsmann SE & Co. KGaA, Gütersloh
- $\bigcirc$  Dr. Ing. h.c. F. Porsche AG, Stuttgart
- Porsche Austria Gesellschaft m.b.H., Salzburg (Chairman)
- Porsche Holding Gesellschaft m.b.H., Salzburg
   (Chairman)
- Porsche Retail GmbH, Salzburg (Chairman)
- VfL Wolfsburg-Fußball GmbH, Wolfsburg (Deputy Chairman)
- Volkswagen Truck & Bus GmbH, Braunschweig

#### JÖRG HOFMANN (61)

(Deputy Chairman; since November 20, 2015)
First Chairman of IG Metall

November 20, 2015<sup>1</sup>

#### Appointments:

O Robert Bosch GmbH, Stuttgart

#### DR. HUSSAIN ALI AL-ABDULLA (59)

Minister of State
April 22, 2010<sup>1</sup>

#### Appointments:

- Gulf Investment Corporation, Safat/Kuwait
- Kirnaf Finance, Riyadh (Chairman)
- Masraf Al Rayan, Doha (Chairman)
- Qatar Holding, Doha
- Qatar Investment Authority, Doha

#### AKBAR AL BAKER (56)

Minister of State and Group Chief Executive of Qatar Airways

May 5, 2015 – June 22, 2016<sup>1</sup>

#### Appointments (as of June 22, 2016):

- Arab Air Carriers Organization, Beirut (Chairman)
- Heathrow Airport Holdings Ltd., London
- International Air Transport Association, Montreal

#### DR. HESSA SULTAN AL-JABER (57)

Minister of State

June 22, 2016<sup>1</sup>

#### Appointments:

- Qatar Satellite Company, Doha
- Malomatia, Doha
- Trio Investment, Doha

#### **BIRGIT DIETZE (43)**

Secretary to the Board of IG Metall June 1, 2016<sup>1</sup>

#### ANNIKA FALKENGREN (54)

President and Group Chief Executive of Skandinaviska Enskilda Banken AB May 3, 2011<sup>1</sup>

#### **Appointments:**

- FAM AB, Stockholm
- Scania CV AB, Södertälje

#### DR. JUR. HANS-PETER FISCHER (57)

Chairman of the Board of Management of Volkswagen Management Association January 1, 2013<sup>1</sup>

#### Appointments:

Volkswagen Pension Trust e.V., Wolfsburg

#### DR. JUR. KLAUS LIESEN (85)

July 2, 1987 – May 3, 2006<sup>1</sup>

Honorary Chairman of the Supervisory Board of Volkswagen AG (since May 3, 2006)

- Membership of statutory supervisory boards in Germany.
- Comparable appointments in Germany and abroad.
- 1 Beginning or period of membership of the Supervisory Board.

Executive Bodies Group Management Report

#### **UWE FRITSCH (60)**

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Chairman of the Works Council of the Volkswagen AG Braunschweig plant April 19, 2012<sup>1</sup>

### Appointments:

- Eintracht Braunschweig GmbH & Co KGaA, Braunschweig
- Basketball Löwen Braunschweig GmbH, Braunschweig

#### **BABETTE FRÖHLICH (51)**

IG Metall.

Department head for coordination of Executive Board duties and planning

October 25, 2007 – June 1, 2016<sup>1</sup>

#### UWE HÜCK (54)

Chairman of the General and Group Works Councils of Dr. Ing. h.c. F. Porsche AG July 1, 2015<sup>1</sup>

#### Appointments:

- O Dr. Ing. h.c. F. Porsche AG, Stuttgart (Deputy Chairman)
- Porsche Automobil Holding SE, Stuttgart (Deputy Chairman)

#### JOHAN JÄRVKLO (43)

Chairman of IF Metall at Scania AB

November 22, 2015<sup>1</sup>

#### Appointments:

- Scania CV AB, Södertälje
- Volkswagen Truck & Bus GmbH, Braunschweig

#### DR. LOUISE KIESLING (59)

Designer and entrepreneur April 30, 2015<sup>1</sup>

#### **OLAF LIES (49)**

Minister of Economic Affairs, Labor and Transport for the Federal State of Lower Saxony

February 19, 2013<sup>1</sup>

#### Appointments:

- O Deutsche Messe AG, Hanover (Chairman)
- Container Terminal Wilhelmshaven JadeWeserPort-Marketing GmbH & Co. KG, Wilhelmshaven (Chairman)
- Demografieagentur für die niedersächsische Wirtschaft GmbH, Hanover (Chairman)
- JadeWeserPort Realisierungs GmbH & Co. KG, Wilhelmshaven (Chairman)
- JadeWeserPort Realisierungs-Beteiligungs GmbH, Wilhelmshaven (Chairman)

#### PETER MOSCH (44)

#### Appointments:

- O AUDI AG, Ingolstadt
- O Porsche Automobil Holding SE, Stuttgart
- Audi Pensionskasse Altersversorgung der AUTO UNION GmbH, VVaG, Ingolstadt

#### BERND OSTERLOH (60)

Chairman of the General and Group Works Councils of Volkswagen AG

January 1, 2005<sup>1</sup>

Appointments:

- O Autostadt GmbH, Wolfsburg
- O Porsche Automobil Holding SE, Stuttgart
- O Wolfsburg AG, Wolfsburg
- Allianz für die Region GmbH, Braunschweig
- Porsche Holding Gesellschaft m.b.H., Salzburg
- SEAT, S.A., Martorell
- ⊙ ŠKODA Auto a.s., Mladá Boleslav
- VfL Wolfsburg-Fußball GmbH, Wolfsburg
- O Volkswagen Immobilien GmbH, Wolfsburg
- ⊙ Volkswagen Truck & Bus GmbH, Braunschweig

#### DR. JUR. HANS MICHEL PIËCH (74)

Lawyer in private practice

August 7, 2009<sup>1</sup>

#### Appointments:

- O AUDI AG, Ingolstadt
- O Dr. Ing. h.c. F. Porsche AG, Stuttgart
- O Porsche Automobil Holding SE, Stuttgart
- Porsche Cars Great Britain Ltd., Reading
- Porsche Cars North America Inc., Atlanta
- Porsche Holding Gesellschaft m.b.H., Salzburg
- Porsche Ibérica S.A., Madrid
- Porsche Italia S.p.A., Padua
- Schmittenhöhebahn AG, Zell am See
- Volksoper Wien GmbH, Vienna

Membership of statutory supervisory boards in Germany.

Comparable appointments in Germany and abroad.

<sup>1</sup> Beginning or period of membership of the Supervisory Board.

#### DR. JUR. FERDINAND OLIVER PORSCHE (55)

Member of the Board of Management of Familie Porsche AG Beteiligungsgesellschaft August 7, 2009<sup>1</sup>

#### Appointments:

- O AUDI AG, Ingolstadt
- O Dr. Ing. h.c. F. Porsche AG, Stuttgart
- O Porsche Automobil Holding SE, Stuttgart
- PGA S.A., Paris
- Porsche Holding Gesellschaft m.b.H., Salzburg
- Porsche Lizenz- und Handelsgesellschaft mbH & Co. KG, Ludwigsburg
- Volkswagen Truck & Bus GmbH, Braunschweig

#### DR. RER. COMM. WOLFGANG PORSCHE (73)

Chairman of the Supervisory Board of Porsche Automobil Holding SE; Chairman of the Supervisory Board of Dr. Ing. h.c. F. Porsche AG April 24, 2008<sup>1</sup>

#### Appointments:

- O AUDI AG, Ingolstadt
- O Dr. Ing. h.c. F. Porsche AG, Stuttgart (Chairman)
- O Porsche Automobil Holding SE, Stuttgart (Chairman)
- Familie Porsche AG Beteiligungsgesellschaft, Salzburg (Chairman)
- Porsche Cars Great Britain Ltd., Reading
- Porsche Cars North America Inc., Atlanta
- Porsche Holding Gesellschaft m.b.H., Salzburg
- Porsche Ibérica S.A., Madrid
- Porsche Italia S.p.A., Padua
- Schmittenhöhebahn AG, Zell am See

#### STEPHAN WEIL (58)

Minister-President of the Federal State of Lower Saxony February 19, 2013<sup>1</sup>

#### STEPHAN WOLF (50)

Deputy Chairman of the General and Group Works
Councils of Volkswagen AG
January 1, 2013<sup>1</sup>

#### Appointments:

- O Volkswagen Financial Services AG, Braunschweig
- O Wolfsburg AG, Wolfsburg
- O Volkswagen Pension Trust e.V., Wolfsburg

#### THOMAS ZWIEBLER (51)

Chairman of the Works Council of Volkswagen Commercial Vehicles May 15, 2010<sup>1</sup>

## COMMITTEES OF THE SUPERVISORY BOARD AS OF DECEMBER 31, 2016

#### Members of the Executive Committee

Hans Dieter Pötsch (Chairman) Jörg Hofmann (Deputy Chairman) Bernd Osterloh Dr. Wolfgang Porsche Stephan Weil

Stephan Wolf

#### Members of the Mediation Committee established in accordance with section 27(3) of the Mitbestimmungsgesetz (German Codetermination Act)

Hans Dieter Pötsch (Chairman) Jörg Hofmann (Deputy Chairman) Bernd Osterloh Stephan Weil

#### **Members of the Audit Committee**

Dr. Ferdinand Oliver Porsche (Chairman)
Peter Mosch (Deputy Chairman)
Birgit Dietze
Annika Falkengren

#### **Members of the Nomination Committee**

Hans Dieter Pötsch (Chairman) Dr. Wolfgang Porsche Stephan Weil

#### **Special Committee on Diesel Engines**

Dr. Wolfgang Porsche (Chairman) Uwe Fritsch Olaf Lies Bernd Osterloh Dr. Ferdinand Oliver Porsche Thomas Zwiebler

- Membership of statutory supervisory boards in Germany.
- Comparable appointments in Germany and abroad.
- 1 Beginning or period of membership of the Supervisory Board.

# Disclosures Required Under Takeover Law

This section contains the Volkswagen Group's disclosures relating to takeover law required by sections 289(4) and 315(4) of the HGB.

#### CAPITAL STRUCTURE

Volkswagen AG's share capital amounted to €1,283,315,873.28 (€1,283,315,873.28) on 31 December, 2016. It was composed of 295,089,818 ordinary shares and 206,205,445 preferred shares. Each share conveys a notional interest of €2.56 in the share capital.

#### SHAREHOLDER RIGHTS AND OBLIGATIONS

The shares convey pecuniary and administrative rights. The pecuniary rights include in particular the shareholders' right to participate in profits (section 58(4) of the Aktiengesetz (AktG – German Stock Corporation Act)), the right to participate in liquidation proceeds (section 271 of the AktG) and preemptive rights to shares in the event of capital increases (section 186 of the AktG) that can be disapplied by the Annual General Meeting with the approval of the Special Meeting of Preferred Shareholders, where appropriate. Administrative rights include the right to attend the Annual General Meeting and the right to speak there, to ask questions, to propose motions and to exercise voting rights. Shareholders can enforce these rights in particular through actions seeking disclosure and actions for avoidance.

Each ordinary share grants the holder one vote at the Annual General Meeting. The Annual General Meeting elects shareholder representatives to the Supervisory Board and elects the auditors; in particular, it resolves on the appropriation of net profit, formally approves the actions of the Board of Management and the Supervisory Board, and resolves on amendments to the Articles of Association of Volkswagen AG, capitalization measures and authorizations to purchase treasury shares; if required, it also resolves on the performance of a special audit, the removal before the end of their term of office of Supervisory Board members elected at the Annual General Meeting and the winding-up of the Company.

Preferred shareholders generally have no voting rights. However, in the exceptional case that they are granted voting rights by law (for example, when preferred share dividends were not paid in one year and not compensated for in full in the following year), each preferred share also grants the holder one vote at the Annual General Meeting. Furthermore, preferred shares entitle the holder to a  $\{0.06\ \text{higher}\ \text{dividend}\ \text{than ordinary shares}$  (further details on this right to preferred and additional dividends are specified in Article 27(2) of the Articles of Association of Volkswagen AG).

The Gesetz über die Überführung der Anteilsrechte an der Volkswagenwerk Gesellschaft mit beschränkter Haftung in private Hand (VW-Gesetz – Act on the Privatization of Shares of Volkswagenwerk Gesellschaft mit beschränkter Haftung) of July 21, 1960, as amended on July 30, 2009, includes various provisions in derogation of the German Stock Corporation Act, for example on exercising voting rights by proxy (section 3 of the VW-Gesetz) and on majority voting requirements at the Annual General Meeting (section 4(3) of the VW-Gesetz).

In accordance with the Volkswagen AG Articles of Association (Article 11(1)), the State of Lower Saxony is entitled to appoint two members of the Supervisory Board of Volkswagen AG for as long as it directly or indirectly holds at least 15% of Volkswagen AG's ordinary shares. In addition, resolutions by the Annual General Meeting that are required by law to be adopted by a qualified majority require a majority of more than four-fifths of the share capital of the Company represented when the resolution is adopted (Article 25(2)), regardless of the provisions of the VW-Gesetz.

#### SHAREHOLDINGS EXCEEDING 10% OF VOTING RIGHTS

Shareholdings in Volkswagen AG that exceed 10% of voting rights are shown in the notes to the annual financial statements of Volkswagen AG, which are available online at www.volkswagenag.com/ir. The current notifications of changes in voting rights in accordance with the Wertpapierhandelsgesetz (WpHG – German Securities Trading Act) are also published on this website.

#### COMPOSITION OF THE SUPERVISORY BOARD

The Supervisory Board consists of 20 members, half of whom are shareholder representatives. In accordance with Article 11(1) of the Articles of Association of Volkswagen AG, the State of Lower Saxony is entitled to appoint two of these shareholder representatives for as long as it directly or indirectly holds at least 15% of the Company's ordinary shares. The remaining shareholder representatives on the Supervisory Board are elected by the Annual General Meeting.

The other half of the Supervisory Board consists of employee representatives elected by the employees in accordance with the Mitbestimmungsgesetz (MitbestG – German Codetermination Act). A total of seven of these employee representatives are Company employees elected by the workforce; the other three employee representatives are trade union representatives elected by the workforce.

The Chairman of the Supervisory Board is generally a shareholder representative elected by the other members of the Supervisory Board. In the event that a Supervisory Board vote is tied, the Chairman of the Supervisory Board has a casting vote in accordance with the Mitbest G.

The goals for the composition of the Supervisory Board are described on page 62 of the Corporate Governance Report. Information about the composition of the Supervisory Board at the end of the reporting period can be found on pages 85 to 87 of this annual report.

STATUTORY REQUIREMENTS AND REQUIREMENTS OF THE
ARTICLES OF ASSOCIATION WITH REGARD TO THE APPOINTMENT
AND REMOVAL OF BOARD OF MANAGEMENT MEMBERS AND TO
AMENDMENTS TO THE ARTICLES OF ASSOCIATION

The appointment and removal of members of the Board of Management are governed by sections 84 and 85 of the AktG, which specify that members of the Board of Management are appointed by the Supervisory Board for a maximum of five years. Board of Management members may be reappointed or have their term of office extended for a maximum of five years in each case. In addition, Article 6 of the Articles of Association of Volkswagen AG states that the number of Board of Management members is stipulated by the Supervisory Board and that the Board of Management must consist of at least three persons.

The Annual General Meeting resolves amendments to the Articles of Association (section 119(1) of the AktG). In accordance with section 4(3) of the VW-Gesetz as amended on July 30, 2009 and Article 25(2) of the Articles of Association of Volkswagen AG, Annual General Meeting resolutions to amend the Articles of Association require a majority of more than four-fifths of the share capital represented.

# POWERS OF THE BOARD OF MANAGEMENT, IN PARTICULAR CONCERNING THE ISSUE OF NEW SHARES AND THE REPURCHASE OF TREASURY SHARES

According to German stock corporation law, the Annual General Meeting can authorize the Board of Management, for a maximum period of five years, to issue new shares. It can also authorize the Board of Management, for a maximum period of five years, to issue bonds on the basis of which new shares are to be issued. The Annual General Meeting also decides the extent to which shareholders have preemptive rights to the new shares or bonds. The highest amount of authorized share capital or contingent capital available for these purposes is determined by Article 4 of the Articles of Association of Volkswagen AG, as amended.

The Annual General Meeting on April 19, 2012 resolved to authorize the Board of Management, with the consent of the Supervisory Board, to increase the Company's share capital by a total of up to €110.0 million (corresponding to approximately 43 million shares) on one or more occasions up to April 18, 2017 by issuing new ordinary and/or nonvoting preferred bearer shares – including with shareholders' preemptive rights disapplied – against cash and/or noncash contributions. This authorization was partially exercised in June 2014 by way of a capital increase through the issuance of 10,471,204 new preferred shares from authorized capital against cash contributions, while disapplying shareholders' preemptive rights. This increased the share capital by €26.8 million and generated gross proceeds of €2.0 billion.

At the Annual General Meeting on May 5, 2015, a resolution was passed authorizing the Board of Management, with the consent of the Supervisory Board, to increase the Company's share capital by a total of up to €179.2 million (corresponding to 70 million shares) on one or more occasions up to May 4, 2020 by issuing new nonvoting preferred shares against cash contributions.

Further details of the authorization to issue new shares and their permitted uses may be found in the notes to the consolidated financial statements on page 265.

Opportunities to acquire treasury shares are governed by section 71 of the AktG. The Board of Management was most recently authorized to acquire treasury shares up to a maximum of 10% of the share capital at the Annual General Meeting on April 19, 2012. This authorization applies until April 18, 2017 and has not as yet been exercised.

## MATERIAL AGREEMENTS OF THE PARENT COMPANY IN THE EVENT OF A CHANGE OF CONTROL FOLLOWING A TAKEOVER BID

A banking syndicate granted Volkswagen AG a syndicated line of credit amounting to €5.0 billion that runs until April 2020. The syndicate members were granted the right to call their portion of the syndicated line of credit if Volkswagen AG is merged with a third party or becomes a subsidiary of another company. However, this call right does not apply in the event of a merger by absorption of Porsche Holding SE, one of its subsidiaries, or one of its holding companies and Volkswagen AG in which Volkswagen AG is the acquiring legal entity.

In addition, Volkswagen AG agreed a supplementary syndicated line of credit of up to €20.0 billion with a banking syndicate, initially running until December 2016 and in the meantime extended until June 2017. The syndicate members were granted the right to call their portion of the syndicated line of credit if Volkswagen AG is merged with a third party or group of third parties, or becomes a subsidiary of another company or group of other companies. Exceptions to this call right were agreed with regard to various combinations involving the current majority shareholders.

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# **Diesel Issue**

We worked intensively to clarify the irregularities in emissions and provided effective technical solutions for the affected vehicles. Extensive settlement agreements were reached in the United States.

#### **IRREGULARITIES IN EMISSIONS**

On September 18, 2015, the US Environmental Protection Agency (EPA) publicly announced in a "Notice of Violation" that irregularities in relation to nitrogen oxide ( $NO_x$ ) emissions had been discovered in emissions tests on certain vehicles with Volkswagen Group diesel engines. Volkswagen admitted to irregularities in this context. In its ad hoc release dated September 22, 2015, the Volkswagen Group announced that noticeable discrepancies between the figures achieved in testing and in actual road use had been identified in around eleven million vehicles worldwide with certain diesel engines.

On November 2, 2015, the EPA issued another "Notice of Violation" alleging that irregularities had also been discovered in the software installed in vehicles with type V6 3.0 l TDI diesel engines. Audi has confirmed that at least three auxiliary emission control devices (AECDs) were not disclosed in the course of the US approval documentation of vehicles with six-cylinder V6 3.0 l TDI diesel engines.

#### EXTENSIVE INVESTIGATIONS BY VOLKSWAGEN

Volkswagen is working intensively to clarify the issue. To this end, Volkswagen ordered both internal inquiries and external investigations. The external investigation is being conducted with the involvement of external lawyers in Germany and the USA. To facilitate the investigations in the course of clarifying the facts, the Group Board of Management established a cooperation program in 2015, which was in place for a limited time and was open to all employees covered by collective agreements.

The Supervisory Board of Volkswagen AG formed a special committee that coordinates all activities relating to the diesel issue for the Supervisory Board. Further information regarding the special committee on diesel engines can be found in the Report

of the Supervisory Board on pages 12 to 17. Volkswagen AG commissioned an external investigation by US law firm Jones Day. This is an independent and comprehensive investigation to address the diesel issue. Jones Day is updating the Company and the Department of Justice (DOJ) on the current results of its investigation on an ongoing basis and supports Volkswagen AG in its cooperation with the judicial authorities. The course of action in clearing up the situation was determined largely by the investigative authorities.

Furthermore, Volkswagen AG filed a criminal complaint in September 2015 with the responsible public prosecutor's office in Braunschweig, which is independently investigating the matter, including allegations of fraud. Searches were carried out in Wolfsburg and elsewhere with the involvement of special agents from the State Office of Criminal Investigation.

We are cooperating with all the responsible authorities to clarify these matters completely and transparently.

Investigations were divided into two parts. The Group Internal Audit function, which involved bringing together experts from various Group companies to form a task force, focused – as instructed by the Supervisory Board and Board of Management – on reviewing relevant processes, reporting and control systems as well as the accompanying infrastructure. This function paid special attention to the processes of software development for the engine control unit. The Group Internal Audit function provided its findings to the external experts from Jones Day. The internationally renowned law firm was engaged by Volkswagen AG to fully clarify the facts and responsibilities in a second investigation. Jones Day has received operational support from the auditing firm Deloitte.

The special investigation has involved conducting interviews with employees and managers who were identified by Jones Day

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as relevant sources of information in connection with the diesel issue. In addition, Jones Day has evaluated documents and data (such as emails).

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We will discuss the action taken in response to the audit findings at the end of this section.

Employees from affected departments have been dismissed as a further direct consequence of the findings from the internal inquiries and external investigations.

The information that has been viewed so far has helped trace the origin and development of the diesel issue to a large extent. The starting point of the diesel issue at Volkswagen was the strategic decision to launch a large-scale promotion of diesel vehicles in the USA in 2005. To this end, a new diesel powertrain unit featuring high performance and cost-efficient production – the EA 189 type engine – was to be developed.

The US emissions limits for emissions of pollutants are strict. Under the strictest standard in the USA at the time, only 31 mg/km of  $NO_x$  was allowed to be emitted, about one-sixth of the Euro 5 standard applicable in Europe at that time. When designing state-of-the-art diesel engines, technicians and engineers face the challenge that there is a conflicting objective between the reduction of  $NO_x$  and other parameters.

In the ensuing period, in order to resolve this conflicting objective satisfactorily within the time frame and budget of the EA 189 project, a group of persons at levels below the Group's Board of Management in the powertrain development division decided to modify the engine management software. In the engine controller of the vehicles with type EA 189 diesel engines there was a software that recognizes the driving curve of the official type test, regardless of whether the vehicle is on a test bench or on the road. Depending on the recognition of the driving curve, the engine controller switches to 2 different modes: mode 1 optimum  $NO_x$  for test bench operation or mode 2 optimum particulate matter for road operation.

As things stand, outside the group of persons mentioned above, the then and current Board of Management of Volkswagen AG had, at any rate, no knowledge of the use of an unlawful "defeat device software" under US law at the time.

In the months after the International Council on Clean Transportation (ICCT) study was published in May 2014, the test set-ups on which the ICCT study was based were repeated in-house at Volkswagen and the unusually high NO<sub>x</sub> emissions confirmed. The US environmental authority of California – the California Air Resources Board (CARB) – was informed of this result, and at the same time the offer was made to recalibrate the type EA 189 diesel engines as part of a service measure that was already planned in the USA. This measure was evaluated and adopted by the Ausschuss für Produktsicherheit (APS – product safety committee), which includes, among others, employees from the technical development, quality assurance, sales, production, logistics, procurement and

legal departments, as part of the existing processes within the Volkswagen Group. The APS thus plays a central role in the internal control system at Volkswagen AG. There are currently no findings to confirm that an unlawful "defeat device software" under US law was reported by the APS as the cause of the discrepancies to the persons responsible for preparing the 2014 annual and consolidated financial statements. Instead, at the time that the annual and consolidated financial statements were being prepared, this group of people remained under the impression that the issue could be solved with comparatively little effort as part of a field measure. By the summer of 2015, however, it was reliably recognized that the cause of the discrepancies was a software modification that would qualify as a "defeat device" as defined by US environmental law. This culminated in the disclosure of the US "defeat device" to EPA and CARB on September 3, 2015, According to the assessment at that time of the members of the Board of Management dealing with the matter, the scope of the costs expected as a result by the Volkswagen Group (recall costs, retrofitting costs and financial penalties) was basically not dissimilar to that of previous cases in which other vehicle manufacturers were involved, and therefore appeared to be controllable overall with a view to the business activities of the Volkswagen Group. This appraisal by Volkswagen AG was based on the assessment of a law firm brought in in the USA for approval issues, according to which similar cases in the past were resolved amicably with the US authorities. Publication of a "Notice of Violation" by the EPA on September 18, 2015, which came as a surprise to the Company, on the facts and possible financial consequences, then presented the situation in a completely different light.

To clarify the issue, Audi set up an internal task force, furnished committees with the necessary resources and launched a program of cooperation for employees covered by collective agreements in 2015. The law firm Jones Day also conducted independent and comprehensive investigations into this matter.

The incumbent members of the Board of Management of AUDI AG have declared as already in the previous year that prior to their notification by the EPA in November 2015, they had no knowledge of the use of an unlawful "defeat device software" under US law in the V6 3.0 l TDI engines.

We are consistently seeking to realize organizational and procedural potential for improvement that has come to light as a result of the diesel issue.

Also, the publications released by the reporting date, as well as the continued investigations and interviews in connection with the diesel issue, did not provide the Group Board of Management with any new reliable findings or assessments regarding the underlying facts and the assessment of the associated risks (e.g. investor lawsuits)

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#### AFFECTED DIESEL ENGINES

FOUR-CYLINDER SIX-CYLINDER 10,741 thousand 113 thousand

EU28 REST OF THE WORLD USA/CANADA 8,494 thousand 1,639 thousand 721 thousand

#### FU28 AND REST OF THE WORLD

In fiscal year 2016, the Kraftfahrt-Bundesamt (KBA – German Federal Motor Transport Authority) issued official approvals needed for modification of the Volkswagen Group vehicles fitted with four-cylinder EA 189 1.2 l, 1.6 l and 2.0 l diesel engines falling within its remit. Only the approval of the technical solutions for 14 thousand vehicles is still outstanding, which is expected to be granted in the first quarter of 2017.

The KBA ascertained for all approved clusters (groups of vehicles) that implementation of the technical solutions would not bring about any unfavorable changes in fuel consumption, engine power, torque and noise emissions. Once the modifications have been made, these vehicles will thus comply with all legal requirements and the emission standards applicable in each case.

The SEAT brand received approvals in principle from its respective type approval authority, the Ministry of Industry in Spain in fiscal year 2016.

The type approval authority for the ŠKODA brand is the Vehicle Certification Agency in the United Kingdom. The approval process for ŠKODA vehicles is still ongoing.

In some countries outside the EU – among others Switzerland, Australia, South Korea, Taiwan and Turkey – national type approval is based on prior recognition of the EC/ECE type approval. We are also in close contact with the authorities in these countries in order to finalize the approval process.

We are now working expeditiously to implement the technical solutions in the field. In agreement with the relevant authorities, the owners of the affected vehicles will be notified and can then make an appointment for modification in an authorized workshop.

The implementation of the technical solution for the highest-volume variant – the 2.0 l TDI engine – began already in January 2016. The 1.2 l TDI followed in the course of the year. A software update is being performed for these engine versions. The implementation phase for the recall of the 1.6 l TDI engine began in November 2016, which provided additional lead time necessary for the hardware modification. In the 1.6 l TDI engines, a "flow transformer" will be fitted in front of the air mass sensor to improve the sensor's measuring accuracy. Combined with updated software,

this will optimize the amount of diesel injected. Based on current planning, implementation of measures will take the 2017 calendar year to complete. Volkswagen guarantees that the solutions will be implemented free of charge for our customers.

In addition, Volkswagen AG has, until December 31, 2017, expressly waived citation of the statute of limitations with regard to any claims made in relation to the software installed in vehicles with engines of type EA 189 by vehicle customers outside the United States and Canada.

#### USA/CANADA

On January 4, 2016, the DOJ, on behalf of the EPA, filed a civil complaint against Volkswagen AG, AUDI AG and other companies of the Volkswagen Group. The claims asserted under civil law are based on the alleged use of the defeat device software in violation of the US Clean Air Act. The complaint's allegations relate to both the four-cylinder and the six-cylinder diesel engines. Volkswagen AG held internal development responsibility for the four-cylinder diesel engines within the Group, and AUDI AG for the six-cylinder diesel engines.

In the USA and Canada, three variants of certain four-cylinder diesel engines are affected. For the vehicles with six-cylinder diesel engines, the software parameters are being revised so that they can be resubmitted for approval in the USA. Due to these considerably stricter  $\mathrm{NO}_x$  limits, it is a greater technical challenge to refit the vehicles so that all applicable emissions limits can be met. Volkswagen is in intensive discussions with the EPA and CARB concerning remedial measures. The technical solutions will be implemented as soon as they have been approved by the authorities. The respective US and Canadian companies of the Volkswagen Group have withdrawn all affected new vehicles from sale with pending approval of technical solutions.

In June and December 2016 and January 2017, Volkswagen AG, AUDI AG, Volkswagen Group of America, Inc. and certain affiliates reached settlement agreements in the USA with the DOJ on behalf of the EPA, CARB, and the California Attorney General, the US Federal Trade Commission (FTC), and private plaintiffs represented by a Plaintiffs' Steering Committee (PSC) in the multidistrict litigation pending in California.

The settlement agreements will resolve certain civil claims made in relation to affected diesel vehicles in the USA: approximately 475,000 vehicles with four-cylinder diesel engines from the Volkswagen Passenger Cars and Audi brands and around 83,000 vehicles with six-cylinder diesel engines from the Volkswagen Passenger Cars, Audi and Porsche brands. In October 2016, the court finally approved the settlement agreements in connection with the four-cylinder diesel engines. A number of class members have filed appeals to an US appellate court from the order approv-

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ing the settlements in connection with the four-cylinder diesel engines. The court has yet to approve the settlement agreements in relation to the six-cylinder diesel engines, which were lodged with the court on January 31, 2017.

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The settlements with respect to the four-cylinder diesel engine vehicles provide affected customers with the option of a buyback or, for leased vehicles, early lease termination, or a free emissions modification of the vehicles, provided that the EPA and CARB approve the modification. The settlements with respect to the six-cylinder diesel engine vehicles, which remain subject to court approval, provide for a buyback or, for leased vehicles, early lease termination program, or a free emissions modification provided that EPA and CARB approve the modification, for Generation 1 six-cylinder vehicles, and a free emissions recall and modification program (pending EPA and CARB approval) for Generation 2 sixcylinder vehicles. If modifications are not approved for Generation 2 six-cylinder vehicles, the settlements require Volkswagen to offer a buyback or, for leased vehicles, early lease termination for those vehicles. Volkswagen will also make additional cash payments to affected current owners and lessees as well as certain former owners and lessees.

In addition, Volkswagen agreed to support environmental programs. Volkswagen will pay USD 2.7 billion over three years and Audi will make an additional one-time payment in the amount of USD 225 million into an environmental trust, managed by a trustee appointed by the court, to offset excess  $NO_x$  emissions. Volkswagen will also invest a total of USD 2.0 billion over ten years in zero emissions vehicle (ZEV) infrastructure as well as corresponding access and awareness initiatives for such technology.

In addition, the six-cylinder vehicle settlement, if approved by the court, calls for an additional USD 25 million payment to CARB to support the availability of ZEVs in California.

In January 2017, Volkswagen AG agreed with the US government to resolve federal criminal liability relating to the diesel issue. The Volkswagen Group also agreed with the US government to resolve civil penalties and injunctive relief under the Clean Air Act and other civil claims against the Company relating to the diesel issue.

The coordinated resolutions involve four settlements, including a plea agreement between Volkswagen AG and the DOJ.

The plea agreement is accompanied by a published Statement of Facts that lays out relevant facts and has been acknowledged by Volkswagen AG.

As part of its plea agreement, Volkswagen AG has agreed to plead guilty to three felony counts under US law: conspiracy, obstruction of justice and using false statements to import cars into the US. The plea agreement, which is subject to US federal court approval, provides for payment of a criminal fine of USD 2.8 billion and the appointment of an independent monitor for a period of three years. The independent monitor will assess and oversee the Company's compliance with the terms of the resolution. This includes overseeing the implementation of measures to further strengthen compliance, reporting and monitoring systems, and an enhanced ethics program.

Volkswagen AG, AUDI AG and other Volkswagen Group companies have further agreed to pay, subject to court approval, a combined penalty of USD 1.45 billion to resolve US federal environmental and customs-related civil claims in the USA. Furthermore, Volkswagen AG and Volkswagen Group of America, Inc. have agreed to pay a separate civil penalty of USD 50 million to the Civil Division of the DOJ to settle potential claims asserted under the Financial Institutions Reform, Recovery and Enforcement Act (FIRREA). Volkswagen AG and Volkswagen Group of America, Inc. specifically deny any liability and expressly dispute FIRREA claims, which they are settling to avoid the uncertainty and expense of protracted litigation.

By their terms, these agreements resolve liability issues under US law and are not intended to address any liability issues, where such exist, under the laws or regulations of any jurisdiction outside the United States. Volkswagen continues to cooperate in full with investigations by the DOJ into the conduct of individuals.

Furthermore, Volkswagen reached agreements with the attorneys general of 44 US states, the District of Columbia and Puerto Rico to resolve their existing or potential consumer protection and unfair trade practices claims – in connection with vehicles in the USA fitted with four-cylinder and six-cylinder diesel engines – for a settlement amount of USD 603 million.

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These settlements do not resolve potential state environmental claims related to the affected vehicles or certain other claims. Moreover, investigations by various US regulatory and government authorities, including in areas relating to securities, financing and tax, are ongoing.

In September 2016, Volkswagen announced that it had finalized an agreement to resolve the claims of Volkswagen-branded franchise dealers in the United States relating to the affected vehicles and other matters asserted concerning the value of the franchise. The settlement agreement includes a cash payment of up to USD 1.208 billion and additional benefits to resolve alleged past, current and future claims of losses in franchise value. The court finally approved the settlement agreement in January 2017. This approval order is subject to appeal before an US appellate court.

In Canada, the NO<sub>x</sub> emissions limits for vehicles are the same as in the USA. Civil consumer claims and regulatory investigations have been initiated for vehicles with 2.0 l and 3.0 l diesel engines. In December 2016, Volkswagen AG and other Canadian and US Volkswagen Group companies reached a class action settlement in Canada with consumers relating to 2.0 l diesel vehicles. The settlement provides for cash payments of up to CAD 564 million to eligible owners and lessees, and many of these affected customers will also have the option of a free emissions modification of their vehicle if approved by regulators, or a buyback or trade-in or – for leased vehicles - early lease termination. The class settlement is subject to court approval, the hearings for which are scheduled for March 2017. Concurrently with the announcement of the class settlement in December 2016, Volkswagen Group Canada agreed with the Commissioner of Competition in Canada to a civil resolution of its regulatory inquiry into consumer protection issues in relation to 2.0 l diesel vehicles. This resolution was reached with the benefits in the class settlement, and Volkswagen Group Canada will also pay a CAD 15 million civil administrative monetary penalty. Civil consumer claims and the Commissioner of Competition's investigation with respect to 3.0 l diesel vehicles remain pending. Also, criminal enforcement-related investigations by the federal environmental regulator and quasi-criminal enforcement-related investigations by a provincial environmental regulator are ongoing in Canada in relation to 2.0 l and 3.0 l diesel vehicles.

#### IMPACT ON THE VOLKSWAGEN GROUP

#### Operating result for 2016

Special items recognized in operating profit relating to the diesel issue amounted to  $\leftarrow$  6.4 (–16.2) billion in fiscal year 2016, mainly due to higher provisions for legal risks.

#### Legal risks

Various legal risks are associated with the diesel issue. The provisions recognized for this matter and the contingent liabilities disclosed as well as the other latent legal risks are partially subject to substantial estimation risks given the complexity of the individual factors, the ongoing approval process with the authorities and the fact that the independent, comprehensive investigations have not yet been completed. The legal risks include (detailed information on the legal risks can be found on pages 193 to 198):

- > Criminal and administrative proceedings worldwide (excluding the USA/Canada)
- > Product-related lawsuits worldwide (excluding the USA/Canada)
- > Lawsuits filed by investors worldwide (excluding the USA/ Canada)
- > Proceedings in the USA/Canada

Should these legal risks materialize, this could result in considerable financial charges.

Further risks from the diesel issue can be found in the Report on Risks and Opportunities on page 183.

#### INTEGRITY

On January 1, 2016, we started to create the organizational framework for a centralized integrity management function by setting up the new Board of Management position for Integrity and Legal Affairs. This Group function is responsible for planning, preparing and implementing programs and projects aimed at raising, clarifying and intensifying a collective awareness of integrity as well as reinforcing a shared culture of integrity in the Company. A continuous exchange of ideas and discussion of issues relating to integrity are key components of the integrity management function.

Volkswagen AG is undergoing the most far-reaching process of change in the Company's history. Particularly the loss of trust as a result of the diesel issue clearly showed that, in terms of integrity, Volkswagen must become a role model for a modern, transparent and successful enterprise. This plan is one of the strategic goals of TOGETHER – Strategy 2025.

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Behaving with integrity is a prerequisite for commercial success and for a positive future for the Company. Only with lasting, dependable integrity will our Company gain and strengthen the trust of its staff, customers, shareholders, business partners and the general public.

#### Integrity program

Volkswagen's goal is to enhance the culture of integrity in the Company and create a collective awareness of integrity. To this end, we launched an integrity program in 2016 involving all employees that is based on six action areas:

- > Dialog & communication
- > Sounding board program
- > Executive program
- > Processes & tools
- > Monitoring & reporting
- > Internationalization

#### Dialog & communication

We provided information at regular intervals on the concept of integrity and its importance as well as on the evolution of the integrity program. In addition, we set up an integrity mailbox to create opportunities for direct communication between the integrity management team and the workforce. An exchange in the form of a live chat also took place on the GroupConnect internal social network.

#### Sounding board program

A shared understanding of what integrity means at Volkswagen can only be developed with the involvement and the experience of the entire workforce. This is why we have instituted the sounding board program as a key initiative in the integrity program. It will ensure close collaboration and dialog between the integrity management team and the workforce with the help of integrity ambassadors – voluntary support staff from management and staff circles. Interactive services as part of this program round off the communications portfolio.

#### Executive program

Management's function as a role model in relation to integrity along with managers' special responsibility was clearly illustrated in a letter signed by all members of the Group Board of Management and in further information to management. The topic of integrity was also a fixed part of many management events.

#### Processes & tools

We are continuously examining the possibility of also implementing our principles of integrity into key management elements of the Company, for example in the field of human resources and collaboration with business partners.

#### Monitoring & reporting

Regular monitoring of the integrity program not only helps us to fine-tune and readjust; it also underlines the relevance of the concept of integrity for employees and managers. Here, continuous evaluation of feedback from the integrity ambassadors and from employees and managers on issues relating to the adaptation and refinement of concepts plays just as important a role as the reporting in internal media and publications such as the sustainability report.

#### Internationalization

Once the pilot phase at the Wolfsburg site has ended, we intend to expand the integrity program to all brands, companies and regions. Those responsible in the areas of governance, risk and compliance are an important link in this context.

#### ACTION IN RESPONSE TO AUDIT CONCLUSIONS

Specific corrective action was proposed by Group Internal Audit for the weaknesses it identified in 2015.

In a structured follow-up process, implementation of the corrective action in 2016 was tracked continuously and reported to the relevant bodies. A total of 31 measures were defined by Group Internal Audit and the majority of them were implemented by the end of 2016. The plan is to implement the remaining measures by the middle of 2017.

While the procedural investigations of Group Internal Audit primarily applied to the processes in connection with the diesel technology in 2015, the findings resulting from the investigations in the reporting period were transformed into general guidelines to shore up governance and compliance. The so-called Golden Rules sharpen the focus even more and increase the acceptance for critical process steps. These rules represent minimum requirements in the organization, process and tools & systems categories in the areas of control unit software development, emission classification and escalation management.

Self-assessments were performed in the Volkswagen Passenger Cars, Audi and Porsche brands to ensure structured application of the Golden Rules and thus to optimize the internal control system (ICS) within the areas affected. The results were validated as an integral part of an investigation by the audit departments in the relevant brands or by Group Internal Audit. By applying this consistent methodology across the brands, the implementation status of the guidelines in the Golden Rules was established and transparency created regarding the degree of maturity of the ICS for the relevant processes, also for the Board of Management.

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In addition, a cross-brand project that ensures similar implementation of the Golden Rules taking the individual features of the brands into account was initiated under the responsibility of Group Research and Development. As part of this, development departments within the group reviewed their processes. Representatives of the brands work on the optimization of their processes in project groups.

Key elements of the process optimization are:

- > Early documentation and interpretation of legislation around the world and alignment of the product portfolio with the legal requirements
- > Guidelines for the development of software for drive control units with documentation of the features with relevance for registration
- > Introduction of multiple controls for approvals in the product development process
- > Reorganization within development for the purpose of separating the responsibility for the development of drives from official approvals
- > Formation of new bodies for cross-brand management and clarification of compliance issues
- > Uniform process standards and work instructions that give those involved legal certainty in the work process
- > Training programs in which everyone involved in the process is required to participate
- Regular reporting to the Group Board of Management in order to create transparency in relation to the implementation status of this process optimization

Adaptation of the Golden Rules to other vehicle development processes and other areas of development is being addressed.

#### TO OUR STAKEHOLDERS

Volkswagen does not tolerate any breaches of the law or other wrongdoing. We deeply and sincerely regret the behavior that gave rise to the diesel crisis. Such misconduct runs contrary to all of the values that Volkswagen stands for. We have taken significant steps to strengthen accountability, extend transparency and prevent something like this from happening again.

The trust of our customers, our shareholders, partners, employees and the general public is our most important asset. The Group has substantially elevated its commitment to working ethically and with integrity. Volkswagen can and will set an example in the years ahead as to how a large, global company embodies and takes its social responsibility seriously.

# **Business Development**

The pace of global economic growth was slightly slower in 2016 than in the previous year. By contrast, global demand for vehicles was higher. Despite a persistently difficult environment, the Volkswagen Group delivered more than 10 million vehicles to customers.

#### GLOBAL ECONOMY GROWS MODERATELY

The moderate growth rate of the global economy slowed to 2.5 (2.8)% in fiscal year 2016. While economic momentum decelerated in the industrialized countries as a whole, growth rates in emerging economies remained virtually constant year-on-year. Inflation increased as a result of the expansionary monetary policies pursued by many central banks and due to rising energy and commodity prices.

#### Europe/Other Markets

The economy of Western Europe continued to recover in the reporting period. At 1.7 (2.0)%, growth in gross domestic product (GDP) was slightly lower than in the previous year. The picture was mixed as regards economic growth in both Northern and Southern Europe. The UK's Brexit referendum in June, when a small majority voted to leave the EU, had a dramatic effect, with direct consequences including uncertainty in the financial markets and dimmer economic prospects for the United Kingdom and Europe as a whole. The eurozone unemployment rate continued to decrease, falling to an average of 10.6 (11.3)%, though rates remained considerably higher in Greece and Spain.

Although GDP grew by a total of 1.3 (0.8)% in Central and Eastern Europe in the reporting period, it remained at a relatively low level. Whereas the comparatively high rate of growth in Central Europe weakened considerably compared with the previous year, the recessionary period of the previous year in Eastern Europe came to an end. The recovery in energy prices was the main positive factor in this trend, while the unresolved conflict between Russia and Ukraine continued to have a negative impact. The decline in economic output in Russia by 0.6 (–3.7)% was much less pronounced in the reporting period than in 2015.

South Africa's GDP expanded by just 0.4 (1.3)%, thus falling substantially short of the already low figure of the

previous year. In addition to a severe drought, ongoing structural deficits and social unrest weighed on the economy.

#### Germany

The German economy continued to profit from positive consumer sentiment and a good labor market, with the 1.8 (1.5)% rise in GDP being somewhat stronger than in the previous year.

#### North America

At 1.6 (2.6)%, economic growth in the USA was slightly lower year-on-year. The economy was supported primarily by private consumption and expansionary monetary policy, whereas private investment growth was weak. The average unemployment rate during the reporting period was 4.9 (5.3)%. The US dollar remained strong, putting domestic goods exports under pressure. At 1.3 (0.9)%, GDP growth in Canada showed only little momentum. Mexico's economic output fell to 2.1 (2.6)%.

#### South America

Brazil experienced its second consecutive year of recession, with economic output falling by 3.6 (–3.8)%. Weak domestic demand, continuing relatively low global commodity prices and political uncertainty weighed on the economy. Argentina's GDP declined by 2.3 (+2.6)%, with structural deficits and high inflation continuing to hamper growth.

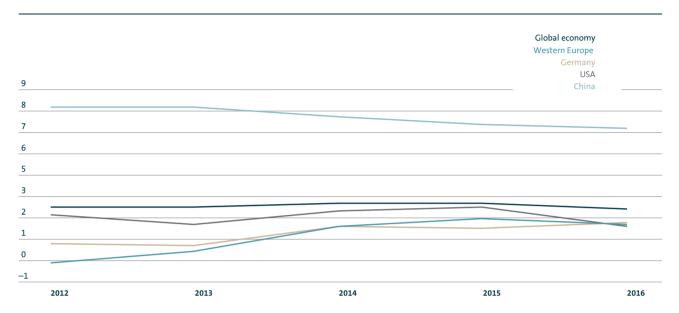
#### Asia-Pacifi

Economic growth in China weakened slightly in 2016, mainly due to structural changes. At 6.7 (6.9)%, however, it was still high compared with other countries worldwide. The Indian economy continued its positive trend with a gain of 6.8 (7.5)% and thereby grew somewhat more slowly than in the previous year. Japan once again posted weak GDP growth of just 1.0 (1.2)%.

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#### **ECONOMIC GROWTH**

Percentage change in GDP



#### GLOBAL DEMAND FOR PASSENGER CARS REACHES RECORD HIGH

Worldwide, the number of new passenger car registrations increased to 81.1 million vehicles in fiscal year 2016, exceeding the previous year's record level by 5.4%. Demand rose in the Asia-Pacific, Western Europe, North America and Central Europe regions, while new passenger car registrations in South America, Eastern Europe and Africa failed to match the prior-year levels.

#### Sector-specific environment

The sector-specific environment was influenced significantly by fiscal policy measures, which contributed substantially to the mixed trends in sales volumes in the markets last year. The instruments used were tax cuts or increases, incentive programs and sales incentives, as well as import duties.

In addition, non-tariff trade barriers to protect the respective domestic automotive industry made the free movement of vehicles, parts and components more difficult. Protectionist tendencies were particularly evident where markets were on the decline.

#### Europe/Other Markets

New passenger car registrations in Western Europe rose by 5.8% in the reporting period to 14.0 million vehicles, the highest level since 2007. This better-than-expected trend was mainly attributable to the positive overall economic environment, low interest rates, low fuel prices and manufacturers' incentive programs. Double-digit growth rates were achieved in Italy (+15.4%) and Spain (+10.9%), especially due

to the release of pent-up demand for replacement vehicles. By contrast, growth in new passenger car registrations was relatively moderate in France, at 5.2%. Demand volume in the United Kingdom (+2.3%) was slightly higher than the record level of the previous year.

At 2.7 million vehicles, the number of new passenger car registrations in Central and Eastern Europe was down 2.3% year-on-year. The decline in Eastern Europe was mainly attributable to the Russian market, which contracted for the fourth year in succession (–11.7%) primarily because of the continuing weak economy and ongoing political tensions. By comparison, new passenger car registrations in the EU member states of Central Europe increased by a substantial 15.2% to 1.1 million units.

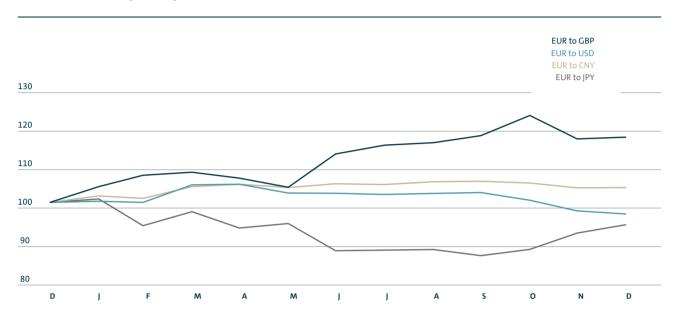
Passenger car sales in the South African market declined by 12.4% in the reporting period to 361 thousand vehicles, the lowest level since 2010. In addition to the weak economic environment, the main reasons for this decrease were low consumer confidence, high interest rates and double-digit growth in new car prices.

#### Germany

In Germany, 3.4 million new passenger vehicles were registered in 2016, 4.5% more than in the previous year. This positive demand trend was due in particular to higher real incomes, the strong labor market and attractive financing options. New passenger car registrations for both private (+6.8%) and commercial (+3.3%) customers contributed to this increase, which resulted in the highest passenger car

#### EXCHANGE RATE MOVEMENTS FROM DECEMBER 2015 TO DECEMBER 2016

*Index based on month-end prices: as of December 31, 2015 = 100* 



market volume since 2009. A slight increase in domestic production (up 0.7% to 5.7 million vehicles) contributed to the ongoing recovery of the German passenger car market, whereas passenger car exports (up 0.1% to 4.4 million vehicles) were on a par with the high levels of the previous year.

#### North America

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At 21.1 million vehicles, sales of passenger cars and light commercial vehicles (up to 6.35 tonnes) in the North American markets were slightly higher in 2016 (+1.8%) than the record level of the prior year. In the USA, demand reached the record set in the previous year with 17.6 million vehicles sold (+0.5%). In addition to the strong labor market, high consumer confidence, low fuel prices and attractive financing and leasing conditions were the main factors in this stable market trend. Models from the SUV, pickup and van segments were the only ones to benefit from this environment (+7.2%), whereas the passenger car segment contracted substantially (-8.1%).

In both Canada (up 2.6% to 1.9 million vehicles) and Mexico (up 18.6% to 1.6 million vehicles), sales of passenger cars and light commercial vehicles continued to grow, topping the record of the prior year in both markets.

#### South America

The South American markets for passenger cars and light commercial vehicles fell by a substantial 11.5% in the reporting period, to 3.7 million units. This trend was mainly

due to the prolonged slump in Brazil, where the number of new registrations fell by 19.9% to 2.0 million vehicles, the fourth successive year of decline. This, the lowest number of vehicle registrations since 2006, was chiefly due to the recessionary economic environment, characterized by rising unemployment, lower real incomes and restricted access to loans. By contrast, Brazil's vehicle exports rose by 24.7% to 520 thousand units.

In Argentina, new registrations of passenger cars and light commercial vehicles increased by 9.8% from the previous year's low level to 677 thousand vehicles. High manufacturer discounts helped to boost demand.

#### Asia-Pacific

The passenger car market volume in the Asia-Pacific region rose by 11.9% in the reporting period to 35.3 million units. In terms of unit numbers, this was the highest increase in new vehicle registrations worldwide. The Chinese market was by far the biggest driver of this growth. The 22.9 million vehicles sold in China (+17.9%) represented a new record. One of the factors contributing to this growth was the tax relief on the purchase of vehicles with engine sizes of up to 1.61 introduced on October 1, 2015, from which attractively priced entry-level models in the SUV segment benefited most.

The number of new vehicle registrations in the Indian passenger car market reached 2.8 million units, up 7.0% year-on-year. This trend was driven by the positive economic environment and the large number of new models.

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In Japan, new passenger cars registrations fell by 1.6% to 4.1 million vehicles, mainly because of a substantial drop in the mini passenger car segment (up to an engine size of 660 cm<sup>3</sup>).

#### MIXED REGIONAL DEMAND FOR COMMERCIAL VEHICLES

In 2016, demand for light commercial vehicles was up slightly overall on the previous year: in total, around 9.6 (9.5) million vehicles were registered worldwide.

In Western Europe, the number of new vehicle registrations rose by 10.0% during the year to 1.8 million units, driven by the region's positive economic performance. The markets in Italy (+28.9%), Spain (+11.6%) and France (+9.4%) recorded high growth rates. In Germany, the 2015 figure was significantly exceeded by 10.2%.

The markets in Central and Eastern Europe saw significant growth on the whole with 303 (287) thousand vehicle registrations. In Russia, ongoing political and economic tensions resulted once again in a decline in demand. The other markets in the region maintained or surpassed their prioryear results, with registrations in Poland in particular rising to 61 (52) thousand units.

In North and South America, the light vehicle market is reported as part of the passenger car market, which includes both passenger cars and light commercial vehicles.

Registrations of light commercial vehicles in the Asia-Pacific region increased to 6.6 million units in the reporting period (+1.9%). In China, the region's dominant market, demand for light commercial vehicles of 4.1 million units was up 4.4% on the prior-year figure. Tax relief for vehicles with engine sizes of up to 1.61 contributed to this growth. As a consequence of the sustained economic growth in India, more vehicles were registered than in 2015; here, 520 (481) thousand new units were registered. The market volume fell in Japan as a result of the persistently weak economic trend (–8.5%).

Global demand for mid-sized and heavy trucks with a gross weight of more than six tonnes was higher in fiscal year 2016 than in the previous year, with 2.3 million new vehicle registrations (+0.9%). The volume of vehicles rose by 0.5% in the markets that are relevant for the Volkswagen Group.

In Western Europe, the number of new truck registrations increased by 8.6% to a total of 280 thousand vehicles on the back of positive economic stimulus. The markets in Italy (+41.9%), France (+13.7%) and Spain (+11.6%) in particular recorded high growth rates. In Germany, Western Europe's largest market, the prior-year figure was exceeded by 3.9%.

Central and Eastern Europe saw demand rise by 10.3% to 129 thousand units. Registrations in Russia moved up 6.9% from a low prior-year level to 48 thousand vehicles, while Poland, among others, generated strong growth (+19.3%).

In North America, the slowdown in the US economy caused demand in the truck market to dwindle slightly; in this region, 488 (531) thousand mid-sized and heavy trucks were registered. The number of new registrations in the US market declined sharply.

South America saw a considerable decline in market volume compared with the previous year. Here, the number of new vehicle registrations fell by 25.0% to 95 thousand units. In Brazil, the region's largest market, demand for trucks, at 48 (68) thousand vehicles, was down substantially on the already low prior-year figure as a result of persistently weak economic output and high inflation rates. New vehicle registrations slumped in Argentina (–22.8%) due to pull-forward effects in 2015 attributable to the introduction of the Euro 5 emission standard in addition to the economic downturn.

At 545 (526) thousand new registrations, the volume of vehicles in the Asia-Pacific region – excluding the Chinese market – was higher than in 2015. Demand in India increased in the reporting period: a total of 292 thousand vehicles were registered, 9.9% more than in the previous year. This was due to the country's positive economic performance, demand for replacement vehicles and the improved investment climate. Demand in China, the world's largest truck market, surged in 2016 to a total of 600 thousand units from a weak prior-year level (+11.4%).

Demand for buses in the markets that are relevant for the Volkswagen Group was perceptibly lower than in the previous year. Negative economic trends in South America led to a marked decline in demand, though the markets in Central and Eastern Europe expanded considerably.

#### TRENDS IN THE MARKETS FOR POWER ENGINEERING

The markets for power engineering are subject to differing regional and economic factors. Consequently, their business growth trends are generally independent of each other.

The merchant shipbuilding market again experienced very muted order activity in the reporting period. Existing and further ongoing overcapacity had a negative impact on utilization levels of the entire merchant fleet. While bulk carriers were particularly affected by low freight rates, low transport rates and fierce competition triggered a further wave of consolidation in the container ship sector as

companies merged or were squeezed out of the market altogether. Despite the slight recovery in oil prices, the persistent overcapacity in the offshore sector continued to discourage investments in oil production, with the result that orders for new ships in this segment dried up almost completely. By contrast, demand for cruise ships and ferries rose. The trend toward gas-powered ships weakened somewhat in the reporting period due to the drop in liquidfuel prices. Other reasons for this decrease were the lack of refueling infrastructure in some places and uncertainty as to future emission standards. The special market for government vessels continued on a positive trajectory. On the whole, the marine market volume was substantially lower year-on-year. China, South Korea and Japan remained the dominant shipbuilding countries, accounting for a global market share of more than 80% measured in terms of tonnage ordered. On account of reduced market volumes, all market segments are seeing considerably higher competitive pressure and a sharp drop in prices as a result.

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Although demand for energy solutions continued to be strong in developing countries and emerging markets throughout the reporting period, the difficult economic environment and financing conditions led to noticeable delays in order placement. Regions such as the Middle East and Southeast Asia, and to an increasing degree South America, continue to be relevant for the regional markets for energy solutions. Overall, there was a slight year-on-year increase in demand for decentralized diesel and gas engine power plants. The shift away from oil-fired power plants toward dual-fuel and gas-fired power plants continued. The increasing pressure through competition and pricing is impacting on the earnings quality of the orders.

The market for the construction of turbomachinery is mainly dominated by investment projects in oil and gas, the processing industry and power generation. The persistently low oil price caused leading oil and gas companies to slash investment yet again, causing order placement to be further postponed or even canceled altogether. Thus far, the slight rise in oil prices recorded in the last months of the reporting period has not led to any recovery in demand. Demand for products from the processing industry and power generation remained generally weak as well. Overcapacity in some industries, such as steel-making, prevented any possible recovery in the corresponding markets. Insufficient capacity utilization at many manufacturers additionally intensified the level of competition. Overall, the market volume for turbomachinery in the reporting period was once again well below the prior-year level. Competition remains fierce and there is considerable pressure on prices.

On the whole, the after-sales market performed well. In particular, after-sales business for large-scale engines in the marine and power plant sector benefited from rising interest in long-term maintenance contracts.

#### DEMAND FOR FINANCIAL SERVICES

Demand for automotive-related financial services remained high in fiscal year 2016. In particular, there was an increase in demand for insurance and service products such as maintenance and servicing agreements, as customers in more advanced automotive-related financial services markets are putting greater focus on optimizing overall running costs. In the fleet segment, some customers moved beyond pure fleet operation to full mobility management using automotive financial service providers. There was also increased demand from both private and business customers for mobility services centered on vehicle usage rather than ownership.

In the European market, automotive-related financial services continued to enjoy rising popularity during the reporting period. The overall market development was positive in most European countries. Sales of financial services rose especially strongly in the UK, France, Spain and Italy. The UK's decision to leave the EU has not yet had a negative impact on local demand for financial services. The financial services business in Europe was also strengthened by a positive cross-border trend in demand for after-sales products such as insurance and products relating to wear and tear.

In 2016, the German market once again recorded growth in the financing and leasing business, mainly driven by the business customer segment. Alongside traditional products, there was a particular focus on automotive services.

In South Africa, demand for financial services products was stable despite a declining market for new vehicles. However, the macroeconomic environment resulted in a slight decline in lending to private customers.

Automotive financial services were also in high demand in North America. In the United States, the overall market once again performed positively. In particular, demand for leasing through captive financial service providers remained at a consistently high level. In Mexico, sales of financial services involving products such as extended warranties continued to be high. Group Management Report Business Development 103

The difficult macroeconomic and political situation in Brazil continued in 2016. This had a negative impact on the consumer credit business for new vehicles and sales of the country-specific financial services product Consorcio, a lottery-style savings plan. However, the negative trend abated slightly in the second half of the year. Despite the reforms initiated, the economic situation in Argentina remained difficult and continued to hold back sales of automotive-related financial services.

The performance of markets in the Asia-Pacific region during the reporting period was mixed. In China, the proportion of loan-financed vehicle purchases rose. Despite increasing restrictions on registrations in metropolitan areas, there is still considerable potential to acquire new customers for automotive-related financial services, particularly in the interior of the country. Demand stagnated in Japan and South Korea. In Australia, meanwhile, the central bank's policy of low interest rates stimulated overall demand for automotive-related financial services and service contracts.

The financial services market in the commercial vehicles business area performed positively again in Europe. Owing to the difficult economic situation in Brazil, the truck and bus business and the related financial services market declined further here. However, this negative trend tapered off slightly in the second half of the year.

#### NEW GROUP MODELS IN 2016

The Volkswagen Group launched a large number of attractive new models on the market in the reporting period, some of them based on the Modular Transverse Toolkit (MQB). The current product portfolio comprises 336 models. It covers almost all key segments and body types, with offerings from small cars to super sports cars in the passenger car segment, and from pickups to heavy trucks and buses in the commercial vehicles segment, as well as motorcycles. Our product portfolio is systematically geared to profitable growth and takes account of regional market and customer needs.

In 2016, the Volkswagen Passenger Cars brand launched the successor to the successful Tiguan SUV model on the market, with a striking design and technical innovations from the MQB. The Beetle family was upgraded and expanded to include the Beetle Dune with an off-road look. The popular up! and e-up! were also rejuvenated. The new flagship model Phideon celebrated its premiere in China. This locally produced luxury saloon for discerning Chinese customers impresses with its cutting-edge technology, elegant design and plush interior. The Magotan now boasts state-of-the-art MQB technology. The portfolio of vehicles offering spacious interiors was extended to include the Touran L and the Golf Sportsvan. The Lamando GTS made its first appearance with a

range of powerful engines and a sporty design. The C-Trek, which is based on the new Bora, complements the crossover portfolio. The Chinese versions of the Passat, Santana and Jetta were all updated. In South America, the product portfolio, which is tailored to the specific needs of the local market, was modernized and made even more attractive. The Voyage and Saveiro models were given an upgrade, while the TSI engine was added as an option for the up!, Golf and Tiguan models as of 2016.

The Audi brand systematically expanded its range of SUVs in 2016. The Q family was extended to include the new sporty compact entry-level model Q2, tapping into another new market segment for the brand. The robust Q7 series was supplemented by the Q7 e-tron, the world's first plug-in hybrid with quattro TDI drive. In addition, the successor to the dynamic A5 Coupé was launched. The A4 family was enhanced through the addition of the sporty S4 Saloon and S4 Avant S models, as well as the A4 allroad quattro. The revamped A3 family hit the market mid-year. In China, the A6 L – the enhanced, long-wheelbase version of the popular luxury class A6 Saloon – was unveiled in 2016. The A4 L and Q3 models produced in China were also upgraded.

ŠKODA launched the Superb Sportline on the European market in the reporting period. The Superb Combi debuted in Russia, while the brand introduced the new-generation Superb and updated Rapid in India.

SEAT started its product offensive in 2016 with the new SUV Ateca, followed in the course of the year by the particularly robust off-road version, the Ateca X-Perience.

Porsche's activities included the introduction of the Targa and Turbo versions of the new 911 generation, which boast, among other features, improved design and equipment levels. Porsche also presented the successors to the Boxster and Cayman models, as well as the second-generation Panamera, which has been redeveloped from the ground up. The dynamic Macan GTS was another model that became available as of 2016.

Bentley unveiled a new series in the reporting period, launching the Bentayga, the most luxurious SUV in the world. The Mulsanne was upgraded and a new version with a lengthened wheelbase was added. Bentley complemented its portfolio with two high-performance models – the Flying Spur V8 S and W12 S.

Super sports car manufacturer Lamborghini premiered the Huracán Spyder, which combines the technology and performance of the Huracán with the emotion of a Spyder. The Aventador Superveloce Roadster, the fastest and most exciting Lamborghini of all time, was also introduced.

Volkswagen Commercial Vehicles launched the updated version of the popular Amarok pickup in the year under review.

In 2016, Scania presented the new generation of its R-series and S-series trucks, boasting newly developed cabs and offering efficiency-enhancing services. The company also launched the automated gear-changing system Scania Opticruise for gas-powered vehicles and the Scania Interlink intercity coach.

MAN presented engines for its TG series that are considerably more fuel-efficient and high-performance, as well as the MAN EfficientLine 3, which has been optimized for efficiency. It also introduced a new modular concept for combined heat and power gas engine power plants in response to the growing demand in Europe for highly efficient, flexible power generation technologies.

Ducati launched two further versions of the Scrambler series: the Sixty2 and Flat Track Pro. The new XDiavel, Hyperstrada 939 and 959 Panigale models, among others, also debuted in 2016, as did the 1200 Enduro and 1200 Pike's Peak versions of the Multistrada series.

#### **VOLKSWAGEN GROUP DELIVERIES**

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In fiscal year 2016, the Volkswagen Group increased its deliveries to customers worldwide by 3.7% and reached a new all-time high of 10,296,997 vehicles. This means that we exceeded the mark of 10 million units sold for the second time since 2014. The chart on the next page shows how deliveries changed from month to month and compares each monthly figure to the same month of the previous year. Deliveries of passenger cars and commercial vehicles are reported separately in the following.

#### VOLKSWAGEN GROUP DELIVERIES1

	2016	2015	%
Passenger Cars	9,635,484	9,320,687	+ 3.4
Commercial Vehicles	661,513	609,909	+ 8.5
Total	10,296,997	9,930,596	+ 3.7

<sup>1</sup> Deliveries for 2015 have been updated to reflect subsequent statistical trends. The figures include the Chinese joint ventures.

#### PASSENGER CAR DELIVERIES WORLDWIDE

With its passenger car brands, the Volkswagen Group has a presence in all relevant automotive markets around the world. The Group's key sales markets currently include Western Europe, China, the USA, Mexico and Brazil. Our wide range of attractive and efficient vehicles gives us a strong position in a persistently challenging competitive

environment. The Group recorded encouraging growth in many key markets.

Deliveries of passenger cars to customers rose during the reporting year to 9,635,484 units amid continued difficult conditions in relevant markets such as Brazil and Russia. This was an increase of 314,797 vehicles or 3.4% on 2015. The passenger car market as a whole expanded by 5.4% in fiscal year 2016, which meant that the Volkswagen Group's share of the global market declined slightly to 11.9 (12.2)%. The Group recorded the highest absolute growth in China. Our sales figures in Brazil, Russia and other countries were impacted by low demand. The diesel issue affected the individual markets. mainly in the USA and Canada, in different ways during the reporting year, depending on the brand. Nearly all brands surpassed the previous year's delivery figures, with the Volkswagen Passenger Cars brand recording the strongest growth in absolute terms. Audi, ŠKODA, and Porsche set new records, as did Bentley and Lamborghini.

The table on page 107 gives an overview of passenger car deliveries to customers of the Volkswagen Group in the regions and the key individual markets. The demand trends for Group models in these markets and regions are described in the following sections.

#### Deliveries in Europe/Other markets

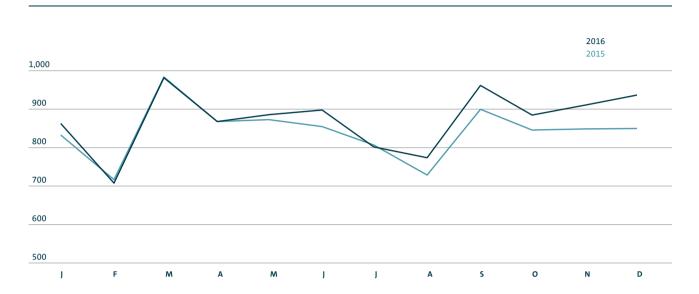
In 2016, the passenger car market as a whole expanded by 5.8% in Western Europe. The Volkswagen Group handed over 3,114,030 vehicles to customers here, 1.7% more than in the previous year. Demand for Group models was up year-on-year in virtually all major markets in this region. The Touran, Audi A4, Audi Q3, Audi Q7, ŠKODA Superb as well as Porsche's Boxster and Cayman models saw the highest growth rates. The ŠKODA Fabia and Porsche Macan models were also very popular. The new Tiguan and the new SEAT Ateca were very well received by the market. The Group's first luxury SUV, the Bentley Bentayga, celebrated its successful market debut. The Group's share of the passenger car market in Western Europe was 22.3 (23.2)%.

In the passenger car markets of Central and Eastern Europe, which declined overall, we handed over 5.8% more vehicles to customers in 2016 than in the previous year. We recorded growth in almost all markets, with the highest increases recorded in Poland and the Czech Republic. In Russia, the continuing weak economic situation and political tensions caused a decline in our deliveries to customers. Demand was highest for the Polo, ŠKODA Rapid and ŠKODA Octavia models. Our share of the passenger car market in Central and Eastern Europe rose to 21.9 (20.2)%.

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#### VOLKSWAGEN GROUP DELIVERIES BY MONTH

Vehicles in thousands



In South Africa, the number of Volkswagen Group vehicles delivered to customers fell by 13.0% year-on-year in 2016. The passenger car market as a whole declined by 12.4% in the same period. Demand was highest for the Polo.

Demand for Volkswagen Group passenger cars in the markets of the Middle East region in 2016 was up by 0.7% compared with the previous year. The Polo, Golf, Passat and ŠKODA Octavia models were particularly popular.

#### Deliveries in Germany

The German passenger car market continued its growth in the 2016 fiscal year, expanding by 4.5%. The Volkswagen Group handed over 1,136,971 vehicles to customers in its home market. This was slightly fewer than in the previous year (–0.9%). The Touran, Audi Q7, Audi Q5 and ŠKODA Superb models saw the highest growth rates. The Tiguan, Audi A4 and SEAT Ateca models were also very popular. In the registration statistics of the Kraftfahrt-Bundesamt (KBA – German Federal Motor Transport Authority), eight Group models led their respective segments at the end of 2016: the upl, Polo, Golf, Tiguan, Touran, Passat, Audi A6 and Porsche 911. The Golf continued to top the list of the most popular passenger cars in Germany in terms of registrations.

#### Deliveries in North America

In North America, the Volkswagen Group delivered 928,033 vehicles to customers in a slightly growing overall market for passenger cars and light commercial vehicles in the reporting year. This was 0.6% more than in the previous year. The Group's market share was 4.4 (4.5)%. The Jetta remained the Group's best-selling model in North America.

Demand for Volkswagen Group models on the US market was down 2.6% year-on-year in 2016, primarily as a result of the diesel issue. The overall market remained steady year-on-year (+0.5%) over this period. Models in the SUV and pickup segments remained in particularly high demand. The Tiguan, Audi A4, Audi Q3, Audi Q7 and Porsche Macan models, among others, registered increases in demand.

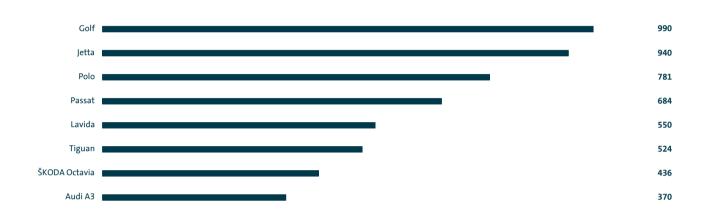
In the growing Canadian market, we handed over 5.6% fewer vehicles to customers in the reporting year than in 2015, mainly as a consequence of the diesel issue. The most sought-after Group model was the Jetta, followed by the Golf. The Audi A4, Audi Q7 and Porsche Macan models enjoyed rising demand.

In Mexico, the strong momentum of the market as whole continued in 2016. Group sales were up 12.8% year-on-year. The Vento, Jetta, Gol and SEAT Ibiza models were especially popular.

#### WORLDWIDE DELIVERIES OF THE GROUP'S MOST SUCCESSFUL MODEL RANGES IN 2016

Vehicles in thousands

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#### Deliveries in South America

Conditions in the South American markets for passenger cars and light commercial vehicles were very challenging in 2016. Amid sharp overall declines in markets in this region, the Volkswagen Group delivered 362,343 vehicles to customers, 26.0% fewer than in the already weak previous year. The Volkswagen Group's share of the passenger car market in this region declined to 10.5 (12.5)%.

In the rapidly deteriorating Brazilian market, 2016 saw demand for Group models decline by 34.6% year-on-year. The up!, Fox, Gol and Saveiro witnessed the strongest sales figures.

In Argentina, the market as a whole continued its recovery in the reporting year. The Volkswagen Group sold 5.6% fewer vehicles here than a year earlier. The Group models with the highest numbers of registrations in Argentina remained the Gol and Suran.

#### Deliveries in the Asia-Pacific region

The passenger car markets in the Asia-Pacific region experienced the largest growth in absolute terms of any world region in 2016. Demand for Volkswagen Group models there increased by 9.8% year-on-year to 4,282,656 units; the market share in this region was 12.1 (12.4)%.

China, the world's largest single market, was again the growth driver of the Asia-Pacific region in the reporting year, recording the highest absolute increase. Attractively priced entry-level models in the SUV segment remained highly sought after. The Volkswagen Group delivered 12.2% more vehicles to customers in China than in the prior-year period. The Jetta, Lavida und Sagitar models were particularly popular. The Lamando, Santana, Audi A3, Audi Q3, ŠKODA Superb and Porsche Macan models also recorded encouraging growth rates. The new versions of the Bora, Touran, Magotan, Audi A4 L and Audi A6 L models and the locally produced Golf Sportsvan were successfully launched in the market.

In the growing passenger car market in India, 4.7% fewer Volkswagen Group vehicles were sold in the reporting year than in 2015. The most popular Group model in India was the Polo. The Ameo was successfully launched in the market.

In Japan, sales of Volkswagen Group vehicles were down 8.8% on the prior-year figure. The total market volume declined by 1.6% in the same period. Demand was highest for the Polo and Golf models.

	DELIVERIES	DELIVERIES (UNITS)	
	2016	2015	(%)
Europe/Other markets	4,062,452	4,006,105	+1.4
Western Europe	3,114,030	3,062,371	+1.7
of which: Germany	1,136,971	1,147,484	-0.9
United Kingdom	523,111	521,345	+0.3
France	249,145	252,530	-1.3
Spain	244,990	235,141	+4.2
Italy	238,537	207,821	+14.8
Central and Eastern Europe	592,275	559,946	+5.8
of which: Russia	155,672	164,653	-5.5
Czech Republic	134,926	126,886	+6.3
Poland	122,622	104,772	+17.0
Other markets	356,147	383,788	-7.2
of which: Turkey	173,965	164,787	+5.6
South Africa	78,897	90,659	-13.0
North America	928,033	922,774	+0.6
of which: USA	591,063	607,096	-2.6
Mexico	238,946	211,845	+12.8
Canada	98,024	103,833	-5.6
South America	362,343	489,636	-26.0
of which: Brazil	231,196	353,508	-34.6
Argentina	92,257	97,775	-5.6
Asia-Pacific	4,282,656	3,902,172	+9.8
of which: China	3,975,071	3,542,467	+12.2
Japan	83,109	91,153	-8.8
India	66,046	69,323	-4.7
Worldwide	9,635,484	9,320,687	+3.4
Volkswagen Passenger Cars	5,980,307	5,823,414	+2.7
Audi	1,867,738	1,803,246	+3.6
ŠKODA	1,126,477	1,055,501	+6.7
SEAT	408,703	400,037	+2.2
Bentley	11,023	10,100	+9.1
Lamborghini	3,457	3,245	+6.5
Porsche	237,778	225,121	+5.6
Bugatti		23	-95.7

<sup>1</sup> Deliveries for 2015 have been updated to reflect subsequent statistical trends. The figures include the Chinese joint ventures.

#### COMMERCIAL VEHICLE DELIVERIES

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The Volkswagen Group delivered a total of 661,513 commercial vehicles to customers worldwide in 2016, 8.5% more than in the previous year. Trucks accounted for 165,806 units (+2.4%) and buses for 17,775 units (+3.7%). Sales by the Volkswagen Commercial Vehicles brand were up 10.9% on the previous year, with 477,932 vehicles delivered. The MAN brand handed over 102,235 vehicles to customers, 0.2% fewer than in 2015, while the Scania brand's deliveries were up 6.2% year-on-year at 81,346 units.

In Western Europe, deliveries were up 13.6% on the previous year at 418,931 vehicles as a result of the sustained economic recovery. Of this total, 327,225 were light commercial vehicles, 86,472 were trucks and 5,234 were buses. The Transporter and Caddy were the most sought-after Group models in Western European markets.

We handed over 65,436 vehicles to customers in Central and Eastern Europe in the period from January to December 2016. This was 18.2% more than in the previous year. Of this figure, 36,484 were light commercial vehicles, 28,184 were trucks and 768 were buses. In Russia, the region's largest market, we delivered 11,300 vehicles. This was 15.4% more than in the previous year. The Transporter and the Caddy were the Group models experiencing the highest demand in Central and Eastern Europe.

In the Other markets, deliveries of Volkswagen Group commercial vehicles fell by 5.3% to a total of 70,927 units: 51,784 light commercial vehicles, 16,227 trucks and 2,916 buses.

Deliveries in North America amounted to 11,140 vehicles (+22.4%), which were handed over almost exclusively to customers in Mexico. Of this figure, 8,479 were light commercial vehicles, 669 were trucks and 1,992 were buses.

The Volkswagen Group sold a total of 59,196 units in South America (-14.2%), of which 32,258 were light commercial vehicles, 22,828 trucks and 4,110 buses. Once again, the Amarok was particularly popular. The persistently difficult economic situation and the difficult financing conditions in Brazil led to a 27.3% decrease in deliveries; 8,441 light commercial vehicles, 16,274 trucks and 1,817 buses were handed over to customers in the country.

In the Asia-Pacific region, the Volkswagen Group delivered 35,883 vehicles to customers in the reporting period; 21,702 light commercial vehicles, 11,426 trucks and 2,755 buses. This was 8.9% more than in the previous year. The Transporter and the Amarok were the most popular Group models. In China, sales were up 14.7% on the previous year at 7,071 vehicles. Of this total, 3,980 were light commercial vehicles, 2,755 were trucks and 336 were buses.

#### COMMERCIAL VEHICLE DELIVERIES TO CUSTOMERS BY MARKET<sup>1</sup>

Europe/Other markets  Western Europe	555,294	498,906	(%)
· ·	555,294	498 906	
Western Europe		.50,500	+11.3
	418,931	368,622	+13.6
Central and Eastern Europe	65,436	55,348	+18.2
Other markets	70,927	74,936	-5.3
North America	11,140	9,099	+22.4
South America	59,196	68,958	-14.2
of which: Brazil	26,532	36,513	-27.3
Asia-Pacific	35,883	32,946	+8.9
of which: China	7,071	6,165	+14.7
Worldwide	661,513	609,909	+8.5
Volkswagen Commercial Vehicles	477,932	430,874	+10.9
Scania	81,346	76,561	+6.2
MAN	102,235	102,474	-0.2

<sup>1</sup> Deliveries for 2015 have been updated to reflect subsequent statistical trends.

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#### DELIVERIES IN THE POWER ENGINEERING SEGMENT

Orders in the Power Engineering segment are usually part of major investment projects. Lead times typically range from just under one year to several years, and partial deliveries as construction progresses are common. Accordingly, there is a time lag between incoming orders and sales revenue from the new construction business.

Sales revenue in the Power Engineering segment was largely driven by Engines & Marine Systems and Turbomachinery, which together generated almost three quarters of the overall revenue volume. Eight engines were delivered for a new power plant in Nicaragua, for instance. The power plant will have an output of 140 MW once it has been completed and put into operation and will cover around 10% of Nicaragua's total energy needs.

## ORDERS RECEIVED IN THE PASSENGER CARS SEGMENT IN WESTERN EUROPE

Due to the positive development of the Western European markets, demand for passenger cars increased in fiscal year 2016 compared with the previous year. Incoming orders in the reporting period were 1.4% higher than in 2015. While orders received in Germany were down slightly (–1.7%), other key markets in this region contributed to this increase.

#### ORDERS RECEIVED FOR COMMERCIAL VEHICLES

Demand for the Volkswagen Group's light commercial vehicles in the Western European markets rose year-on-year in 2016. At 338,858 units, orders received were up 16.5% compared with the previous year.

New orders for mid-sized and heavy trucks and buses witnessed a positive trend overall in 2016, with orders received for 190,573 vehicles (+3.2%). In Western Europe, our main sales market, positive economic stimulus gave a boost to incoming orders. In South America, however, the deterioration in the economic situation had a negative impact on the order intake.

#### ORDERS RECEIVED IN THE POWER ENGINEERING SEGMENT

The long-term performance of the Power Engineering business is determined by the macroeconomic environment. Individual major orders lead to fluctuations in incoming orders during the year that do not correlate with these long-term trends.

Orders received in the Power Engineering segment in 2016 amounted to €3.3 (3.4) billion. Engines & Marine Systems and Turbomachinery generated the most new

orders, together accounting for almost three-quarters of the order volume. For example, a Turkish energy company ordered twelve engines with a combined output of 227 MW for its floating power plants, which provide a flexible solution to energy bottlenecks. A German energy provider awarded a contract for the construction of a gas engine power plant with cogeneration. The plant will be powered by three MAN gas engines. As well as electricity, it will also generate up to 30 MW for district heating.

#### **VOLKSWAGEN GROUP FINANCIAL SERVICES**

The Financial Services Division combines the Volkswagen Group's dealer and customer financing, leasing, banking and insurance activities, fleet management and mobility offerings. The division comprises Volkswagen Financial Services and the financial services activities of Scania, Porsche and Porsche Holding Salzburg.

The number of new contracts signed worldwide in the Customer Financing/Leasing and Service/Insurance areas rose by 13.1% to 7.1 million contracts in 2016. At 17.4 million, the total number of contracts at the end of 2016 exceeded the figure at the prior-year reporting date by 10.0%. The underlying contract types were modified according to their significance. The number of contracts in the Customer Financing/Leasing area was up by 6.8% to 9.5 million, while it increased by 14.1% to 8.0 million contracts in the Service/Insurance area. The ratio of leased or financed vehicles to Group deliveries (penetration rate) in the Financial Services Division's markets rose to 33.3 (31.5)% in the reporting period.

In Europe/Other markets, 5.2 million new contracts were signed in the reporting period, 14.1% more than in 2015. The number of contracts was up 10.4% to 12.4 million as of December 31, 2016. This included 5.9 million contracts in the Customer Financing/Leasing area, an increase of 7.2% on the figure for 2015. The share of leased or financed vehicles increased from 44.3% to 46.8% of deliveries.

The total number of contracts in the Financial Services Division in North America stood at 2.8 million (+13.0%). Of this figure, 1.8 million contracts were attributable to the Customer Financing/Leasing area, 6.1% more than in the previous year. With 988 thousand new contracts, the number of new contracts rose by 7.6% compared with the previous year. The penetration rate in North America increased to 63.3 (61.8)%.

In South America, 197 thousand new contracts were signed in the reporting period (–27.2%). The number of contracts was down 16.3% year-on-year to 647 thousand

contracts as of year-end 2016. The majority of these were attributable to the Customer Financing/Leasing area. The penetration rate in South America was 30.4 (35.5)%.

In the Asia-Pacific region, 740 thousand new contracts were signed in the reporting year, an increase of 33.6%. The total number of contracts amounted to 1.5 million (+16.6%), of which 1.2 million contracts were attributable to the Customer Financing/Leasing area (+22.5%). The share of leased or financed vehicles in the region rose from 11.6% to 15.1% of deliveries.

#### SALES TO THE DEALER ORGANIZATION

In the reporting period, the Volkswagen Group's sales to the dealer organization worldwide – including the Chinese joint ventures – amounted to 10,391,113 vehicles, up 3.8% on the prior-year figure. The increase of 4.6% in unit sales outside Germany is primarily attributable to stronger demand in Western Europe and Central Europe, as well as in China. In Germany, the number of vehicles sold decreased by 1.7%. At 12.1%, the proportion of the Group's sales accounted for by Germany was lower than in 2015 (12.8%).

The Polo, Golf, Jetta and Passat were our biggest sellers last year. The Touran, Lamando, Lavida, Jetta and Tiguan models, the Audi A4 family, the Audi Q3, Q7, the ŠKODA Fabia, Rapid and Superb as well as the SEAT Alhambra and Ateca saw the fastest growth in demand. The Porsche Cayman, Boxster, 911 and Macan models were also very well received by the market.

#### PRODUCTION

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The Volkswagen Group produced 10,405,092 vehicles worldwide in fiscal year 2016, 3.9% more than in the previous year. In total, our Chinese joint ventures produced 13.9% more units than in the year before. The percentage of the Group's total production accounted for by Germany was lower than in 2015, at 25.8 (26.8)%. Our plants worldwide produced an average of 43,186 vehicles per working day, an increase of 3.1% on the prior-year level. The Volkswagen Group production figures do not include the Crafter models built in the Daimler plants.

#### INVENTORIES

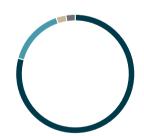
Global inventories at Group companies and in the dealer organization were higher at the end of the reporting period than at year-end 2015, mainly due to demand-induced stock building in China and Western Europe.

#### **EMPLOYEES**

Including the Chinese joint ventures, the Volkswagen Group employed an average of 619,346 people in fiscal year 2016, an increase of 2.5% year-on-year. Our companies in Germany employed 279,993 people on average in 2016; at 45.2 (45.6)%, their share of the headcount was slightly below the level of the previous year. The Volkswagen Group had 601,443 active employees (+2.8%) as of December 31, 2016. In addition, 5,782 employees were in the passive phase of their partial retirement and 19,490 young people were in vocational traineeships (+4.5%). The Volkswagen Group's headcount was 626,715 employees (+2.7%) at the end of the reporting period. Significant factors for the increase in employees were the recruitment of specialists, particularly in Germany and China, volume-driven growth outside of Germany and the expansion of the workforce in our new plants in Mexico and Poland. A total of 281,518 people were employed in Germany (+1.0%), while 345,197 were employed abroad (+4.2%).

#### **EMPLOYEES BY DIVISION/BUSINESS AREA**

as of December 31, 2016



Passenger Cars 496,771
Commercial Vehicles 97,351
Power Engineering 16,808
Financial Services 15,785

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# **Shares and Bonds**

Volkswagen AG's ordinary and preferred shares underperformed the market as a whole in 2016 in a volatile market environment.

#### EQUITY MARKETS

Prices on the international equity markets experienced volatility in the reporting period. The DAX recorded a slight increase overall. In particular, recurring concerns about the economic performance of important industrialized nations, whether the United Kingdom would remain in the EU, the development of the oil price and the central banks' monetary policy caused considerable volatility in the markets.

The beginning of the first quarter saw capital market participants become more unsettled due to the low oil price and falling prices on the Chinese stock market in response to a slowdown in Chinese economic growth. In mid-January, prices were temporarily propped up by hopes that the European Central Bank (ECB) would further loosen its monetary policy, but subsequently continued their downward trend in the wake of negative economic data from China. In mid-February, the DAX began to recover on the strength of an expected stabilization in the oil price and positive economic data from the USA. Concerns about whether the United Kingdom would remain in the EU caused prices to drop temporarily. Prices recovered over the further course of the first quarter as the ECB expanded its bond-buying program and cut its key interest rate.

Fears of an appreciation of the euro and deteriorating corporate data from Germany caused prices to decline at the beginning of the second quarter. The German benchmark index staged a temporary recovery in mid-April on the back of the rising oil price, which is usually regarded as a positive indicator for global economic growth, and favorable economic data from China. May saw prices move sideways before rising late in the month, buoyed by a further oil price increase.

Despite uncertainty over the United Kingdom's continued membership of the EU, the DAX was propped up for a time in June by hopes that the US Federal Reserve would continue its loose monetary policy. The referendum at the end of June, which resulted in the British public voting to leave the EU, led to sharp falls in stock prices.

Uncertainties in the Italian banking system prompted a decline in the German benchmark index at the beginning of the third quarter. The DAX rose in mid-July on the back of speculation about rate cuts in the UK, strong labor market data in the US and rumors that the major US bank JP Morgan would prop up Italy's banking system. In August, the Bank of England cut its key interest rate and announced a program to buy up government and corporate bonds. This, along with hopes of a gradual increase in interest rates in the USA, caused share prices to rise. Following a temporary dip, prices climbed over the further course of the third quarter, buoyed by the continued loose monetary policy of the Bank of Japan and the US Federal Reserve.

Reports about the banking sector weighed on the markets at the start of the fourth quarter. Positive economic data from China caused stock prices to recover in mid-October. Further on in the quarter, uncertainty in connection with the US presidential election and the referendum on constitutional changes in Italy generated price volatility. The ECB's continuation of its expansionary monetary policy and the weak euro gave share prices a boost in December.

At the end of 2016, the DAX had reached 11,481 points, an increase of 6.9% on the previous year's figure. The EURO STOXX Automobiles & Parts closed the year at 521 points, 4.1% lower than on the last day of trading in 2015.

Shares and Bonds Group Management Report

#### SHARE PRICE DEVELOPMENT FROM DECEMBER 2015 TO DECEMBER 2016

Index based on month-end prices: December 31, 2015 = 100

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#### MOVEMENTS IN THE PRICE OF VOLKSWAGEN'S SHARES

On the whole, Volkswagen AG's ordinary and preferred shares declined in 2016 amid considerable volatility, underperforming the overall market but outperforming the automotive sector.

In the first quarter, both classes of shares lagged the downward market environment in a highly volatile environment. This was due to speculation about the impact of the diesel issue in addition to general economic data. The press release issued at the beginning of February stating that Volkswagen's operating profit before special items for fiscal year 2015 was on a level with the previous year had a stabilizing effect on share prices. In March, positive sales and business figures released by individual Group brands led the shares to gain ground, some of which was lost again towards the end of the first quarter.

In the period from April to June, Volkswagen's shares followed the market trend, which saw a decline overall. This was due to speculation about the impact of the diesel issue in addition to general economic data. In April, prices stabilized following the news that an agreement in principle in connection with the diesel issue had been reached in the USA, as well as the publication of the Volkswagen Group's annual report. In a market environment dominated by

uncertainty, prices were shored up in June by the presentation of the new TOGETHER – Strategy 2025 and the announcement that Volkswagen had reached settlement agreements in the USA.

In the third quarter, the prices of Volkswagen shares tracked the market uptrend but continued to trail the market. Speculation about further developments in the negotiations and the preliminary settlement agreements in the USA in connection with the diesel issue as well as uncertainty about additional legal risks impacted on the price performance of Volkswagen's shares.

In the fourth quarter, both classes of shares largely made up for their losses during the year to date. Strong delivery figures, approval of the settlement agreements reached in the USA, the announcement of the pact for the future and the Volkswagen Passenger Cars brand's Transform 2025+ strategy as well as expectations that the diesel issue will be clarified in relation to 3.0 l diesel engines had a positive effect on stock prices.

■ FURTHER INFORMATION ON VOLKSWAGEN SHARES www.volkswagenag.com/ir

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Volkswagen AG's preferred shares reached their highest daily closing price for the year of €138.80 on December 21, 2016. They recorded their lowest closing price for the reporting period of €94.00 on February 11, 2016. The Company's preferred shares closed the end of 2016 at €133.35, down 0.3% on the 2015 closing price.

Volkswagen's ordinary shares reached their highest closing price of €144.20 on December 21, 2016 as well. They also recorded their lowest daily closing price for the year (€108.95) on February 11, 2016. The ordinary shares were trading at €136.75 on the last day of trading in 2016, down 3.9% on the price at the end of 2015.

Additional Volkswagen share data, plus corporate news, reports and presentations can be downloaded from our website at www.volkswagenag.com/ir.

#### SHAREHOLDER STRUCTURE AT DECEMBER 31, 2016

Volkswagen AG's subscribed capital amounted €1,283,315,873.28 at the end of the reporting period. The shareholder structure of Volkswagen AG as of 31 December, 2016 is shown in the chart on this page.

The distribution of voting rights for the 295,089,818 ordinary shares was as follows at the reporting date: Porsche Automobil Holding SE, Stuttgart, held 52.2% of the voting rights. The second-largest shareholder was the State of Lower Saxony, which held 20.0% of the voting rights. Qatar Holding LLC was the third-largest shareholder, with 17.0%. The remaining 10.8% of ordinary shares were attributable to other shareholders.

Notifications of changes in voting rights in accordance with the Wertpapierhandelsgesetz (WpHG – German Securities Trading Act) are published on our website at www.volkswagenag.com/ir.

#### SHAREHOLDER STRUCTURE AT DECEMBER 31, 2016

as a percentage of subscribed capital



Porsche Automobil Holding SE 30.8 Foreign institutional investors 22.5 Oatar Holding LLC State of Lower Saxony 11.8

Private shareholders/Others

German institutional investors

#### DIVIDEND POLICY

Our dividend policy matches our financial strategy. In the interests of all stakeholders, we aim for continuous dividend growth so that our shareholders can participate appropriately in our business success. The proposed dividend amount therefore reflects our financial management objectives - in particular, ensuring a solid financial foundation as part of the implementation of our strategy.

The Board of Management and Supervisory Board of Volkswagen AG are proposing a dividend of €2.00 per ordinary share and €2.06 per preferred share. On this basis, the total dividend for fiscal year 2016 amounts to €1.0 (0.1) billion. The distribution ratio is based on the Group's earnings after tax attributable to Volkswagen AG shareholders. This amounts to 19.7% for the reporting period and was negative in the previous year. In our new Group strategy we aim to achieve a distribution ratio of 30%.

#### DIVIDEND YIELD

Based on the dividend proposal for the reporting period, the dividend yield on Volkswagen ordinary shares is 1.5 (0.1)%, measured by the closing price on the last trading day in 2016. The dividend yield on preferred shares is 1.5 (0.1)%.

The current dividend proposal can be found in the chapter entitled "Volkswagen AG (condensed, according to the German Commercial Code)", on page 137 of this annual report.

#### EARNINGS PER SHARE

Basic earnings per ordinary share were €10.24 (-3.20) in fiscal year 2016. Basic earnings per preferred share were €10.30 (-3.09). In accordance with IAS 33, the calculation is based on the weighted average number of ordinary and preferred shares outstanding in the reporting period. Since the number of basic and diluted shares is identical, basic earnings per share correspond to diluted earnings per share.

See also note 11 to the Volkswagen consolidated financial statements for the calculation of earnings per share.

#### ANNUAL GENERAL MEETING

The 56th Annual General Meeting of Volkswagen AG was held at the Hanover Exhibition Center on June 22, 2016. The ordinary shareholders of Volkswagen AG accepted the proposal of the Board of Management and the Supervisory Board to pay a dividend of €0.11 per ordinary share and €0.17 per preferred share with a majority of 99.98%. With over 90% of the voting capital present, they also formally approved the actions of the Board of Management and Supervisory Board.

Shares and Bonds Group Management Report

In addition, the ordinary shareholders of Volkswagen AG elected PricewaterhouseCoopers AG Wirtschaftsprüfungsgesellschaft (PwC) as the auditors for the single-entity and consolidated financial statements for fiscal year 2016 and as the auditors to review the condensed consolidated financial statements and interim management report for the first six months of 2016, for the period up to September 30, 2016 and for the first quarter of fiscal year 2017.

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The Annual General Meeting also rejected the motions added to the agenda concerning the appointment of a special auditor in accordance with section 142(1) of the Aktiengesetz (AktG – German Stock Corporation Act) as well as the further motions raised in the course of the meeting.

Ms. Annika Falkengren's scheduled term of office and the terms of office of the court-appointed members of the Supervisory Board – Dr. Louise Kiesling and Mr. Hans Dieter Pötsch – expired at the end of the Annual General Meeting. The Annual General Meeting elected all three members to a full term of office in the Supervisory Board. Mr. Akbar Al Baker, likewise a shareholder representative on the Supervisory Board of Volkswagen AG, stepped down from his office with effect from the end of the Annual General Meeting. The Annual General Meeting elected Dr. Hessa Sultan Al-Jaber, representing the Qatar Investment Authority (QIA), to replace him for the remainder of his term of office. With Ms. Al-Jaber, Ms. Falkengren and Dr. Kiesling, three of the ten shareholder representative seats on the supervisory body are filled by women.

#### INVESTOR RELATIONS ACTIVITIES

On the one hand, investor relations activities in fiscal year 2016 were dominated mainly by developments in connection with the diesel issue. On the other hand, focal issues were the Volkswagen Group's future program TOGETHER – Strategy 2025, the conclusion of the pact for the future and the Volkswagen Passenger Cars brand's TRANSFORM 2025+ strategy. We also briefed capital market participants on our activities in the Chinese market at the Volkswagen Group China Investor Presentation.

In fiscal year 2016, the Investor Relations team provided extensive information to investors and analysts in all key financial markets worldwide about the strategic focus, current business performance and future prospects of the Volkswagen Group.

At roughly 700 one-on-one discussions, roadshows and conferences, we maintained close contact with capital market participants in 2016. Many of these discussions involved an exchange of ideas between investors and analysts and members of the Board of Management and Group senior executives. With offices in Wolfsburg, London and Beijing and the liaison office in Herndon (USA), the work

of the Investor Relations team benefits from its presence in the most important regions for the capital markets. It allows us to keep close contact with analysts and investors locally, acquire in-depth knowledge of the respective markets and keep a finger on the pulse of operations of the Volkswagen Group.

At events held in the past year, the investor relations team also informed private shareholders about the current situation of the Group and was present at the Annual General Meeting in Hanover.

We also promptly published all presentations given in connection with events that were of interest to investors on our investor relations website.

#### **VOLKSWAGEN SHARE DATA**

	Ordinary shares	Preferred shares			
ISIN	DE0007664005	DE0007664039			
WKN	766400	766403			
Deutsche Börse/Bloomberg	VOW	VOW3			
Reuters	VOWG.DE	VOWG_p.DE			
Primary market indices	CDAX, Prime All Share, MSCI Euro, S&P Global 100 Index	DAX, CDAX, EURO STOXX, EURO STOXX 50, EURO STOXX Automobiles & Parts, Prime All Share, MSCI Euro			
Exchanges	Berlin, Düsseldorf, Frankfurt, Hambu Hanover, Munich, Stuttgart, Xet Luxembourg, New York <sup>1</sup> , SIX Sw Exchar				

<sup>1</sup> Traded in the form of "sponsored unlisted American Depositary Receipts" (ADRs). Five ADRs correspond to one underlying Volkswagen ordinary or preferred share.

## OUR INVESTOR RELATIONS TEAM IS AVAILABLE FOR QUERIES AND COMMENTS AT ALL TIMES:

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#### VOLKSWAGEN SHARE KEY FIGURES

DIVIDEND DEVELOPMENT		2016	2015	2014	2013	2012
Number of no-par value shares at Dec. 31						
Ordinary shares	thousands	295,090	295,090	295,090	295,090	295,090
Preferred shares	thousands	206,205	206,205	180,641	170,148	170,143
Dividend <sup>1</sup>						
per ordinary share		2.00	0.11	4.80	4.00	3.50
per preferred share		2.06	0.17	4.86	4.06	3.56
Dividend paid <sup>1</sup>	€ million	1,015	68	2,294	1,871	1,639
on ordinary shares	€ million	590	32	1,416	1,180	1,033
on preferred shares	€ million	425	35	878	691	606
SHARE PRICE DEVELOPMENT <sup>2</sup>		2016	2015	2014	2013	2012
Ordinary share						
Closing	€	136.75	142.30	180.10	196.90	162.75
Price performance	%	-3.9	-21.0	-8.5	+21.0	+57.0
Annual high	€	144.20	247.55	197.35	196.90	162.75
Annual low	€	108.95	101.15	150.70	132.60	106.20
Preferred share						
Closing	€	133.35	133.75	184.65	204.15	172.15
Price performance	%	-0.3	-27.6	-9.6	+18.6	+48.7
Annual high	€	138.80	255.20	203.35	204.15	172.70
Annual low	€	94.00	92.36	150.25	138.50	118.00
Beta factor <sup>3</sup>	factor	1.22	1.28	1.38	1.32	1.26
Market capitalization at Dec. 31	€ billion	67.9	69.6	86.5	92.8	77.3
Equity attributable to Volkswagen AG share- holders and hybrid capital investors at Dec. 31	€ billion	92.7	88.1	90.0	87.7	77.74
Ratio of market capitalization to equity	factor	0.73	0.79	0.96	1.06	1.00
natio of market capitalization to equity		<u> </u>				
KEY FIGURES PER SHARE		2016	2015	2014	2013	2012 <sup>4</sup>
Earnings per ordinary share <sup>5</sup>						
basic	€	10.24	-3.20	21.82	18.61	46.41
diluted	€	10.24	-3.20	21.82	18.61	46.41
Equity <sup>6</sup>	€	184.90	175.67	189.16	188.58	166.98
Price/earnings ratio <sup>7</sup>						
Ordinary share	factor	13.4	x	8.2	10.6	3.5
Preferred share	factor	13.0	x	8.4	10.9	3.7
Dividend yield <sup>8</sup>						
Ordinary share	%	1.5	0.1	2.7	2.0	2.2
Preferred share		1.5	0.1	2.6	2.0	2.1
STOCK EXCHANGE TURNOVER <sup>9</sup>		2016	2015	2014	2013	2012
Turnover of Volkswagen ordinary shares	€ billion	3.3	6.9	3.2	3.5	3.5
	million shares	25.4	45.4	17.8	21.4	26.8
Turnover of Volkswagen preferred shares	€ billion	41.1	72.4	45.1	43.0	40.9
	million shares	347.0	444.4	248.3	252.8	293.3
Volkswagen share of total DAX turnover	%	5.0	7.1	5.4	5.7	5.3

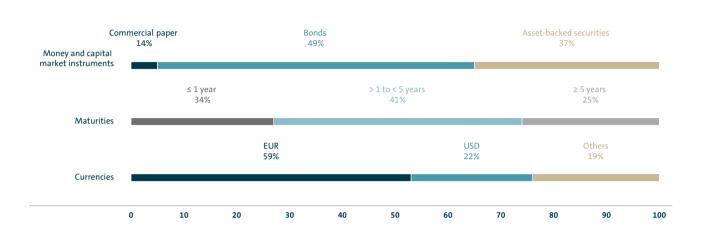
- Figures for the years 2012 to 2015 relate to dividends paid in the following year. For 2016, the figures relate to the proposed dividend.
   Xetra prices.
   See page 133 for the calculation.
   2012 figures adjusted in the 2013 annual financial statements to reflect application of IAS 19R.
- 5 See note 11 to the consolidated financial statements (Earnings per share) for the calculation.
- Based on the total number of ordinary and preferred shares on December 31 (excluding potential shares from the mandatory convertible note).
   Ratio of year-end-closing price to earnings per share.
   Dividend per share based on the year-end-closing price.
   Order book turnover on the Xetra electronic trading platform (Deutsche Börse).

Shares and Bonds Group Management Report

#### REFINANCING STRUCTURE OF THE VOLKSWAGEN GROUP

as of December 31, 2016

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#### REFINANCING

As a result of the diesel issue, the Volkswagen Group's ability to access individual refinancing instruments in the money and capital market in 2016 was restricted. Our activities were therefore marked by diversification in certain instruments and markets. One focus was the issue of commercial paper, especially in Europe and in the currency euro.

Asset-backed securities (ABS) transactions were another important element. The Financial Services Division placed ABS transactions with a value of  $\in$ 4.0 billion in the eurozone. An ABS credit facility of USD 9.0 billion was entered into with a banking syndicate in the USA. The Volkswagen Group also issued other ABS transactions in Australia, China, the United Kingdom, Japan and Sweden with a value of  $\in$ 3.6 billion.

A bond was issued for the first time in China's local capital market. Other transactions were executed in currencies such as the Swedish krona, Russian ruble and Indian rupee.

In addition, the Automotive Division issued a public promissory note with a value of  $\in 1.1$  billion.

The share of fixed-rate instruments was roughly twice as high as the share of variable-rate instruments.

In all refinancing arrangements, risks related to interest rates and currency are generally excluded by entering into derivatives contracts at the same time. The table below shows how our money and capital market programs were utilized as of 31 December, 2016 and illustrates the financial flexibility of the Volkswagen Group:

PROGRAM	Authorized volume € billion	Amount utilized on Dec. 31, 2016 € billion
Commercial paper	26.8	13.4
Bonds	129.4	47.7
of which hybrid issues		7.5
Asset-backed securities	73.2	36.5

The €20.0 billion syndicated credit line for Volkswagen AG that was agreed with a banking syndicate in December 2015 was extended until June 2017. After exercising an extension option in 2015, the syndicated credit line of €5.0 billion agreed in July 2011 was extended to April 2020. Both credit lines were unused as of the end of 2016.

Syndicated credit lines worth a total of  $\in 2.4$  billion at other Group companies have also not been drawn down. In addition, Group companies had arranged bilateral, confirmed credit lines with national and international banks in various other countries for a total of  $\in 8.5$  billion, of which  $\in 2.6$  billion was drawn down.

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#### RATINGS

	VOLKSWAGEN AG			VOLKSWAGEN FINANCIAL SERVICES AG			VOLKSWAGEN BANK GMBH		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
Standard & Poor's									
Short-term	A-2	A-2	A-1	A-2	A-2	A-1	A-2	A-2	A-1
Long-term	BBB+	BBB+	A	BBB+	BBB+	A	Α-	A-	A
Outlook	negative	negative	stable	negative	negative	stable	negative	negative	stable
Moody's Investors Service									
Short-term	P-2	P-2	P-2	P-1	P-1	P-2	P-1	P-1	P-2
Long-term	A3	A3	A3	A2	A1	A3	Aa3	A1	A3
Outlook	negative	negative	positive	negative	negative	positive	negative	negative	positive

#### RATINGS

In 2016, rating agencies Standard & Poor's and Moody's Investors Service undertook their regular update of their credit ratings for Volkswagen AG, Volkswagen Financial Services AG and Volkswagen Bank GmbH.

Standard & Poor's confirmed its short-term and long-term ratings for Volkswagen AG and Volkswagen Financial Services AG at A–2 and BBB+, respectively. The short-term and long-term ratings of Volkswagen Bank GmbH were also confirmed at A–2 and A– respectively. The outlook for all three companies was left unchanged at negative.

In August 2016, Moody's Investors Service downgraded its long-term rating for Volkswagen Financial Services AG by one notch, from A1 to A2. At the same time, the long-term rating of Volkswagen Bank GmbH was raised by one notch, from A1 to Aa3. This is due to a change in the perspective of the rating method introduced last year in the event of a wind-up of the two companies. The short-term rating was left unchanged for both companies at P–1. The short-term and long-term ratings for Volkswagen AG remain unchanged at P–2 and A3, respectively. The outlook for all three companies is still classified as negative.

#### **VOLKSWAGEN IN SUSTAINABILITY RANKINGS AND INDICES**

Analysts and investors view sustainability performance as a leading indicator of forward-looking corporate governance and therefore increasingly also base their recommendations and decisions on companies' sustainability profiles. Sustainability ratings are particularly well suited to evaluating a company's environmental, social and economic performance. If a company achieves the highest scores in these ratings, this sends a clear signal to its stakeholders. It also raises its attractiveness as an employer and the motivation of its existing employees.

In sustainability rankings and indices – such as the Dow Jones Sustainability Indices, Carbon Disclosure Project (CDP), Sustainalytics, or oekom research – where we held top positions before the emissions issue, Volkswagen's ratings have been downgraded or removed.

# Results of Operations, Financial Position and Net Assets

The Volkswagen Group's sales revenue recorded further growth in fiscal year 2016. Despite further charges resulting from legal risks, especially in connection with the diesel issue, and restructuring measures, operating profit was up significantly on the previous year.

The Volkswagen Group's segment reporting in compliance with IFRS 8 comprises the four reportable segments Passenger Cars, Commercial Vehicles, Power Engineering and Financial Services, in line with the Group's internal management and reporting.

At Volkswagen, segment profit or loss is measured on the basis of the operating result.

The reconciliation column contains activities and other operations that do not by definition constitute segments. These include the unallocated Group financing activities. Consolidation adjustments between the segments (including the holding company functions) are also contained in the reconciliation. Purchase price allocation for Porsche Holding Salzburg and Porsche, as well as for Scania and MAN, reflects their accounting treatment in the segments.

The Automotive Division comprises the Passenger Cars, Commercial Vehicles and Power Engineering segments, as well as the figures from the reconciliation. The Passenger Cars segment and the reconciliation are combined to form the Passenger Cars Business Area. Effective January 1, 2016, the previously combined Commercial Vehicles/Power Engineering Business Area is presented as two separate business areas in accordance with the segment reporting: the Commercial Vehicles Business Area and the Power Engineering Business Area. The Financial Services Division corresponds to the Financial Services segment.

Activities in the Passenger Cars segment cover the development of vehicles and engines, the production and sale of passenger cars, and the genuine parts business. This segment combines the Volkswagen Group's individual passenger car brands on a consolidated basis. It also includes the Ducati brand's motorcycle business.

The Commercial Vehicles segment primarily comprises the development, production and sale of light commercial vehicles, trucks and buses from the Volkswagen Commercial Vehicles, Scania and MAN brands, the corresponding genuine parts business and related services.

The Power Engineering segment combines the large-bore diesel engines, turbomachinery, special gear units, propulsion components and testing systems businesses.

#### KEY FIGURES FOR 2016 BY SEGMENT

€ million	Passenger Cars	Commercial Vehicles	Power Engineering	Financial Services	Total segments	Reconciliation	Volkswagen Group
Sales revenue	177,815	32,080	3,593	31,251	244,739	-27,472	217,267
Segment profit or loss (operating result)	5,235	718	-217	2,435	8,171	-1,068	7,103
as a percentage of sales revenue	2.9	2.2	-6.0	7.8			3.3
Capex, including capitalized development costs	15,891	2,433	194	357	18,875	27	18,902

The activities of the Financial Services segment comprise dealer and customer financing, leasing, banking and insurance activities, fleet management and mobility offerings.

#### SALE OF LEASEPLAN

#### SPECIAL ITEMS IN THE FISCAL YEAR

Special items consist of certain items in the financial statements whose separate disclosure the Board of Management believes can enable a better assessment of our economic performance.

Special items relating to the diesel issue amounted to  $\in$  -6.4 (-16.2) billion in fiscal year 2016, mainly due to higher

expenses attributable to the recognition of provisions for legal risks.

Additional provisions had to be recognized for the replacement of potentially faulty airbags manufactured and supplied by Takata, which had been imposed by the competent authorities on all affected automobile manufacturers. The special items recognized in the operating result relating to these measures amount to  $\in$ -0.3 (-0.3) billion in the reporting period.

In addition, special items for restructuring measures weighed on both the passenger cars business, in an amount of  $\in$ -0.2 (-0.2) billion, and the trucks business, in an amount of  $\in$ -0.1 (-0.2) billion in South America; in the Power Engineering Business Area, operating profit was impacted in an amount of  $\in$ -0.2 billion. The measures are aimed at sustainably enhancing competitiveness and safeguarding future viability.

Provisions for legal risks relating to the commercial vehicles antitrust proceedings launched by the European Commission resulted in special items of €–0.4 billion in the Commercial Vehicles Business Area in the reporting period.

#### INCOME STATEMENT BY DIVISION

	VOLKSWAGEN	GROUP	AUTOMOTIVE <sup>1</sup>		FINANCIAL SERVICES	
€ million	2016	2015	2016	2015	2016	2015
Sales revenue	217,267	213,292	186,016	183,936	31,251	29,357
Cost of sales	-176,270	-179,382	-150,860	-155,553	-25,410	-23,829
Gross profit	40,997	33,911	35,156	28,382	5,841	5,528
Distribution expenses	-22,700	-23,515	-21,453	-22,281	-1,248	-1,234
Administrative expenses	-7,336	-7,197	-5,730	-5,646	-1,606	-1,552
Net other operating result	-3,858	-7,267	-3,306	-6,761	-552	-506
Operating result	7,103	-4,069	4,668	-6,305	2,435	2,236
Operating return on sales (%)	3.3	-1.9	2.5	-3.4	7.8	7.6
Share of profits and losses of equity-accounted						
investments	3,497	4,387	3,433	4,366	64	21
Finance costs and Other financial result	-3,308	-1,620	-3,217	-1,695	<u>–91</u>	75
Financial result	189	2,767	216	2,671	-27	97
Earnings before tax	7,292	-1,301	4,884	-3,634	2,408	2,333
Income tax expense	-1,912	-59	-1,149	527	-763	-586
Earnings after tax	5,379	-1,361	3,735	-3,107	1,645	1,747
Noncontrolling interests	10	10	-81	-10	91	19
Earnings attributable to Volkswagen AG hybrid capital investors	225	212	225	212	_	_
Earnings attributable to Volkswagen AG shareholders	5,144	-1,582	3,591	-3,310	1,553	1,728

<sup>1</sup> Including allocation of consolidation adjustments between the Automotive and Financial Services divisions.

#### SHARE OF SALES REVENUE BY MARKET 2016

in percent

### SHARE OF SALES REVENUE BY DIVISION/BUSINESS AREA 2016

in percent







Passenger Cars 69%
Commercial Vehicles 15%
Power Engineering 2%
Financial Services 14%

Overall, negative special items recognized in the operating result amounted to  $\leftarrow$  7.5 (-16.9) billion in fiscal year 2016.

#### **RESULTS OF OPERATIONS**

#### Results of operations of the Group

The Volkswagen Group generated sales revenue of €217.3 billion in fiscal year 2016, thus surpassing the prior-year figure by €4.0 billion. Improvements in the mix and the good business development in the Financial Services Division were offset by negative exchange rate effects and a slight decline in vehicle unit sales, excluding the Chinese joint ventures. At 79.9 (80.2)%, a large majority of sales revenue was recorded outside Germany.

At €41.0 (33.9) billion, gross profit was up year-on-year. Adjusted for the special items recognized here in both periods, gross profit was on a level with the previous year, at €42.5 (42.4) billion. The gross margin amounted to 18.9 (15.9)%; excluding special items it was 19.6 (19.9)%.

At €14.6 (12.8) billion, the Volkswagen Group's operating profit before special items was up year-on-year, while the operating return on sales before special items increased to 6.7 (6.0)%. In addition to optimized product costs, improvements in the mix had a positive effect, while exchange rate effects, the decline in unit sales (excluding the Chinese joint ventures) and higher depreciation and amortization charges had a negative impact. Negative special items of €7.5 (16.9) billion, particularly for legal risks, weighed on operating profit; of this total, €6.9 (16.7) billion was attributable to the Passenger Cars Business Area, €0.5 (0.2) billion to the Commercial Vehicles Business Area and €0.2 billion to the Power Engineering Business Area.

At  $\$ 7.1 (-4.1) billion, the Volkswagen Group's operating profit was up significantly on the previous year. The operating return on sales rose to 3.3 (-1.9)%.

At €0.2 billion, the financial result was €2.6 billion lower than in 2015. In the previous year, the income from the sale of the Suzuki shares had a clearly positive effect. The decline was also the result of a year-on-year decrease in income from the equity-accounted Chinese joint ventures, higher finance costs due to interest-related and remeasurement effects as well as higher expenses from derivative financial instruments. The income from the sale of the LeasePlan shares had a positive effect.

At  $\[ \in \]$ 7.3 billion, the Volkswagen Group's profit before tax was  $\[ \in \]$ 8.6 billion higher than in the previous year. The return on sales before tax improved from -0.6% to 3.4%. The income tax expense amounted to  $\[ \in \]$ 1.9 (0.1) billion, resulting in a tax rate of 26.2% in the reporting period. Compared with the previous year, profit after tax grew by  $\[ \in \]$ 6.7 billion to  $\[ \in \]$ 5.4 billion.

#### Results of operations in the Automotive Division

The Automotive Division's sales revenue in the reporting period was up slightly compared with the previous year, at €186.0 (183.9) billion. Improvements in the mix had a positive effect, while negative exchange rate effects and the slight decline in vehicle unit sales (excluding the Chinese joint ventures) had an opposing impact. As our Chinese joint ventures are accounted for using the equity method, the Group's performance in the Chinese passenger car market is mainly reflected in consolidated sales revenue only by deliveries of vehicles and vehicle parts.

Cost of sales declined year-on-year. A significant decline in special items from the diesel issue, optimized product costs, exchange rate effects and lower research and development expenditures recognized in profit or loss more than offset the rise in depreciation and amortization charges and negative special items from the replacement of procured airbags. The ratio of cost of sales to sales revenue declined year-on-year. As a result, gross profit in the Automotive Division exceeded the 2015 figure, at €35.2 (28.4) billion.

Distribution expenses declined in fiscal year 2016 due to lower special items from the diesel issue as well as positive exchange rate effects. The ratio of distribution expenses to sales revenue also decreased. Administrative expenses rose year-on-year, although the ratio of administrative expenses to sales revenue was unchanged. A year-on-year decline in special items resulting from legal risks in connection with the diesel issue and lower negative exchange rate effects were positive factors, while the main negative factor was negative special items from legal risks in the Commercial Vehicles Business Area; as a result, the other operating result, at  $\in$ -3.3 billion, improved by  $\in$ 3.5 billion compared with the previous year.

At €4.7 billion, the Automotive Division's operating profit in fiscal year 2016 was €11.0 billion higher than in the previous year. The operating return on sales rose to 2.5 (-3.4)%. Negative special items contained in this figure amounted to a total of €7.5 (16.9) billion. Excluding the special items, the Automotive Division's operating profit rose to €12.2 (10.6) billion. The operating return on sales before special items was 6.6 (5.8)%. Optimized product costs and favorable mix developments were able to more than offset negative exchange rate effects, declining vehicle unit sales if our Chinese joint ventures are excluded, as well as higher depreciation and amortization charges. Since the profit recorded by our Chinese joint ventures is accounted for in the financial result using the equity method, their business growth is primarily reflected in the Group's operating result only by deliveries of vehicles and vehicle parts, and license income.

The financial result declined by  $\[ \in \] 2.5$  billion to  $\[ \in \] 0.2$  billion; this figure contains lower investment income from the Chinese joint ventures, higher finance costs due to interest-related and remeasurement effects as well as increased expenses from derivative financial instruments. The income from the sale of the LeasePlan shares was a positive factor in the reporting period; in the prior-year period, the sale of the Suzuki shares had a clearly positive effect.

RESULTS OF OPERATIONS IN THE PASSENGER CARS BUSINESS AREA

€ million	2016	2015
Sales revenue	150,343	149,716
Gross profit	29,660	23,023
Operating result	4,167	-7,013
Operating return on sales (%)	2.8	-4.7

Sales revenue in the Passenger Cars Business Area in 2016 was on a level with the previous year, at  $\in$ 150.3 (149.7) billion. At  $\in$ 29.7 billion, gross profit exceeded the prior-year figure by 28.8%. At  $\in$ 4.2 billion, operating profit improved by  $\in$ 11.2 billion. The special items contained in this figure from the diesel issue, from the replacement of procured airbags and from restructuring measures in South America amounted to  $\in$ 6.9 (16.7) billion. Optimized product costs and favorable mix developments were able to more than offset negative exchange rate effects and declining vehicle unit sales, as well as higher depreciation and amortization charges. The operating return on sales was 2.8 (–4.7)%.

## RESULTS OF OPERATIONS IN THE COMMERCIAL VEHICLES BUSINESS AREA

€ million	2016	2015
Sales revenue	32,080	30,445
Gross profit	4,899	4,589
Operating result	718	586
Operating return on sales (%)	2.2	1.9
Operating return on sales (70)		

Sales revenue in the Commercial Vehicles Business Area was €32.1 billion in 2016 and hence €1.6 billion higher than in 2015. At €4.9 (4.6) billion, gross profit improved compared with the previous year. At €0.7 billion, the Commercial Vehicles Business Area's operating profit was up €0.1 billion year-on-year; the operating return on sales rose to 2.2 (1.9)%. Higher unit vehicle sales and the expansion of the service business were positive factors, while special items from restructuring measures to sustainably enhance competitiveness and provisions for legal risks relating to the commercial vehicles antitrust proceedings launched by the European Commission weighed on operating profit.

#### RESULTS OF OPERATIONS IN THE POWER ENGINEERING BUSINESS AREA

€ million	2016	2015
Sales revenue	3,593	3,775
Gross profit	597	770
Operating result	-217	123
Operating return on sales (%)	-6.0	3.2

The Power Engineering Business Area recorded sales revenue of €3.6 billion in fiscal year 2016, a decline of 4.8% year-on-year due to volume-related factors. Gross profit was €0.6 (0.8) billion. Operating profit declined by €0.3 billion to €-0.2 billion due to volume- and margin-related factors, as well as to the special items from restructuring measures to safeguard future viability; the operating return on sales decreased from 3.2% to -6.0%.

#### Results of operations in the Financial Services Division

The Financial Services Division generated sales revenue of €31.3 billion in 2016; the year-on-year increase of 6.5% was attributable primarily to the higher business volume. Exchange rate effects had a negative impact.

Despite sustained pressure on margins, a negative exchange rate trend and higher depreciation and amortization charges, the higher volumes increased gross profit to  $\in 5.8$  (5.5) billion.

Distribution expenses in the reporting period were on a level with the previous year. Administrative expenses rose slightly. The ratios of both figures to sales revenue declined. The net other operating result amounted to  $\in$  0.6 (-0.5) billion.

Operating profit at the Financial Services Division increased by 8.9% year-on-year to  $\in$  2.4 billion, with the division again making a significant contribution to consolidated profit. The operating return on sales rose to 7.8 (7.6)%. The return on equity before tax was 10.8 (12.2)%.

#### PRINCIPLES AND GOALS OF FINANCIAL MANAGEMENT

Financial management at the Volkswagen Group covers liquidity management, currency, interest rate and commodity risk management, as well as credit and country risk management. It is performed centrally for all Group companies by Group Treasury, based on internal directives and risk parameters. The MAN and Porsche Holding Salzburg subgroups are integrated into the main financial management functions, while Scania is integrated to a limited extent. Additionally,

these subgroups have their own financial management structures.

The goal of liquidity management is to ensure that the Volkswagen Group remains solvent at all times and at the same time to generate an adequate return from the investment of surplus funds. We use cash pooling to optimize the use of existing liquidity between the significant companies in Europe. To do this, the - positive or negative - balances accumulating on the cash pooling accounts are swept daily into a target account at Group Treasury and thus pooled. Currency, interest rate and commodity risk management is designed to hedge the prices on which investment, production and sales plans are based using derivative financial instruments. Credit and country risk management aims to use diversification to avoid exposing the Volkswagen Group to the risk of loss or default. To achieve this, internal limits are defined on the basis of various credit risks for the volume of business per counterparty when entering into financial transactions. These primarily focus on the capital resources of potential counterparties, as well as the ratings awarded by independent agencies. The relevant risk limits and the authorized financial instruments, hedging methods and hedging horizons are approved by the Executive Committee for Liquidity and Foreign Currency.

For additional information on the principles and goals of financial management, please refer to page 199 and to the notes to the 2016 consolidated financial statements on pages 291 to 299.

#### FINANCIAL POSITION

#### Financial position of the Group

The Volkswagen Group generated gross cash flow of €26.0 billion in fiscal year 2016, up 59.7% on the prior-year figure. Funds tied up in working capital increased by €14.0 billion to €16.6 billion. The new special items recognized in the reporting period had a negative impact on gross cash flow and a positive effect on the change in working capital. Cash flows from operating activities declined by €4.2 billion to €9.4 billion.

At  $\leq$ 16.8 billion, the Volkswagen Group's investing activities attributable to operating activities in 2016 were up 8.2% on the previous year. Within this item, investments in property, plant and equipment, investment property and intangible assets, excluding capitalized development costs (capex) of  $\leq$ 13.2 (13.2) billion were on a level with the previous year, while capitalized development costs increased to  $\leq$ 5.8 (5.0) billion. The "acquisition and disposal of equity investments" item comprises primarily the cash inflow from

#### CASH FLOW STATEMENT BY DIVISION

	VOLKSWAGEN	GROUP	AUTOMOTIVE <sup>1</sup>		FINANCIAL SERVICES	
€ million	2016	2015	2016	2015	2016	2015
Cash and cash equivalents at beginning of period	20,462	18,634	15,294	16,010	5,168	2,624
Earnings before tax	7,292	-1,301	4,884	-3,634	2,408	2,333
Income taxes paid	-3,315	-3,238	-3,526	-2,985	211	-254
Depreciation and amortization expense <sup>2</sup>	20,924	19,693	14,331	13,516	6,593	6,176
Change in pension provisions	235	309	224	295	11	14
Other noncash income/expense and						
reclassifications <sup>3</sup>	871	817	556	325	316	493
Gross cash flow	26,007	16,280	16,468	7,518	9,539	8,762
Change in working capital	-16,576	-2,601	3,803	16,278	-20,379	-18,880
Change in inventories	-3,637	-3,149	-3,313	-2,706	-324	-444
Change in receivables	-2,155	-1,807	-1,876	-1,001	-280	-805
Change in liabilities	5,048	2,807	4,474	2,641	574	166
Change in other provisions	5,732	18,019	5,616	17,989	116	30
Change in lease assets (excluding						
depreciation)	-12,074	-10,808	-1,157	-765	-10,917	-10,043
Change in financial services receivables	-9,490	-7,663	58	120	-9,547	-7,784
Cash flows from operating activities	9,430	13,679	20,271	23,796	-10,840	-10,117
Cash flows from investing activities attributable to operating activities	-16,797	-15,523	-15,941	-14,909	-856	-614
of which: investments in property, plant and equipment, investment property and intangible assets, excluding capitalized						
development costs	-13,152	-13,213	-12,795	-12,738	-357	-476
capitalized development costs	-5,750	-5,021	-5,750	-5,021		
acquisition and disposal of equity						
investments	1,754	2,178	2,283	2,361	-528	-183
Net cash flow <sup>4</sup>	-7,367	-1,845	4,330	8,887	-11,696	-10,731
Change in investments in securities, loans and	2 002	F 630	2.125	2 506	757	2 122
time deposits	-3,882	-5,628	-3,125	-3,506	<u>-757</u>	-2,122
Cash flows from investing activities	-20,679	-21,151	-19,066	-18,415	-1,613	-2,736
Cash flows from financing activities	9,712	9,068	-2,298	-6,333	12,009	15,401
of which: capital transactions with noncontrolling interests	-3	-0	-3			
Capital contributions/capital redemptions		2,457	-1,454	140	1,454	2,317
Effect of exchange rate changes on cash and cash equivalents	-91	232	-76	236	-15	-4
Net change in cash and cash equivalents	-1,628	1,828	-1,169	-717	-460	2,544
Cash and cash equivalents at Dec. 31 <sup>5</sup>	18,833	20,462	14,125	15,294	4,709	5,168
Securities, loans and time deposits	28,036	24,613	17,911	14,812	10,125	9,801
Gross liquidity	46,869	45,075	32,036	30,105	14,833	14,969
Total third-party borrowings	-154,819	-145,604	-4,856	-5,583	-149,963	-140,021
Net liquidity <sup>6</sup>	-107,950	-100,530	27,180	24,522	-135,130	-125,052

 $<sup>{\</sup>bf 1} \ \ {\sf Including allocation of consolidation adjustments between the Automotive and Financial Services divisions}.$ 

<sup>2</sup> Net of impairment reversals.

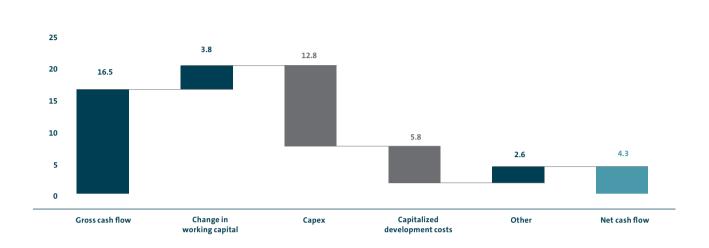
<sup>3</sup> These relate mainly to the fair value measurement of financial instruments, application of the equity method and reclassification of gains/losses on disposal of noncurrent assets and equity investments to investing activities.

<sup>4</sup> Net cash flow: cash flows from operating activities, net of investing activities attributable to operating activities (investing activities excluding change in investments in securities, loans and time deposits).

 <sup>5</sup> Cash and cash equivalents comprise cash at banks, checks, cash-in-hand and call deposits.
 6 The total of cash, cash equivalents, securities, loans from related parties and time deposits net of third-party borrowings (noncurrent and current financial liabilities).

**AUTOMOTIVE DIVISION NET CASH FLOW 2016** 

€ hillion



the sale of the LeasePlan shares; in the previous year, the item reflected the sale of the Suzuki shares. Net cash flow declined to  $\in$  -7.4 (-1.8) billion.

Cash inflows from financing activities amounted to  $\in$  9.7 (9.1) billion. These mainly include dividend payments and the issuance and redemption of bonds and other financial liabilities. In the previous year, they also included the issuance of hybrid notes.

At €18.8 (20.5) billion, the Volkswagen Group's cash and cash equivalents reported in the cash flow statement decreased year-on-year.

The Volkswagen Group recorded net liquidity of €–107.9 billion as of 31 December, 2016, compared with €–100.5 billion at year-end 2015.

#### Financial position in the Automotive Division

At  $\[ \le \]$ 16.5 billion, the Automotive Division's gross cash flow was  $\[ \le \]$ 9.0 billion higher in fiscal year 2016 than in the previous year. The increase is attributable primarily to lower special items compared with the previous year and the higher operating profit before special items, while lower dividend payments by the Chinese joint ventures were a negative factor. The change in working capital of  $\[ \le \]$ 3.8 (16.3) billion was significantly down on the previous year. The new special items recognized in the reporting period had a negative impact on gross cash flow and a positive effect on the change in working capital. Legal risks and vehicle recalls attributable to the diesel issue resulted in cash outflows in the reporting period. Cash flows from operating activities decreased by  $\[ \]$ 3.5 billion to  $\[ \]$ 20.3 billion.

Investing activities attributable to operating activities increased to €15.9 (14.9) billion. At €12.8 (12.7) billion, capex was on a level with the previous year. The ratio of capex to sales revenue was unchanged year-on-year, at 6.9 (6.9)%. We invested mainly in our production facilities and in models that we launched in 2016 or are planning to launch in 2017. These are primarily vehicles in the Tiguan, Atlas, Audi A4, Audi A6, Audi A8, Audi Q5, ŠKODA Kodiaq, SEAT Ibiza and SEAT Arona series, as well as the Porsche Panamera and the Porsche Cayenne. Other investment priorities were the ecological focus of our model range, growing drivetrain electrification and our modular toolkits. Capitalized development costs increased by €0.7 billion to €5.8 billion. Investing activities in the reporting period included the sale of the LeasePlan shares amounting to €2.2 billion, and in the previous year the sale of the Suzuki shares.

The Automotive Division's net cash flow of €4.3 billion was down €4.6 billion compared with 2015.

In financing activities, a capital increase carried out by Volkswagen AG at Volkswagen Financial Services AG in fiscal year 2016 to finance the growth in business volumes and comply with the increase in regulatory capital requirements resulted in outflows of  $\{1.2$  billion. At the end of June, a total dividend of  $\{0.1\}$  (2.3) billion, which was considerably lower than in the previous year due to the diesel issue, was distributed to the shareholders of Volkswagen AG. In addition, the Automotive Division's financing activities include the issuance and redemption of bonds and other financial liabilities and amounted to  $\{-2.3\}$  (-6.3) billion.

Net liquidity in the Automotive Division as of December 31, 2016 amounting to €27.2 billion was €2.7 billion higher than at the end of the previous fiscal year. This represents 12.5% of consolidated sales revenue.

#### FINANCIAL POSITION IN THE PASSENGER CARS BUSINESS AREA

€ million	2016	2015
Gross cash flow	13,920	4,722
Change in working capital	3,454	15,469
Cash flows from operating activities	17,374	20,191
Cash flows from investing activities attributable to operating activities	-13,353	-12,434
Net cash flow	4,021	7,757

At €13.9 billion, gross cash flow in the Passenger Cars Business Area in fiscal year 2016 was €9.2 billion higher than in the previous year. The increase was mainly attributable to higher earnings before special items and the considerable year-on-year decline in negative special items; negative factors were the lower dividends paid by the Chinese joint ventures. At €3.5 (15.5) billion, funds released from working capital were significantly lower than in the previous year. The new special items recognized in the reporting period had a negative impact on gross cash flow and a positive effect on the change in working capital. The diesel issue gave rise to cash outflows in the reporting period. Cash flows from operating activities decreased by 14.0% to €17.4 billion. Investing activities attributable to operating activities recorded a cash outflow of €13.4 (12.4) billion in the reporting period. At €10.9 (10.9) billion, capex was on a level with the previous year, while capitalized development costs rose by €0.8 billion to €5.0 billion. Transactions in the reporting period included the sale of the LeasePlan shares and in the previous year the sale of the Suzuki shares. Net cash flow declined by €3.7 billion to €4.0 billion.

## FINANCIAL POSITION IN THE COMMERCIAL VEHICLES BUSINESS AREA

€ million	2016	2015
Gross cash flow	2,496	2,455
Change in working capital	238	786
Cash flows from operating activities	2,734	3,241
Cash flows from investing activities attributable to operating activities	-2,407	-2,285
Net cash flow	327	956

At  $\[ \le 2.5 \]$  (2.5) billion in the fiscal year, gross cash flow in the Commercial Vehicles Business Area was on a level with the previous year. The higher earnings before special items more than offset negative special items.  $\[ \le 0.2 \]$  (0.8) billion was released from working capital, less than in the previous year. The new special items recognized in the reporting period had a negative impact on gross cash flow and a positive effect on the change in working capital. Cash flows from operating activities declined to  $\[ \le 2.7 \]$  (3.2) billion. Investing activities attributable to operating activities recorded a cash outflow of  $\[ \le 2.4 \]$  (2.3) billion, resulting in particular from investments for the new plant in Wrzesnia, Poland, the successor to the Volkswagen Crafter being built there starting in 2016, and the new generation of Scania trucks. At  $\[ \le 0.3 \]$  billion, net cash flow in the reporting period was down  $\[ \le 0.6 \]$  billion year-on-year.

### FINANCIAL POSITION IN THE POWER ENGINEERING BUSINESS ARFA

€ million	2016	2015
Gross cash flow	52	340
Change in working capital	111	24
Cash flows from operating activities	163	364
Cash flows from investing activities attributable to operating activities	-182	-191
Net cash flow	-19	173

The Power Engineering Business Area generated gross cash flow of €0.1 billion in the reporting period, thus falling short of the prior-year figure by €0.3 billion. The decrease was primarily attributable to the special items from restructuring expenses, which at the same time had a positive effect on working capital. At €0.1 (0.0) billion, this increased as against the previous year. Cash flows from operating activities declined to €0.2 (0.4) billion. Investing activities attributable to operating activities decreased by 4.9% to €0.2 billion. Net cash flow declined to €-0.0 (0.2) billion in the reporting period.

#### CONSOLIDATED BALANCE SHEET BY DIVISION AS OF DECEMBER 31

	VOLKSWAGEN	GROUP	AUTOMOT	VE <sup>1</sup>	FINANCIAL SERVICES	
€ million	2016	2015	2016	2015	2016	2015
Assets						
Noncurrent assets	254,010	236,548	139,003	132,812	115,007	103,736
Intangible assets	62,599	61,147	62,372	60,918	227	228
Property, plant and equipment	54,033	50,171	51,415	47,768	2,619	2,403
Lease assets	38,439	33,173	3,385	2,931	35,054	30,242
Financial services receivables	68,402	63,185	9		68,393	63,185
Investments, equity-accounted investments and other equity investments, other receivables and financial assets	30,537	28.873	21.822	21.195	8,715	7.678
Current assets	155,722	145,387	81,083	74,019	74,640	71,367
Inventories	38,978	35,048	34,947	31,369	4,031	3,679
Financial services receivables	49.673	46,888	<del>-660</del>		50.333	47,502
Other receivables and financial assets	30,286	27,572	17,561	15,315	12,726	12,257
Marketable securities	17,520	15,007	14,703	12,261	2,817	2,747
Cash, cash equivalents and time deposits	19,265	20,871	14,532	15,688	4,733	5,183
Total assets	409,732	381,935	220,085	206,831	189,647	175,103
Equity and liabilities						
Equity	92,910	88,270	69,130	67,366	23,780	20,905
Equity attributable to Volkswagen AG shareholders	85,122	80,500	61,714	59,898	23,408	20,603
Equity attributable to Volkswagen AG hybrid capital investors	7,567	7,560	7,567	7,560		_
Equity attributable to Volkswagen AG						
shareholders and hybrid capital investors	92,689	88,060	69,281	67,458	23,408	20,603
Noncontrolling interests	221	210	-151	<del>-92</del>	373	302
Noncurrent liabilities	139,306	145,175	69,982	73,568	69,324	71,607
Financial liabilities	66,358	73,292	5,876	9,557	60,483	63,735
Provisions for pensions	33,012	27,535	32,464	27,119	549	415
Other liabilities	39,936	44,349	31,643	36,892	8,293	7,457
Current liabilities	177,515	148,489	80,973	65,898	96,542	82,591
Put options and compensation rights granted to noncontrolling interest shareholders	3,849	3,933	3,849	3,933	-	_
Financial liabilities	88,461	72,313	-1,019	-3,974	89,481	76,286
Trade payables	22,794	20,460	20,753	18,709	2,041	1,751
Other liabilities	62,411	51,783	57,391	47,229	5,021	4,554
Total equity and liabilities	409,732	381,935	220,085	206,831	189,647	175,103

 $<sup>1 \ \ \</sup>text{Including allocation of consolidation adjustments between the Automotive and Financial Services divisions, primarily intragroup loans.}$ 

#### CONSOLIDATED RALANCE SHEET STRUCTURE 2016

in percent



#### Financial position in the Financial Services Division

The Financial Services Division generated gross cash flow of €9.5 (8.8) billion in the reporting period due to earnings-related factors. Funds tied up in working capital amounted to €20.4 (18.9) billion due to growth in business volumes. Cash flows from operating activities amounted to €-10.8 (-10.1) billion.

The acquisition of the interest in ride hailing service Gett amounting to  $\{0.3\text{ billion was one of the factors behind the increase in investing activities attributable to operating activities to <math>\{0.9, 0.6, 0.6\}$  billion.

Volkswagen AG contributed a capital increase of  $\in 1.2$  billion to the Financial Services Division's financing activities in the reporting period to finance the expected growth in business in existing and new markets as well as to comply with the continued increase in regulatory requirements. Cash inflows from financing activities amounted to  $\in 12.0$  (15.4) billion overall.

The Financial Services Division's negative net liquidity, which is common in the industry, amounted to  $\in$ -135.1 billion at the end of the reporting period, compared with  $\in$ -125.1 billion at the end of December 2015.

#### **NET ASSETS**

#### Consolidated balance sheet structure

At  $\$ 409.7 billion, the Volkswagen Group's total assets at the end of fiscal year 2016 exceeded the prior-year figure by 7.3%, due above all to the increased business volume of the Financial Services Division. The structure of the consolidated balance sheet as of the reporting date is shown in the chart on this page. At  $\$ 92.9 billion, the Volkswagen Group's equity increased by  $\$ 4.6 billion compared with December 31, 2015. The equity ratio was 22.7 (23.1)%.

As of the end of the fiscal year, the Group had off-balance-sheet commitments in the form of contingent liabilities in the amount of  $\[ \in \]$  6.8 (3.5) billion, financial guarantees in the amount of  $\[ \in \]$  0.2 (1.6) billion and other financial obligations in the amount of  $\[ \in \]$  25.9 (25.4) billion. Contingent liabilities relate primarily to legal risks in connection with the diesel issue. The other financial obligations primarily result from purchase commitments for property, plant and equipment, as well as obligations under long-term leasing and rental contracts and irrevocable credit commitments to customers. In addition, as part of the settlement agreements in the USA, Volkswagen announced investments in the infrastructure for zero-emission vehicles and in initiatives to promote access to and awareness of this technology. Other financial obligations include an amount of  $\[ \in \]$  6 billion for this purpose.

#### Automotive Division balance sheet structure

The Automotive Division's intangible assets and its property, plant and equipment were up on the year-end 2015 figure as of December 31, 2016. Equity-accounted investments decreased, mainly as a result of the sale of the LeasePlan shares. There was a significant increase in other receivables and financial assets. Noncurrent assets rose by a total of 4.7%.

Current assets rose by a total of 9.5%; inventories contained in this item rose by 11.4% because of production-related factors. Receivables were up on year-end 2015. Marketable securities increased to  $\leq$ 14.7 (12.3) billion as compared with December 31, 2015, while cash and cash equivalents stood at  $\leq$ 14.5 (15.7) billion.

The Automotive Division's equity was €69.1 billion at the end of 2016, and thus 2.6% higher year-on-year. It was lifted by the good earnings growth before special items and positive effects from the measurement of derivatives recognized outside profit or loss. Expenses from special items and higher actuarial losses from the measurement of pension provisions reduced the Automotive Division's equity. The capital increase implemented in the Financial Services Division also reduced equity in the Automotive Division, where the deduction was recognized. The noncontrolling interests are mainly attributable to RENK AG and AUDI AG. As these were lower overall than the noncontrolling interests attributable to the Financial Services Division, the figure for the Automotive Division, where the deduction was recognized, was negative. The equity ratio decreased to 31.4 (32.6)%.

Noncurrent liabilities decreased by 4.9% year-on-year to  $\in$ 70.0 (73.6) billion. Pension provisions contained in this figure increased because of the change in the discount rate. Financial liabilities declined by  $\in$ 3.7 billion and other provisions were also down.

At €81.0 (65.9) billion, current liabilities were 22.9% higher overall than at the end of 2015. Reclassifications from noncurrent to current liabilities, due to shorter remaining maturities, as well as short-term borrowings led to an increase in current financial liabilities. The figures for the Automotive Division also contain the elimination of intragroup transactions between the Automotive and Financial Services divisions. As the current financial liabilities for the primary Automotive Division were lower than the loans granted to the Financial Services Division, a negative amount was disclosed. The item "Put options and compensation rights granted to noncontrolling interest shareholders" primarily comprises the liability for the obligation to acquire the shares held by the remaining free float shareholders of MAN. Current other provisions increased because of special items.

The Automotive Division's total assets amounted to €220.1 billion at the end of the reporting period, up 6.4% on the prior-year figure.

#### PASSENGER CARS BUSINESS AREA BALANCE SHEET STRUCTURE

€ million	2016	2015
Noncurrent assets	109,918	105,028
Current assets	61,600	57,289
Total assets	171,518	162,317
Equity	54,789	54,598
Noncurrent liabilities	56,703	61,195
Current liabilities	60,026	46,524

Noncurrent assets in the Passenger Cars Business Area amounted to €109.9 billion as of December 31, 2016, 4.7% higher than a year before. While intangible assets and property, plant and equipment increased, equity-accounted investments declined primarily as a result of the sale of the LeasePlan shares. Current assets rose by 7.5% to €61.6 billion, mainly due to the increase in inventories. Total assets at the end of 2016 amounted to €171.5 (162.3) billion.

#### COMMERCIAL VEHICLES BUSINESS AREA BALANCE SHEET STRUCTURE

€ million	2016	2015
Noncurrent assets	26,206	24,749
Current assets	16,197	13,421
Total assets	42,403	38,170
Equity	11,185	9,512
Noncurrent liabilities	12,531	11,532
Current liabilities	18,687	17,126

At  $\[ \in \]$ 11.2 billion, equity at the end of fiscal year 2016 was up 17.6% year-on-year. Noncurrent liabilities rose by 8.7%; the other provisions contained in this figure increased largely because of special items resulting from legal risks. Driven by the increase in financial liabilities, current liabilities rose by 9.1% compared with the 2015 reporting date.

## POWER ENGINEERING BUSINESS AREA BALANCE SHEET STRUCTURE

€ million	2016	2015
Noncurrent assets	2,879	3,035
Current assets	3,285	3,310
Total assets	6,165	6,345
Equity	3,157	3,255
Noncurrent liabilities	748	842
Current liabilities	2,260	2,248

The Power Engineering Business Area's noncurrent assets declined compared with the previous year. Current assets were on a level with the previous year. The Power Engineering Business Area recorded total assets of  $\in$ 6.2 billion as of December 31, 2016, 2.8% lower than at year-end 2015.

Due to earnings-related factors and special items from the restructuring program, the Power Engineering Business Area's equity at the end of the fiscal year was 3.0% lower than the figure of  $\leqslant$ 3.2 billion recorded in the previous year. Noncurrent liabilities fell by 11.1%, while current liabilities were on a level with the previous year.

#### Financial Services Division balance sheet structure

The Financial Services Division's total assets amounted to €189.6 billion at the end of December 2016, a 8.3% increase over the figure as of December 31, 2015.

Both lease assets and noncurrent financial services receivables increased because of the growth in business. Noncurrent assets rose by 10.9% overall.

Current assets were up 4.6% year-on-year, primarily as a result of higher financial services receivables.

The Financial Services Division accounted for 46.3 (45.8)% of the Volkswagen Group's assets at the end of fiscal year 2016.

At €23.8 billion, the Financial Services Division's equity as of December 31, 2016 exceeded the prior-year figure by 13.8%. In addition to good earnings growth, equity was pushed up by capital increases implemented by Volkswagen AG in the reporting period to finance the growth in business and meet regulatory capital requirements. The equity ratio was 12.5 (11.9)%.

Driven by the decline in financial liabilities, noncurrent liabilities were down by 3.2%.

Current liabilities increased by 16.9% compared with year-end 2015. This increase is attributable to the funding of volume growth. At  $\leq$ 33.8 (26.5) billion, deposits from direct banking business were higher than in the previous year.

#### FINANCIAL KEY PERFORMANCE INDICATORS

%	2016	2015	2014	2013	2012
Volkswagen Group					
Gross margin	18.9	15.9	18.0	18.1	18.2
Personnel expense ratio	17.0	17.0	16.7	16.1	15.3
Operating result as a percentage of sales revenue	3.3	-1.9	6.3	5.9	6.0
Return on sales before tax	3.4	-0.6	7.3	6.3	13.2
Return on sales after tax	2.5	-0.6	5.5	4.6	11.4
Equity ratio	22.7	23.1	25.7	27.8	26.5
Dynamic gearing <sup>1</sup> (years)	0.1	0.1	0.1	0.1	0.1
Automotive Division <sup>2</sup>					
Change in unit sales year-on-year <sup>3</sup>	+ 3.8	-2.0	+ 5.0	+ 4.1	+ 11.8
Change in sales revenue year-on-year	+ 1.1	+ 3.6	+ 1.4	+ 1.3	+ 21.6
Research and development costs as a percentage of sales revenue	7.3	7.4	7.4	6.7	5.5
Operating result as a percentage of sales revenue	2.5	-3.4	6.1	5.6	5.7
EBITDA (in € million) <sup>4</sup>	18,999	7,212	23,100	20,594	19,895
Return on investment (ROI) <sup>5</sup>	8.2	-0.2	14.9	14.5	16.6
Cash flows from operating activities as a percentage of sales					
revenue	10.9	12.9	12.2	11.8	9.4
Cash flows from investing activities attributable to operating activities as a percentage of sales revenue	8.6	8.1	8.7	9.3	9.5
Capex as a percentage of sales revenue	6.9	6.9	6.5	6.3	5.9
Net liquidity as a percentage of sales revenue	12.5	11.5	8.7	8.6	5.5
Ratio of noncurrent assets to total assets <sup>6</sup>	23.4	23.1	22.3	21.3	21.0
Ratio of current assets to total assets <sup>7</sup>	15.9	15.2	14.3	13.4	14.3
Inventory turnover <sup>8</sup>	5.5	5.8	6.2	6.5	6.4
Equity ratio	31.4	32.6	36.9	39.8	37.9
Financial Services Division					
Increase in total assets	8.3	13.9	15.1	3.9	19.5
Return on equity before tax <sup>9</sup>	10.8	12.2	12.5	14.3	13.1
Equity ratio	12.5	11.9	11.3	10.5	10.4

- ${\bf 1} \ \ {\sf Ratio} \ {\sf of} \ {\sf cash} \ {\sf flows} \ {\sf from} \ {\sf operating} \ {\sf activities} \ {\sf to} \ {\sf current} \ {\sf and} \ {\sf noncurrent} \ {\sf financial} \ {\sf liabilities}.$
- 2 Including allocation of consolidation adjustments between the Automotive and Financial Services divisions.
- 3 Including the Chinese joint ventures. These companies are accounted for using the equity method.
- 4 Operating result plus net depreciation/amortization and impairment losses/reversals of impairment losses on property, plant and equipment, capitalized development costs, lease assets, goodwill and financial assets as reported in the cash flow statement.
- 5 For details, see Value-based management on page 133.
- 6 Ratio of property, plant and equipment to total assets.
- ${\bf 7} \ \ {\bf Ratio} \ {\bf of} \ {\bf inventories} \ {\bf to} \ {\bf total} \ {\bf assets} \ {\bf at} \ {\bf the} \ {\bf balance} \ {\bf sheet} \ {\bf date}.$
- 8 Ratio of sales revenue to average monthly inventories.
- $9\ \ Earnings$  before tax as a percentage of average equity.

#### VALUE ADDED STATEMENT

The value added statement indicates the added value generated by a company in the past fiscal year as its contribution to the gross domestic product of its home country, and how it is appropriated. The value added generated by the Volkswagen Group in the year under review was up 20.6% year-on-

year, mainly as a result of considerably lower negative special items in connection with the diesel issue. Added value per employee increased to €94.5 thousand (+18.0%) in 2016. Employees in the passive phase of their partial retirement as well as vocational trainees are not included in the calculation.

#### VALUE ADDED GENERATED BY THE VOLKSWAGEN GROUP

Source of funds in € million	2016		2015	
Sales revenue	217,267		213,292	
Other income	17,907		20,092	
Cost of materials	-140,307		-143,700	
Depreciation and amortization	-20,924		-19,693	
Other upfront expenditures	-23,990		-28,578	
Value added	49,953		41,413	
Appropriation of funds in € million	2016	%	2015	%
Appropriation of funds in € million  to shareholders (dividend, 2016 dividend proposal)	1,015	2.0	2015	
··· ·				0.2
to shareholders (dividend, 2016 dividend proposal)	1,015	2.0	68	0.2 87.6 7.3
to shareholders (dividend, 2016 dividend proposal) to employees (wages, salaries, benefits)	1,015 37,017	2.0 74.1	68 36,268	0.2 87.6
to shareholders (dividend, 2016 dividend proposal) to employees (wages, salaries, benefits) to the state (taxes, duties)	1,015 37,017 3,486	2.0 74.1 7.0	68 36,268 3,033	0.2 87.6 7.3

#### FIVE-YEAR REVIEW

	2016	2015	2014	2013	2012
Volume Data (thousands)					
Vehicle sales (units)	10,391	10,010	10,217	9,728	9,345
Germany	1,257	1,279	1,247	1,187	1,207
Abroad	9,135	8,731	8,970	8,541	8,137
Production (units)	10,405	10,017	10,213	9,728	9,255
Germany	2,685	2,681	2,559	2,458	2,321
Abroad	7,720	7,336	7,653	7,270	6,934
Employees (yearly average)	619	604	583	563	533
Germany	280	276	265	255	237
Abroad	339	329	318	308	296
Financial Data (in € million)					
Income Statement					
Sales revenue	217,267	213,292	202,458	197,007	192,676
Cost of sales	176,270	179,382	165,934	161,407	157,522
Gross profit	40,997	33,911	36,524	35,600	35,154
Distribution expenses	22,700	23,515	20,292	19,655	18,850
Administrative expenses	7,336	7,197	6,841	6,888	6,220
Net other operating result	-3,858	-7,267	3,306	2,613	1,415
Operating result	7,103	-4,069	12,697	11,671	11,498
Financial result	189	2,767	2,097	757	13,989
Earnings before tax	7,292	-1,301	14,794	12,428	25,487
Income tax expense	1,912	59	3,726	3,283	3,606
Earnings after tax	5,379	-1,361	11,068	9,145	21,881
Cost of materials	140,307	143,700	132,514	127,089	122,450
Personnel expenses	37,017	36,268	33,834	31,747	29,504
Balance Sheet (at December 31)					
Noncurrent assets	254,010	236,548	220,106	202,141	196,457
Current assets	155,722	145,387	131,102	122,192	113,061
Total assets	409,732	381,935	351,209	324,333	309,518
Equity	92,910	88,270	90,189	90,037	81,995
of which: noncontrolling interests	221	210	198	2,304	4,313
Noncurrent liabilities	139,306	145,175	130,314	115,672	121,996
Current liabilities	177,515	148,489	130,706	118,625	105,526
Total equity and liabilities	409,732	381,935	351,209	324,333	309,518
Cash flows from operating activities	9,430	13,679	10,784	12,595	7,209
Cash flows from investing activities attributable to operating activities	16,797	15,523	16,452	14,936	16,840
Cash flows from financing activities	9,712	9,068	4,645	8,973	13,712

#### RETURN ON INVESTMENT (ROI) AND VALUE CONTRIBUTION

The Volkswagen Group's financial target system centers on continuously and sustainably increasing the value of the Company. In order to ensure the efficient use of resources in the Automotive Division and to measure the success of this, we have been using a value-based management system for a number of years, with return on investment (ROI) as a relative indicator and value contribution<sup>1</sup>, a key performance indicator linked to the cost of capital, as an absolute performance measure.

The return on investment serves as a consistent target in strategic and operational management. If the return on investment exceeds the market cost of capital, there is an increase in the value of the invested capital and a positive value contribution. The concept of value-based management allows the success of the Automotive Division and individual business units to be evaluated. It also enables the earnings power of our products, product lines and projects – such as new plants – to be measured.

#### Components of value contribution

Value contribution is calculated on the basis of the operating result after tax and the opportunity cost of invested capital. The operating result shows the economic performance of the Automotive Division and is initially a pre-tax figure.

Using the various international income tax rates of the relevant companies, we assume an overall average tax rate of 30% when calculating the operating result after tax.

The cost of capital is multiplied by the average invested capital to give the opportunity cost of capital. Invested capital is calculated as total operating assets reported in the balance sheet (property, plant and equipment, intangible assets, lease assets, inventories and receivables) less non-interest-bearing liabilities (trade payables and payments on account received). Average invested capital is derived from the balance at the beginning and the end of the reporting period.

As the concept of value-based management only comprises our operating activities, assets relating to investments in subsidiaries and associates and the investment of cash funds are not included when calculating invested capital. Interest charged on these assets is reported in the financial result.

#### Determining the current cost of capital

The cost of capital is the weighted average of the required rates of return on equity and debt. The cost of equity is determined using the Capital Asset Pricing Model (CAPM).

This model uses the yield on long-term risk-free Bunds, increased by the risk premium attaching to investments in the equity market. The risk premium comprises a general market risk and a specific business risk.

The general risk premium of 6.5% reflects the general risk of a capital investment in the equity market and is oriented on the Morgan Stanley Capital International (MSCI) World Index.

The specific business risk – price fluctuations in Volkswagen preferred shares – has been modeled in comparison to the MSCI World Index when calculating the beta factor. The MSCI World Index is a global capital market benchmark for investors.

The analysis period for the beta factor calculation spans five years with annual beta figures on a daily basis and an average subsequently being calculated. A beta factor of 1.22 (1.28) was determined for 2016.

#### COST OF CAPITAL AFTER TAX AUTOMOTIVE DIVISION

%	2016	2015
Risk-free rate	0.7	1.2
MSCI World Index market risk premium	6.5	6.5
Volkswagen-specific risk premium	1.5	1.8
(Volkswagen beta factor)	(1.22)	(1.28)
Cost of equity after tax	8.7	9.5
Cost of debt	1.7	2.0
Tax	-0.5	-0.6
Cost of debt after tax	1.2	1.4
Proportion of equity	66.7	66.7
Proportion of debt	33.3	33.3
Cost of capital after tax	6.2	6.8

The cost of debt is based on the average yield for long-term debt. As borrowing costs are tax-deductible, the cost of debt is adjusted to account for the tax rate of 30%.

A weighting on the basis of a fixed ratio for the fair values of equity and debt gives an effective cost of capital for the Automotive Division of 6.2 (6.8)% for 2016.

<sup>1</sup> The value contribution corresponds to the Economic Value Added (EVA®). EVA® is a registered trademark of Stern Stewart & Co.

## RETURN ON INVESTMENT (ROI) AND VALUE CONTRIBUTION IN THE REPORTING PERIOD

The operating result after tax of the Automotive Division, including the proportionate operating result of the Chinese joint ventures, was €7,419 (−203) million in fiscal year 2016. The increase was primarily due to the year-on-year decline in special items, as well as improvements in the mix and optimized product costs. Profit was negatively impacted by higher depreciation and amortization charges due to the high volume of capital expenditures and exchange rate effects. Effects on earnings and assets from purchase price allocation are not taken into account as they cannot be influenced operationally by management.

Invested capital rose to €91,020 (84,289) million, primarily due to increased investments in property, plant and equipment, investment property and intangible assets, excluding capitalized development costs (capex), and higher capitalized development costs.

The return on investment (ROI) is the return on invested capital for a particular period based on the operating result after tax. It rose year-on-year to 8.2 (-0.2)% as a result of the improved operating profit. We did not meet the minimum required rate of return on invested capital of 9% due to the adverse effects of the special items on earnings.

More information on value-based management is contained in our publication entitled "Financial Control System of the Volkswagen Group", which can be downloaded from our Investor Relations website: www.volkswagenag.com/ir.

#### RETURN ON INVESTMENT (ROI) AND VALUE CONTRIBUTION IN THE AUTOMOTIVE DIVISION1

€ million	2016	2015
Operating result after tax	7,419	-203
Invested capital (average)	91,020	84,289
Return on investment (ROI) in %	8.2	-0.2
Cost of capital in %	6.2	6.8
Cost of invested capital	5,643	5,732
Value contribution	1,775	-5,935

<sup>1</sup> Including proportionate inclusion of the Chinese joint ventures (including the relevant sales and component companies) and allocation of consolidation adjustments between the Automotive and Financial Services divisions.

#### SUMMARY OF BUSINESS DEVELOPMENT AND ECONOMIC POSITION

The Board of Management of Volkswagen AG considers business development and the economic position to have been satisfactory overall. In spite of the challenges resulting from the diesel issue and the persistently difficult conditions on the vehicle markets in Brazil and Russia, we were able to reach our forecast in 2016 and also set a new record, with 10.3 million vehicles delivered (+3.7%). The Group's sales revenue ultimately grew at a faster pace than expected over the course of the year and was higher than in the previous year, due among other factors to mix-related factors and the good business growth recorded by the Financial Services Division. As a result, operating profit before special items rose year-onyear to €14.6 billion and the operating return on sales before special items was 6.7%, exceeding expectations. As expected, operating profit and the operating return on sales after special items resulting in particular from the diesel issue were also clearly positive.

Sales revenue in the Passenger Cars Business Area was better than expected, exceeding the figure for 2015. Operating profit and the operating return on sales were within the forecast ranges and exceeded the original expectations before special items. The Commercial Vehicles, Power Engineering and Financial Services Business Areas are confirming the current sales forecasts. The operating profit and operating return on sales recorded by the Commercial Vehicles Business Area was within the range originally forecasted, despite special items. In the Power Engineering Business Area, operating profit declined significantly because of special items. The Financial Services Division increased its operating profit markedly year-on-year.

The Automotive Division's ratio of capex to sales revenue was 6.9%, as in the previous year, and was thus inside the expected corridor. As forecast, the net cash flow in the Automotive Division was significantly lower than in the previous year, among other things because of expenses from the diesel issue. The Automotive Division's net liquidity at the end of the reporting period was a robust €27.1 billion. The return on investment (ROI) rose significantly as a result of the improved operating profit in the Automotive Division; however, the minimum rate of return on invested capital was not achieved because of the special items.

#### **FORECAST VERSUS ACTUAL FIGURES**

	Actual 2015	Original Forecast for 2016	Adjusted Forecast for 2016	Actual 2016
Deliveries to customers	9.9 million	on the prior-year level	slight increase	10.3 million
Volkswagen Group				
Sales revenue	€213.3 billion	decline up to 5%	on the prior-year level	€217.3 billion
Operating return on sales before special items	6.0%	5.0 - 6.0%	~ 6%	6.7%
Operating return on sales	-1.9%	5.0 - 6.0%	clearly positive, up to 5.0%	3.3%
Operating result before special items	€12.8 billion	within the forecast range	within the forecast range	€14.6 billion
Operating result	€-4.1 billion	within the forecast range	within the forecast range	€7.1 billion
Passenger Cars Business Area				
Sales revenue	€149.7 billion	noticeable decline	slight decline	€150.3 billion
Operating return on sales	-4.7%	5.5 - 6.5%	clearly positive, up to 5.5%	2.8%
Operating result	€-7.0 billion	within the forecast range	within the forecast range	€4.2 billion
Commercial Vehicles Business Area				
Sales revenue	€30.4 billion	on the prior-year level	moderate increase	€32.1 billion
			slightly positive,	
Operating return on sales	1.9%	2.0 -4.0%	up to 2%	2.2%
Operating result	€0.6 billion	within the forecast range	within the forecast range	€0.7 billion
Power Engineering Business Area				
Sales revenue	€3.8 billion	noticeable decline	noticeable decline	€3.6 billion
Operating Result	€0.1 billion	significant decline	significant decline	€-0.2 billion
Financial Services Division				
Sales revenue	€29.4 billion	on the prior-year level	noticeable increase	€31.3 billion
Operating result	€2.2 billion	on the prior-year level	noticeable increase	€2.4 billion
Capex/sales revenue in the Automotive Division	6.9%	6-7%	6-7%	6.9%
Net cash flow in the Automotive Division	€8.9 billion	significant decline	significant decline	€4.3 billion
Return on investment (RoI) in the Automotive Division	-0.2%	significant increase,	significant increase,	8.2%

Volkswagen AG Group Management Report

# Volkswagen AG

(Condensed, in accordance with the German Commercial Code)

Production and unit sales at prior-year level.

Profit rises; further charges from the diesel issue, but at a lower level.

#### ANNUAL RESULT

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Special items relating to the diesel issue, and in particular provisions for technical measures and legal risks, had an impact of  $\in$ -0.8 (-7.5) billion on cost of sales and of  $\in$ -4.5 (-6.7) billion on the net other operating result. In addition, special items of  $\in$ -0.4 (-0.8) billion affected distribution expenses.

In fiscal year 2016, sales were 2.5% higher than in the previous year, at  $\[ < \]$ 75.3 billion. This includes an amount of  $\[ < \]$ 2.0 billion, relating in particular to rental and leasing, which had been recognized in the other operating result in the previous year. Adjusted for this amount, sales fell slightly compared with 2015. Sales generated abroad accounted for a share of 61.2 (62.1)%. Cost of sales fell by 7.3% to  $\[ < \]$ 70.2 billion. In deviation from the previous year, expenditure of  $\[ < \]$ 1.4 bil-

At  $\in$ 8.4 billion, selling, general and administrative expenses were  $\in$ 1.0 billion down on the prior-year figure.

The net other operating result improved by  $\leq$ 5.0 billion to  $\leq$ -2.0 (-7.1) billion.

Driven by lower net investment income, the financial result declined to  $\leq 8.7$  (13.8) billion.

#### INCOME STATEMENT OF VOLKSWAGEN AG

€ million	2016	2015
Sales	75,310	73,510
Cost of sales	-70,180	-75,693
Gross profit on sales	5,131	-2,184
Selling, general and administrative expenses	-8,352	-9,364
Net other operating result	-2,035	-7,084
Financial result <sup>1</sup>	8,725	13,813
Taxes on income	-670	-697
Earnings after tax	2,799	-5,515
Net income/net loss for the fiscal year	2,799	-5,515
Retained profits brought forward	2	5
Appropriation to/release of revenue		
reserves	-1,399	5,580
Net retained profits	1,402	69

#### 1 Including write-downs of financial assets.

#### BALANCE SHEET OF VOLKSWAGEN AG AS OF DECEMBER 31

€ million	2016	2015
Fixed assets	101,973	94,919
Inventories	4,387	4,073
Receivables <sup>1</sup>	26,386	26,563
Cash-in-hand and bank balances	9,117	7,941
Total assets	141,863	133,496
Equity	27,100	24,368
Special tax-allowable reserves	23	26
Long-term debt	26,457	26,973
Medium-term debt	30,082	32,003
Short-term debt	58,200	50,126

<sup>1</sup> Including prepaid expenses.

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#### NET ASSETS AND FINANCIAL POSITION

Total assets amounted to €141.9 billion at December 31, 2016, €8.4 billion up on the prior-year figure. Investments in tangible and intangible fixed assets declined to €2.0 (2.7) billion. At €9.1 (9.1) billion, investments in financial assets remained at the prior-year level. Fixed assets accounted for a share of 71.9 (71.1)% of total assets.

Current assets (including prepaid expenses) increased slightly compared with 2015.

Equity amounted to €27.1 billion at the end of the reporting period; the increase was due in particular to the improved net income for the year. The equity ratio was 19.1 (18.3)%.

At  $\le 30.8$  (28.6) billion, other provisions remained at the previous year's high level. This was due to the previous year's increase in provisions in connection with the diesel issue, which largely continued to be recognized. Provisions for pensions and similar obligations declined by  $\le 0.7$  billion to  $\le 13.6$  billion, primarily as a result of a change in the interest rate, while provisions for taxes decreased by  $\le 0.7$  billion to  $\le 3.9$  billion.

The  $\le$ 4.8 billion rise in total liabilities (including deferred income) to  $\le$ 66.4 billion is mainly attributable to higher liabilities to affiliated companies.

Volkswagen AG's cash funds, comprising cash instruments with a maturity of less than three months, less bank and cash pooling liabilities repayable on demand, declined year-on-year from €–5.1 billion to €–6.2 billion. The interest-bearing portion of debt amounted to €55.1 (51.4) billion. In our assessment, the economic position of Volkswagen AG is just as satisfactory overall as that of the Volkswagen Group.

#### **DIVIDEND PROPOSAL**

Including net income for the year, net retained profits amounted to  $\[ \in \]$ 1.4 billion. The Board of Management and Supervisory Board are proposing to pay a total dividend of  $\[ \in \]$ 1.0 billion, i.e.  $\[ \in \]$ 2.00 per ordinary share and  $\[ \in \]$ 2.06 per preferred share.

#### PROPOSAL ON THE APPROPRIATION OF NET PROFIT

€	2016
Dividend distribution on subscribed capital	
(€1,283 million)	1,014,962,852.70
of which on: ordinary shares	590,179,636.00
preferred shares	424,783,216.70
Appropriation to other revenue reserves	385,000,000.00
Balance (carried forward to new account)	1,709,231.84
Net retained profits	1,401,672,084.54

#### EMPLOYEE PAY AND BENEFITS AT VOLKSWAGEN AG

2016	%	2015	%
7,138	71.2	7,126	71.8
1,337	13.3	1,227	12.4
1,099	11.0	1,108	11.2
456	4.6	461	4.6
10,030	100.0	9,922	100.0
	7,138 1,337 1,099 456	7,138 71.2 1,337 13.3 1,099 11.0 456 4.6	7,138     71.2     7,126       1,337     13.3     1,227       1,099     11.0     1,108       456     4.6     461

Volkswagen AG Group Management Report

#### VEHICLE SALES

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Volkswagen AG sold a total of 2,632,144 (2,676,629) vehicles in fiscal year 2016. Vehicles sold abroad accounted for a share of 69.7 (69.4)%.

#### PRODUCTION

Volkswagen AG produced a total of 1,241,217 vehicles at its vehicle production plants in Wolfsburg, Hanover and Emden in the reporting period (–1.2%). Volkswagen AG's average daily production was up on the previous year, at 5,423 units.

#### **EMPLOYEES**

As of December 31, 2016, a total of 113,928 people were employed at the sites of Volkswagen AG, excluding staff employed at subsidiaries. Of this figure, 4,999 were vocational trainees. 2,936 employees were in the passive phase of their partial retirement. The size of the workforce decreased by 0.1% as against the prior-year reporting date.

Female employees accounted for 17.0% of the workforce. Volkswagen AG employed 4,721 part-time workers (4.1%). The percentage of foreign employees was 6.1%. The proportion of employees in the production area who have completed vocational training relevant for Volkswagen was 83.5%. 18.8% of the employees were graduates. The average age of employees in fiscal year 2016 was 43.2 years.

#### RESEARCH AND DEVELOPMENT

Research and development costs for Volkswagen AG under the German Commercial Code declined to €4.7 (5.3) billion in the reporting period. 12,380 people were employed in this area at the end of the reporting period.

#### **EXPENDITURE ON ENVIRONMENTAL PROTECTION**

When measuring expenditure on environmental protection, a distinction is made between investments and operating costs for production-related environmental protection measures. Of our total investments, only those that are spent exclusively or primarily on environmental protection are included in environmental protection investments. We distinguish here between additive and integrated investments. Additive environmental protection measures are separate investments that are independent of other investments relating to the production process. They can be upstream or downstream of the production process. Unlike additive environmental protection measures, integrated measures involve reducing the environmental impact during the production phase. In 2016 we invested primarily in soil, water and air pollution control.

The operating costs recognized for environmental protection relate exclusively to production-related measures that protect the environment against harmful factors by avoiding, reducing, or eliminating emissions by the Company. Resources are also conserved. For example, these include expenditures incurred to operate equipment that protects the environment as well as expenditures for measures not relating to such equipment. The emphasis in 2016 was on sewage and waste management.

The fields of environmental protection were redefined in 2016 due to a change in legislation.

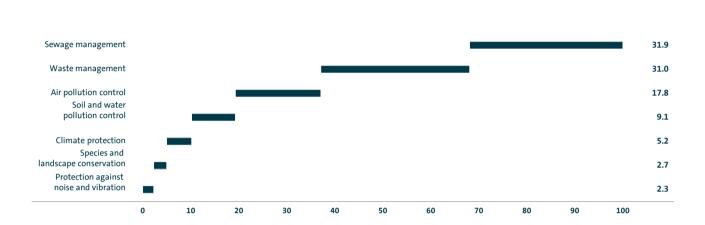
#### VOLKSWAGEN AG EXPENDITURE ON ENVIRONMENTAL PROTECTION

€ million	2016	2015	2014	2013	2012
Investments	11	21	19	14	9
Operating costs	223	244	226	224	216

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#### OPERATING COSTS FOR ENVIRONMENTAL PROTECTION AT VOLKSWAGEN AG 2016

Share of environmental protection areas in percent



### BUSINESS DEVELOPMENT RISKS AND OPPORTUNITIES AT VOLKSWAGEN AG

The business development of Volkswagen AG is exposed to essentially the same risks and opportunities as the Volkswagen Group. These risks and opportunities are explained in the Report on Risks and Opportunities on pages 180 to 201 of this annual report.

#### RISKS ARISING FROM FINANCIAL INSTRUMENTS

Risks for Volkswagen AG arising from the use of financial instruments are generally the same as those to which the Volkswagen Group is exposed. An explanation of these risks can be found on pages 199 to 200 of this annual report.

#### **DEPENDENT COMPANY REPORT**

The Board of Management of Volkswagen AG has submitted to the Supervisory Board the report required by section 312 of the AktG and issued the following concluding declaration:

"We declare that, based on the circumstances known to us at the time when the transactions with affiliated companies within the meaning of section 312 of the German Stock Corporation Act (AktG) were entered into, our Company received appropriate consideration for each transaction. No transactions with third parties or measures were either undertaken or omitted on the instructions of or in the interests of Porsche or other affiliated companies in the reporting period."

## Sustainable Value Enhancement

Our goal is to run our business responsibly along the entire value chain. Everyone should benefit from this – our customers, our employees, the environment and society. Our future program TOGETHER – Strategy 2025 is ushering in the biggest change process in the Company's history. The starting point is our vision of becoming one of the world's leading providers of sustainable mobility.

The main financial key performance indicators for the Volks-wagen Group are described in the "Results of Operations, Financial Position and Net Assets" chapter. Nonfinancial key performance indicators also attest to the efficiency of our Company's value drivers. These include the processes in the areas of research and development, procurement, production, marketing and sales, information technology and quality assurance. In all of these processes, we are aware of our responsibility towards our customers, our employees, the environment and society. In this chapter we provide examples of how we are increasing the value of our Company in a sustainable way.

#### SUSTAINABILITY

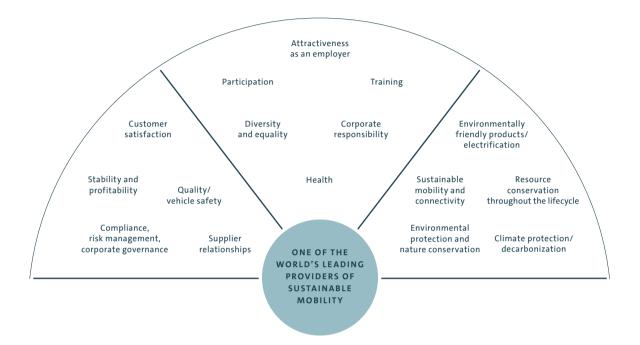
The Volkswagen Group is committed to sustainable, transparent and responsible corporate governance. The biggest challenge we face in implementing this at all levels and at every step in the value chain is the complexity of our Company, with its twelve brands, more than 626 thousand employees and 120 production locations. In order to tackle this challenge in the best way possible, we follow the recommendations of the German Corporate Governance Code and coordinate our sustainability activities across the entire Group. We have also put in place a forward-looking system of risk management and a clear framework for dealing with environmental issues in a future-oriented manner, employee responsibility and social commitment across our brands and in the regions in which we operate. The remuneration paid to the Group Board of Management also takes the Company's long-term success into account.

For us, sustainability means simultaneously striving for economic, social and environmental goals in a way that gives them equal priority. We want to create enduring value, provide good working conditions and handle the environment and resources with care. In connection with the diesel issue, we failed to meet our own standards in several respects. The irregularities in our handling of emissions figures are contrary to everything we stand for. We are doing everything within our power both to prevent it happening again and to regain lost trust from our stakeholders. Our sustainability concept is under extensive revision to ensure that we recognize risks and opportunities in the areas of environment, society and governance at an early stage at every step along the value chain. In this way, our corporate social responsibility (CSR) activities will contribute toward enhancing our Company's reputation and value in the long term.

#### Management und coordination

The Volkswagen Group has created a clear management structure to coordinate the Group's activities as regards sustainability and CSR. Its highest committee is the Group Board of Management (Sustainability Board), which is regularly informed by the Group Sustainability steering group on issues related to sustainability and corporate responsibility. The members of the Group Sustainability steering group include executives from central Board of Management business areas and representatives of the Group Works Council and the brands. The steering group's tasks include identifying the key action areas, making decisions on the strategic sustainability goals, monitoring the extent to which these goals are being met by means of indicators and approving the sustainability report.

The sustainability office supports the steering group. Its duties include coordinating all sustainability activities within the Group and the brands. It is also responsible for stakeholder dialog at Group level, for example with sustainability-driven analysts and investors. In addition, CSR project teams work across business areas on topics such as reporting, stakeholder management and sustainability in supplier



relationships. In parallel, this coordination and working structure is also largely established across the brands and is constantly expanding. Since 2009, the Sustainability & CSR coordinators for all brands and regions have come together once a year to promote communication across the Group, create uniform structures and learn from one another. This Group CSR meeting has proven its worth as an integral part of the Group-wide coordination structure.

#### Sustainability Council

As part of its efforts to continuously improve and expand its sustainability management, the Volkswagen Group appointed an international Sustainability Council in 2016 made up of renowned experts from the academic world, politics and society. The members of the council establish their own working methods and areas of focus independently and consult with the Board of Management, senior managers and the employee representatives regularly. The council's role is to keep a watchful, critical eye on developments within the Company and in society.

The proven expertise of the council members guarantees a comprehensive approach. The topics addressed are social responsibility and integrity, sustainable mobility and climate protection, and the future of work and digitalization. The Sustainability Council is vested with rights of information, consultation and initiative. This involves receiving timely, comprehensive information so that the council can fulfill its consulting mandate. Dialog between the Company and the council is ensured through the active offering of consultations. In addition, the council is authorized to proactively propose topics and it or its members can implement projects with the Company subject to prior agreement.

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The first key issues in 2017 will be not only the challenges created by global  $CO_2$  emissions and the corresponding regulations to be met post-2025, but also the Company's transformation process. The Volkswagen Group is initially providing  $\[ \in \] 20 \]$  million in funding for projects proposed and promoted by the Sustainability Council in its first two years.

#### Materiality analysis

Two developments in 2016 influenced the detailed analysis as to which issues are material to the Volkswagen Group: the realignment of the Group via the future program TOGETHER – Strategy 2025, and dealing with the consequences of the diesel issue.

After analyzing and identifying topics that are material to the Company, we derived 16 key action areas that we will use to achieve our goal of becoming one of the world's leading providers of sustainable mobility. The analysis was based on external studies, industry analyses and stakeholder surveys carried out by our brands, internal guidelines such as our corporate strategy and Group environmental strategy as well as key factors identified by the Volkswagen Group's strategy committee.

As the details of the new Group strategy have not yet been finalized, we are still in the process of specifying the content of the key action areas and defining corresponding values, targets and indicators. As an enterprise with global operations, we will also take account of the options available to us for influencing and implementing the Sustainable Development Goals (SDGs) formulated by the United Nations.

#### Code of Conduct and guidelines

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Voluntary commitments and principles that apply throughout the Group form the backbone of our strategic sustainability goals. Such principles include the seven Volkswagen Group values, namely customer focus, top performance, value creation, the ability to realign, respect, responsibility and sustainability. In addition, our sustainability model provides the framework for sustainable and responsible action. The Code of Conduct introduced by the Volkswagen Group in 2010 also applies to the entire Group and helps managers and employees alike to deal with legal and ethical challenges in their day-to-day work.

We expressly support the United Nations Global Compact, an agreement between the UN and the business world aimed at enhancing the social and ecological aspects of globalization. As long ago as 2002, the Volkswagen Group made a commitment to promoting human rights, labor standards and environmental protection and combating corruption. In 2013, this commitment was extended to include the CEO Water Mandate, the aim of which is to ensure the careful management of water resources. Until such time as the diesel issue has been finally resolved, we have agreed to put our membership on hold. We ensure that our actions are in line with the declarations of the International Labor Organization (ILO), the principles and conventions of the Organisation for Economic Co-operation and Development (OECD) and the international covenants of the United Nations on basic rights and freedom.

We have also established our own internal guidelines in the shape of the Volkswagen Social Charter, the Charter on Labor Relations, the Charter on Vocational Education and Training, and the Charter on Temporary Work, all of which apply to the Group as a whole. Environmental protection activities are shaped by the environmental policy and principles for products and production, which both apply throughout the Group.

#### Strategic stakeholder management

Every day, we are confronted by the multifarious demands, expectations and attitudes of our many different stakeholders. These stakeholders may be individuals, groups or organizations with a legitimate interest in how the Volkswagen Group reaches its corporate decisions and in the implications of those decisions. Our customers and our employees are our key stakeholders. They form the core around which twelve other stakeholder groups are positioned – from the business and academic worlds, society and politics, and the media. The relationships our companies entertain with their stakeholders enrich the work we do together. At the same time, the diverse interests of these groups can lead to conflicts of interests.

That is why, day in and day out, we have to strike a balance between acting efficiently and satisfying a wide array of social expectations. Our customers expect a high-quality range of mobility products and first-class service. Performance-related remuneration, secure jobs and co-determination are key issues for our employees. Investors and analysts, on the other hand, want to see constantly rising unit sales and solid earnings growth, whereas civil society stakeholders are focused on social commitment and supporting social and environmental projects.

It is important to us that our stakeholders interact with us as equal partners. We know that we can achieve long-term success only if we take a proactive approach and are fully acquainted with the interests, needs and expectations of our stakeholders. That includes:

- systematically capturing, analyzing and understanding the stakeholders' expectations of Volkswagen;
- > solving problems jointly and sharing and utilizing the knowledge of both sides;
- openly addressing conflicts and recognizing potential conflicts and the risks arising from them; and
- > improving the quality of our decisions through transparency, openness and participation.

In addition to actively sharing information, we are also promoting a more in-depth and trust-based form of collaboration with selected stakeholders, the goal being to provide support to society, solve problems jointly and to draw on their expertise in the decision-making process. Examples include our cooperation with the German Red Cross (DRK) and our efforts to help refugees.

Humanity, public spirit and a sense of responsibility are the values on which the work of the DRK is based, and they are values we share. As part of the strategic partnership, the Volkswagen Group helps the DRK to find more people who are willing to volunteer their time. This goal is central to the partnership, in conjunction with strengthening the Red Cross's rescue service.

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#### STAKEHOLDERS OF THE VOLKSWAGEN GROUP



The slogan "Helping Together" sums up how we are joining in the collective task of receiving and integrating the refugees who come to Europe and Germany. This is accomplished through a wide variety of projects, such as immediate aid in the initial accommodation facilities, local integration and education projects as well as providing vehicles and nonmonetary resources.

However, our long-standing cooperation and consultancy agreement with the German Nature and Biodiversity Conservation Union (NABU) expired on December 31, 2015. Extension of the contract and further collaboration are suspended for the time being as a result of the diesel issue. Nevertheless, we would like to continue our strategic partnership with NABU and are working hard to create the conditions needed to resume our successful project work of the past.

Not only do we provide support for projects that address future trends or that aid education or society as a whole, but we also want to drive the economy by helping to promote structural development and equal opportunities. In the reporting period we were involved in around 200 projects worldwide. In these, we pay special attention to the continuity and sustainability of our activities. We want not only our employees, but also our shareholders, neighbors and customers to benefit from what we do. Furthermore, we provide rapid assistance to victims of natural disasters and support the volunteer work of our own employees.

#### RESEARCH AND DEVELOPMENT

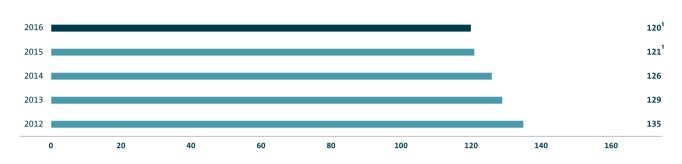
An important basis for innovation and thus the success of our business hinges on the early detection of future-oriented developments and trends in the ever-more complex areas of society, politics, technology, the environment and the economy. The Volkswagen Group's research institutes in the world's key automotive markets directly monitor pioneering developments in the local environment, thus gaining important insights that will safeguard the Group's future.

In the reporting period, our research activities were focused on designing forward-looking mobility solutions that will safeguard the Company's future and on establishing innovative technological expertise to strengthen our competitiveness. Our development activities focused on expanding our product range and enhancing the functionality, quality, safety and environmental compatibility of our products.

The future program TOGETHER – Strategy 2025 provides the framework for the realignment of our Group-wide research and development work: together with the brands, we have formulated an R&D strategy for the Group and already launched our first projects. This enables the brands to focus on developing future trends and systematically strengthening the development network – for example, so as to tap synergies and make efficiency gains even in the early phase of product development.

The Volkswagen Group's technology management team is supporting the Group's transformation into a provider of sustainable mobility solutions by ensuring that early development activities are aligned with future trends in the automotive sector and by creating links between innovation areas such as service design and more traditional product-related topics. All our mobility concepts are systematically tailored to our customers' needs.

CO<sub>2</sub> EMISSIONS OF THE VOLKSWAGEN GROUP'S EUROPEAN (EU28) NEW PASSENGER CAR FLEET in grams per kilometer



1 Subject to official publication by the European Commission in the annual CO<sub>2</sub> fleet monitoring report.

#### Fuel and drivetrain strategy

The Volkswagen Group's new passenger car fleet in the EU (excluding Lamborghini and Bentley) emitted an average of  $120\,\mathrm{g\,CO_2/km^1}$  in the reporting period and was thus well below the 2016 European limit of  $130\,\mathrm{g\,CO_2/km}$ . As small-volume manufacturers, the Lamborghini and Bentley brands each have an independent fleet for the purposes of the European  $\mathrm{CO_2}$  legislation and complied with their individual targets.

Starting in autumn 2017, the test procedure for emissions and fuel consumption used in the EU will gradually be replaced by the Worldwide Harmonized Light-Duty Vehicles Test Procedure (WLTP). The purpose of the new test cycle is to state more practice-oriented levels for  $CO_2$  emissions and fuel consumption and also to take account of higher speeds and driving dynamics as well as the optional equipment chosen by customers.

The Volkswagen Group's fuel and drivetrain strategy is paving the way for sustainable, carbon-neutral mobility. The goal is to increase drive system efficiency with each new model generation – irrespective of whether the means of propulsion are combustion engines, hybrids, plug-in hybrids, pure electric drives, or fuel cell drive systems.

The drivetrain portfolio will expand and coexist between traditional drivetrains and e-mobility will increase in the future. The current modular toolkits are designed so that the full range of drive systems can be deployed and flexibly fitted on product lines across our global locations.

From today's perspective, the combustion engine looks set to serve as the broad basis for drive technology in the coming years. In the interest of using resources responsibly, it is therefore essential for combustion engines to be further optimized.

As far as conventional combustion engines are concerned, we are continually working on technologies for the efficient purification of exhaust gases and clean combustion in order to reduce harmful emissions even further. From mid-2017 onwards, we will progressively fit all Group direct-injection TSI and TFSI engines with petrol particulate filters.

When it comes to vehicles with conventional drive systems, we have taken several efficiency-increasing measures to significantly reduce average fuel consumption. In 2016, the new V6 and V8 petrol engines were deployed for the first time in series production in the premium and sports car segment, for example in the new Porsche Panamera. These engines are not only highly responsive, but have high levels of comfort and efficiency.

Volkswagen continued to refine the TSI engine family in the reporting period. In spring 2017, the new generation made its debut with the 1.5 TSI evo engine in the new Golf. It will be followed by a BlueMotion variant with an output of 96 kW (130 PS), among others. The TSI evo underscores the Company's strategy of using modular technology toolkits in series-production to make cutting-edge technologies available to customers.

We are expanding our traditional range of engines through drivetrain electrification. The percentage of drivers traveling predominantly short distances is growing all the time, and includes not only commuters and residents of big cities, but also drivers of delivery vehicles in urban areas. Zero-emissions, purely electric vehicles like the e-up! and e-Golf are highly suited for short-distance travel and are thus an interesting proposition, especially for this target group. In the medium-to-long term, opportunities to recharge privately – e.g. using a charging station installed on the customer's premises – must be supplemented by good public recharging infrastructure.

However, most customers also want to be able to drive longer distances. Hybrid vehicles, particularly plug-in hybrids, combine highly efficient combustion engines with zeroemission electric motors. We consider this combination of drive concepts to be one way of offering electrified models for Group Management Report Sustainable Value Enhancement 145

all mobility needs to customers of a wide range of vehicle classes, building trust in the new technologies and thus helping e-mobility gain acceptance.

All Group brands are driving the development of electric traction forwards. We have expanded our expertise in this area with the help of additional technical specialists and experts. On the basis of the experience gained with existing vehicle architectures, we designed the Modular Electric Toolkit (MEB) for the compact segment. This can be deployed across our brands in passenger cars and light commercial vehicles alike. The MEB enables us to develop very exciting vehicles and allows ranges of 300 to 600 km in purely electrical mode. It also makes it possible to factor in vehicle-specific requirements and achieve savings by combining purchasing volumes. Thanks to the Volkswagen Group's modular toolkit strategy, modules can be deployed across different model series and brands, thus achieving substantial synergies. This applies in particular to models that share the same platform. We have integrated the production of electrified vehicles into the manufacturing processes at our existing plants, e.g. in Wolfsburg, Emden, Bratislava, Ingolstadt and Leipzig. The electric motors are manufactured at our plant in Kassel.

The battery is the heart of an electric vehicle and its energy content is the deciding factor in determining the vehicle's range and performance. In light of the gains in market volume and unit sales of electric vehicles over the coming years, the Volkswagen Group will establish battery technology as a new competency. At the moment, we use lithium-ion cells in our all-electric and plug-in hybrid vehicles. We assemble these cells into battery systems in our Braunschweig factory. Battery types based on solid electrolytes, which have a higher energy density and offer higher intrinsic safety, are currently being researched. The next generation of electric and plug-in hybrid vehicles will be fitted with enhanced lithium-ion technology.

In 2016, we presented the visionary I.D. concept car, a zero-emissions vehicle that we intend to launch in 2020. It will have a range of up to 600 km and will be the first representative of an entirely new fleet of highly innovative electric vehicles based on the MEB. In 2016, Audi extended its range of e-tron models with the Audi Q7 3.01 TDI e-tron quattro. In addition to this, Volkswagen Commercial Vehicles presented its e-Crafter study in the reporting period. With a driving range of more than 200 km, the first electrically powered Crafter is a near production-ready solution for zero-emis-

sions urban delivery situations. MAN presented an all-electric MAN Lion's City articulated bus as a modular concept vehicle, a TGS semitrailer tractor with an electric drive for inner-city night deliveries, as well as a variety of concepts for the recharging infrastructure in 2016.

As part of our future program TOGETHER – Strategy 2025, we plan to be producing more than 30 different types of purely battery-powered electric vehicles across the Group as a whole by 2025.

Alongside electric vehicles, natural-gas engines play a key role in achieving the goal of carbon-neutral mobility. Due to the chemical composition of natural gas, its  $\rm CO_2$  emissions are around 25% below those of petrol. Volkswagen is expanding its range of eco-friendly drive concepts with the new 1.01 three-cylinder TGI engine, which has an output of 66 kW (90 PS) and achieves impressive consumption figures and compelling performance, thanks to the systematic refinement of its combustion process and supercharging.

Renewable fuels can play a big part in further reducing the CO<sub>2</sub> emissions of combustion engines and can complement e-mobility, e.g. on long-distance trips. They are also a fast way to cut the overall CO2 emissions of vehicles already on the road. Volkswagen plans to deploy and refine existing fuel solutions in a model region and to test new approaches. Beyond that, the Company is taking part in joint projects that examine the potential to produce petrol, diesel and gas from renewable energy sources. In 2016, Audi expanded its production capacity for sustainably generated e-gas and set a milestone with Germany's first power-to-gas facility using industrial-scale biological methanation. Furthermore, Audi unveiled another g-tron model. Like the A3 g-tron and the A4 g-tron, the Audi A5 Sportback g-tron can be operated with either climate-friendly Audi e-gas or natural gas (CNG) or with petrol.

Hydrogen will not be widely available as a fuel in the medium term. Both hydrogen filling stations and renewable hydrogen production plants will have to be constructed. Volkswagen has been working on fuel cell technologies for many years and has gained extensive experience operating test fleets. In the reporting period, Audi provided a concrete perspective of its hydrogen drives, presenting the h-tron quattro concept car, a hydrogen-powered sports SUV that can be completely refilled with hydrogen in about four minutes and has a range of 600 km.

#### Life cycle engineering and recycling

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Innovations and new technologies for reducing fuel consumption are not enough on their own to minimize the effect of vehicles on the environment. That is why we examine the entire product life cycle of our vehicles – including the production of both raw materials and components – and prepare life cycle assessments in accordance with ISO standards 14040 and 14044. On this basis, we can determine where improvements have the greatest effect and develop innovations that target these points directly. We call this life cycle engineering.

The Volkswagen Passenger Cars brand reports on the results in so-called environmental ratings. These ratings show the ecological advances in new vehicle models compared with their immediate predecessors. Audi publishes this information under the term "environmental footprint", while SEAT provides corresponding data in its product catalog. We also use life cycle assessments for the special subject of water, using them to calculate and analyze the amount of water consumed by a vehicle throughout its entire life cycle (water footprint). This enables us to take targeted action to reduce water consumption. We also use the results of our life cycle assessments to generate the Scope 3 inventory. We report on CO<sub>2</sub> emissions in twelve out of a total of 15 Scope 3 categories in accordance with the Scope 3 standard published by the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute. As a result, we are one of the leading companies in the automotive industry. You can find further information on this in the Volkswagen Group's Sustainability Report 2016.

As we wish to minimize our vehicles' impact on the environment in collaboration with our suppliers, Volkswagen joined the CDP supply chain program in 2015; this records greenhouse gas emissions throughout the value chain. We seek direct contact with our suppliers in specific workshops, where together we discuss and develop innovative approaches to the ecological optimization of particular components.

Recycling, too, is central to reducing the impact of our products on the environment and conserving resources. It is not just a matter of recycling vehicles at the end of their service life: we already pay attention to the recyclability of the required materials, the use of high-quality recycled material and the avoidance of pollutants when developing new vehicles. Therefore, our end-of-life vehicles are 85% recyclable and 95% recoverable. We also factor in aspects of the use phase, for instance the treatment and disposal of service fluids or high-wear components.

Building on the findings of the LithoRec research project (lithium-ion battery recycling), we are working on extending the useful life of such batteries and the recirculation of battery materials so as to conserve resources and cut costs. There is also the Volkswagen Passenger Cars brand's Genuine Exchange Parts program, whereby industrial reconditioning produces high-quality exchange parts that conserve resources and offer the same quality, functionality and warranty, but are on average 40% cheaper than the corresponding new parts.

#### Sustainable mobility and connectivity

Mobility is one of the key conditions for economic growth. The latest challenge is to cater to the growing demand for mobility despite diminishing resources and, in the process, reduce its negative effects on the environment. Holistic mobility concepts have to be efficient, sustainable, customeroriented and, above all else, designed in such a way that they are accessible anytime and anywhere. We at Volkswagen are researching and developing groundbreaking mobility solutions for our customers that will shape the future in this area. We do not limit our focus to automotive mobility, but take in other modes of transport as well and examine structural issues such as urbanization, urban development and the quality of transport infrastructure. We also take account of demand trends, such as the shared use of vehicles. One building block of our future program TOGETHER - Strategy 2025 is the establishment of a cross-brand mobility solutions business. Part of this is the new MOIA business unit, which will develop, participate in or acquire services that are tailored to customer requirements, such as ride hailing ser-

Volkswagen is working on a wide range of approaches, from novel vehicle concepts right through to research into innovative urban developments. We are sharing ideas with universities and associations, and presenting potential solutions to the specialized public for discussion. However, these measures can be fully effective only if they are interlinked and deployed in the right place at the right time. They require the efficient interplay of people, technologies, means of transport and infrastructure. With the aid of scientists and tests in model cities, we helped to derive indicators for sustainable mobility in cities within the WBCSD's Sustainable Mobility Project 2.0. In spring 2016, the European Commission announced that it would actively support the application of these 19 indicators throughout cities. Together with the SEAT brand, Volkswagen Group Research set up the interdisciplinary research platform CARNET (Cooperative Group Management Report Sustainable Value Enhancement 147

Automotive Research Network) in Barcelona. In over 20 joint projects, CARNET is working on concepts for efficient urban mobility, e.g. the SEAT Ateca Smart City Car, which connects with its environment through Smart City Connectivity, or the Barcelona Smart Shuttle.

The connection of vehicles to other vehicles, to the environment, to infrastructure and to mobile devices is advancing and increasing the safety, comfort and driving enjoyment of drivers, passengers and other road users. The latest generation of the Modular Infotainment Toolkit (MIB) has already brought corresponding innovations to numerous models of our Group brands.

Volkswagen has developed a self-learning, context-sensitive, personalized voice command system that can adapt to individual users and situations. We are also constantly refining the gesture control systems we install in our vehicles. Volkswagen's newest infotainment systems already use a proximity sensor. The new Golf is the first in its class to offer a cockpit with gesture control: without actually touching a screen, it is possible to operate the display and controls in virtual space with hand movements. This represents a clear gain in comfort and safety. Eye tracking is a further refinement of gesture control: the system tracks the driver's point of gaze, adapting the vehicle to suit the condition of the driver or his/her intended operations and preparing it for critical situations before they occur.

Audi is advancing the development of intelligent networking with the Audi Connect car-to-x services, with new infotainment modules and with high-precision digital maps from HERE. Audi is the first manufacturer to connect its models to the city infrastructure: the "time to green" feature is the world's first car-to-x service and provides information on the duration of the red light and the optimum speed for the "green wave" directly on the vehicle display.

Scania continued to refine its connected services in 2016. Examples include the fleet management service, which is based on data from 230,000 connected Scania vehicles, or the flexible maintenance program, which ensures that every truck receives exactly the right maintenance based on the actual usage.

Volkswagen Truck & Bus presented the new RIO brand in 2016. This cloud-based, multi-vendor platform serves the entire transport and logistics ecosystem and will be available in the second quarter of 2017. It combines and analyzes diverse data from the logistics value chain, using it to make specific recommendations to customers on how to optimize their transport and reloading processes and thus enhance efficiency and transparency.

#### Driver assistance systems and automated driving

In 2016, we extended the use of innovative driver assistance systems to further vehicles, systematically pursuing the strategy of making innovations from the luxury vehicle segments available in the volume segments. The gradual expansion of assistance systems and automated driving functions paves the way for autonomous driving and increasingly takes the pressure off the driver. Volkswagen's aim is to become the leader in this area of innovation.

The new Porsche Panamera is fitted with Porsche InnoDrive including Adaptive Cruise Control. This innovative driver assistance system uses navigation data and radar-video sensors to enhance vehicle efficiency, anticipating and factoring in speed limits, road gradients and the radius of bends. The new Tiguan and the SEAT Ateca are fitted, for example, with the driver assistance systems Traffic Jam Assist, Emergency Assist and Front Assist with Pedestrian Monitoring and City Emergency Braking. The new Golf with Traffic Jam Assist can drive in a semi-automated manner at speeds of up to 60 km/h thanks to the combination of Adaptive Cruise Control (ACC) and Lane Assist.

The new Blind Spot Monitor with Rear Traffic Alert represents another safety gain: when the vehicle is in motion, the sensor warns of any vehicles in the driver's blind spot; when the driver is backing out of a parking spot, the system even recognizes any vehicle or pedestrian approaching from the side near the rear of the vehicle and brakes automatically if there is danger of a collision.

Volkswagen is also working on an online driver assistance system. Users can deploy current or future mobile technologies to enter data in the system, which is then made available to the other online participants. The data in question, which is recorded on extremely detailed maps, can enhance both driving safety and convenience, and includes information on traffic signs and traffic lights, unoccupied parking spaces, or the road surface.

Driver assistance systems and automated driving functions are also gaining ground in heavy commercial vehicles. Scania presented its first studies on self-driving trucks and buses in 2016. A further variant is driving in a convoy, also known as platooning. Still in the development phase, platooning involves two or more trucks driving closely behind one another with the aid of driver assistance and control systems as well as truck-to-truck communication. Platooning not only reduces fuel consumption and  $\rm CO_2$  emissions, but also enhances safety and traffic efficiency. MAN and Scania gave an impressive demonstration of this technology at the European Truck Platooning Challenge 2016.

In November 2016, DB Schenker and MAN agreed on their first project devoted to platooning.

#### Leveraging synergies increases efficiency

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When developing vehicles, we cooperate closely with our brands to leverage synergies. The research and development strategy elaborated in our development alliance aims, for example, to keep the Group competitive in the long term by deploying resources more efficiently in the research and development of mobility-related technologies and concepts. The brands work together on key technologies in our development alliance and form Group-wide expertise networks addressing potential topics of the future. Moreover, the individual brands are making increasing use of the modular toolkits making synergies possible both between the various models of a product line and across product lines. The brands benefit from an intensive exchange of best practices, for example in the field of virtual development. A further aim is to reduce IT costs by developing IT tools jointly.

In 2016, MAN and Scania formulated clear principles for their joint development work and signed a corresponding memorandum of understanding. Going forward, teams of engineers from both brands will work together to develop core drivetrain components. This will result in shared platforms for engines, gearboxes, axles and exhaust gas aftertreatment systems, which can then be modified for each specific brand.

#### Pooling strengths with strategic alliances

One goal of our research and development strategy is to continue building and consolidating a partnership culture, and we have designed corresponding initiatives to achieve this goal. In order to attain the goal expressed in our future program TOGETHER – Strategy 2025, namely of transforming our core automotive business and establishing a new mobility solutions business, it is essential that we intensify our traditionally excellent innovative strength and place it on an even broader footing. That is why we will rely to a greater extent than previously on partnerships, acquisitions and venture capital investments. Investment selection will be

managed centrally so as to generate maximum value for the Group and its brands.

We are collaborating with experienced battery manufacturers in the research and further development of high-voltage battery systems for electric and plug-in hybrid drives. We not only continued, but also intensified, these cooperative projects in the reporting period. Our research community with Varta Microbattery GmbH made further progress with traction batteries in 2016.

Audi is developing the battery for an all-electric SUV on the basis of powerful cell modules from South Korean suppliers LG Chem and Samsung SDI. The partners wish to invest in cell technology in Europe and will supply Audi from their European plants.

We are also carrying out research into economical light-weight construction technologies for series production as part of the public-private partnership with Open Hybrid LabFactory in collaboration with the Lower Saxony Research Center for Vehicle Technology at the Technical University of Braunschweig, the Fraunhofer Gesellschaft and various other industry partners. LeichtbauCampus Open Hybrid LabFactory was inaugurated in September 2016 and research activities were commenced.

In the reporting period, AUDI AG, the BMW Group and Daimler AG continued their joint work on the HERE maps and positioning services business acquired from the Nokia Corporation in 2015. In combination with real-time vehicle data, HERE's high-precision digital maps create the basis for the next generation of mobility and positioning services, which in turn underpin the new driver assistance systems – right through to autonomous driving.

Audi is also pressing ahead with crucial key issues in the field of digitalization and is involved, for example, in six projects related to structural measures and communication technologies for the Digital Motorway Test Bed, a joint initiative of Germany's Federal Ministry of Transport and Digital Infrastructure with the state of Bavaria, the automotive and supplier industry, and the IT sector. Transmitters and sensors installed along several stretches of the A9 motorway connect vehicles with their surroundings as well as with each other.

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#### Key R&D figures

In fiscal year 2016, we filed 6,465 (6,244) patent applications worldwide for employee inventions, around half of them in Germany. An increasing share of these applications is for driver assistance systems, conventional and alternative drive systems, and lightweight construction, thus underscoring our outstanding power to innovate.

In the reporting period, the Automotive Division's total research and development costs were 0.4% higher than in the previous year; total research and development expenditure as a percentage of the Automotive Division's sales revenue

(the R&D ratio) came to 7.3 (7.4)%. Along with new models, the main focus was on the electrification of our vehicle portfolio, a more efficient range of engines, lightweight construction, digitalization and the development of modular toolkits. The capitalization ratio rose to 42.1 (36.9)%. Research and development expenditure recognized in profit or loss in accordance with IFRS decreased to  $\{11.5\}$  (11.9) billion.

As of December 31, 2016, the research and development function – including the equity-accounted Chinese joint ventures – employed 48,063 people (–1.4%) Group-wide or 7.7% of the total headcount.

#### RESEARCH AND DEVELOPMENT COSTS IN THE AUTOMOTIVE DIVISION

€ million	2016	2015
- Thinion	2016	2013
Total research and development costs	13,672	13,612
of which capitalized development costs	5,750	5,021
Capitalization ratio in %	42.1	36.9
Amortization of capitalized development costs	3,587	3,263
Research and development costs recognized in profit or loss	11,509	11,853
Sales revenue	186,016	183,936
Total research and development costs	13,672	13,612
R&D ratio	7.3	7.4

Future in Motion Group Management Report

## **Future in Motion**

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Researching and shaping the future of mobility: a look ahead to the year 2025.

In the automotive industry, as in other sectors, the current decade has seen the scale of changes affecting the environment and competition reach unprecedented complexity. This is posing new challenges for research work at the Company and transforming the way we understand the future, turning it from something predictable into an exploratory and participatory space for creativity. The results of our research work are giving us an insight into the current and future trends in innovative areas of technology. This knowledge is of crucial importance to the direction of our research and development activities. Only armed with a reliable idea of technological possibilities and their limits, can we position the Group in a way that ensures sustainable growth.

Together with renowned research partners, we have identified key areas that will have an effect far beyond 2025. This is giving us the chance to help shape the answers to the questions of the future. The changes are also bringing challenges in the form of competitive pressure. We regard this as an opportunity to proactively build the future.

The issues we will face in the run-up to 2025 are challenging, and cooperation will be required over the next decade if we are to solve them. Such cooperative solutions are essential to answering the questions that will be asked of the mobility of the future and meeting the needs that will arise. We are reorienting our activities and strategic investment plans towards tomorrow's mobility. The Group faces the largest transformation in its history, which offers us great potential to mold and safeguard the future together and in a sustainable way.

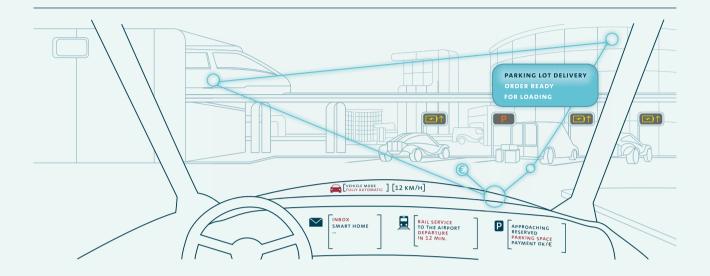
Recently, trends such as digitalization and the fusion of individual technologies have led to innovations in the field of automation. They have also created the environment needed to expand these innovations into further industries and areas of our lives. We are now gaining first-hand experience of the application of these technologies on a large scale thanks to Industry 4.0, digital assistants and the networking of everyday objects in the Internet of things. The relationship between people and technology will develop over the coming decades from one of interaction to a synchronized interplay. Service robots, smart traffic management systems and information technologies will mutually reinforce each other. Growing knowledge and new techniques in the area

of artificial intelligence in particular are enabling new innovative applications to emerge from these technologies. Predictive analyses reveal relationships and patterns within large quantities of data, allowing behavior and events to be predicted with a high degree of certainty. They provide a basis for customized solutions with global variations. The future world of mobility will enable people and goods to be transported by largely autonomous systems and optimize flows of traffic and travel in order to meet the sharp rise in demand for mobility. From 2020, highly and fully automated vehicles will be put to a range of uses in many regions.

The premises of 21st century mobility systems differ radically from those of the 20th century. The ways in which we move people, materials and products are shifting with new technological possibilities, changing values and economic innovations. Intelligent and integrated systems will have an impact on our mobility habits, lifestyles, urban communities and global supply chains. These systems will set the benchmarks against which the mobility providers of the future will be measured. Demand for mobility tailored to many different locations and deployment scenarios will also grow in future. However, industry cannot shape mobility alone. Cities, regions and politicians must develop strategies together. Smart cities are the first step towards rethinking the future shape of urban life. Integrating relevant infrastructure and optimizing the flow of supplies and transport are the key action areas.

Making sure that the highly digitalized mobility systems of the future are secure will require comprehensive strategies for resilient infrastructures and consistent protection of sensitive data on people, technology and systems. These systems must respond effectively to changes and threats (such as cyberattacks, power cuts or hardware failure), recover swiftly from complications and even withstand disasters. The rapid growth of the Internet of things, which also includes vehicles, is expanding not only opportunities for value generation using digital data, but also creating potential targets. The resilience of these systems will be key, particularly where autonomous systems and the flow of digital data are concerned.

In the future, mobility will not only mean moving from place to place, but will be expected to create health benefits, too. Group Management Report Future in Motion 151



People's understanding of health will undergo a fundamental shift, with ever more of us taking responsibility for it into our own hands. Health will be understood not only in the physiological sense, but will encompass our all-round personal well-being. The design of future mobility systems will take this broader concept of health into account.

Above all, future mobility will involve a change in business models. Value creation in numerous industries is currently in a state of flux, and this transformation has already manifested itself in the mobility sector in a variety of ways. Shared use of goods, consideration of customer specifications in the product development process and the influence of social networks on products are all becoming increasingly important. Different regional solutions will also develop. Advancing digitalization is increasingly translating economic processes into algorithms, giving rise to completely new customer experiences. Developing new competencies in the area of agile and scalable business models will be a competitive factor over the next decade. These new business models must address the measures needed to ensure sustainable growth and reduce the impact on environmental systems.

An awareness of sustainability and the realization of social, environmental and economic goals to ensure the world remains livable for generations to come: these are the major challenges that we are facing. Though there have been positive developments such as the Paris climate agreement, many questions concerning the realization of set goals remain unresolved. To limit the adverse effects of climate change, consistent measures and regulations will have to be implemented in all areas in the near future. As it can also be assumed that purely technological solutions will be unable to meet this challenge – given that some environmentally

friendly technologies cannot be produced without an impact on the climate, and therefore involve feedback effects – it will also be essential for individuals to change their behavior. Strong, progressive regulation of the mobility sector can therefore be expected in the near future, and will shape the mobility of the future in a way that reaches beyond the question of how vehicles are powered. Proposals, models and strategies by individuals, cities and regions all around the world are already leading this development.

Our future program TOGETHER – Strategy 2025 is addressing forward-looking topics, thus laying the foundations needed to achieve our global sustainability goals. Over the coming years, we will make major investments in the technologies of the future that are necessary to realize our vision. This will include the electrification of the model range, the digitalization offensive throughout the Group, safe autonomous driving and the offering of mobility services.

The Volkswagen Group has achieved important milestones and embarked on new initiatives in these areas in 2016. We want to make a decisive contribution to shaping not only today's mobility, but tomorrow's as well.

#### PROCUREMENT

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The main tasks for procurement in fiscal year 2016 were to cover the Company's needs and safeguard its vehicle start-ups as well as to help ensure the competitiveness of its products. Beyond that, procurement calculated opportunities in new markets and shaped the Company's future partnerships with its suppliers through the Volkswagen FAST (Future Automotive Supply Tracks) initiative.

#### Procurement policy and strategy

The vision of Volkswagen Group procurement finds expression in the phrase: Together – best in customer value and cost. Procurement makes a key contribution to innovation and cost optimization by playing an active part in early project phases, through its price leadership with new technologies and through marketable concepts. Our mission is to have the world's highest performing and most attractive procurement organization.

At the time the new Group strategy was being developed, the strategy of Volkswagen Group procurement was refined accordingly. Key elements concern digitalization, future-proof process and organizational structures, and the everchanging supplier base. Sustainability plays an even more important role in the new strategy.

As the digital transformation gathers pace in the years ahead, we expect to see a sharp increase in procurement volumes of digital products and services. Examples of these are the components for autonomously driving vehicles, software and also services, especially in the area of new mobility. In this context, it is important to review and refine the decision-making parameters and methods we employ so that we can ensure that we achieve optimum prices, quality and data security in the digital world as well. Procurement will also harness the digital transformation to continue to optimize its own processes and structures, e.g. through the deployment of artificial intelligence or Big Data.

In the coming years, digitalization will further change the way we collaborate with our suppliers. When it comes to our traditional suppliers, we expect to see a sustained concentration of those companies that deliver directly to us. Suppliers that deliver upstream components such as processors or software will continue to gain in importance, and the number of suppliers from Asia, particularly China, will rise substantially.

Volkswagen Group procurement's Strategy 2025, which has been developed further within this framework in consultation with the brands, has six target dimensions:

- > Access to supplier innovations
- > Active cost structures
- > Forward-looking structures
- > People, expertise and attractiveness
- > Supply chain excellence
- > Group-wide synergies

The content of each of these target dimensions is described concisely, and specific KPIs have been assigned to the targets. The first initiatives were already successfully launched at the end of 2016.

#### Volkswagen FAST – progress and milestones

FAST is the central initiative of Group procurement, introduced in 2015 with the aim of making the Volkswagen Group and its supply network future-proof. The goal of FAST is to successfully implement the key topics of innovation and globalization by involving suppliers at an earlier stage and more intensively. The FAST initiative enhances the quality and speed of collaboration with our key partners, and thus enables us to coordinate global strategies and points of technological focus even more closely. The common goal is to make impressive technologies available to our customers even more quickly and to implement worldwide vehicle projects more effectively and efficiently.

Key milestones were reached in 2016. We held strategic dialogs with 55 suppliers for 61 competencies and agreed on joint targets. At our first strategy conference, these selected suppliers talked with members of the Board of Management and other representatives of the Volkswagen Group and its brands about the key topics and projects of the coming years. After its successful launch, the FAST initiative will now be expanded to include suppliers for other product groups, e.g. components for vehicle connectivity. We carried out an initial review of these strategic partnerships in 2016 and will continuously adapt the group of FAST suppliers where necessary. This means that suppliers who have not yet been selected still have an opportunity to qualify for the initiative.

We are continually adapting our methods for involving suppliers in the innovation process so that our customers get to experience impressive technologies even more quickly. One example is the Innovation Days introduced within the scope of FAST. We created this multi-step process to identify and assess our suppliers' innovative ideas at an early stage and integrate them in the Company's technology planning. We made good use of the very first Innovation Days in 2015 to discuss and design innovations for compact-class vehicles together with our suppliers. In 2016, we took this concept to

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the next level, identifying with our suppliers innovations for a new generation of electric vehicles on the basis of the Modular Electric Toolkit (MEB). By inviting our suppliers to take part in competitions for new concepts, we are systematically supporting the cost-effective implementation of new technologies. We discuss and flesh out promising topics with our suppliers in our "Innovation Forum".

Procurement has responded to the impact of new technologies, adapting the issues it addresses and its organization accordingly. For example, for the first time, we have defined fixed contact persons within procurement who support their designated suppliers at every step in the innovation process. Close collaboration has been established with the e-mobility unit and additional competencies have been established in new product groups for electric drives, autonomous driving, new display and operating concepts as well as vehicle connectivity.

#### Procurement processes and procedures

Standardized procurement processes and systems that apply across the Group are the basis of all of our activities in procurement. We were able to build on this sound basis in the reporting period, continuing to work hand in hand with our suppliers to refine our systems, with the aim of creating a worldwide digital network of all of the procurement work processes. We also continued to enhance our variant-management processes: we want to help achieve cost-optimized product design and firmly anchor the idea of economic efficiency in our vehicle projects. In the reporting period, we largely completed our revision of the product development process, especially of the early phase, with the result that concept development and feasibility studies are to proceed in parallel in future.

#### Digitalization of supply

We are striving to develop an entirely digital supply chain, and our partners have a crucial role to play in this. In 2016, our process optimization program, supplier interaction management, provided us with additional supplier feedback across all brands and regions of the Volkswagen Group on the potential for efficiency gains and digitalization. Subsequently, we used that feedback to come up with ideas and approaches for further optimize and digitalize the points of contact in our collaboration, for example by deploying artificial intelligence when dealing with bottlenecks in the supply of purchase parts and raw materials. The Group Business Platform constituted an important milestone in 2016 with regards to optimizing and digitalizing our collaboration with

our suppliers. Thanks to the latest technical developments, the Volkswagen Group will be in a position going forward to make fast, cost-effective use of the most innovative technological trends offered by mobile and internet-based collaboration. By bringing together internal and external partners on a digital platform, we are making it possible for all those involved to communicate with each other in real time

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#### Supply situation for purchase parts and upstream materials

The systematic tracking of purchase parts so as to avoid bottlenecks continued to gain importance in 2016. Natural disasters such as earthquakes and floods impacted the availability of upstream materials, which Group demand management countered with comprehensive measures. In the reporting period, we were also able to avoid any large-scale stoppages in vehicle production apart from a few exceptions.

#### Management of purchase parts and suppliers

At the Volkswagen Group, purchase parts management comprises the technical unit within procurement that is responsible for ensuring the availability of purchase parts by means of an international network of tool and industrialization experts. Purchase parts management involves two aspects: preventive action before the start of series production in new vehicle and engine projects through the inspection of selected purchase parts volumes for the toolmaking process; and a reactive support when problems arise in the supply of purchase parts during series production. Purchase parts management's international network enables its experts to draw on the knowledge and experience of colleagues at various locations during global projects, thus enhancing the efficiency of start-ups. The purchase parts management experts work in close cooperation with their quality assurance colleagues across all divisions in the plants and carry out performance tests of suppliers at the individual milestones in the product development process in order to ensure that the required supplier capacities are available in the right quality for vehicle start-ups.

#### Sustainability in supplier relationships

As far as sustainability in supplier relationships is concerned, our activities in 2016 focused on exercising and implementing our corporate due diligence at all points in our supply chains.

In this context, we expanded Volkswagen Group's requirements for sustainability in relations with business partners (Code of Conduct for Business Partners) in 2016 to include a passage regarding our duty to promote responsible supply chains for minerals from countries beset by conflict or classified as high-risk. We also made corresponding revisions to the Volkswagen Guideline on Raw Materials from Conflict Regions. Our suppliers were informed of these changes through appropriate forms of communication.

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In the reporting period, we continued to enhance the knowledge of both our own staff, and also our suppliers' staff, as regards sustainability in supplier relationships – both online and face-to-face. As of the end of the reporting period, 25,000 supplier locations had completed our online training program. In addition, more than 900 employees from procurement and around 1,300 employees from more than 800 suppliers completed face-to-face training sessions in fiscal year 2016. The face-to-face training sessions for suppliers generally took place in cooperation with other automotive manufacturers and targeted suppliers in the Czech Republic, China and South Africa, as well as suppliers from the logistics industry.

In line with our established sustainability concept and processes, a total of 45 suppliers were audited by an external service provider in fiscal year 2016. In 19 of these cases, the audit findings prompted us to perform an immediate structured process for in-depth analysis. As a result, we agreed upon action plans with the suppliers in question with a view to improving their sustainability performance.

Around the world, we take care to enforce minimum sustainability standards especially with regard to human rights, occupational health and safety, environmental protection and the fight against corruption. In addition to that, we track the sustainability performance of our suppliers. The longstanding business relationships that result from this are beneficial to all the parties involved, namely the Group and its suppliers. We ensure the consistent quality of the goods and services provided and avoid disruptions to supplies and reputational risks.

#### Structure of key procurement markets

Through the procurement units in our markets and eight regional offices across the globe, we assist local suppliers close to our production plants in meeting our high quality requirements. Suppliers who meet our requirements also have an opportunity to move beyond their local markets and deliver their products to other Group locations around the world. In key regions, quality assurance, technical development and logistics provide support in this task, and are organized in procurement-led project teams. This approach is crucial in safeguarding the Company's global supplies and keeping purchasing prices at competitive levels. One example of the development of new procurement markets is the regional office opened in Bangkok in the reporting period. The objective of the new office is to continue expanding our supplier portfolio in the region and to increase the flow of goods from the ASEAN countries.

Procurement is present not only in new growth markets, but also in well-known and established ones such as Japan, South Korea and Israel. In this way, the department ensures that the Company has access at all times to the latest innovations and technologies of tomorrow.

#### Purchasing volume of Volkswagen Group procurement

Procurement purchases production materials, services and capex items. In 2016, the incoming goods and order volume amounted to €166.5 billion, including the figures for the Chinese joint ventures.

#### GROUP PROCUREMENT VOLUME

in percent



Europe/Other markets
North America
South America
Asia-Pacific
29%

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#### PRODUCTION

We are creating and managing a global cross-brand production network. This is designed to safeguard the processes from the supplier to the factory and assembly line, and from the factory to dealers and customers. Enduring efficiency is a prerequisite for our competitiveness. We meet challenges of the future with holistic optimizations, pioneering innovations, flexible supply streams and structures, and an agile team. In fiscal year 2016, the global production volume passed the ten-million mark again. Productivity increased by around 4% year-on-year despite the continuing difficult conditions in many markets.

#### "Intelligently networked" production strategy

Production is supporting the future program TOGETHER – Strategy 2025 with the "intelligently networked" functional area strategy. This is the logical development of the Production Strategy 2018. It is based on the Company's strategic development into a world-leading provider of sustainable mobility as well as on current trends such as digitalization, electrification and the changing world of work. The Production Strategy 2018 began to define key action areas and carry out successful work in these fields already in 2010. Some of the measures and topics this covered have now become part of our day-to-day business or are managed through group-wide working groups, while others have been integrated into the Production Strategy 2025 and given a new direction.

Our aim is to intelligently connect people, brands and machines, and to combine the strength and potential of our global manufacturing and logistics partnerships in order to take long-term advantage of the resulting synergies. In doing so, we can make our business even more fit for the future and competitive in the longterm.

The four strategic target areas – versatile production network, efficient production, intelligent production processes and future-ready production – guide our strategic work.

Nine strategic initiatives of our production strategy incorporate aspects such as the competitive design of our global production network, the reduction and offsetting of environmental pollution along the production process, and digitalization and its impact on the processes involved in production as well as in other work and collaboration. The fundamental aim is to increase productivity and profitability.

#### **Production locations**

The Group began the 2016 fiscal year with 119 production locations. Sitech opened a new component production site in Wrzesnia, Poland, in August. In late September, the Audi brand opened the vehicle plant in San José Chiapa, its first production facility in Mexico. In October, Scania and MAN combined their production in Saint Petersburg, while the Volkswagen Commercial Vehicles brand opened a new manufacturing site for the Crafter in Wrzesnia, Poland. MAN moved its bus production in Poland from Poznan to Starachowice. The Volkswagen Group's global production network thus comprised 120 locations at the end of the reporting period, divided into 68 locations for passenger cars, commercial vehicles and motorcycles, and 52 locations for powertrains and components.

With 71 locations, Europe remains our most important production region for vehicle and component production; 28 of these sites are located in Germany alone. The Asia-Pacific region has 31 locations. In North America, we now have five locations, while the number of locations in South America remained unchanged during the reporting period at nine. The Group operates four locations in Africa.

In Europe, the plant in Wrzesnia, newly opened in 2016, is manufacturing the Crafter and has an annual capacity of 100,000 vehicles. The Portuguese plant in Palmela will also begin producing 150,000 Volkswagen T-Roc vehicles annually from the middle of the year. In Bratislava, production of the Audi Q8 will start at the beginning of 2018 with an annual capacity of 40,000 vehicles.

In order to secure and expand our market position in China, we increased capacity at the Chengdu site by 100,000 vehicles up until 2016. A further increase is planned for 2019. The new Ningbo II vehicle plant with a capacity of 150,000 vehicles per year will be opened at the end of 2017. In late 2017, capacity at one of the three vehicle plants in Anting will be increased by 75,000 units to 300,000 vehicles.

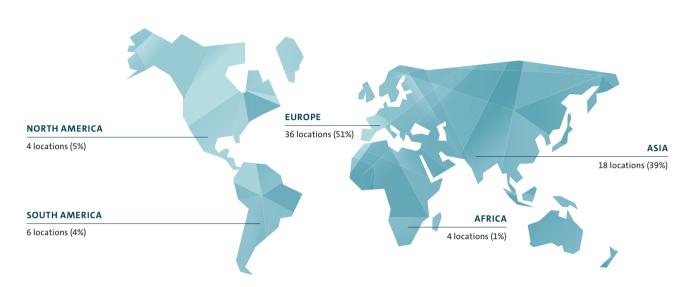
In the North America region, we plan to produce the longwheelbase Tiguan for the US market from the first quarter of

Capacity utilization of the locations in the Volkswagen Group's production network is further enhanced by supplying them with complete knock-down (CKD) kits for local assembly.

#### VEHICLE PRODUCTION LOCATIONS OF THE VOLKSWAGEN GROUP

Share of total production 2016 in percent

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In September 2016, Volkswagen entered into a collaboration with Kenyan importer DT Dobie to advance the development of further emerging markets in Africa. Partial assembly of the Polo Vivo at the Kenya Vehicle Manufacturers plant began in late 2016.

At engine and transmission plants, a wide range of new, more efficient powertrains will be integrated into existing production capacity in 2017. The new evo generation of the EA211 series, for example, will launch with the four-cylinder turbo petrol engine. This is the first in a series of highly efficient petrol engines that will be produced in the medium term by at least four engine plants, largely replacing the existing generation.

#### New start-ups and production milestones

In 2016, the Volkswagen Group implemented a total of 62 vehicle production starts in 31 locations across 16 countries; of these, 25 were new or successor product start-ups, while 37 start-ups were attributable to derivatives and product upgrades.

The Volkswagen Group passed some significant milestones in 2016. Volkswagen Passenger Cars produced the two millionth Touran. The 25,000th e-Golf also rolled off the production line in Wolfsburg. Audi began the year by celebrating the production of 30 million vehicles worldwide and one million units of the Q5 model in Ingolstadt. At ŠKODA, the five millionth Octavia left the factory at the start of the year. The Kassel plant celebrated two milestones: the completion of three million DQ200 gearboxes helped take the

total number of gearboxes produced at the site to 125 million. The MQB platform used across the Group was installed in the eight millionth vehicle in late 2016.

#### The Group's production system

To help us become the world's most sustainable, most powerful and most fascinating automotive production platform, we optimize and standardize our production processes. The Group's value-driven, synchronous production system provides us with the necessary methodologies and instruments for this. Our goal is to further expand the Group production system throughout the world at all brand and regional locations so as to achieve sustainable and continuous improvement.

We have already made substantial progress towards achieving this goal. In the future, we will increase the amount of attention we give to further strengthening the Group's system and increasing production its presence. Implementation is focusing on leadership, responsibility and corporate culture. As a first step in this direction, we are measuring the extent to which the methodologies and instruments are being implemented at the locations. The target/actual comparisons are used to identify fields of action. These are then defined in a project plan and worked through in a structured manner in the second step. As a synchronous company, we are including all business areas so as to systematically optimize processes.

As the complexity of products increases, a factory must work at optimal capacity so as to continue manufacturing high-quality products that give customers maximum Group Management Report Sustainable Value Enhancement 157

benefits at competitive prices. This is all made possible by the standardization of production processes and operating equipment at an early stage. The basis for this is consistent construction and design principles that are defined in the form of product standards. "Concept consistency" ensures that common design principles, joining techniques and joining sequences, but also installation and connection concepts, are applied in the brands' development and production areas. The principle of concept consistency is a fundamental component of the creation of efficient logistics and manufacturing processes.

#### Global production network

With twelve brands and 120 production locations, multibrand projects are an important aspect of the Volkswagen Group's forward-looking production. The corporate objective is to generate maximum synergies based on the platform strategy and enable several brands to use the same production locations.

The modular platforms and toolkits allow us to design our production sites to be flexible. They generate synergy effects that enable us to reduce capital expenditure and make better use of existing capacities. With these toolkits, we have created the conditions for using the production sites for several brands at the same time. Our so-called multibrand locations can respond flexibly to market requirements and further raise the Group's competitiveness. The Bratislava site, for example, produces vehicles for the Volkswagen Passenger Cars, Audi, Porsche, SEAT and ŠKODA brands. It will be joined by further multibrand locations in future, including in Tianjin, China. Currently, almost half of the 40 passenger car locations are already multibrand locations.

Another concept for volume flexibility is the "turntable". This is used, among other things, to compensate for fluctuations in demand or in segment shifts. One such "turntable" is formed by Volkswagen's sites in Emden (Passat), Zwickau (Passat and Golf) and Wolfsburg (Golf).

The Volkswagen Group is aiming to become one of the world's leading providers of battery-powered electric vehicles by 2025. We will therefore expand the product range and launch a new family of electric cars based on the Modular Electric Toolkit (MEB). We are also tackling this challenge in our production processes with the aim of integrating these new vehicles into existing conventional factories as efficiently as possible. In 2016, we prepared to adapt the production network to new products and technologies in vehicle and component manufacturing.

In order to design multibrand projects and e-mobility to be cost-effective in conjunction with existing concepts, it is important to make production highly flexible and efficient. We have begun the targeting process, standardization 2.0 and a reduction in the number of different options offered, and have hardwired these measures into the strategy. The targeting process serves the transparency and monitoring of cost types in the individual projects. Standardization 2.0 involves readjusting processes to formulate standards with an application- and user-based focus.

#### New technologies and product innovations

Modern, highly efficient car production like that at the Volkswagen Group would be inconceivable without reliable and extensive automation technology. Networking and digitalization in production already played an important role well before the term Industry 4.0 was coined. Volkswagen is exploring new technological solutions in many evaluation and implementation projects, including for identifying and localizing components and equipment, for energy management and predictive maintenance, for data-driven analysis and control of production processes, and for the use of wearables such as smartglasses in logistics processes. The aim is to increase equipment availability, flexibility and productivity, while also reducing the use of resources.

An important topic for the manufacturing of the future is human-robot collaboration (MRK). Volkswagen plans to support employees using robots equipped with special safety sensor technology, helping them to perform tasks that are physically uncomfortable or particularly monotonous. Assembly and logistics processes present a large potential field of application for MRK. Volkswagen is systematically analyzing the existing tasks in production lines and examining the technical abilities of the new robot systems. As part of a strategic cooperation with a renowned robot manufacturer in 2016, Volkswagen has defined a series of application projects and successfully implemented the first solutions in series production. The results of the pilot projects enable us to verify the expected ergonomic and economic benefits, and to take subsequent decisions on this basis. Volkswagen's approach is to build its own planning expertise for workplaces with MRK.

The design and introduction of new production technologies involve the affected staff in the redesign of workplaces and processes from the very outset. This is an important prerequisite if new technologies and solutions are to find the necessary acceptance.

#### Environmentally efficient production

The Volkswagen Group has set itself the goal of reducing the five key environmental indicators of energy and water consumption, waste for disposal, and CO<sub>2</sub> and VOC emissions in production by 25% for each vehicle produced – starting from

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2010 levels – by 2018. This objective applies to all of the Group's production locations and is derived from our environmental requirements for production processes, which are anchored in the Group's environmental principles. As the charts on page 159 show, we have already made considerable progress towards reducing all these key indicators.

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The Volkswagen Group's brands contribute to achieving these goals with their own frameworks that reflect the specific features of their corporate culture and their brand image. Volkswagen Passenger Cars and Volkswagen Commercial Vehicles have established "Think Blue.Factory", Audi has its "ultra strategy", ŠKODA calls its program "Green Factory", SEAT calls its program "ECOMOTIVE Factory" and Bentley's program is called "Environmental Factory". Porsche has introduced "resource-efficient production". Scania and MAN are giving their commitment to the environment the names "Blue Rating" and "climate strategy", respectively.

We are encouraging close integration and communication between the brands worldwide in order to leverage synergies. Our environmental experts meet regularly in working groups; in addition, they train our employees on the topic of environmental protection.

Volkswagen uses various analytical techniques to examine and evaluate the flow of resources and energy in production as well as the resulting environmental impact. Processes can be made more transparent with the aid of material flow analyses. These identify action recommendations to reduce both the environmental burden and production costs. Various agents can use material flow analyses. The approach can assist in planning new, more resource-efficient equipment, and act as a decision-making aid when implementing measures, and help to raise awareness among staff regarding the resource-efficient use of process materials.

We record and catalog environmental measures in an IT system and make these available for a Group-wide exchange of best practice. In the reporting period, more than 1,600 implemented measures in the area of environment and energy were documented in this system. They serve to improve passenger car and light commercial vehicle production processes. These activities are not only worthwhile from an environmental perspective; they also lead to annual savings of around €49 million.

With a series of effective, innovative measures, we once again promoted the reduction of environmental indicators in the reporting period, while at the same time improving production processes. The following examples show the extent to which the measures contribute to improvement of the production processes and achievement of the target values for the five key environmental indicators:

One important lever for reducing energy consumption is tailoring the operation of all facilities to demand. In 2016, we reinforced the energy efficiency gains from the first pilot projects on load-dependent operation of paint dryers by rolling out the technology at further locations. The change has cut energy requirements by around 7,300 MWh a year, reducing  $CO_2$  emissions by approximately 1,900 tonnes and saving some €290,000 annually.

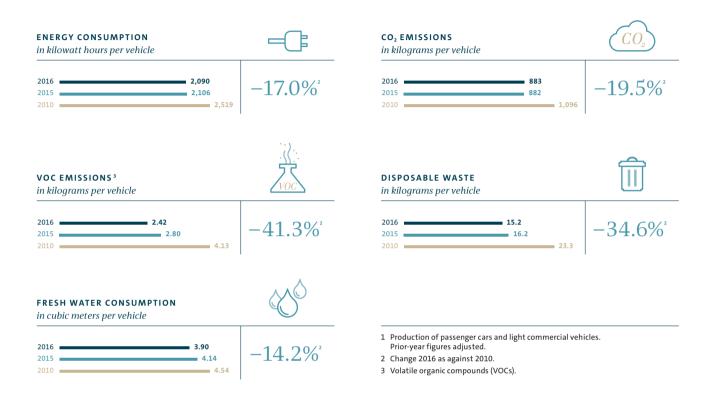
At the Foshan factory, the biological treatment plant was expanded to include an additional membrane step. This modern technology cleans wastewater especially thoroughly, enabling it to be reused on site. The facility cleans more than 70,000 m<sup>3</sup> of wastewater a year, reducing the factory's environmental impact.

The Bratislava plant introduced an advanced waste management system in January 2016 to optimize waste logistics processes. Transponder technology (Data Matrix code) is used to identify waste at the point of origin and track it completely all the way to the final disposal location. At each stage of the disposal process in the factory, this documents the volume, fill level, degree of sorting, any wrongly disposed materials and the condition of container spaces. The specialist waste management department uses the information collected to develop effective measures together with the waste producers so that container volumes, collection intervals, container locations and disposal routes can be tailored optimally to production. This has achieved a 15% reduction in the quantity of cost-incurring residual waste within the space of nine months. Moreover, the time required for internal and external reporting of waste statistics has been considerably reduced and data quality increased. This waste management system also supports compliance with legal requirements for the transport and disposal of waste.

A new, environmentally friendly top coat paint line came on stream in Ingolstadt. This features ultramodern technology such as air circulation, dry scrubbing and waste air cleaning. The facility has reduced heat energy and water consumption by 20% per car. In addition, the air circulation system helps to reduce CO<sub>2</sub> emissions per painted car by 30%. Meanwhile, the cleaning of waste air reduces VOC emissions by 90%.

Measures have also been implemented in energy generation and consumption. We have set a particularly positive example in Brazil, switching to 100% renewable energy despite the current economic difficulties in the country. This measure reduces  $CO_2$  emissions by approximately 21,000 tonnes per year.

#### KEY ENVIRONMENTAL INDICATORS FOR PRODUCTION IN THE VOLKSWAGEN GROUP 1



#### **Green logistics**

Together, our brands, regions and plants are designing the logistics of tomorrow in a digital automotive world and using new technologies. The massive rise in available information is making processes from the supplier to the production plant to the customer more and more transparent. We use animated planning tools for designing factories and supply streams and have already implemented the tracking of loaded trucks by GPS. Our production plants work in an automated and digitalized manner with driverless transport systems in logistics.

Throughout all this, the traditional logistics objective still applies: information, material and vehicles are to be in the right place at the right time in the right quality and quantity – at the optimum cost.

Logistics is contributing to the Volkswagen Group's increased focus on the environment, for example by analyzing the entire transport chain in respect of  $\mathrm{CO}_2$  emissions. The objective is to avoid transports or to shift to more environmentally friendly modes of transport and to reduce fuel consumption. We are working on measures and areas of action for optimizing the logistics processes across the brands.

An important starting point for reducing CO<sub>2</sub> emissions is the selection of the mode of transport. One of the most efficient options here is maritime transport. The Volkswagen Group is therefore involved in the Clean Shipping Network (CSN), an association of marine cargo owners. With the aid of the Clean Shipping Index rating tool, environmental efficiency figures can be compared, for example the emissions of individual ships on particular routes. This allows the environmental footprint of maritime transport to be analyzed and reduced.

The successful use of alternative drive technologies is of decisive importance in environmental and economic terms. E-mobility, gas and hybrid drives, fuel cells and other novel fuels offer interesting problem-solving approaches that are being examined for future use in logistics. To improve the environmental compatibility of vehicle transports by ship for the long term, the Volkswagen Group will use two carcarrying vessels powered by LNG (liquefied natural gas) between Europe and North America. Compared to conventional vessels, the LNG ships will reduce emissions of CO<sub>2</sub> by up to 25%, NO<sub>x</sub> by up to 30%, soot particles by up to 60% and SO<sub>x</sub> (sulphur oxide) by up to 100% per ship and year. Furthermore, use of an ultramodern dual-fuel marine engine

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with direct injection and exhaust aftertreatment will deliver an additional emissions reduction.

The Volkswagen Group is constantly looking for alternatives and more environmentally friendly transport options both in vehicle and materials logistics. Materials from Turkey for the Volkswagen factory in Palmela, Portugal, have been transported by sea since late 2015. Previously, the materials travelled by truck. The change saves 240 tonnes of CO<sub>2</sub> emissions a year and is also cutting costs for the Company.

The new logistics center in Bratislava, Slovakia, is another element in the optimization of materials transport in the Group. Optimal thermal insulation reduces heating costs, while the use of double doors in loading areas guarantees that less heat is lost. LED lighting reduces electricity consumption by some 50%. At the same time, consolidating loads enables a reduction in traffic of an average of 90 trucks for incoming goods and around 65 trucks for outgoing goods.

#### SALES AND MARKETING

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Our unique product portfolio is comprised of twelve successful brands including innovative financing services.

#### Brand diversity in the Volkswagen Group

At the Volkswagen Passenger Cars brand, the customer's wishes are the driving force behind our developments and decisions. This enables us to offer innovations and automotive solutions that excite our customers, and are at the same time affordable. The brand's vision is "Moving people and driving them forwards". Its medium-to-long-term objective is to become a world market leader in e-mobility. In light of the diesel issue in particular, the Volkswagen Passenger Cars brand has defined four areas of innovation: first, intelligent and attractive sustainability; second, automated driving; third, connecting customers, manufacturer and product; and fourth, intuitive usability. Our aim is to implement these innovations in an inspiring, future-oriented way. In addition, we are doing everything in our power to restore trust and to continue to convince our customers of the Volkswagen Passenger Cars brand.

"Vorsprung" is an active brand promise that is delivered throughout the world, making Audi one of the most highly desired brands in the premium segment. For the progressive target group, "Vorsprung" will also mean greater personal freedom for self-determined mobility in the future. Audi creates this freedom for its customers by giving them a simplified, surprising, interconnected brand experience. Intelligent concepts and excellent value for money are the hallmarks of the successful ŠKODA brand. "Simply Clever" combines future-oriented functionality with an impressive space concept that is technically simple but delivers sophisticated and practical features.

Design, passion, quality and ongoing evolution are the distinctive characteristics of the youthful, dynamic Spanish brand SEAT. Its goal of combining technological precision and superb engineering with emotional design is expressed in SEAT's "TECHNOLOGY TO ENJOY" slogan.

Exclusivity and social acceptance, tradition and innovation, performance and everyday usability, design and functionality – these are the brand values of sports car manufacturer Porsche. True to its philosophy of "achieving maximum output from minimum input", Porsche skillfully turns its work into speed and success.

Exclusivity, elegance and power – these are the defining qualities of our Bentley, Bugatti and Lamborghini brands in the luxury vehicle segments. They round off the Volkswagen Group's brand diversity in the passenger cars segment.

Volkswagen Commercial Vehicles stands for superior mobility with its three core values – reliability, economy and partnership. The vehicles are tailored to meet the respective transport needs of customers in trade and industry, as well as civil authorities and service providers, whilst private customers value our family-friendly MPVs and recreational motor homes.

The Swedish brand Scania's core values are "customer first", "respect for the individual" and "quality". This successful company has been manufacturing high-performance and technologically highly innovative trucks and buses for more than 100 years, offering its customers efficient transport solutions that are complemented by excellent service offerings and financial services.

Customer focus, enthusiasm for the product and efficiency are the core values at MAN. Alongside trucks and buses, the company is a leading manufacturer of diesel engines, turbomachinery, turnkey power plants and special gear units.

Ducati is one of the most renowned manufacturers of premium motorcycles. Its emotionally charged products thrill the Italian brand's customers with their premium quality craftsmanship, uncompromising performance and challenging dynamics.

Offering appropriate products and services across all vehicle classes, Volkswagen Financial Services provides the key to mobility for the Volkswagen Group's private and business customers worldwide.

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#### E-mobility and digitalization in Group Sales

The Volkswagen Group plans to launch over 30 new electric vehicles by 2025. Our e-mobility strategy also encompasses the development of customer-oriented products and business models around the vehicle, including arranging customer-specific charging infrastructure solutions. With such innovative products and services and our mobile online services, the Volkswagen Group will evolve from an automotive manufacturer into a mobility provider.

In sales, we make use of the opportunities that increasing digitalization offers. Our actions are guided by a clearly defined strategy that requires extensive cooperation between the brands to achieve the greatest possible synergies.

Digitalization will be decisive in creating a completely new product experience for our customers – one which captivates with seamless customer communications, from the initial interest in purchasing a vehicle to servicing and ultimately to the sale of the used car. At the same time we thus open up new business models and opportunities – relating in particular to mobility and other services – around the connected vehicle. This will increasingly make us an integral part of the customer's digital world of experience. We take great care to make all processes transparent so that customers always retain control of their own data.

We also gear our internal processes and structures to the speed of digital innovation. The result is project teams operating across different business areas, new forms of cooperation, a more intensive relationship with the international start-up scene, a consolidation of venture capital expertise as a form of supporting innovative ideas and business models as well as new lean systems and cloud-based IT solutions.

#### Customer satisfaction and customer loyalty

The Volkswagen Group's sales activities focus consistently on increasing customer satisfaction – this is our top priority. Aided by the digitalization offensive in sales, we are placing even greater emphasis on customer requirements and on service; this offensive will sustainably shape our business.

The Group's brands regularly seek to identify customer satisfaction levels, focusing on products and services. They derive new measures from survey results to achieve even greater customer satisfaction.

In terms of customer satisfaction with their products, Audi and Porsche are leaders in the core European markets when compared with other Group brands and competitors. The other brands in the Group also score higher than competing brands. All Group brands achieve figures at or above the level of the competition with regard to customer satisfaction with dealers.

The Volkswagen Passenger Cars brand has maintained a high level of customer loyalty in its core European markets for several years in a row. However, the emissions issue had a negative impact on brand image, brand trust, and customer satisfaction with products compared with 2015. The loyalty of Audi, Porsche and ŠKODA customers has kept these brands in the upper rankings in comparison with competitors for a number of years.

#### The Group sales structure

The Volkswagen Group's multibrand structure helps to promote the independence of its brands. Nevertheless, we use overarching sales activities to increase sales volumes and market share, cut costs and improve earnings contributions.

We intensified our efforts to improve dealer profitability during the reporting period, increasing the business volume per dealer and putting new cost-cutting programs into action. Here, the focus was always on maintaining a close working relationship with dealers and ensuring their profitability. We use Group companies to manage our wholesale business in over 20 markets. A central department provides transparency and ensures that sales activities are cost effective. By creating synergies between the brands, this is making a major contribution to achieving the aims of our Strategy 2025. This makes it possible for the remaining wholesale companies to learn quickly and efficiently from the Group-wide benchmarking process and from the best practices adopted by individual companies. In the reporting period, we focused on optimizing structures with a view to further decentralization and improving logistics costs at our sales companies.

#### Fleet customer business

Our business relationships with fleet customers are often long-term partnerships. In a volatile environment, this customer group guarantees more stable vehicle sales than the private customer segment.

The Volkswagen Group has an established base of business fleet customers in Germany and the rest of Europe in particular. Our extensive product range enables us to satisfy their individual mobility needs from a single source.

At 14.1 (14.1)%, the share of fleet customers in total registrations in Germany remained stable in fiscal year 2016 amid 4.6% growth in the market. The Volkswagen Group's share of this customer segment decreased to 47.1 (48.5)%. Registrations by fleet customers in Europe were 6.2% higher in total

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than in the previous year; the Group's share of this was 28.5 (28.9)%. The clarification of the  $CO_2$  issue and implementation of technical solutions for the diesel issue helped to ensure that there were no significant declines in volumes for the Volkswagen Group's fleet customer business in 2016.

#### After Sales and Service

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In After Sales, individual service and the timely provision of genuine parts are essential in ensuring passenger car customer satisfaction. We use a worldwide after-sales network with more than 120 of our own warehouses for this purpose. This ensures that we can supply almost all service partners around the globe within 24 hours. The genuine parts supplied by our passenger cars brands and the expertise of our service centers represent the highest level of quality and ensure the safety and value retention of our customers' vehicles.

The Volkswagen Group regards itself as a complete provider of all parts and services relevant to customers in the after-sales business. Together with our partners, we ensure the worldwide mobility of our customers. The partner businesses offer the entire portfolio of services, for example oil and tire changes, inspection, maintenance and repair, in all vehicle classes. We are continuously expanding our range of tailored services in order to improve convenience for our customers and increase customer satisfaction.

Around the world, our commercial vehicles business also prides itself on products of the highest quality and on strong customer focus. Fuel efficiency, maintenance and operating costs, the residual resale value of vehicles, and the purchase price – these are all critical buying criteria for our customers, in addition to availability.

Scania is adding services to its range of trucks, buses and engines that guarantee fuel efficiency, reliability and good vehicle availability. Among these are the Scania Rent Truck & Trailer service that helps to overcome short-term fleet capacity problems. Thanks to Scania Parts and the Genuine Parts Warranty, most replacement parts are available within 24 hours almost anywhere in the world. Driver behavior is the key factor influencing operating efficiency, service life of tires and parts, as well as road safety. Scania driver training teaches drivers how to drive more safely and efficiently. Scania's workshop service and service contracts offer customers a high degree of safety in addition to consistently high quality. Scania introduced Scania Maintenance during the reporting period, a new flexible maintenance service for trucks. Vehicles are called to the maintenance workshop whenever operating data shows that intervention is required. This solution reduces the time spent in service workshops and enables maintenance work to be optimized.

MAN offers service packages optimally geared to customer requirements. These reduce total operating costs and help vehicles retain their value. As well as contracts for servicing and repairs, the packages include proactive maintenance management (MAN ServiceCare), which enables optimized planning of maintenance work, thereby increasing vehicle availability. Active data exchange between vehicles, customers and the MAN service points is handled via the integrated MAN Telematic System. The comprehensive services enable downtimes to be minimized. MAN has more than 1,400 state-of-the-art service points worldwide with modern diagnostic systems and high-quality specialist tools.

In the Power Engineering segment, MAN PrimeServ ensures the availability of machinery. The global network of more than 100 PrimeServ locations guarantees excellent customer proximity and offers, among other things, replacement parts in original quality, qualified technical service and long-term maintenance contracts. The product range is continually improving and expanding. A comprehensive program at the numerous MAN PrimeServ Academies meets the high demand for customer training worldwide.

#### QUALITY ASSURANCE

The quality of our products and services plays a key role in maintaining customer satisfaction. Customers are particularly satisfied and remain loyal when their expectations of a product or service are met or even exceeded. Appeal, reliability and service determine quality as it is perceived by the customer throughout the entire product experience. Our objective is to positively surprise and excite our customers in all areas and thus win them over with our outstanding quality. We continued to aspire to this objective in the reporting period. The diesel issue has shown, however, that we must broaden our previous understanding of quality. Quality assurance now checks the compliance of our products more intensively.

We are also placing greater emphasis on our quality management system than before, thereby reinforcing the process-driven approach Group-wide across all business areas. Quality management in the Volkswagen Group is based on the standard ISO 9001: the requirements of this standard must be met to obtain the type approval for producing and selling our vehicles. Following the revision to the standard in 2015, we applied the new requirements to all the Group's locations and brands during the reporting period. One key change in content concerns the risk assessment for non-

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compliance with defined processes. To ensure that these and other new requirements as well as official regulations are implemented and complied with, we have developed guidelines, recommendations and tips for quality management consultants, and provide them with support in their everyday work

As a further step, we have reinforced application of the internal control principle – mutual support and control between the divisions – and built up important additional expertise, including in software security. This particularly affects the control mechanisms between technical development and quality assurance before and after the start of production. In product development, for example, we have introduced the same principle for the approval of powertrains. At the series production stage, too, we are working even harder to carry out conformity checks on our products with the participation of all business units involved and to perform assessments and make decisions on this basis. This applies particularly to exhaust emissions and fuel consumption.

With these and other measures, quality assurance makes sure that we not only meet all legal requirements imposed on us as a manufacturer but that our products do as well.

#### Observing regional requirements

Our customers in the different regions of the world have very diverse needs as far as new vehicle models are concerned. Identifying these specific regional factors and prioritizing them is an important task for quality assurance, so that they can then be reflected in the development of new products and the production of established vehicle models. Factors such as the available fuel quality, road conditions, traffic density, country-specific usage patterns and, last but not least, local legislation play a key role in this process. We mainly use market studies and customer surveys to determine region-specific customer requirements.

#### Product and supplier quality

In the reporting period, the large number of product startups made high demands on quality assurance. We nevertheless managed to maintain the high quality of the previous years. Our suppliers also made important contributions in helping us achieve this goal. We expect them to use sustainable practices, and to deliver the highest product quality and reliability of supply.

One of our key concerns is to integrate innovative technologies into new vehicles without harming customer satisfaction. We are therefore placing even greater emphasis than before on software quality and data security. Long before customers are able to experience a new product, quality assurance supports and analyzes new vehicle projects. The aim is to make our products even better and more

reliable, while taking into account as many customer wishes and special regional demands as possible.

In addition, quality assurance defines the quality targets and standards for the Volkswagen Group, and monitors compliance with them. It also identifies the cause of any faults and defines the process for removing them. In 2016, we continued to standardize our fault removal process, so that we can respond even more quickly and effectively to any problems. As a result, we can increase customer satisfaction, and at the same time reduce warranty and ex-gratia repair costs.

#### Service quality

We also continue to improve the quality of our service scope worldwide. As in previous years, this involved the further optimization of our warranty and ex-gratia instruments in 2016. Additional opportunities also presented themselves at our authorized dealers, who represent the direct interface with our customers: together we are working on identifying and preventing any problems that may occur in the emotional moment of vehicle handover at an early stage. The so-called dealer-plant teams – a proven concept, whose use in the reporting period included the market launch of the new Tiguan – are one measure taken in this area. Employees from various working areas inspect the quality of the vehicles delivered to the dealer on the forecourt and provide detailed feedback about any problems to the manufacturing plant in question.

#### Group quality standards

Whether they are buying a passenger car, commercial vehicle or motorcycle, our customers expect perfect quality from the Volkswagen Group. For more than 40 years now, auditors have therefore been deployed around the world to carry out an assessment from the customer's perspective of the vehicles ready for delivery. As the requirements are constantly changing, we continually revise the quality benchmarks used for such audits. Based on the guiding principles of precision and perfection, we successfully transferred the Group's audit system to the Commercial Vehicles Business Area in 2016, and trained and certified the brands' product auditors accordingly.

#### **EMPLOYEES**

The Volkswagen Group is one of the world's largest employers in the private sector. As of December 31, 2016, the Group, including the Chinese joint ventures, employed 626,715 people, 2.7% more than at the end of fiscal year 2015. The ratio of Group employees in Germany to those abroad remained stable in the reporting period. At the end of 2016, 44.9 (45.7)% were employed in Germany.

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#### Pact for the future

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In the 2016 reporting period, the Volkswagen brand signed a pact for the future with the General Works Council for greater economic viability and a more secure future at the Company's German locations. Among other things, this envisages losses of up to 23,000 jobs in Germany over the coming years, which will be accomplished in a socially compatible way and without compulsory redundancies. The job cuts will take the demographic curve into account, which means that some of the positions that become vacant as a result of employees entering retirement will not be filled. At the same time, we are planning to build up new competencies at different locations and create about 9,000 additional jobs with a secure future, which will mainly be filled with existing employees.

#### Human resources strategy

The Volkswagen Group has long been providing stimulus for innovation in its employment policy. In its pursuit of personnel management excellence, the Company has been implementing an individualized approach to human resources management since 2008 with the primary objective of ensuring supreme performance by providing optimal personal support for employees.

EMPLOYEES BY CONTINENT in percent, as of December 31, 2016



Germany 45%
Rest of Europe 29%
America 9%
Africa 1%
Asia/Australia 16%

In October 2016, when adopting its program for the future TOGETHER – Strategy 2025, the Volkswagen Group also approved a new human resources strategy with five overarching objectives:

- The Volkswagen Group aims to be an excellent employer with all of its brands and companies worldwide.
- > Highly competent, dedicated employees strive for excellence in terms of innovation, added value and customer focus.
- > A sustainable work organization ensures optimal working conditions in factories and offices.

- > An exemplary corporate culture creates an open work climate that is characterized by mutual trust and collaboration.
- > The Board of Management department of the Volkswagen Group responsible for Human Resources ensures the greatest possible efficiency in its own structures and processes, meeting the requirements of high-quality personnel management at the same time.

Many of the goals of the human resources strategy are underpinned by measurable indicators, and the extent to which these are achieved is reviewed on a regular basis. They include the Group's attractiveness as an employer and diversity factors such as the proportion of women in management.

With its new human resources strategy, the Volkswagen Group is continuing the successful key approaches of its human resources policy. These include the pronounced stakeholder focus, the granting of comprehensive participation rights for employees, outstanding training opportunities and long-term service through systematic employee retention as well as the aspiration to appropriately balance performance and remuneration. The new human resources strategy is also setting innovative trends: modern forms of working such as agile work – whereby executives and team members work together to increase the efficiency with which all tasks are completed – will be expanded on a broad front in many areas.

Before 2020, the Volkswagen Group will introduce a diversity management system to prevent forms of discrimination such as of people with diminished capabilities. In addition, cultural change initiatives are currently concerned with anchoring flatter hierarchies, a more open form of collaboration and a greater focus on the big picture in the Company's divisions. Furthermore, working times and places of work will be designed to provide greater flexibility. We plan to give social sustainability more weight and tie it in with our human resources strategy: In the future, social and cultural megatrends such as the desire for employee participation in decisions will be implemented faster and more systematically in personnel management. A new "Human Resources Strategy and Sustainability" organizational unit has been established for this purpose.

The Code of Collaboration, which is part of the program for the future TOGETHER – Strategy 2025, defines the rules for working relationships in the Group and is therefore a key pillar of this strategy. A cross-functional team from different brands, countries, divisions and generations supported the development and implementation process from the outset. The Code of Collaboration was initiated at the Global Top Management Conference in June 2016. It describes the form of collaboration in the brand alliance with the terms "open and honest", "uncomplicated", "without prejudice", "on an equal footing" and "for one another".

The traditional focus areas of personnel management such as providing optimal support and training opportunities for employees as well as careful planning and Group Management Report Sustainable Value Enhancement

deployment of human resources will continue to apply in the new strategy.

#### Training within the vocational groups

Training at Volkswagen is organized very systematically on the basis of vocational groups. A vocational group includes all employees whose work activities are based on similar technical skills and who need related expertise in order to perform their job. The skills profiles lay down the functional and interdisciplinary skills for each job.

A broad range of qualification opportunities is available to employees. This enables them to continue to develop throughout their working lives and continuously deepen their knowledge. In this process, they also learn from more experienced colleagues, who act as experts in the vocational group academies – the learning centers of the vocational groups – and pass on their knowledge to others.

In the reporting period, the Governance Academy was established and the foundation of the Academy of Technical Development anchored in the pact for the future. Staff from the new model line organization will be supported by the existing Product Academy. From 2017 onward, skills development and training for all vocational groups at Volkswagen will be supported by an academy.

#### Dual vocational training

Dual vocational training, where theory and practice are closely interwoven and which meets the Group's high standards of expertise and quality, creates the basis for first-class performance. As with staff training, here, too, the content is developed based on the expertise required within each vocational group. The "Volkswagen Group Charter on Vocational Education and Training" adopted in June 2015 shows the high value Volkswagen places on education and training. In addition to high-quality education and training, good training conditions will be created and/or developed further at the relevant Group locations.

Volkswagen has introduced dual vocational training at many of the Group's international locations in the past few years and is continuously working on improvements. Over three-quarters of all the Group's vocational trainees now learn their trade through dual vocational training. As of the end of 2016, the Volkswagen Group had trained 19,490 young people in approximately 60 trades and 50 dual study programs.

After completing their vocational training, young people at the start of their career have the opportunity to take part in the "Wanderjahre" (Years Abroad) program, spending twelve months at one of the Group's international locations. In the reporting period, 42 trainees at 15 Volkswagen Group locations around the world took part in this development program, including employees from Volkswagen Truck & Bus and MAN Truck & Bus in Germany for the first time.

Once a year, Volkswagen honors its highest-achieving vocational trainees in the Group with the "Best Apprentice

Award". In 2016, nine young women and 36 young men at a total of 43 Group locations received this award for their excellent performance and technical expertise.

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#### Developing university graduates

We offer structured programs for joining Volkswagen that are specially geared to university graduates. At Volkswagen AG, two trainee programs are available. In the StartUp Direct program, the trainees work in the target area from the outset, attending supplementary training seminars so as to get an excellent overview of the Company. In the StartUp Cross program, university graduates interested in working internationally are assigned to different locations at home and abroad. They get to know the various specialist areas throughout the value chain, broadening their knowledge and practical experience in the process. Volkswagen took on 114 trainees under the two programs in 2016; around 26% of them were young women.

Trainee programs are also offered at the international Group locations, among others at ŠKODA in the Czech Republic and at Scania in Sweden. In addition, the Volkswagen Group's StartUp Europe trainee program offers young engineers from Southern Europe an opportunity to gain international work experience.

Volkswagen uses a differentiated approach to ensure the loyalty of its young academic talent, which consists of two elements: the Student Talent Bank and the Academic Talent Pool

Through the Student Talent Bank, Volkswagen supports particularly high-achieving students in both functional and interdisciplinary areas. The aim here is to persuade former interns to join the Company and, by inviting them to specialist lectures, seminars, or visits, for example, to give them the best possible preparation for entering a profession in the world of Volkswagen.

Talented young high potentials are added to the Academic Talent Pool just before they complete their degree or doctorate. This puts selected high potentials on the radar at the Company, allowing them to be considered for an entry-level position in one of the functional areas.

#### Professional development, leadership and management programs

The Volkswagen Group Academy offers a broad range of qualification routes for specialists – from advanced training on general Company-related issues to training within the vocational groups to personal development programs. Here, too, the focus is on the basic dual training principle, which combines learning of theoretical content with practical experience.

We have standardized a large number of our development programs and selection processes for executives, foremen and managers across the Group. The Volkswagen Group Academy carried out a total of around 615 training programs Sustainable Value Enhancement Group Management Report

and assessment centers for executives, foremen and managers in 15 countries in the reporting period.

#### Impact of digitalization on training

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New technologies can usefully complement learning and the transfer of expertise. As the central training organization in the Group, the Volkswagen Group Academy incorporates this idea into different projects. In the digitalXperience program, the content and learning formats of the dual vocational training are reviewed for digitalization opportunities with a view to making vocational training fit for the future. These measures are flanked by skills development among the teaching staff at the Volkswagen Group Academy.

In parallel, the Volkswagen Group Academy is setting up an Education Lab designed to create stronger ties with education start-ups and translate the findings of the educational research into new technologies. These will then be tested in conjunction with the teaching staff and the students at Volkswagen to aid learning and the transfer of expertise.

#### Professional development at university level

Within the Volkswagen Group Academy, the AutoUni makes knowledge that is relevant for the future available to the Group by integrating internal senior experts and collaborating with universities. Its events are offered as programs and as cooperative study modules in a blended learning format, which combines classroom training with online content, and are supplemented by lectures and conferences. The 2016 offering included digitalization, sustainability, e-mobility, autonomous driving and Industry 4.0 as well as the workplace of the future. Around 9,200 interested employees from 59 locations attended over 160 AutoUni events around the world.

The AutoUni cooperates with internationally renowned universities, institutes and research centers on research projects, dissertations and theses and offers doctoral students in the Group a platform for exchanging ideas in addition to interdisciplinary training programs. At the end of 2016, more than 400 doctoral students were engaged in research at the various Volkswagen Group companies in Germany, investigating forward-looking, Company-related issues.

#### Advancement of women and family-friendly HR policies

For Volkswagen, family-friendly human resources policies are a key aspect of being an attractive employer and go a long way to achieving greater equality between the sexes. We therefore work continuously on further increasing the proportion of women in leadership positions. Targets have been set for every division in the company to encourage women with high potential in their decision to aim for a career in management in the Company.

This approach is supported by many different measures including the cross-brand "Management Mentoring Pro-

gram", which is designed to support women on the way to management positions. Volkswagen has also launched the "Career with Children" project that supports young mothers and fathers during and on their return from parental leave, helping them to continue their career as effectively as possible. Volkswagen offers the "Compass" program specifically to encourage women with high potential in their decision to aim for a career in management.

We use our Germany-wide Woman DrivINGAward and the Woman Experience Day to focus on female engineering and computer science students and graduates, so as to recruit them for technical positions at Volkswagen. We use target group-specific events to help the participants understand our products and give them an insight into the attractive tasks in our Company.

In the reporting period, Volkswagen AG reached the target quotas it had set for the proportion of women in management in accordance with the German law regarding the equal participation of women and men in leadership positions in the private and public sectors: by the end of the year, the proportion of women was 9.8% (target: 9.8%) in the first management level and 13.5% (target: 13.3%) in the second management level. For the new period up to the end of 2021, Volkswagen AG is aiming to have 13.0% women in the first management level and 16.9% women in the second management level.

## PROPORTION OF WOMEN VOLKSWAGEN GROUP IN GERMANY $^1$ as of December 31, 2016

% 	2016	2015	
Total vocational trainees	29.5	28.3	
Industrial vocational trainees	23.3	22.6	
Commercial vocational trainees	58.6	57.0	
Students in traineeship schemes	33.5	33.4	
Total management	11.0	10.3	
Management	12.8	11.9	
Senior management	8.7	8.6	
Top management	4.7	3.8	

#### 1 Excluding Scania, MAN and Porsche.

In addition, Volkswagen intends to raise the proportion of female skilled workers and forewomen in Germany to 10%; in fiscal year 2016, the proportion of women in the Volkswagen Group in Germany (without Scania, MAN and Porsche) was 7.6% working as skilled workers and 5.1% as forewomen. In order to increase the proportion of female vocational trainees in the industrial and technical area from the current 23.3% to 30%, Volkswagen specifically targets the recruitment of women, for example by arranging special work experience and orientation days for young women.

in 2016.

employees whom we asked to participate, some 440,000, or 81%, took part. The mood index – an important parameter in

the opinion survey – was at 78 of a possible 100 index points

In the Volkswagen Group, a large number of operational arrangements are in force to enable individuals to combine the demands of work and home. These include working time flexibility, variable part-time working and shift models, leave of absence to care for close family members, as well as onsite, company-run childcare facilities.

Volkswagen is continuously working on further improving these options. In September 2016, Volkswagen AG introduced a far-reaching collective agreement for work performed outside the facility (mobile work). At AUDI AG, staff have had the opportunity to work in any location and with flexible working hours since October 2016, if this is compatible with the job tasks at hand. The collective agreements have fulfilled employees' request for greater flexibility with regard to working time and the place of work.

#### **Employee participation**

Codetermination and employee participation are important pillars of our human resources strategy. Volkswagen aims to promote high levels of technical expertise and a strong team spirit. We therefore invest in our people, offer employees attractive opportunities for development and promote a good working climate. This includes employees' opinions, assessments and constructive criticism being heard. Differentiated pay systems that reward individual and team effort are a further component of employee participation.

With our opinion survey, a uniform, Group-wide poll, we regularly gather information about employee satisfaction and open up feedback channels to receive suggestions for improvement. We conducted the opinion survey in a revised format in 2016, adding further questions for employees: new tools now systematically support managers and employees when discussing the results. The survey was carried out at 172 sites and companies in 45 countries. Of the 540,000

Since 2007, Volkswagen AG has been using a tool for involving its workforce in improving the Company's efficiency: the "Volkswagen Way". Our overarching goal here is to increase Volkswagen's competitiveness and safeguard employment. In fiscal year 2016, a particular focus was on improving collaboration and communication within the Company and on strengthening our leadership and participation culture. The evolution of the "Volkswagen Way" thus actively supports the Volkswagen Group's program for the future TOGETHER – Strategy 2025.

Ideas Management is an important leadership and motivational instrument for line supervisors because it facilitates active participation in planning and organizing work and is also underpinned by prizes with monetary incentives. Employees use their creativity, knowledge and initiative to take responsibility for process and product improvement at many of the Group's locations.

IDEAS MANAGEMENT IN THE VOLKSWAGEN GROUP<sup>1</sup> as of December 31, 2016

	2016	2015
Ideas for improvement suggested	583,017	536,081
Ideas for improvement implemented	482,453	360,454
Savings in € million	435.6	374.9
Bonuses in € million	40.0	38.7

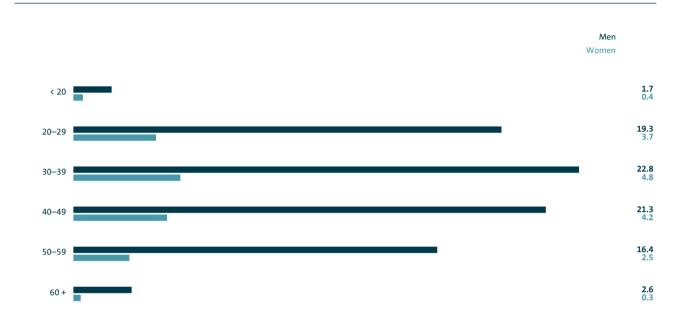
<sup>1 46 (41)</sup> participating production locations.

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#### AGE STRUCTURE IN YEARS OF VOLKSWAGEN GROUP EMPLOYEES

as of December 31, 2016; in percent

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#### Preventive healthcare and occupational safety

Volkswagen's holistic healthcare management system extends beyond traditional preventive healthcare and occupational safety; it also covers aspects of work organization, workplace design, behavioral ergonomics, psychosocial aspects, rehabilitation and reintegration into working life as well as programs for preventing widespread diseases. The Group's Health Department performs standardized health audits for this purpose. The Overall Factory White Paper for vehicle production plants serves as the basis for planning new factories in the Group. In the latest edition of the White Paper, released in 2016, international requirements were added, which means that the topic of health now applies to all locations worldwide.

To maintain and improve employees' health and performance and help keep them fit, a free and comprehensive voluntary screening (check-up) is provided for all employees at almost all production facilities. In some cases, country-specific supplementary examinations, such as HIV and tuberculosis tests, have been added.

In light of the general increase in mental illness and stress, we also offer a broad range of services in this area to employees in the Group. This includes psychological training for managers and psychological support in emergencies – such as at SAIC Volkswagen in China – as well as a project for collecting information about psychosocial stress factors at SEAT in Spain and a psychosocial risk assessment and consultation at Audi in Hungary.

Another important action area in the Volkswagen Group is the continuous improvement of ergonomics. Volkswagen is aiming to ensure that the ergonomic quality of the workstations is taken into account throughout all production and work processes. With this in mind, we collaborate with scientists to combine state-of-the-art ergonomic workplaces with innovative work processes. As regards occupational safety, all Group companies covered by Group occupational safety management system used this to analyze their occupational safety organizations and processes. The results have been incorporated into a Group-wide benchmark and now provide the foundation for further improvements of the system.

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## EMPLOYEE BREAKDOWN<sup>1</sup> as of December 31, 2016

	2016	2015	2014	2013	2012
Vocational trainees in the Group	19,490	18,651	18,459	17,703	16,714
Industrial	14,276	13,673	13,577	13,174	12,508
Commercial	5,214	4,978	4,882	4,529	4,206
Passive phase of partial retirement	5,782	6,183	7,129	9,501	7,804
Group´s active employees	601,443	585,242	566,998	545,596	525,245
Employees	626,715	610,076	592,586	572,800	549,763
Europe	464,199	451,257	438,631	424,964	410,427
America	58,491	59,329	59,790	61,796	63,193
Africa	6,082	6,388	6,330	6,356	6,461
Asia	96,823	91,991	86,752	78,672	68,704
Australia	1,120	1,111	1,083	1,012	978
Percentage of female employees in the Group	16.0	16.0	15.7	15.5	15.2
Female graduate recruits <sup>2</sup> (in %)	26.0	37.0	30.9	35.3	29.2

<sup>1</sup> Including the Chinese joint venture companies.

#### INFORMATION TECHNOLOGY (IT)

With digitalization and networking in the ascendant on the whole, all of our business processes must also be supported digitally from end to end. At the same time, the establishment of new locations is posing high demands in terms of networking and coordination. A modern, tailor-made infrastructure and efficient application landscape are essential to meeting these requirements. The centerpiece is the Groupwide "Fertigungs-, Informations- und Steuerungssystem" (FIS – Production, Information and Control System). This enables us to efficiently produce vehicles at currently 43 plants worldwide – at the right time and with the right equipment. FIS is a key success factor for flexible, cross-brand manufacturing in the global production network.

In 2016, we have increased the Group-wide level of IT standardization for managing our plants to 88 (84)%. The "digital factory" is an example of an application launched only recently: even before the Company breaks ground on the construction of a new plant, our planners are able to take a virtual walk through the building, check their plans and thus ensure production can begin as intended.

The growing convergence of production and IT is opening up new opportunities. Big data processes help us to analyze faulty machinery and take action at an early stage.

Volkswagen is addressing the trend towards digitalization in the Group's own IT labs. At these innovation centers, new IT solutions are developed in close cooperation between departments, research institutions and technology partners. The innovation centers act as test laboratories for the Group, as advisors on questions concerning the future of information technology and as liaison offices for start-up companies.

Our first IT lab, Data:Lab in Munich, is the center of expertise and innovation on topics involving big data, advanced analytics (process for systematic analysis of data in electronic form), machine learning and artificial intelligence.

Another center of innovation opened in Berlin in the reporting period – Digital:Lab. Among other things, the experts there are working on a digital platform that will enable us to provide our customers with mobility services, including information on fuel prices, parking and weather conditions.

We established the Smart.Production:Lab at the Wolfsburg location in August 2015. This acts as a center of expertise for Industry 4.0-related topics and is making an important contribution towards progressively turning the Volkswagen Group's production plants into smart factories.

<sup>2</sup> Volkswagen AG

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Activities covering the Internet of things, data analytics, human-robot collaboration and wearables aim to comprehensively digitalize production and logistics. At the Smart.Production:Lab, we are helping to shape the future of car manufacturing.

We are also constantly increasing our efforts to network employees. Internal communities and the Company's internal Group Connect network are helping to establish new methods, means and ways of working within the Group and to put experts in touch with one another.

Volkswagen also actively seeks open discussions with start-ups in order to turn innovative ideas from young entrepreneurs into products suitable for series production. Internal and external hackathons (programming competitions) additionally create ideas for new products and services. At the CeBIT, for example, Group IT and SAP arranged the "InnoJam++" in which around 100 international mathematics, computer science, natural science, and technology students took part.

#### THE VOLKSWAGEN GROUP'S ENVIRONMENTAL STRATEGY

Climate change, resource availability and urbanization are some of the major global challenges faced by the Volkswagen Group. These challenges are also reflected in the growing demands placed on the Group – from politicians enforcing ambitious environmental regulations around the world, from investors who expect us to anticipate and manage the resulting risks, and from customers who are increasingly interested in low-emission, environmentally friendly vehicles.

Our goal is to become a role model in all things related to the environment and to actively support the implementation of the United Nations' Sustainable Development Goals (SDGs).

#### Targets and guidelines

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The Volkswagen Group's future program, TOGETHER – Strategy 2025, reveals how Volkswagen plans to excel. By taking responsibility, we intend to become a role model in all things related to the environment. To this end, we have defined the following targets:

- > To continuously reduce our carbon footprint
- > To continuously reduce the harmful emissions
- > To continuously reduce the resource consumption

In our quest to become a role model in all things related to the environment, we have drawn up several guidelines:

> In addition to addressing the global challenge of climate change (reducing CO<sub>2</sub> emissions), our approach covers all other environmental resources, especially conserving water, soil and air quality as well as energy and raw materials. Our decades of experience and the expertise we have built up as a result will come to fruition both globally and locally.

- > We employ a holistic approach by researching, developing and democratizing environmentally friendly innovations, significantly reducing the environmental burden in the process.
- > We significantly reduce the environmental burden throughout the entire product life cycle by setting ourselves ambitious goals and acting as a driving force in both the production phase (supply chain) and the usage phase of our products.
- > We communicate our measures, achievements and projects as transparently as possible.
- Our achievements are substantiated by high rankings in environmental awards.

We can only reach our goals if we firmly entrench environmentally relevant issues in our organizational and decisionmaking processes. Our long-established environmental management system provides the basis for this.

All environmental protection activities in the Volkswagen Group are centered around our global principles, which have been expanded and improved over the years, and which are binding for all Group brands:

- Group Environmental Principles for Locations/Production (2007)
- > Group Environmental Principles for Product (2008)
- > Mission Statement on Biodiversity (2008)
- > Group Environmental Policy (2010)

#### Group environmental protection bodies

The Group Board of Management is the highest internal decision-making authority on environmental matters. Since 2012, it has simultaneously functioned as the Group's Sustainability Board. The Group-wide management of environmental protection is the responsibility of the Group Steering Committee for the Environment and Energy, with support from numerous specialist bodies such as:

- > the Group Life Cycle Engineering working group
- > the Group Steering Committee for CO<sub>2</sub>
- > the Vehicle Recycling Steering Committee
- > the Group Energy working group

These committees assess and analyze environmental opportunities and risks. To cover the entire value chain (life cycle approach), the corresponding divisions of the Group are represented in the Group Steering Committee for the Environment and Energy.

The brands and companies are independently responsible for environmental organization at their headquarters and locations, but base their environmental policies on the targets, guidelines and principles that apply throughout the Group.

2014 saw the inception of the Environmental Task Force, mandated with identifying and implementing potential savings at the locations. This team of analysts from Group research environment acts as a networking intermediary in the Company between departments, such as planning, main-

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tenance and operations. The broad-based knowledge of the Environmental Task Force, the many solutions and ideas from the locations and the transfer of measures via the massnahmen@web IT tool all help to promote a lively Groupwide dialog.

#### Engaging the workforce

Only a well-informed, qualified workforce can implement the specific measures derived from our environmental strategy and achieve the set targets. Already since 1976, environmental officers at our European locations have regularly convened to share their knowledge and experience. Regular Group Environmental Conferences were introduced in 1998 as a forum for the Group's Environmental Officers and experts to discuss strategies, measures and projects, and draw up joint action plans.

2013 saw the introduction of environmental protection ambassadors, as specially trained environmental experts. Worldwide, more than 1,000 ambassadors are now operating as front-line contacts and opinion leaders for production employees. Also, so-called Energy Experts receive special advanced training. The Wolfsburg facility alone has more than 70 of those experts helping their colleagues to save energy. Cross-brand, inter-departmental steering committees and working groups also operate at both management and expert level. Employee engagement is supported by an intranet portal showcasing best-practice examples and facilitating direct contact with all the relevant colleagues. The portal also outlines fundamental energy-saving guidelines and tips, including a number generated by the central ideas management program.

#### Biodiversity

Biodiversity means the variety of life on our planet, and covers the variety of species, the genetic differences within species and the diversity of ecosystems. We rely on it as the basis for our continued existence: healthy food, clean water, fertile soils and a balanced climate. Protecting biological diversity is one of the greatest challenges of our time. The United Nations has therefore declared the current decade to be the "UN Decade on Biodiversity".

Volkswagen has been committed to protecting biodiversity since 2007 and is a founder member of the Biodiversity in Good Company e.V. initiative. In our mission statement, we have committed to supporting the protection of species at all locations. For this, we are collaborating with local suppliers. As a consequence of the diesel issue, our membership in the Biodiversity in Good Company e.V. initiative is on hold until this issue has been clarified. Protecting biodiversity is a component of our environmental management. We have, among other things, appointed Volkswagen AG's environmental management officer as the Biodiversity Officer. We contribute to achieving the targets of the UN Convention on Biological Diversity (CBD) by reducing greenhouse gas emissions and utilizing resources as efficiently as possible. Volkswagen supports networking between the various players in the fields of business, politics, society and academia with a view to increasing public awareness of biodiversity conservation and to increase knowledge about the issue.

The thirteenth meeting of the Conference of the Parties (COP 13) on the Convention on Biological Diversity was held in Cancún in December. A representative of Volkswagen de México was invited to speak at the 2016 CBD Business and Biodiversity Forum in the run-up to the event. A statement in which the participating companies reaffirm their commitment to protecting biodiversity was also published for the first time. Volkswagen de México is one of the signatories of this Business and Biodiversity Pledge.

Our long-standing cooperation agreement with the Naturschutzbund Deutschland e.V. (NABU – German Nature and Biodiversity Conservation Union) expired on December 31, 2015. Nevertheless, the collaboration between Volkswagen Financial Services AG and NABU continued in 2016 under an agreement on a moorland conservation project and another agreement on environmentally friendly fleet management. Rewetting of moorland is an efficient measure for climate protection and nature conservation and serves to protect biotopes with highly specialized species.

At our international sites, we support the protection of nature with various partners. Volkswagen de México, for example, has been sponsoring reforestation in the Iztaccíhuatl-Popocatépetl National Park since 2008. Volkswagen has made around €1.4 million available for planting a total of 490,000 conifers. 39 suppliers have provided funding for the project. One of the aims of this project is to channel rainwater and meltwater into Puebla's aquifers.

In Xinjiang, Volkswagen supports the SuMaRiO (Sustainable Management of River Oases along the Tarim River) project, making – also from the perspective of the United Nations – an important contribution to environmental protection, to biodiversity and to combating desertification.

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#### External environmental awards

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The Volkswagen Group's models and its brands received numerous awards for environmentally friendly features in 2016. Here are some examples:

Vehicles from the Passenger Cars brand received top marks for energy efficiency in a test conducted by Brazil's "Quatro Rodas" magazine. Of all the automobiles with petrol-powered drives, the speed up! was the most fuel-efficient, followed by the take up! and the Fox BlueMotion. The new Gol Comfortline with its 1.0 MPI engine and the Audi A1 Sport 1.4 TFSI also made the list of the most fuel-efficient vehicles.

In the China Eco-Car Assessment Program (C-ECAP), the Golf TSI was awarded a platinum medal and the ŠKODA Octavia 1.4 TSI DSG and the Volkswagen Lamando 230 TSI with DSG were awarded gold medals. The vehicles were rated in six categories, including energy savings and the recycling rate.

The eco up! and its sisters Mii from SEAT and Citigo from ŠKODA repeated earlier success by winning in the environmentally friendly car list (Switzerland). The Audi A3 TFSI gtron and the Golf TGI, which came second and third, rounded off the successful performance of the Group's efficient natural gas models in the top ten.

The editorial team from Engadget, a leading online technology magazine in the United States, conferred on the BUDD-e this year's "Best of CES" award in the Best Innovation category. Special mention was made of the vehicle's range and quick charging mode. The online guide SlashGear, which mainly rates smartphones, cars, computers and digital life, also named the BUDD-e the overall winner.

In the competition organized by Verkehrsrundschau and Trucker magazines, the Volkswagen Caddy came out on top among the vans, receiving the "Green Van 2016" award. The Caddy delivered the best overall result regarding fuel consumption, payload and load capacity. The EfficientLine 2 fuel-efficient package for the MAN TGX received the "Green Truck Innovation" accolade for proven reduction of emissions in air pollutants, greenhouse gases and noise. Scania received the "Green Truck Future Innovation 2016" environmental award in the category of promising innovations for its hybrid module for distribution trucks. The 235 kW (320 PS) hybrid truck achieves fuel savings of up to 18% compared with trucks run solely on diesel. It can operate solely in electric mode, or the electric power can be combined with pure biodiesel.

#### REPORT ON POST-BALANCE SHEET DATE EVENTS

There were no significant events after the end of fiscal year 2016.

# Report on Expected Developments

The momentum of the global economy is expected to be somewhat stronger in 2017 than in the previous year. We assume that global demand for vehicles will be mixed and increase at a slightly slower rate than in the reporting period. Thanks to its brand diversity, global presence and pioneering technologies, the Volkswagen Group is well prepared to deal with the diverse conditions in the regional markets.

In the following, we describe the expected development of the Volkswagen Group and the general framework for its business activities. Risks and opportunities that could represent a departure from the forecast trends are presented in the Report on Risks and Opportunities.

Our assumptions are based on current estimates by thirdparty institutions. These include economic research institutes, banks, multinational organizations and consulting firms.

#### GLOBAL ECONOMIC DEVELOPMENT

In our forecasts, we assume that global economic growth in 2017 will be slightly above the previous year's level. We believe risks will arise from protectionist tendencies, turbulence in the financial markets and structural deficits in individual countries. In addition, growth prospects will continue to be hurt by geopolitical tensions and conflicts. We expect the economic upturn to continue in the large majority of industrialized nations, with stable rates of expansion overall. Most emerging markets will probably see faster growth than in the previous year. We expect the strongest rates of expansion in Asia's emerging economies.

Furthermore, we anticipate that the global economy will also continue to grow in the period 2018 to 2021.

#### Europe/Other Markets

In Western Europe, the economic recovery is expected to decelerate to some extent in 2017 compared with the reporting period. Resolving structural problems and the uncertain outcome of the Brexit negotiations between the EU and the United Kingdom represent major challenges.

For Central Europe, we estimate that growth rates in 2017 will be similar to those of the past fiscal year. In Eastern Europe, the economic situation should stabilize further, providing the smoldering conflict between Russia and Ukraine does not worsen. Following its decline in recent years, Russia's economic output is likely to increase slightly.

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Political uncertainty and social tensions resulting primarily from high unemployment levels will probably continue to weigh on the South African economy in 2017 and keep growth down.

#### Germany

In Germany, GDP is slated to rise in 2017 at a similar pace as in the reporting period. The situation in the labor market is expected to remain stable, bolstering consumer spending.

#### North America

For North America, we expect that the economy will expand in 2017 at a faster rate than in the previous year. Growth in the USA and in Canada is forecast to rise year-on-year, while the rate of growth in the Mexican economy is projected to decrease.

#### South America

Brazil is very likely to come out of recession in 2017, showing a modest growth trend. In spite of persistently high inflation, the Argentinian economy should pick up speed again. Report on Expected Developments Group Management Report

#### Asia-Pacific

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In 2017, the Chinese economy is expected to continue growing on a high level, but year-on-year this growth will lose momentum. For India, we anticipate an expansion rate at around the prior-year level. The economic situation in Japan is likely to remain essentially unchanged compared to the reporting period.

#### TRENDS IN THE PASSENGER CAR MARKETS

We expect trends in the passenger car markets in the individual regions to be mixed in 2017. Overall, growth in global demand for new vehicles will probably be slower than in the reporting period.

The Volkswagen Group is well positioned to deal with the mixed developments in automotive markets around the world. Our broad, selectively expanded product range featuring the latest generation of engines as well as a variety of alternative drives puts us in a good position globally compared with our competitors. Our goal is to offer all customers the mobility and innovations they need, sustainably strengthening our competitive position in the process.

We estimate that demand for passenger cars worldwide will continue to increase in the period 2018 to 2021.

#### Europe/Other Markets

For 2017, we anticipate that unit sales volumes in Western Europe will fall somewhat short of the level seen in the reporting period. Pre-crisis levels are not expected to be reached, even in the medium term. The continuing uncertainty among consumers precipitated by the debt crisis is likely to be exacerbated by the uncertain outcome of the Brexit negotiations between the EU and the UK, putting a damper on demand. In Italy and Spain, the recovery will probably continue in 2017 but at a much slower pace; for France, we expect growth to be only slightly positive. We anticipate that the market volume in the United Kingdom will be considerably lower than the high level seen in the previous year.

In the Central and Eastern European markets, demand for passenger cars in 2017 should exceed the weak prior-year figure. Following significant declines in some of the previous years, the volume of demand in Russia is estimated to increase moderately. We expect to see further growth in demand in the Central European markets.

We are projecting that the volume of demand in the South African passenger car market in 2017 will be up slightly year-on-year.

#### Germany

Following the positive trend of recent years, we forecast that the volume of the German passenger car market in 2017 will be slightly lower than in the previous year.

#### North America

We expect that the market volume for passenger cars and light commercial vehicles (up to 6.35 tonnes) in North America as a whole and in the USA will be a little lower in 2017 than in the prior year. Demand will probably remain highest for models in the SUV, pickup and van segments. In the Canadian market, the number of new registrations is likely to be slightly below the previous year's high level as well. This stands in contrast to Mexico, where we anticipate that demand will be noticeably higher than in the reporting period.

#### South America

Owing to their dependence on demand for raw materials, the South American markets for passenger cars and light commercial vehicles are heavily influenced by developments in the global economy. Protectionist tendencies are adversely affecting the performance of the region's vehicle markets, especially in Brazil and Argentina, which have imposed restrictions on vehicle imports. Nevertheless, compared with the previous year, demand in the South American markets as a whole will probably edge up in 2017. In Brazil, the largest market in South America, the volume is expected to rise moderately following substantial losses in the previous years. We anticipate that volumes in the Argentinian market in 2017 will be up slightly year-on-year.

#### Asia-Pacific

The passenger car markets in the Asia-Pacific region look set to continue their growth trajectory in 2017, however at a weaker pace. In China, the steady increase in individual mobility requirements will push up demand, though the rate of growth is likely to be slower than in the previous year because the tax break for vehicles with engine sizes of up to 1.6 l was reduced by half at the end of 2016. Strong demand is still forecast for attractively priced entry-level models in the SUV segment in particular. In India, we expect demand for passenger cars to slightly exceed the previous year. We believe that demand in the Japanese passenger car market will continue to taper off in 2017.

#### TRENDS IN THE MARKETS FOR COMMERCIAL VEHICLES

We expect trends in the markets for light commercial vehicles in the individual regions to be mixed again in 2017. Overall, we envisage modest growth in demand, a trend that is likely to continue in the period 2018 to 2021.

Due to the uncertainty caused by the United Kingdom's European Union membership referendum in June 2016, we estimate that demand for light commercial vehicles in Western Europe in 2017 will be slightly below the previous year's level. The United Kingdom is expected to register the biggest decline in the region. We anticipate that registrations in Germany will be around the previous year's level.

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In the Central and Eastern European markets, registrations of light commercial vehicles in 2017 will probably be higher than in the previous year. Also in Russia we expect the market volume to rise compared with 2016.

In North and South America, the light vehicle market is reported as part of the passenger car market, which includes both passenger cars and light commercial vehicles.

The market volume in the Asia-Pacific region in 2017 will probably record a slight increase year-on-year. We are expecting demand in the Chinese market to match the prior-year level. For India we are forecasting a considerably higher volume in 2017 than in the reporting period. In the Japanese market, the downward trend is likely to continue in 2017 at a slower pace.

In the markets for mid-sized and heavy trucks that are relevant for the Volkswagen Group, new registrations in 2017 are set to be somewhat up on the level in 2016. For the period 2018 to 2021 we anticipate a positive trend.

We expect to see demand in Western Europe and Germany decrease slightly year-on-year in 2017.

Central and Eastern European markets should record a significant increase in demand. For Russia, we anticipate a substantial recovery in demand in 2017, in contrast to the low level recorded in 2016.

Owing to a cyclical decline in the truck market, registrations in North America will probably be down substantially in 2017 on the figure for 2016.

Demand in the Brazilian market will recover in 2017 from the low level of the previous year, as the first signs of an economic recovery suggest.

Registrations in China, the world's largest truck market, are projected to be moderately higher in 2017 than in 2016. In India, we expect significant growth in the market on the strength of the positive economic climate and the implementation of numerous infrastructure measures.

In the bus markets that are relevant for the Volkswagen Group, we expect to see a moderate increase in demand in 2017. We anticipate that demand in Western Europe in 2017 will be below the 2016 level. For Central and Eastern Europe, we are forecasting higher demand than in the previous year. In South America, new registrations will probably be noticeably higher than the prior-year level.

For the period 2018 to 2021, we expect moderate growth overall in the demand for buses in the markets that are relevant for the Volkswagen Group.

#### TRENDS IN THE MARKETS FOR POWER ENGINEERING

We expect the overall difficult market environment and thus the price pressure in the power engineering segment to persist undiminished in 2017.

We anticipate that the order volume in 2017 for twostroke engines used in merchant shipping will be similar to the prior-year figure. Calls for greater energy efficiency and low pollutant emissions will have a significant influence on ship designs in the future. We expect to see continuing high demand for special-purpose ships such as cruise ships, ferries and government vessels. In the offshore segment, new orders are expected to be at a very low level due to overcapacities, despite the recent slight increase in the oil price. Our assumption is that the volume of the marine market will persist at last year's level on the whole. The competitive pressure will continue unabated.

Demand for energy correlates strongly with macroeconomic and demographic trends, especially in developing countries and emerging markets. The global trend toward decentralized power stations and gas-based applications shows no sign of slowing down. We predict that demand will increase slightly year-on-year in 2017, but will remain at a low overall level.

In spite of the slight increase in the oil price, the market for turbomachinery is expected to experience a persistently difficult market environment in fiscal year 2017, resulting in high prices and competitive pressure. This is due to expectations that unfavorable economic and political conditions will prevail in some relevant markets. We consequently envisage that in 2017 the market for turbomachinery will also settle at the previous year's low level.

Due to the fact that new construction capacity is not being utilized in full, the after-sales area is also expected to witness mounting competitive pressure.

For the period 2018 to 2021, we expect to see growing demand in the power engineering markets. The extent and timing of this growth will vary in the individual business fields, however.

#### DEMAND FOR FINANCIAL SERVICES

We believe that automotive financial services will continue to be very important for vehicle sales worldwide in 2017. We expect to witness further increasing demand in emerging markets in which market penetration is currently low, such as China. Regions with developed automotive financial services markets will see a continuation of the trend towards enabling Report on Expected Developments Group Management Report

mobility at a manageable total cost. Integrated end-to-end solutions, comprising mobility-related service modules such as insurance and innovative packages of services, will become increasingly important. In addition, demand for new mobility services such as carsharing will also grow; we estimate that this trend will continue in the period 2018 to 2021.

In the mid-sized and heavy commercial vehicles category, we expect rising demand for financial services products in emerging markets. There in particular, financing solutions support vehicle sales and are thus an essential component of the sales process. We anticipate increased demand in 2017 in the developed markets for services that reduce the total cost of ownership. This trend is also expected to continue in the period 2018 to 2021.

#### **EXCHANGE RATE TRENDS**

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The global economy lost a little of its momentum in 2016. Energy and commodity prices recovered as the reporting period went on, albeit at a relatively low level. Confidence in the economic stability of crisis-hit emerging markets partially returned and led to a gradual appreciation of the currencies of these countries. The euro lost ground slightly against the US dollar, but gained ground slightly against the Chinese renminbi. In the wake of the United Kingdom's Brexit referendum in June 2016, the sterling slumped against the European single currency. The Russian ruble and the Brazilian real turned around their preceding downtrend at the beginning of the reporting period and have since recorded significant price gains. For 2017, we are forecasting that the euro will gain some strength against the US dollar, Chinese renminbi, sterling and other key currencies. The expectation is that the Russian ruble and Brazilian real will remain relatively weak. We currently assume that these trends will continue in the period 2018 to 2021. There is still a general event risk - defined as the risk arising from unforeseen market developments.

#### INTEREST RATE TRENDS

Interest rates remained extremely low in fiscal year 2016 due to the continuation of expansionary monetary policy and the challenging overall economic environment. In the major Western industrialized nations, key interest rates persisted at a historic low level. While it became apparent in the USA that the extremely loose monetary policy was gradually drawing to an end, the European Central Bank continued to pursue this course. In light of further expansionary monetary policy measures in the eurozone, we therefore consider it unlikely that interest rates will rise in 2017. In the USA, however, we can expect to see a moderate increase in interest rates. For the

period 2018 to 2021, we anticipate a successive rise in interest rates, though the pace will vary from region to region.

#### COMMODITY PRICE TRENDS

Political and economic uncertainty in different forms caused the prices for many raw and input materials, such as crude oil, steel and rare earths, to move sideways or upwards in 2016 amid high volatility in some cases. In light of these individual factors, we expect mixed developments in the commodity markets in 2017 with an increase in most commodity prices. We believe that this trend will continue in the period 2018 to 2021. Forward-looking, system-based and individual procurement methods enable us to mitigate risks arising from this volatility in commodity prices. Long-term supply agreements ensure that the Group's needs are satisfied and thus ensure a high degree of supply reliability.

#### **NEW MODELS IN 2017**

In the course of transforming our core business, we will define the positioning of our Group brands more clearly and further optimize the vehicle and drive portfolio with a view to the most attractive and fastest-growing market segments. We will unveil additional SUV models, integrate digitalization into our products more systematically and provide important stimuli for the future with e-mobility offerings.

The Volkswagen Passenger Cars brand will launch the revamped Golf on the market in 2017. The brand's bestselling model, which will also be available as the Golf Estate, Golf GTI and Golf GTE, boasts a polished design, efficient engine technology, innovative driver assist systems and a new generation of infotainment systems. The latest battery technology extends the range of the new e-Golf by around 50% to up to 300 km in the New European Driving Cycle. The Polo was completely overhauled based on the MQB and now offers customers an even greater level of comfort. Its features include a wide range of affordable innovations, more spacious interior and outstanding design. The already large up! family will be joined by the sporty up! GTI in late 2017. The brand will continue its SUV initiative with the T-Roc, a compact crossover model. In addition, Volkswagen will demonstrate the brand's value, quality and power of innovation in 2017 with the sporty four-door coupé Arteon, which will complete the portfolio above the Passat. Three new electric vehicles will be rolled out in China - the plug-in versions of the Phideon and the Passat Estate as well as the e-Golf. The Teramont, a mid-class SUV that comfortably seats seven passengers, will also be introduced to the market, setting new standards in the segment with the latest driver assist systems and a masculine off-road design. In addition, Volkswagen will Group Management Report Report Report on Expected Developments 177

introduce the long version of the new Tiguan in China. In the USA, we aim to win over customers with the new Tiguan, which features a longer wheelbase. Volkswagen will cater to one of the largest segments in the American market with the SUV Atlas produced at our Chattanooga plant. The vehicle concept is specially tailored to meet the special demands of our customers here. In Brazil the face-lifted up! will be launched in 2017. The Golf and Golf Estate will also be refreshed. The new Polo is also expected to boost sales figures in Brazil.

At the new Audi plant in San José Chiapa, Mexico, production of the second generation of the best-selling SUV, the Q5, began at the end of 2016. This will be successively launched on the markets in 2017. The A5 family will be supplemented by the revamped A5 Sportback and A5 Cabriolet. Audi's new flagship will be launched towards the end of the year: the successor to the Audi A8 thrills with numerous new driver assist systems and infotainment features, raising the bar in its segment. The RS 3 Saloon will be launched in North America in 2017 along with the R8 Spyder and the TT RS. The new A5 Sportback will also make its debut in the US market.

ŠKODA will launch the bold, powerful Kodiaq in 2017 – a new series based on the MQB. The SUV combines all qualities that are synonymous with the ŠKODA brand: an exceptional amount of space, strong design and excellent value for money. In addition, the new generation of the robust Yeti will be unveiled. The popular Octavia will receive an upgrade. The Citigo, the Rapid and the Rapid Spaceback will also be given a face-lift.

SEAT will continue its product initiative with the new Leon. The fifth generation of the Ibiza will also be presented. SEAT is making its debut in the crossover segment with the Arona.

Starting in 2017, Porsche will produce the Panamera 4 E-Hybrid and the Panamera Executive models. The Panamera Sport Turismo will complement the model series in the second half of the year. The new generation of the 911 GT3 and the GTS models from the 911 series will also be delivered to customers.

In 2017, Bentley will launch the Bentayga – the first model with a diesel engine in Europe and selected international markets as well as the Continental GT Supersports high-performance variant. The next generation of the Continental GT will be unveiled in the second half of the year.

Lamborghini will launch the new Huracán Spyder RWD and the Huracán Performante in 2017, along with the upgraded Aventador S Coupé.

Bugatti will commence delivery of its new Chiron, the world's most powerful, fastest, most luxurious and most exclusive production super sports car. With a power output of 1,500 PS, a torque value of 1,600 Nm and a wide variety of

technical innovations, the Chiron will set new standards in every respect.

In 2017, Volkswagen Commercial Vehicles will start selling the completely redeveloped Crafter, which was designed with customers' specific preferences in mind. Boasting a large variety of drives and derivatives, the new Crafter offers customeroriented functionality and everyday solutions for individual transport tasks in all areas of use.

Scania will launch further variants of its new generation of trucks.

MAN will enter the world of vans for the first time in 2017 with the TGE. The light commercial vehicle will be MAN's primary solution in future for everyday lighter tasks in the transport and haulage sector. The models from the TG series will be redesigned. In the bus segment, the NEOPLAN Tourliner will be launched. Furthermore, new services and product innovations will be presented in all business areas in 2017.

Ducati will roll out a total of seven new models in 2017: the Ducati SuperSport, the Monster 797 and Monster 1200, the Multistrada 950, two new Scrambler models – the Scrambler Café Racer and the Scrambler Desert Sled – and the 1299 Superleggera, of which only 500 will be produced.

#### STRATEGIC SALES FOCUS

The multibrand structure, comprising largely independent, strong brands that nevertheless achieve maximum synergies, is one of the defining features of the Volkswagen Group. The structures in the Group have been designed for managing a multibrand organization.

To facilitate the entry into new markets for more Group brands, we will further expand our multibrand structure, particularly in the growth markets. We will also strengthen our customer focus across all sales levels and in customer service, for which we are continually enhancing employee qualifications in addition to optimizing our processes and systems to reflect shifts in customer requirements as well as changing markets and technologies, in particular digitalization. The focus of our sales strategy remains the same – the integrated marketing of new and used vehicles, financial and other services, as well as genuine parts and accessories. Mobility services are gradually being added.

#### TECHNICAL EXPERTISE AND MOTIVATION IN THE

#### TRANSFORMATION PROCESS

Our staff's dedication and high level of expertise provide important prerequisites for the transformation process to one of the world's leading providers of sustainable mobility, while ensuring our professional excellence in the field of classical automobile manufacturing.

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The dual vocational training and a university degree are the basis for professional development in the vocational groups at Volkswagen. Employees then obtain further qualifications throughout their working lives. To always meet current requirements, the broad offering of qualifications is continuously being enhanced. For example, employees are prepared for the changes associated with the advancing digitalization and the use of new technologies under Industry 4.0. An important pillar of this strategy is the transfer of knowledge and experience by internal experts to other staff. Qualifications are provided in the form of dual vocational training that closely integrates theoretical and practical forms of learning.

#### INVESTMENT AND FINANCIAL PLANNING

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In our current planning for 2017, investments of a total of €18 billion will be made in the Automotive Division.

Scheduled capex (investments in property, plant and equipment, investment property and intangible assets, excluding capitalized development costs) will amount to €13 billion. The ratio of capex to sales revenue in 2017 will be at a level of 6–7%. The majority of capex will be spent on new products and the continued rollout and development of the modular toolkit. The focus is on the electrification and digitalization of our vehicles, in particular through the advancement of the Modular Electric Toolkit (MEB). At the same time, primarily the SUV range will be further expanded.

Besides capex, investing activities will include additions of €5 billion to capitalized development costs. Among other things, these reflect upfront expenditures in connection with environmental standards and the extension and updating of our model range.

The investments in our facilities and models, as well as in the development of alternative drives and modular toolkits, are laying the foundations for profitable, sustainable growth at Volkswagen. These investments also include commitments arising from decisions taken in previous fiscal years.

We anticipate significant cash outflows in 2017 because of expenses from the diesel issue. Cash flows from operating activities are not expected to cover the Automotive Division's investment requirements. We therefore expect a negative net cash flow in 2017.

These plans are based on the Volkswagen Group's current structures. They do not take into account the possible settlement payable to other shareholders associated with the control and profit and loss transfer agreement with MAN SE. Our joint ventures in China are not consolidated and are therefore also not included in the above figures. These joint

ventures will invest €4 billion in capex in 2017, to be financed from the companies' own funds.

In the Financial Services Division we are planning lower investments in 2017 than in the previous year. We expect the growth in lease assets and in receivables from leasing, customer and dealer financing to lead to funds tied up in working capital, of which around 55% will be financed from the gross cash flow. As is common in the sector, the remaining funds needed will be met primarily through unsecured bonds on the money and capital market, asset-backed securities, customer deposits from direct banking business, as well as through the use of international credit lines.

#### TARGETS FOR VALUE-BASED MANAGEMENT

Based on long-term interest rates derived from the capital market and the target capital structure (fair value of equity to debt = 2:1), the minimum required rate of return on invested capital defined for the Automotive Division remains unchanged at 9%. Due in particular to the adverse effects of the special items on earnings, we did not achieve the minimum required rate of return in the reporting period, with a return on investment (ROI) of 8.2% (see also page 133). Invested capital will increase in 2017 as a result of investments in new models, the development of alternative drives and modular toolkits, as well as in future technologies. The return on investment will be up substantially year-on-year, above the minimum required rate of return on invested capital of 9%.

#### FUTURE ORGANIZATIONAL STRUCTURE OF THE GROUP

As part of the future program TOGETHER – Strategy 2025, we are setting up a new mobility solutions business with which we will press ahead with our transformation into a global leader in sustainable mobility. We will develop and market mobility services independently or in partnership with others. In addition to ride provision via an app (ride hailing), the focus will be on holistic transport solutions that shape personal and public transport more efficiently. The mobility solutions business will be reported in the Financial Services segment.

#### SUMMARY OF EXPECTED DEVELOPMENTS

The Volkswagen Group's Board of Management expects the global economy to record slightly higher growth in 2017 than in the previous year. We believe risks will arise from protectionist tendencies, turbulence in the financial markets and structural deficits in individual countries. In addition, growth prospects will continue to be hurt by geopolitical

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tensions and conflicts. We expect the economic upturn to continue in the large majority of industrialized nations, with stable rates of expansion overall. Most emerging markets will probably see faster growth than in the previous year. We expect the strongest rates of expansion in Asia's emerging economies.

The trend in the automotive industry closely follows global economic developments. We expect competition in the international automotive markets to intensify further.

We expect trends in the passenger car markets in the individual regions to be mixed in 2017. Overall, growth in global demand for new vehicles will probably be slower than in the reporting period. We anticipate that sales volume in Western Europe and the German passenger car market will be slightly lower than in the previous year. In the Central and Eastern European markets, demand for passenger cars should exceed the weak prior-year figure. We expect that the market volume for passenger cars and light commercial vehicles (up to 6.35 tonnes) in North America in 2017 will be a little lower than the prior-year figure. On the South American market for passenger cars and light commercial vehicles, overall demand is expected to rise slightly compared with the previous year. The passenger car markets in the Asia-Pacific region look set to continue their growth trajectory at a slightly weaker pace.

We expect trends in the markets for light commercial vehicles in the individual regions to be mixed again in 2017. Overall, we envisage a slight increase in demand.

In the markets for mid-sized and heavy trucks that are relevant for the Volkswagen Group, new registrations in 2017 are set to rise slightly above the prior-year level, while a moderate year-on-year increase is expected in new registrations of buses in the relevant markets.

We believe that automotive financial services will continue to be very important for vehicle sales worldwide in 2017.

The Volkswagen Group is well positioned to deal with the mixed developments in automotive markets around the world. Our broad, selectively expanded product range featuring the latest generation of engines as well as a variety of alternative drives puts us in a good position globally compared with our competitors. The Group's further strengths include in particular its unique brand portfolio, its steadily growing presence in all major world markets and its wide selection of financial services. Our range of models covers almost all key segments, with offerings from small cars to super sports cars in the passenger car segment, and from pickups to heavy trucks and buses in the commercial vehicles segment, as well as motorcycles. The Volkswagen Group brands will further optimize their vehicle and drivetrain portfolio in 2017 to concentrate on the most attractive and fastest-growing market segments.

The Group's new structure with more decentralized responsibility will strengthen our brands and regions and increase our proximity to customers. In addition, we are working to make even more focused use of the advantages of our multibrand group by continuously developing new technologies and our toolkits. Our goal is to offer all customers the mobility and innovations they need, sustainably strengthening our competitive position in the process.

We expect that deliveries to customers of the Volkswagen Group in 2017 will moderately exceed the prior-year volume amid persistently challenging market conditions.

Challenges will arise particularly from the economic situation, intense competition in the market, exchange rate volatility and the diesel issue.

We expect the sales revenues of the Volkswagen Group and of the Passenger Cars Business Area and Commercial Vehicles Business Area to grow up to 4% year-on-year in 2017. In terms of the Group's operating result, we anticipate an operating profit on sales of between 6.0% and 7.0% in 2017. In the Passenger Cars Business Area, we expect an operating return on sales in the range of 6.5-7.5%. For the Commercial Vehicles Business Area, we anticipate an operating return on sales of between 3.0 and 5.0%. In the Power Engineering Business Area, we expect a substantial year-on-year decline in sales revenue but also a lower operating loss. For the Financial Services Division, we are forecasting sales revenue and the operating profit at the prior-year level.

In the Automotive Division, the R&D ratio and the ratio of capex to sales revenue will fluctuate in the range of 6-7% in 2017. As a result of the effects of the diesel issue, net cash flow will be negative and significantly lower than in the previous year. Net liquidity will decline considerably as a result. The return on investment (ROI) will be up markedly year-on-year and will exceed our minimum required rate of return on invested capital of 9%. Our unchanged stated goal is to continue our solid liquidity policy.

The commitment and considerable technical expertise of our staff are key prerequisites to successfully shaping the transformation into a leading international provider of sustainable mobility. With our future program, TOGETHER – Strategy 2025, we are attaching even greater importance to our responsibility in relation to the environment, safety and society. We are also aiming for operational excellence in all business processes and intensifying our focus on profitable growth.

Report on Risks and Opportunities Group Management Report

# Report on Risks and Opportunities

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(CONTAINS THE REPORT IN ACCORDANCE WITH SECTION 289(5) OF THE HGB)

Promptly identifying the risks and opportunities arising from our operating activities and taking a forward-looking approach to managing them is crucial to our Company's long-term success. A comprehensive risk management and internal control system helps the Volkswagen Group deal with risks in a responsible manner.

In this section, we first explain the objective and structure of the Volkswagen Group's risk management system (RMS) and internal control system (ICS) and describe the system relevant for the financial reporting process. We then outline the main risks and opportunities arising in our business activities.

### OBJECTIVE OF THE RISK MANAGEMENT SYSTEM AND INTERNAL CONTROL SYSTEM AT VOLKSWAGEN

Only by promptly identifying, accurately assessing and effectively and efficiently managing the risks and opportunities arising from our business activities can we ensure the Volkswagen Group's sustainable success. The aim of the RMS/ICS is to identify potential risks at an early stage so that suitable countermeasures can be taken to avert the threat of loss to the Company, and any risks that might jeopardize its continued existence can be ruled out.

Assessing the probability and extent of future events and developments is, by its nature, subject to uncertainty. We are therefore aware that even the best RMS cannot foresee all potential risks and even the best ICS can never completely prevent irregular acts.

## STRUCTURE OF THE RISK MANAGEMENT SYSTEM AND INTERNAL CONTROL SYSTEM AT VOLKSWAGEN

The organizational design of the Volkswagen Group's RMS/ ICS is based on the internationally recognized COSO framework for enterprise risk management (COSO: Committee of Sponsoring Organizations of the Treadway Commission). In the reporting period, Volkswagen again pursued a holistic, integrated approach that combines a risk management

system, an internal control system and a compliance management system (CMS) within a single management strategy (governance, risk and compliance strategy). Structuring the RMS/ICS in accordance with the COSO framework for enterprise risk management ensures that potential risks are covered in full; opportunities are not recorded. Uniform Group principles are used as the basis for managing risks in a consistent manner.

With this approach we not only fulfil legal requirements, particularly with regard to the financial reporting process, but we are also able to manage significant risks to the Group holistically, i.e. by incorporating both tangible and intangible criteria.

We further enhanced our RMS/ICS in the reporting period. In addition to the ad hoc and annual risk assessment, the Board of Management also receives quarterly risk reports. This additional reporting on the current risk situation raises awareness of risks in the Company and encourages an open approach to dealing with them. We continued to reinforce the internal control system in the area of product compliance in 2016. This includes what are known as the Golden Rules, which we describe in the chapter on the diesel issue on page 96.

Another key element of the RMS/ICS at Volkswagen is the three lines of defense model, a basic element required, among others, by the European Confederation of Institutes of Internal Auditing (ECIIA). In line with this model, the Volkswagen Group's RMS/ICS has three lines of defense that are designed to protect the Company from significant risks occurring.





#### First line of defense: operational risk management

The primary line of defense comprises the operational risk management and internal control systems at the individual Group companies and business units. The RMS/ICS is an integral part of the Volkswagen Group's structure and workflows. Events that may give rise to risk are identified and assessed locally in the divisions and at the investees. Countermeasures are introduced immediately, their effects are assessed and the information is incorporated into the planning in a timely manner. The results of the operational risk management process are incorporated into budget planning and financial control on an ongoing basis. The targets agreed in the budget planning rounds are continually reviewed in revolving planning updates.

At the same time, the results of risk mitigation measures that have already been taken are incorporated into the monthly forecasts on further business development without delay. This means that the Board of Management also has access to an overall picture of the current risk situation via the documented reporting channels during the year.

The minimum requirements for the operational risk management and internal control system are set out for the entire Group in uniform guidelines. These also include a process for the timely reporting of material risks.

## Second line of defense: identifying systemic risks using the regular Governance, Risk and Compliance process

In addition to the ongoing operational risk management, the Group Governance, Risk and Compliance (GRC) department each year sends standardized surveys on the risk situation and the effectiveness of the RMS/ICS to the significant Group companies and units worldwide (regular GRC process). The feedback is used to update the overall picture of the potential risk situation and assess the effectiveness of the system.

Each systemic risk reported is assessed using the expected likelihood of occurrence and various risk criteria (financial and nonfinancial). In addition, the measures taken to manage and control risk are documented at management level. This means that risks are assessed in the context of any risk management measures initiated, i.e. in a net analysis. In addition to strategic, operational and reporting risks, risks arising from potential compliance violations are also integrated into this process. Moreover, the effectiveness of key risk management and control measures is tested and any weaknesses identified in the process are reported and rectified.

All Group companies and units selected from among the entities in the consolidated Group on the basis of materiality and risk criteria were subject to the regular GRC process in fiscal year 2016.

The Scania brand had not yet been included in the Volkswagen Group's risk management system due to various provisions of Swedish company law. Scania was integrated into quarterly risk reporting in 2016. In future, it will also be included in the regular GRC process. According to Scania's corporate governance report, risk management and risk assessment are integral parts of corporate management. Risk areas at Scania are evaluated by the brand's Controlling department and reflected in the financial reporting.

The RMS was expanded in the reporting period to include quarterly risk reporting. The aim is to raise awareness of significant risks currently faced by the Volkswagen Group and to encourage these to be dealt with openly. All Group brands are included in this new process along with Volkswagen Financial Services AG.

#### Third line of defense: checks by Group Internal Audit

Group Internal Audit helps the Board of Management to monitor the various divisions and corporate units within the Group. It regularly checks the risk early warning system and the structure and implementation of the RMS/ICS and the CMS as part of its independent audit procedures.

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#### ANNUAL STANDARD GOVERNANCE, RISK AND COMPLIANCE PROCESS

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#### RISK EARLY WARNING SYSTEM IN LINE WITH THE KONTRAG

The Company's risk situation is ascertained, assessed and documented in accordance with the requirements of the Gesetz zur Kontrolle und Transparenz im Unternehmensbereich (KonTraG - German Act on Control and Transparency in Business). The requirements for a risk early warning system are met through the elements of the RMS/ICS described above (first and second lines of defense). Independently of this, the external auditors check both the processes and procedures implemented in this respect and the adequacy of the documentation on an annual basis. The plausibility and adequacy of the risk reports are examined on a random basis in detailed interviews with the divisions and companies concerned that also involve the external auditors. The latter assessed our risk early warning system based on this volume of data and established that the risks identified were presented and communicated accurately. The risk early warning system therefore meets the requirements of the KonTraG.

In addition, the Financial Services Division is subject both to scheduled examinations as part of the audit of the annual financial statements and to also unscheduled audits, in particular by the Banking Supervision Committee of the European Central Bank (ECB SSM, Single Supervisory Mechanism) and by the Bundesanstalt für Finanz-dienstleistungsaufsicht (BaFin – the German Federal Financial Supervisory Authority) within the meaning of section 44 of the Kreditwesengesetz (KWG – German Banking Act), as well as examinations by the Prüfungsverband deutscher Banken (Auditing Association of German Banks).

## Monitoring the effectiveness of the risk management system and the internal control system

To ensure its effectiveness, the RMS/ICS is regularly optimized as part of our continuous monitoring and improvement processes. In the process, equal consideration is given to both internal and external requirements. External experts assist in the continuous enhancement of our RMS/ICS on a case-by-case basis. The results culminate in both regular and event-driven reporting to the Board of Management and Supervisory Board of Volkswagen AG.

## THE RISK MANAGEMENT AND INTEGRATED INTERNAL CONTROL SYSTEM IN THE CONTEXT OF THE FINANCIAL REPORTING PROCESS

The accounting-related part of the RMS/ICS that is relevant for the financial statements of Volkswagen AG and the Volkswagen Group comprises measures that are intended to ensure the complete, accurate and timely transmission of the information required for the preparation of the financial statements of Volkswagen AG, the consolidated financial statements and the combined Group management report. These measures are designed to minimize the risk of material misstatement in the accounts and in the external reporting.

## Main features of the risk management and integrated internal control system relevant for the financial reporting process

The Volkswagen Group's accounting is essentially organized along decentralized lines. For the most part, accounting duties are performed by the consolidated companies themselves or entrusted to the Group's shared service centers. In principle, the audited financial statements of Volkswagen AG and its subsidiaries prepared in accordance with IFRSs and the Volkswagen IFRS accounting manual are transmitted to the Group in encrypted form. A standard market product is used for encryption.

The Volkswagen IFRS accounting manual, which has been prepared using external expert opinions in certain cases, ensures the application of uniform accounting policies based on the requirements applicable to the parent. In particular, it includes more detailed guidance on the application of legal requirements and industry-specific issues. Components of the reporting packages required to be prepared by the Group companies are also set out in detail there and requirements established for the presentation and settlement of intragroup transactions and the balance reconciliation process that builds on this.

Control activities at Group level include analyzing and, if necessary, adjusting the data reported in the financial statements presented by the subsidiaries, taking into account the reports submitted by the auditors and the outcome of the meetings on the financial statements with representatives of the individual companies. These discussions address both the reasonableness of the single-entity financial statements and specific significant issues at the subsidiaries. Alongside reasonableness reviews, control mechanisms applied during the preparation of the single-entity and consolidated financial statements of Volkswagen AG include the clear delineation of areas of responsibility and the application of the dual control principle.

The Group management report is prepared – in accordance with the applicable requirements and regulations – centrally but with the involvement of and in consultation with the Group units and companies.

In addition, the accounting-related internal control system is independently reviewed by Group Internal Audit in Germany and abroad.

#### Integrated consolidation and planning system

The Volkswagen consolidation and corporate management system (VoKUs) enables the Volkswagen Group to consolidate and analyze both Financial Reporting's backward-looking data and Controlling's budget data. VoKUs offers centralized master data management, uniform reporting, an authorization concept and maximum flexibility with regard to changes to the legal environment, providing a future-proof technical platform that benefits Group Financial Reporting and Group Controlling in equal measure. To verify data consistency, VoKUs has a multi-level validation system that primarily checks content plausibility between the balance sheet, the income statement and the notes.

#### RISKS AND OPPORTUNITIES

In this section, we outline the risks and opportunities that arise in the course of our business activities. We have grouped them into categories. Unless explicitly mentioned, there were no material changes to the specific risks and opportunities compared with the previous year.

The diesel issue gives rise to its own risks for the Volkswagen Group and also has an impact on existing risks. These are described under the respective risk category.

We use competitive and environmental analyses and market studies to identify not only risks but also opportunities with a positive impact on the design of our products, the efficiency with which they are produced, their success in the market and our cost structure. Where they can be assessed, risks and opportunities that we expect to occur are already reflected in our medium-term planning and our forecast. The following therefore reports on internal and external developments as risks and opportunities that may result in a negative or positive deviation from our forecast.

#### Risks from the diesel issue

The Volkswagen Group has recognized provisions arising from the diesel issue, in particular for the upcoming service campaigns, recalls and customer-related measures as well as for legal risks, but also for residual value risks.

Due to existing estimation risks particularly from legal risks, criminal and administrative proceedings, higher expenses for technical solutions, lower market prices, repurchase obligations and customer-related measures, further significant financial liabilities may emerge.

Demand may decrease – possibly exacerbated by a loss of reputation or insufficient communication. Other potential consequences include lower margins in the new and used car businesses and a temporary increase in funds tied up in working capital.

The funding needed to cover the risks may lead to assets having to be sold due to the situation and equivalent proceeds for them not being achieved as a result.

As a result of the diesel issue the ability to use refinancing instruments may possibly be restricted or precluded for the Volkswagen Group. A downgrade of the Company's rating could adversely affect the terms associated with the Volkswagen Group's borrowings.

We are cooperating with all the responsible authorities to clarify these matters completely and transparently.

#### Macroeconomic risks and opportunities

We believe that the risks to continued global economic growth arise primarily from turbulence in the financial markets, protectionist tendencies and structural deficits, which pose a threat to the performance of individual industrialized nations and emerging economies. In the southern part of the eurozone, a sustained economic recovery is being hindered by the situation of some financial institutions whose ability to withstand a crisis is still not assured. Risks are also associated with the effects of the UK's planned withdrawal from the EU. Persistently high private- and public-

Report on Risks and Opportunities

sector debt in many places is also clouding the outlook for growth and may cause markets to respond negatively. Declines in growth in key countries and regions often have an immediate impact on the state of the global economy and therefore pose a central risk.

The economic development of some emerging economies is being hampered primarily by dependence on energy and commodity prices, capital inflows and socio-political tensions. Corruption, inadequate government structures and a lack of legal certainty also pose risks.

Geopolitical tensions and conflicts are a further major risk to the performance of individual economies and regions. As the global economy becomes increasingly interconnected, it is also vulnerable to local developments. Any escalation of the conflicts in Eastern Europe, the Middle East, or Africa, for example, could cause upheaval on the global energy and commodity markets and exacerbate migration trends. The same applies to armed conflicts, terrorist activities, or the spread of infectious diseases, which may prompt unexpected, short-term responses from the markets.

Overall, we consider the probability of a global recession to be low. Due to the risk factors mentioned, however, the possibility of a decline in global economic growth or a period of below-average growth rates cannot be ruled out.

The macroeconomic environment may also give rise to opportunities for the Volkswagen Group if actual developments differ in a positive way from expected developments.

#### Sector-specific risk and market opportunities

The growth markets of Asia, South America, and Central and Eastern Europe are particularly important to the Volkswagen Group in terms of the global trend in demand for passenger cars and commercial vehicles. Although these markets harbor considerable potential, the underlying conditions in some countries in these regions make it difficult to increase unit sales figures there. Some have high customs barriers or minimum local content requirements for production, for example. The political crisis and its economic consequences again inhibited market development in Russia in fiscal year 2016. In South America, structural deficits continued to have a negative impact. Restrictions on vehicle registrations could enter into force in further Chinese metropolitan areas in the future. Additionally, a global economic slowdown could negatively impact consumer confidence. Furthermore, we cannot entirely rule out the possibility of freight deliveries being shifted from trucks to other means of transport, and of demand for the Group's commercial vehicles falling as a result.

At the same time, wherever the economic and regulatory situation permits, there are opportunities above and beyond current projections resulting from faster growth in the emerging markets where vehicle densities are still low. The demand that built up in individual established markets during the crisis could also bring a more marked recovery in these markets if the economic environment eases more quickly than expected. Price pressure in established automotive markets due to high market saturation is a particular challenge for the Volkswagen Group as a supplier of volume and premium models. As the global economy is still under strain, competitive pressures are likely to remain high in the future. Some manufacturers may respond by offering incentives in order to meet their sales targets, putting the entire sector under additional pressure, particularly in Western Europe, the USA and China.

Western Europe is one of our main sales markets. A drop in prices due to the economic climate triggered by falling demand in this region would have a particularly strong impact on the Company's earnings. We counter this risk with a clear, customer-oriented and innovative product and pricing policy. Outside Western Europe, delivery volumes are widely spread worldwide, with the Chinese market accounting for a large share. In numerous existing and developing markets, we either already have a strong presence or are working hard to build one. Moreover, strategic partnerships are helping us to increase our presence in these countries and regions and cater to requirements there.

Economic performance varied from region to region in fiscal year 2016. While the situation in Western Europe stabilized further, China remained on its growth trajectory and the US economy continued to expand, market conditions in Eastern Europe and South America remained under strain. The resulting challenges for our trading and sales companies, such as efficient inventory management and a profitable dealer network, are considerable and are being met by appropriate measures on their part. However, financing business activities through bank loans remains difficult. Our financial services companies offer dealers financing on attractive terms with the aim of strengthening their business models and reducing operational risk. We have installed a comprehensive liquidity risk management system so that we can promptly counteract any liquidity bottlenecks at the dealers' end that could hinder smooth business operations.

We continue to approve loans for vehicle finance on the basis of the same cautious principles applied in the past, taking into account the regulatory requirements of section 25a(1) of the Kreditwesengesetz (KWG – German Banking Act).

Volkswagen may be exposed to increased competition in aftermarkets for two reasons in particular: firstly, because of the provisions of the block exemption regulations, which have applied to after-sales services since June 2010, and, secondly, because of the amendments included in EU Regulation 566/2011 of June 8, 2011 regarding access by independent market participants to technical information.

In addition, the European Commission is currently evaluating the market with regard to existing design protection. If the proposed abolition of design protection for visible replacement parts were to be approved, this could adversely affect the Volkswagen Group's genuine parts business.

The automotive industry faces a process of transformation with far-reaching changes. Electric drives, connected vehicles and autonomous driving are associated with both opportunities and risks for our sales. In particular, more rapidly evolving customer requirements, swift implementation of legislative initiatives and the market entry of new competitors from outside the industry will require changed products, a faster pace of innovation and adjustments to business models.

Below, we outline the market opportunities for the Volkswagen Group. We see the greatest potential for growth in the markets of the Asia-Pacific region and in North America.

#### China

China, the largest market in the Asia-Pacific region, continued to grow in the reporting period. The Chinese demand for vehicles will continue to rise in the coming years, albeit at a slower pace than in the past, due to the need for individual mobility. Demand will also shift from the large coastal cities to the interior of the country. In order to leverage the considerable opportunities offered by the Chinese market – also with regard to e-mobility – and to defend our strong market position in China over the long term, we are continuously expanding our product range to include models that have been specially developed for this market. We are further extending our production capacity in this growing market through additional production facilities.

#### India

The political and economic situation in India further stabilized in 2016. The vehicle markets continued their recovery. We expect this trend to continue. Against this backdrop, the Group is currently consolidating its activities, as India remains an important strategic future market for the Group.

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The volume of the US vehicle market in 2016 marginally exceeded that of the strong previous year. For 2017, we expect the market to fall slightly below the 2016 level. In the USA, Volkswagen Group of America is systematically pursuing our strategy of becoming a full-fledged volume supplier. An engine plant and the development of additional production capacity in the North America region will allow the Group to better serve the market in the future. We are also pressing forward with additional products tailored specifically to the US market. Our success here will largely depend on how transparently, thoroughly and quickly we deal with the diesel issue and restore customer confidence.

#### Brazil

The economic environment remained weak in the reporting period and the volume of demand on the vehicle market fell once again. The ongoing recession, coupled with high unemployment, falling real incomes and restrictive lending policies, prevented the hoped-for recovery. In 2017, we expect the vehicle market to stabilize slightly above its 2016 level. The growing number of automobile manufacturers with local production has resulted in a sharp increase in price pressure and competition. The Brazilian market plays a key role for the Volkswagen Group. To strengthen our competitive position here, we offer vehicles that have been specially developed for this market and are locally produced, such as the Gol and the Fox

#### Russia

Russia has the potential to grow into one of the largest automotive markets in the world. However, the heavy reliance on oil revenues that are lower than in the past, a substantial fall in real incomes, and high vehicle prices as a result of the weak currency led to a decline in the market as a whole in 2016. Demand for vehicles also continued to be impacted by the political crisis and the related sanctions imposed by the EU and the USA. The market remains strategically important to the Volkswagen Group, which is why we are working intensively there.

#### The Middle East

Despite economic and political instability, the Middle East region offers growth opportunities. We are leveraging the potential for growth with a range of vehicles that has been specifically tailored to this market, but do not have our own production facilities. Report on Risks and Opportunities Group Management Report

#### **Power Engineering**

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The underlying trends in the global economy such as sustained growth and a greater international division of labor are set to continue, as are the resulting increase in global transport routes and volumes, a growing demand for energy and the required forces for innovation in relation to global climate policy.

We are working systematically to leverage these market opportunities across the world. In the medium term, significant potential can be leveraged by enhancing the aftersales business through the introduction of new products and the expansion of our service network. Going forward, stricter requirements with respect to reliability, the availability of the plants that are already in operation, the increase in environmental compatibility and efficient operation, together with the large number of engines and plants, will provide the basis for growth.

As part of the capital goods industry, the Power Engineering Business Area is affected by fluctuations in the investment climate. Even minor changes in growth rates or growth forecasts, resulting from geopolitical uncertainties or volatile commodities and foreign exchange markets, for example, can lead to significant changes in demand or the cancellation of existing orders. The measures we use to counter the considerable economic risks include flexible production concepts and cost flexibility by means of temporary employment, working time accounts and short-time work, and – where necessary – structural adjustments.

#### Research and development risk

We conduct trend analyses, customer surveys and scouting activities so as to reflect our customers' requirements during product development as well as possible. In this way, we identify trends at an early stage and examine their relevance for our customers in good time.

We counter the risk that it may not be possible to develop products or modules within the specified timeframe, to the required quality standards, or in line with cost specifications by continuously and systematically monitoring the progress of all projects and analyzing third-party industrial property rights, increasingly including in relation to communication technologies. We regularly compare this progress with the project's original targets; in the event of variances, we introduce appropriate countermeasures in good time. Our end-to-end project organization supports effective cooperation among all areas involved in the process, ensuring that specific requirements are incorporated into the development process as early as possible and that their implementation is planned in good time. This is why we implemented a product line organization in the Volkswagen Passenger Cars, Audi,

ŠKODA and SEAT brands in 2016 modeled on that of Porsche, to increasingly promote an entrepreneurial mindset and approach.

#### Opportunities arising from the Modular Transverse Toolkit

The Modular Transverse Toolkit (MQB) and the Modular Production Toolkit (MPB) enable us to cut both development costs and the necessary one-time expenses and manufacturing times, as well as making usage possible over several vehicle generations. The toolkits also allow us to produce different models from different brands in various quantities, using the same system in a single plant. This means that our capacities can be used with greater flexibility throughout the entire Group, enabling us to achieve efficiency gains.

In addition to conventional petrol and diesel engines, the MQB also affords us the opportunity to integrate alternative drivetrains, such as natural gas, hybrid, or electric drives. Previously, individual, vehicle-specific adaptations were necessary for each model. The MQB has created an extremely flexible vehicle architecture that permits dimensions determined by the concept – such as the wheelbase, track width, wheel size and seat position – to be harmonized throughout the Group and utilized flexibly. Other dimensions, for example the distance between the pedals and the middle of the front wheels, are always the same and ensure a uniform system in the front of the car, enabling synergies to be achieved.

#### Procurement risks and opportunities

The trend in procurement is to bundle contracts to a greater extent and to ensure worldwide availability of uniform components. This is resulting in an increased need for financing and further consolidation in the supply industry. The Volkswagen Group's procurement risk management system therefore assesses suppliers before they are commissioned to perform projects. Among other things, the procurement function considers the risk of there being insufficient competition if it concentrates on a few financially strong suppliers when awarding contracts.

The procurement risk management system continuously and globally monitors the financial situation of our suppliers and takes targeted measures to avoid supply bottlenecks.

The positive economic trend in Europe, North America and China strengthened our supplier base at an overall good level of capacity utilization and good margin situation. Financing offered on attractive terms and low interest rates provided suppliers with favorable conditions. This reduced the number of insolvencies among our suppliers.

Consolidation of the supplier base continued at the same time, fueled by the globalization of regional suppliers, especially from China, as well as the trends toward e-mobility

and increasing connectivity between the vehicle and its equipment. The political and economic tensions in Russia and South America led to capacity adjustments by suppliers and to a concentration in the supplier base.

Quality problems may necessitate technical measures involving a considerable financial outlay where costs cannot be passed on to the supplier or can only be passed on to a limited extent. It is not possible at the present time to rule out a potential further increase in the recalls of a range of models produced by various manufacturers in which certain airbags manufactured by Takata were installed. This could also affect Volkswagen Group models.

In addition to financial difficulties, supply risks may, for example, arise as a result of fires or accidents at suppliers. The supplier risks are automatically identified without delay in the procurement function through early warning systems and mitigated immediately by applying inferred measures.

Additional measures were taken to safeguard supply and avert future assembly line stoppages caused by suspensions of deliveries.

#### Production risk

Volatile developments in the global automotive markets, accidents at suppliers, storms and earthquakes, as well as the emissions issue caused production volumes of several vehicle models to fluctuate at some plants. We address such fluctuations using tried-and-tested tools, such as flexible working time models. The technical design of the production network enables us to respond dynamically to varying changes in demand at the sites. "Turntable concepts" even out capacity utilization between production facilities. At multibrand sites, volatile demand can also be smoothed across brands.

Short-term changes in customer demand for specific equipment features in our products and the decreasing predictability of demand may lead to supply bottlenecks. We minimize this risk, among other things, by continuously comparing our available resources against future demand scenarios. If we identify bottlenecks in the supply of materials, we can introduce countermeasures far enough in advance.

Production capacity is planned several years in advance for each vehicle project on the basis of expected sales trends. These are subject to market changes and generally entail a degree of uncertainty. If forecasts are too optimistic, there is a risk that capacity will not be fully utilized. However, forecasts that are too pessimistic pose a risk of undercapacity, as a result of which it may not be possible to meet customer demand.

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Particular events beyond our control such as natural disasters or other events, for example fires, explosions or the leakage of substances hazardous to health and/or the environment, may adversely affect production to a significant extent. As a consequence, bottlenecks or even outages may occur, thus preventing the planned volume of production from being achieved. We address such risks with, among other things, fire protection measures and hazardous goods management and cover them – where financially viable – using insurance.

The range of our models is growing, while at the same time product lifecycles are becoming shorter; the number of new vehicle start-ups at our sites worldwide is therefore increasing. The processes and technical systems we use for this are complex and there is thus a risk that vehicle deliveries may be delayed. We address this risk by drawing on experience of past start-ups and, identifying weaknesses at an early stage, so as to ensure that production volumes and quality standards are met during our new vehicle start-ups throughout the Group.

In order to prevent downtime in general, lost output, rejects and reworking, we use the TPM (Total Productive Maintenance) method at our production facilities. TPM is a continuous process involving the entire workforce. Round-the-clock maintenance of the technical facilities means that they are always operational and guaranteed to function reliably.

#### Risks arising from long-term production

In the case of large projects, risks may arise that are often only identified in the course of the project. They may result in particular from contract drafting errors, miscosting, post-contract changes in economic and technical conditions, weaknesses in project management, or poor performance by subcontractors. In particular, omissions or errors made at the start of a project are usually difficult to compensate for or correct and often entail substantial additional expenses.

We endeavor to identify these risks at an even earlier stage and to take appropriate measures to eliminate or minimize them before they occur by constantly optimizing the project control process across all project phases and by using a lessons learned process and regular project reviews. We can thus further reduce risk, particularly during the bidding and planning phase for large upcoming projects.

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#### Risks arising from changes in demand

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As a result of the diesel issue, the Volkswagen Group may experience decreases in demand, possibly exacerbated by media reports. When dealing with the issue, our highest priority is to provide customers with solutions, both from a technical perspective and in financial matters. In addition, we are pressing ahead with the systematic clarification of the misconduct in the Company.

Consumer demand is shaped not only by real factors such as disposable income, but also by psychological factors that cannot be planned for. Unexpected buyer reluctance, possibly further exacerbated by press reports, could stem from households' worries about the future economic situation, for example. This is particularly the case in saturated automotive markets such as Western Europe, where demand could drop as a result of owners holding on to their vehicles for longer. In the reporting period, it became evident that the effects of the eurozone debt crisis have not yet been overcome. Some automotive markets, particularly in Southern Europe, were able to further recover from their record lows, however, and exhibited positive growth rates. We are countering this buyer reluctance with our attractive range of models and systematic customer orientation.

A combination of buyer reluctance as a result of the crisis and increases in some vehicle taxes based on  $\mathrm{CO}_2$  emissions – as is already the case in some European countries – is driving a shift in demand towards smaller segments and engines in individual markets. We counter the risk that such a shift will negatively impact the Volkswagen Group's earnings by constantly developing new, fuel-efficient vehicles and alternative drive technologies, based on our drivetrain and fuel strategy.

Automotive markets around the world are exposed to risks from government intervention such as tax increases, which curb private consumption or from protectionist tendencies.

Commercial vehicles are capital goods: even minor changes in growth rates or growth forecasts can significantly affect transport requirements and thus demand. The production fluctuations arising as a result require a high degree of flexibility from manufacturers. Although production volumes are significantly lower, the complexity of the trucks and buses range in fact significantly exceeds the already very high complexity of the passenger cars' range. The priorities for commercial vehicle customers are total cost of ownership, vehicle reliability and the service provided.

MAN Power Engineering's two-stroke engines are produced exclusively by licensees, particularly in South Korea,

China and Japan. Due to volatile demand in new ship construction and heavy investment by some licensees, there is excess capacity in the market for marine engines, resulting in risks ranging from a decline in license revenues through to bad debt losses. There is also a risk that market share will be lost as a result of Chinese state-owned licensees merging with competitors. We address these risks by constantly monitoring the markets and working closely together with all licensees. This also includes receivables management in order to safeguard our license revenues.

#### Dependence on fleet customer business

The fleet customer business is generally more stable than the business with retail customers. The clarification of the  $\mathrm{CO}_2$  issue and implementation of technical solutions for the diesel issue helped to ensure that there were no significant declines in volumes for the Volkswagen Group's fleet customer business in 2016. Only the Volkswagen Passenger Cars brand in Europe saw slight losses. The shrinking market in Brazil led to a fall in volume in that country.

The fleet customer business continues to be characterized by increasing concentration and internationalization. The Volkswagen Group is well positioned with its broad portfolio of products and drive systems, as well as its target-groupfocused customer care. There is no concentration of default risks at individual fleet customers or markets.

#### Quality risk

Right from the product development stage, we aim to identify and rectify quality problems at the earliest possible point, so as to avoid delays to the start of production. As we are using an increasing number of modular components as part of our modular toolkit strategy, it is very important when defects do occur to identify the cause and eliminate the defect as quickly as possible. We further optimized the processes with which we can prevent these defects at our brands and improved our organizational processes during the reporting period so that we are able to counter the associated risks more effectively.

Increasing technical complexity and the use of the toolkit system in the Group mean that the need for high-grade supplier components of impeccable quality is rising. To ensure the continuity of production, it is also extremely important that our own plants and our suppliers deliver components on time. We ensure long-term quality and supply capability from the very start of the supply chain using a risk management system that we first tested internally and then introduced among suppliers. In this way, Quality Assurance helps to

fulfill customer expectations and consequently to boost our Company's reputation, sales figures and earnings.

Assuring quality is of fundamental importance especially in the Brazilian, Russian, Indian and Chinese markets, for which we develop dedicated vehicles and where local manufacturers and suppliers have been established, particularly as it may be very difficult to estimate regulatory or official decisions. We continuously analyze the conditions specific to each market and adapt quality requirements to them. We counter the local risks we identify by continuously developing measures and implementing them locally, thereby effectively preventing quality defects from arising.

Vehicle registration and operation criteria are defined and monitored by national and, in some cases, international authorities. Some countries also have special – and in some cases new – rules aimed at protecting customers in their dealings with vehicle manufacturers. With our established and revised quality assurance processes, we ensure that the Volkswagen Group brands and their products fulfill all applicable requirements and that local authorities receive timely notification of all issues requiring reporting. By doing so, we reduce the risk of customer complaints and other negative consequences.

#### Personnel Risk

We counter economic risks as well as changes in the market and competitive situation with a range of instruments that help the Group to remain flexible, even with fluctuating order intake – whether orders decline or demand for our products increases. These include time accounts which are filled when overtime is necessary and reduced through time off in quiet periods, enabling our factories to adjust their capacity to the production volume and to "breathe" with measures such as extra shifts, closure days and flexible shift models. The use of temporary workers also allows us to plan more flexibly. All of these measures help the Volkswagen Group to generally maintain a stable permanent workforce—even when orders fluctuate.

The technical expertise and individual commitment of employees are essential prerequisites for the success of the Volkswagen Group. Our strategic, end-to-end human resources development strategy gives all employees attractive training and development opportunities, with particular emphasis being placed on increasing technical expertise in the Company's different vocational groups. By boosting our training programs, particularly at our international locations,

we are able to adequately address the challenges of technological change.

We are continuously expanding our recruitment tools. Our systematic talent relationship management, for example, enables us to make contact with talented candidates from strategically relevant target groups at an early stage and to build a long-term relationship between them and the Group.

In addition to the standard dual vocational training, programs such as our StIP integrated degree and traineeship scheme ensure a pipeline of highly qualified and motivated employees. We counter the risk that knowledge will be lost as a result of employee fluctuation and retirement with intensive, department-specific training. We have also established a base of senior experts in the Group. With this additional measure, we use the valuable knowledge of our experienced specialists who have retired from Volkswagen. Organizing efficient knowledge hubs - for example the academies dedicated to the various vocational groups under the umbrella of the Volkswagen Group Academy - is becoming increasingly important, particularly where retiring staff are not directly replaced by young specialists. Volkswagen is working on knowledge relays to ensure experience is passed on even when the chain of succession is broken.

#### IT Risk

At Volkswagen, a global company geared towards further growth, the information technology (IT) used in all divisions Group-wide is assuming an increasingly important role. IT risks include unauthorized access to and extraction of sensitive electronic corporate data as well as limited systems availability as a consequence of downtime or disasters.

We address the risk of unauthorized access to or extraction of corporate data with IT security technologies (e.g. firewall and intrusion prevention systems) and a dual authentication procedure. We achieve additional protection by restricting the allocation of access rights to systems and information and by keeping backup copies of critical data resources. We use technical resources that have been tried and tested in the market, adhering to standards applicable throughout the Company. Redundant IT infrastructures protect us against risks that occur in the event of a systems failure or natural or other disaster.

One of our focuses is on continuously enhancing our security measures. The current IT security program, for example, is built on structured rights management, optimization of IT infrastructure, application security and the IT Report on Risks and Opportunities

security command center. The role of the latter is to detect cyber-attacks at an early stage and help to successfully defeat them using the latest hardware and software. The command center is staffed around the clock in three regions (Europe, America, Asia). Volkswagen complements these technical measures with consistent awareness raising and training for all employees.

Volkswagen AG, Allianz SE, BASF SE and Bayer AG jointly founded the German cybersecurity organization (Deutsche Cyber-Sicherheitsorganisation GmbH - DCSO) in 2015. The company aims to serve as a competence center, accumulate specialist knowledge on cybersecurity and become the preferred service provider in this field to German business. DCSO conducts security audits and certifies key suppliers and technologies in order to help German businesses detect and defend against cyber-attacks and to predict them in future. It is hoped that close exchange of information with the Federal Ministry of the Interior and the Federal Office for Information Security will aid the compilation of an anonymized status report on national cybersecurity. Small and mediumsized enterprises - including many of our suppliers - can obtain security services offered by DCSO, which they would otherwise be unable to afford. Volkswagen also benefits from this, as it makes our supply chain more secure.

The high standards we set for the quality of our products also apply to the way in which we handle our customers' data. Our guiding principles are data security and transparency as well as informational self-determination.

#### **Environmental protection regulations**

The specific emission limits for all new passenger car and light commercial vehicle fleets for brands and groups in the EU for the period up to 2019 are set out in Regulation (EC) No 443/2009 on CO<sub>2</sub> emissions from passenger cars and Regulation (EU) No 510/2011 on light commercial vehicles of up to 3.5 tonnes, which came into effect in April 2009 and June 2011 respectively. These regulations are an important component of European climate protection legislation and therefore form the key regulatory framework for product design and marketing by all vehicle manufacturers operating in the European market.

The average  $CO_2$  emissions of manufacturers' new European passenger car fleets have not been allowed to exceed 130 g  $CO_2$ /km since 2012. Compliance with this requirement was introduced in phases; from 2015 the entire fleet had to meet this limit. Regulation (EC) No 333/2014, which was adopted in 2014, states that the average emissions of European passenger car fleets may be no higher than just 95 g  $CO_2$ /km from 2021 onwards; in 2020, this emissions limit will already apply to 95% of the fleet.

The EU's  $CO_2$  regulation for light commercial vehicles requires limits to be met from 2014 onwards, with targets being phased in over the period to 2017. Under this regulation, the average  $CO_2$  emissions of new vehicle registrations in Europe may not exceed 175 g  $CO_2$ /km, a target required to be met by 75% of the fleet in 2015 and 80% of the fleet in 2016. From 2020 onwards, the limit under EU Regulation No 253/2014, which was adopted in 2014, is 147 g  $CO_2$ /km.

The European Commission intends to publish a regulatory proposal for the  $\rm CO_2$  regime after 2020 in the second half of 2017. Policymakers are already discussing reduction targets for the transport sector for the period to 2050, such as the 60% reduction in greenhouse gas emissions from 1990 levels cited in the EU White Paper on transport published in March 2011. It will only be possible to meet these long-term goals by making additional, extensive use of nonfossil sources of energy, in particular in the form of renewable electricity.

At the same time, regulations governing fleet fuel consumption are also being developed or introduced outside the EU28, for example in India, Japan, Canada, Mexico, Saudi Arabia, Switzerland, South Korea and Taiwan. Brazil has introduced a fleet efficiency target as part of a voluntary program for granting a tax advantage. To achieve a 30% tax advantage in this country, vehicle manufacturers are required to achieve, among other things, average fleet efficiency of around 1.82 megajoules/km by 2017. The fuel consumption regulations in China, which set a fleet target of 6.9 liters/100 km for the period 2012-2015 (Phase III), were continued into Phase IV for the period 2016-2020, with a target of 5.0 liters/100 km at the end of this period. Preparations for legislation up to 2025 (Phase V) have begun. Due to the extension of greenhouse gas legislation in the USA, uniform fuel consumption and greenhouse gas standards will continue to apply in all federal states in the period from 2017 to 2025. The law was signed by the US president in mid-2012.

The increased regulation of fleet-based CO<sub>2</sub> emissions and fuel consumption makes it necessary to use the latest mobility technologies in all key markets worldwide. Electrified and pure-play electric drives will also become increasingly common. The Volkswagen Group closely coordinates technology and product planning with its brands so as to avoid breaches of fleet fuel consumption limits, since these would entail severe sanctions. Volkswagen continues to regard diesel technology as an important element in the fulfillment of CO<sub>2</sub> emissions targets.

EU legislation permits some flexibility in fulfilling the emissions targets, for example:

- > Excess emissions and emission shortfalls may be offset between vehicle models within a fleet of new vehicles
- > Emission pools may be formed
- > Relief may be provided in the form of credits that are granted for additional innovative technologies contained in the vehicle and that apply outside the test cycle (ecoinnovations)
- > Special rules are in place for small series producers and niche manufacturers
- > Particularly efficient vehicles qualify for super-credits.

Whether the Group meets its fleet targets, however, depends crucially on its technological and financial capabilities, which are reflected, among other things, in our drivetrain and fuel strategy (see page 144).

In the EU, a new test procedure for determining pollutant and  $\mathrm{CO}_2$  emissions as well as fuel consumption in passenger cars and light commercial vehicles known as the Worldwide Harmonized Light-Duty Vehicles Test Procedure (WLTP) will be applied to new vehicle types from fall 2017 and to all new vehicles from fall 2018.

A further important European regulation pertains to Real Driving Emissions (RDE) for passenger cars and light commercial vehicles. The packages of legislation are currently being elaborated; uniform limits for nitrogen oxide and particulate emissions will then apply across the EU from September 2017. These limits must be complied with in real road traffic, making the RDE test procedure fundamentally different from the Euro 6 standard still in force, which stipulates that the limits are compulsory on the test bed. The RDE regulation is intended primarily to improve air quality in urban areas and areas close to traffic. It will lead to stricter requirements for exhaust gas aftertreatment in passenger cars and light commercial vehicles.

The other main EU regulations affecting the automotive industry include:

- > EU Directive 2007/46/EC establishing a framework for the approval of motor vehicles
- EU Directive 2009/33/EC on the promotion of clean and energy-efficient road transport vehicles (Green Procurement Directive)
- > EU Directive 2006/40/EC relating to emissions from airconditioning systems in motor vehicles
- > The Car Labeling Directive 1999/94/EC
- > The Fuel Quality Directive (FQD) 2009/30/EC updating the fuel quality specifications and introducing energy efficiency specifications for fuel production
- > The Renewable Energy Directive (RED) 2009/28/EC introducing sustainability criteria

The revised Energy Taxation Directive 2003/96/EC updating the minimum tax rates for all energy products and power.

The implementation of the above-mentioned directives by the EU member states serves to support the  $CO_2$  regulations in Europe. These are aimed not only at vehicle manufacturers, but also at other sectors such as the mineral oil industry. Vehicle taxes based on  $CO_2$  emissions are having a similar steering effect; many EU member states have already incorporated  $CO_2$  elements into their rules on vehicle taxation.

Heavy commercial vehicles first put into operation from 2014 onwards are already subject to the stricter emission requirements of the Euro 6 standard in accordance with Regulation (EU) No 582/2011. At the same time as the CO<sub>2</sub> legislation for passenger cars and light commercial vehicles, the EU is also preparing more comprehensive regulation of CO<sub>2</sub> emissions in heavy commercial vehicles. Simply setting an overarching limit for these vehicles – such as that in place for passenger cars and light commercial vehicles - would require an extremely complex set of rules because of the wide range of variants. For this reason, the European Commission is working with independent scientific institutions and the European Automobile Manufacturers' Association (ACEA), to prepare a simulation-based method called the Vehicle Energy Consumption Calculation Tool (VECTO). This can be used to determine the CO2 emissions of heavy commercial vehicles of over 7.5 tonnes based on their typical use (short-haul, regional, distribution and long-haul trips, service on construction sites and as municipal vehicles, city buses, intercity buses and coaches). A legislative proposal for the CO2 certification of heavy commercial vehicles and regulations on the reporting and monitoring of CO2 figures are expected in the first half of 2017. A compulsory CO2 declaration is expected for selected vehicle categories, probably from 2018 (initially long-haul and regional distribution vehicles, later also buses and other segments), with the captured data initially being used to enable the customer to compare information, and for certification and monitoring purposes. Further vehicle categories are likely to be included as time progresses. As part of its strategy to decarbonize transport, the European Commission has also announced that it will be presenting a proposal regarding the introduction of CO<sub>2</sub> standards for heavy commercial vehicles by the end of 2019. A public consultation that constitutes the basis for further regulatory measures ended in the fall of 2016. The European Commission placed particular emphasis on the role of the public sector in procuring low-emission or zero-emission vehicles, for example city buses.

Manufacturers of heavy commercial vehicles are urging the adoption of a system for quantifying CO<sub>2</sub> figures that Report on Risks and Opportunities Group Management Report

looks at the vehicle as a whole and not simply at the engine or the tractor, and thus also includes the trailers and bodywork. This transparency should increase competition for more fuel-efficient and thus more CO<sub>2</sub>-efficient commercial vehicles and as a result decrease CO<sub>2</sub> emissions.

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As part of its efforts to reduce the CO<sub>2</sub> emissions of heavy commercial vehicles, the European Commission has also adjusted the provisions regarding the maximum permissible dimensions and weights of trucks (Directive 1996/53/EC, the Weights and Dimensions Directive) and revised them through EU Directive 2015/719. According to these, cabs with a rounded shape and air conduction devices at the rear of the vehicle will make it possible to improve aerodynamics in future. At the same time, the driver's field of vision is to be extended by increasing the length of the cab in order to improve safety. In addition, the legislators increased the overall weight permitted for vehicles with alternative drive technologies by up to one tonne. The specific technical requirements for the development of aerodynamic and safe cabs are currently being examined.

The European commercial vehicles industry supports the goals of reducing CO2 emissions and improving transport safety. However, it is not just the vehicles themselves that affect future CO<sub>2</sub> emissions; individual components also play an important role, such as reduced rolling resistance tires and the aerodynamic trim of the trailer, and so do driving behavior, alternative fuels, transport infrastructure and transport conditions. As part of a field trial that took place up to the end of 2016, longer and heavier vehicles that can decrease fuel consumption and thus CO2 emissions by up to 25% according to scientific studies by the Federal Highway Research Institute, were also driving on German roads. Since the beginning of 2017, these longer vehicles have been used in regular operations in a certified road network. Digitalizing the transport system will also eliminate existing inefficiencies such as inadequate utilization of available load capacities, empty trips or unnetworked route planning: vehicles that move in networked, intermodal transport systems in which flows of traffic are optimized through the use of artificial intelligence save fuel and hence reduce CO2 emis-

In the Power Engineering segment, the International Maritime Organization (IMO) has introduced the International Convention for the Prevention of Pollution from Ships (MARine POLlution – MARPOL), with which limits on emissions from marine engines will be lowered in phases. A significant reduction of the sulfur content in marine fuel has been confirmed with effect from January 1, 2020. In addition, the IMO has decided on a number of emission control areas in Europe and in the United States/Canada that will be subject to special environmental regulations. Expansion to other regions such as the Mediterranean or Japan is already being

planned; further regions such as the Black Sea, Alaska, Australia or South Korea are also in discussion. In addition, emission limits also apply, for example, under EU Directive 1997/68/EC and in accordance with the regulations of the US Environmental Protection Agency (EPA). As regards stationary equipment, there are a number of national rules in place worldwide that limit permitted emissions. On December 18, 2008, the World Bank Group set limits for gas and diesel engines in its "Environmental, Health, and Safety Guidelines for Thermal Power Plants", which are required to be applied if individual countries have adopted no national requirements of their own, or ones that are less strict than those of the World Bank Group. In addition, the United Nations adopted the Convention on Long-range Transboundary Air Pollution back in 1979, setting limits on total emissions as well as nitrogen oxide for the signatory states (including all EU states, other countries in Eastern Europe, the USA and Canada). Enhancements to the product portfolio in the Power Engineering segment focus on improving the efficiency of the equipment and systems.

The allocation method for emissions certificates changed fundamentally when the third emissions trading period (2013–2020) began. As a general rule, all emission allowances for power generators have been sold at auction since 2013. For the manufacturing industry and certain power generation installations (e.g. combined heat and power installations), a portion of the certificates are allocated free of charge on the basis of benchmarks applicable throughout the EU. The portion of certificates allocated free of charge will gradually decrease as the trading period progresses: the remaining quantities required will have to be bought, and thus paid for, at auction. Furthermore, installation operators can partly fulfill their obligation to hold emission allowances using certificates from climate change projects (Joint Implementation and Clean Development Mechanism projects).

In certain (sub-)sectors of industry, there is a risk that production will be transferred to countries outside Europe due to the amended provisions governing emissions trading, a phenomenon referred to as "carbon leakage". A consistent quantity of certificates will be allocated to these sectors free of charge for the period from 2013 to 2020 on the basis of the pan-EU benchmarks. The automotive industry was included in the new carbon leakage list that came into effect in 2015. As a result, individual plants at European locations of the Volkswagen Group will receive additional certificates free of charge by the end of the third trading period.

Back in 2013, the European Commission decided to initially withhold a portion of the certificates to be auctioned and not to release them for auction until a later date during the third trading period (backloading). This temporary scarcity of certificates, which could lead to a price increase, will be directed into a market stability reserve, to be estab-

lished in 2018. The reserve will serve to correct any imbalance between the supply of and demand for certificates in emissions trading in the fourth trading period.

In addition to the EU member states, other countries in which the Volkswagen Group has production sites are also considering introducing an emissions trading system. Seven pilot projects are running in China, for example, although they have not so far affected the Volkswagen Group. The Chinese government is planning a national emissions trading system that it says will enter into force as early as 2017. Experts consider this to be unrealistic, however. So far, no detailed information is available on the form the trading system will take.

#### Litigation

In the course of their operating activities, Volkswagen AG and the companies in which it is directly or indirectly invested become involved in a great number of legal disputes and official proceedings in Germany and internationally. In particular, such legal disputes and other proceedings may occur in relation to suppliers, dealers, customers, employees, or investors. For the companies involved, these may result in payment or other obligations. Above all in cases in particular where US customers assert claims for vehicle defects individually or by way of a class action, highly cost-intensive measures may have to be taken and substantial compensation or punitive damages paid. Corresponding risks also result from US patent infringement proceedings.

Risks may also emerge in connection with the adherence to regulatory requirements. This particularly applies in the case of regulatory vagueness that may be interpreted differently by Volkswagen and the agencies responsible for the respective regulations. In addition, legal risks can arise from the criminal activities of individual persons, which even the best compliance management system can never completely prevent.

Where transparent and economically viable, adequate insurance coverage is taken out for these risks. For the identifiable and measurable risks, provisions considered appropriate are recognized and information about contingent liabilities is disclosed. As some risks cannot be assessed or can only be assessed to a limited extent, the possibility of loss or damage not being covered by the insured amounts and provisions cannot be ruled out. This particularly applies to legal risk assessment regarding the diesel issue.

#### Diesel Issue

On September 18, 2015, the US Environmental Protection Agency (EPA) publicly announced in a "Notice of Violation" that irregularities in relation to nitrogen oxide ( $NO_x$ ) emissions had been discovered in emissions tests on certain vehicles with Volkswagen Group diesel engines. It has been alleged that we had used undisclosed engine management software installed in certain four-cylinder diesel engines used in certain 2009 to 2015 model year vehicles to circumvent  $NO_x$  emissions testing regulations in the United States of America in order to comply with certification requirements. The US environmental authority of California – the California Air Resources Board (CARB) – announced its own enforcement investigation in this context.

Volkswagen admitted to irregularities in this context. In its ad hoc release dated September 22, 2015, the Volkswagen Group announced that noticeable discrepancies between the figures achieved in testing and in actual road use had been identified in around eleven million vehicles worldwide with certain diesel engines. The vast majority of these engines are Type EA 189 Euro 5 engines. On November 2, 2015, the EPA issued another "Notice of Violation" alleging that irregularities had also been discovered in the software installed in vehicles with type V6 TDI 3.0 l diesel engines. CARB also issued a letter announcing its own enforcement investigation in this context. Audi has confirmed that at least three auxiliary emission control devices were inadequately disclosed in the course of the US approval documentation. Around 113 thousand vehicles from the 2009 to 2016 model years with certain six-cylinder diesel engines are affected in the USA and Canada, where regulations governing NO<sub>x</sub> emissions limits for vehicles are stricter than those in other parts of the world.

On January 4, 2016, the US Department of Justice (DOJ), on behalf of the EPA, filed a civil complaint against Volkswagen AG, AUDI AG and other companies of the Volkswagen Group. The claims asserted under civil law are founded on the alleged use of illegal (defeat device) software in violation of the American Clean Air Act. The complaint's allegations relate to both the four-cylinder and the six-cylinder diesel engines. On January 12, 2016, it was announced that CARB intends to seek civil fines for alleged violations of the California Health & Safety Code and various CARB regulations.

In addition to internal inquiries, Volkswagen AG commissioned an external investigation by US law firm Jones Day.

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This is an independent and comprehensive investigation addressing the diesel issue. The Supervisory Board of Volkswagen AG is ensuring that Jones Day can carry out its clarification work independently. Jones Day is updating the Company and the DOJ on the current results of its investigation on an ongoing basis and supports Volkswagen AG in its cooperation with the judicial authorities.

The Supervisory Board of Volkswagen AG has formed a special committee to coordinate all activities in this context for the Supervisory Board.

Based on decisions dated October 15, 2015, the Kraftfahrtbundesamt (KBA – German Federal Motor Transport Authority) ordered the Volkswagen Passenger Cars, Volkswagen Commercial Vehicles and SEAT brands to recall all of the diesel vehicles that had been issued with vehicle type approval by the KBA from among the eleven million vehicles affected. The recall concerns the member states of the European Union (EU28). On December 10, 2015 a similar decision was issued regarding Audi vehicles with the EA 189 engine. The timetable and action plan forming the basis for the recall order correspond to the proposals presented in advance by Volkswagen. Depending on the technical complexity of the remedial actions, this means that the Volkswagen Group has been recalling the affected vehicles, of which there are around 8.5 million in total in the EU28 countries, to the service workshops since January 2016. The remedial actions differ in scope depending on the engine variant. The technical solutions cover software and in some cases hardware modifications, depending on the series and model year. The details of the remedial actions for the Volkswagen Group vehicles falling within its jurisdiction have been agreed in close cooperation with the KBA, which had to approve all fixes in advance. Only the approval of the technical solutions for 14 thousand vehicles is still outstanding.

In fiscal year 2016, the SEAT brand received approvals in principle from its respective type approval authority, the Ministry of Industry in Spain.

The type approval authority for the ŠKODA brand is the Vehicle Certification Agency in the United Kingdom. The approval process for ŠKODA vehicles is still ongoing.

In some countries outside the EU – among others Switzerland, Australia, South Korea, Taiwan and Turkey – national type approval is based on prior recognition of the EC/ECE type approval. We are also in close contact with the authorities in these countries in order to finalize the approval process. In addition, there is an intensive exchange of information with the authorities in the USA and Canada, where Volkswagen's planned actions in relation to the four-cylinder and the six-cylinder diesel engines will also have to be approved. Due to considerably stricter NO<sub>x</sub> limits in the

USA and Canada, it is a greater technical challenge to refit the vehicles so that all applicable emissions limits can be met.

Potential consequences for Volkswagen's results of operations, financial position and net assets could emerge primarily in the following legal areas:

1. Criminal and administrative proceedings worldwide (excluding the USA/Canada)

In addition to the described approval processes with the responsible registration authorities, in some countries criminal investigations/misdemeanor proceedings (for example, by the public prosecutor's office in Braunschweig, Germany) and/or administrative proceedings (for example, by the Bundesanstalt für Finanzdienstleistungsaufsicht BaFin - the German Federal Financial Supervisory Authority) have been opened. The public prosecutor's office in Braunschweig is investigating the core issue of the criminal investigations. Whether this will result in fines for the Company, and if so what their amount might be, is currently subject to estimation risks. According to Volkswagen's estimates so far, the likelihood for the majority of these proceedings to be successful is less than 50%. Contingent liabilities have therefore been disclosed in cases where they can be assessed and for which the likelihood for the imposition of fines was deemed not lower than 10%.

2. Product-related lawsuits worldwide (excluding the USA/Canada)

In principle, it is possible that customers in the affected markets will file civil lawsuits against Volkswagen AG and other Volkswagen Group companies. In addition, it is possible that importers and dealers could assert claims against Volkswagen AG and other Volkswagen Group companies, e.g. through recourse claims. As well as individual lawsuits, class action lawsuits are possible in various jurisdictions (albeit not in Germany).

In this context, various lawsuits are pending against Volkswagen AG and other Volkswagen Group companies at present.

Class action proceedings against Volkswagen AG and other Volkswagen Group companies are pending in various countries such as Argentina, Australia, Belgium, Brazil, Israel, Italy, United Kingdom, Mexico, Poland, Portugal and Taiwan. The class action proceedings are lawsuits aimed among other things at asserting damages. The amount of these damages cannot yet be quantified due to the early stage of the proceedings. Volkswagen does not estimate the litigants' prospect of success to be more than 50% in any of the aforementioned proceedings aimed at monetary relief. In South Korea various mass proceedings are pending (in some of

these individual lawsuits several hundred litigants have been aggregated). These lawsuits are filed to assert damages and to rescind the purchase contract including repayment of the purchase price. Due to special circumstances in the market and specific characteristics of the South Korean legal system, Volkswagen estimates the litigants' prospects of success in the South Korean mass proceedings mentioned above to be inherently higher than in other jurisdictions outside the USA and Canada. Contingent liabilities have been disclosed for pending class action proceedings that can be assessed and for which the chance of success was deemed not implausible. Provisions were recognized to a small extent.

Furthermore, individual lawsuits and similar proceedings are pending against Volkswagen AG and other Volkswagen Group companies in numerous countries. In Germany around 1.300 individual law suits, in Italy and Spain law suits in the low three digit range and in France, Ireland and Austria individual lawsuits in the two-digit range are pending, most of which are aimed at asserting damages or rescinding the purchase contract. According to Volkswagen's estimates so far, the litigants' prospect of success is below 50% in the vast majority of the individual lawsuits. Contingent liabilities have therefore been disclosed for those lawsuits that can be assessed and for which the chance of success was deemed not implausible.

It is too early to estimate how many customers will take advantage of the option to file lawsuits in the future, beyond the existing lawsuits, or what their prospects of success will be.

Meanwhile, except for 14 thousand vehicles, the KBA has ascertained for all approved clusters (groups of vehicles) that implementation of the technical solutions would not bring about any unfavorable changes in fuel consumption, engine power, torque and noise emissions. We are now working expeditiously to implement the technical solutions in the field. The implementation of the technical modifications already started in January 2016.

## 3. Lawsuits filed by investors worldwide (excluding the USA/Canada)

Investors from Germany and abroad have filed claims for damages against Volkswagen AG based on purported losses due to alleged misconduct in capital market communications in connection with the diesel issue.

The vast majority of these investor lawsuits are currently pending at the District Court (Landgericht) in Braunschweig. On August 5, 2016, the District Court in Braunschweig ordered that common questions of law and fact relevant to the lawsuits pending at the District Court in Braunschweig be referred to the Higher Regional Court (Oberlandesgericht) in Braunschweig for a binding declaratory decision pursuant to the German Act on Model Case Proceedings in Disputes

Regarding Capital Market Information (Kapitalanleger-Musterverfahrensgesetz). In this proceeding, common questions of law and fact relevant to these actions shall be adjudicated in a consolidated manner by the Higher Regional Court in Braunschweig. All lawsuits at the District Court in Braunschweig will be stayed pending up until resolution of the common issues, unless they can be dismissed for reasons independent of the common issues that are adjudicated in the model case proceedings. The resolution of the common issues in the model case proceedings will be binding on all pending cases in the stayed lawsuits.

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At the District Court in Stuttgart, further lawsuits have been filed against Volkswagen AG and Porsche Automobil Holding SE as joint and several debtors. It is currently unclear whether model case proceedings will be initiated in respect of these lawsuits and whether they will take place at the Higher Regional Court in Stuttgart or referred to the Higher Regional Court in Braunschweig.

Further investor lawsuits have been filed at various courts in Germany as well as in Austria and the Netherlands.

Altogether, Volkswagen has so far been served with investor lawsuits, judicial applications for dunning procedures and conciliation proceedings with claims amounting to approximately €9 billion. Volkswagen remains of the opinion that it duly complied with its capital market obligations. Therefore, no provisions have been recognized for these investor lawsuits. Insofar as the chance of success was estimated at not lower than 10%, contingent liabilities have been disclosed.

#### 4. Proceedings in the USA/Canada

Following the publication of the EPA's "Notices of Violation," Volkswagen AG and other Volkswagen Group companies have been the subject of intense scrutiny, ongoing investigations (civil and criminal) and civil litigation. Volkswagen AG and other Volkswagen Group companies have received subpoenas and inquiries from state attorneys general and other governmental authorities and are responding to such investigations and inquiries.

In addition, Volkswagen AG and other Volkswagen Group companies in the USA/Canada are facing litigation on a number of different fronts relating to the matters described in the EPA's "Notices of Violation".

A large number of putative class action lawsuits by affected customers and dealers have been filed in US federal courts and consolidated for pretrial coordination purposes in the federal multidistrict litigation proceeding in the State of California.

On January 4, 2016, the DOJ, Civil Division, on behalf of the EPA, initiated a civil complaint against Volkswagen AG, AUDI AG and certain other Volkswagen Group companies. Report on Risks and Opportunities

The action seeks statutory penalties under the US Clean Air Act, as well as certain injunctive relief, and has been consolidated for pretrial coordination purposes in the California multidistrict litigation.

On January 12, 2016, CARB announced that it intends to seek civil fines for alleged violations of the California Health & Safety Code and various CARB regulations.

In June 2016, Volkswagen AG, Volkswagen Group of America, Inc. and certain affiliates reached settlement agreements with the DOJ on behalf of the EPA, CARB and the California Attorney General; private plaintiffs represented by a Plaintiffs' Steering Committee (PSC) in the multidistrict litigation pending in California and the U.S. Federal Trade Commission (FTC). These settlement agreements will resolve certain civil claims made in relation to affected diesel vehicles with 2.0 l TDI engines from the Volkswagen Passenger Cars and Audi brands in the USA. Volkswagen AG and certain affiliates also entered into a first partial consent decree with the DOJ, EPA, CARB and the California Attorney General, which was lodged with the court on June 28, 2016. On October 18, 2016, a fairness hearing on whether final approval should be granted was held, and on October 25, 2016, the court granted final approval of the settlement agreements and the partial consent order. A number of class members have filed appeals to an US appellate court from the order approving the settlements.

The settlements provide affected customers with the option of a buyback or, for leased vehicles, early lease termination, or a free emissions modification of the vehicles, provided that EPA and CARB approve the modification. Volkswagen will also make additional cash payments to affected current owners or lessees as well as certain former owners or lessees.

Volkswagen also agreed to support environmental programs. The company will pay USD 2.7 billion over three years into an environmental trust, managed by a trustee appointed by the court, to offset excess nitrogen oxide ( $NO_x$ ) emissions. Volkswagen will also invest a total of USD 2.0 billion over ten years in zero emissions vehicle infrastructure as well as corresponding access and awareness initiatives.

Volkswagen AG and certain affiliates also entered into a separate partial consent decree with CARB and the California

Attorney General resolving certain claims under California unfair competition, false advertising, and consumer protection laws related to both the 2.0-liter and 3.0-liter TDI vehicles, which was lodged with the court on July 7, 2016. Under the terms of the agreement, Volkswagen agreed to pay California USD 86 million. The court entered judgment on the partial consent decree on September 1, 2016 and the USD 86 million payment was made on September 28, 2016.

On December 20, 2016, Volkswagen entered into a second partial consent decree, subject to court approval, with the DOJ, EPA, CARB and the California Attorney General that resolved claims for injunctive relief under the Clean Air Act and California environmental, consumer protection and false advertising laws related to the 3.0-liter TDI vehicles. Under the terms of this consent decree, Volkswagen agreed to implement a buyback and lease termination program for Generation 1 3.0-liter TDI vehicles and a free emissions recall and modification program for Generation 2 3.0-liter TDI vehicles (if the modification program for Generation 2 vehicles is not approved by the EPA and CARB. Volkswagen will be required to offer a buyback and lease termination program for those vehicles); and pay USD 225 million into the environmental mitigation trust that will be established pursuant to the first partial consent decree. The second partial consent decree was lodged with the court on December 20, 2016 and is currently in its notice and comment period.

In addition, on December 20, 2016, Volkswagen entered into an additional, concurrent second partial consent decree, subject to court approval, with CARB and the California Attorney General that resolved claims for injunctive relief under California environmental, consumer protection and false advertising laws related to the 3.0-liter TDI vehicles. Under the terms of this consent decree, Volkswagen agreed to provide additional injunctive relief to California, including the implementation of a "Green City" initiative and the introduction of three new Battery Electric Vehicle (BEV) models in California by 2020, as well as a USD 25 million payment to CARB to support the availability of BEVs in California.

On January 11, 2017, Volkswagen entered into a third partial consent decree, subject to court approval, with the DOJ and EPA that resolved claims for civil penalties and injunctive relief under the Clean Air Act related to the 2.0-liter and 3.0-

liter TDI vehicles. Volkswagen agreed to pay USD 1.45 billion (plus any accrued interest) to resolve the civil penalty and injunctive relief claims under the Clean Air Act, as well as the customs claims of the US Customs and Border Protection. Under the third partial consent decree, the injunctive relief includes monitoring, auditing and compliance obligations. This consent decree, which is subject to public comment, was lodged with the court on January 11, 2017. Also on January 11, 2017, Volkswagen entered into a settlement agreement with the DOJ to resolve any claims under the Financial Institutions Reform, Recovery and Enforcement Act of 1989 and agreed to pay USD 50 million (plus any accrued interest), specifically denying any liability and expressly disputing any claims.

The DOJ also opened a criminal investigation focusing on allegations that various federal law criminal offenses were committed. On January 11, 2017, Volkswagen AG agreed to plead guilty to three federal criminal felony counts, and to pay a USD 2.8 billion criminal penalty. Pursuant to the terms of this agreement, Volkswagen will be on probation for three years and will work with an independent monitor for three years. The independent monitor will assess and oversee the company's compliance with the terms of the resolution. This includes overseeing the implementation of measures to further strengthen compliance, reporting and monitoring systems, and an enhanced ethics program. Volkswagen will also continue to cooperate with the DOJ's ongoing investigation of individual employees or former employees who may be responsible for criminal violations.

Moreover, investigations by various US regulatory and government authorities, including in areas relating to securities, financing and tax, are ongoing.

On January 31, 2017, Volkswagen AG, Volkswagen Group of America, Inc. and certain affiliates entered into a settlement agreement with private plaintiffs represented by the PSC in the multidistrict litigation pending in California, and a consent order with the FTC. These agreements will resolve certain civil claims made in relation to affected diesel vehicles with 3.0 l TDI engines from the Volkswagen, Audi and Porsche brands in the USA. On February 14, 2017, the court preliminarily approved the settlement agreement with private

plaintiffs and scheduled a fairness hearing on whether final approval should be granted for May 11, 2017. The agreement with the FTC will also be subject to court approval.

Under the settlements, consumers' options and compensation will depend on whether their vehicles are classified as Generation 1 or Generation 2. Generation 1 (model years 2009-2012) consumers will have the option of a buyback, early lease termination, trade-in, or a free emissions modification, provided that EPA and CARB approve the modification. Additionally, Generation 1 owners and lessees, as well as certain former owners and lessees, will be eligible to receive cash payments.

Generation 2 (model years 2013-2016) consumers will receive a free emissions compliant repair to bring the vehicles into compliance with the emissions standards to which they were originally certified – provided that EPA and CARB grant approval – as well as cash payments. If Volkswagen ultimately cannot obtain EPA and CARB approval for emissions compliant repairs within the time limits set out in the settlement agreement, Generation 2 consumers will be offered the options for buyback, lease termination, trade-in or – if approved by EPA and CARB – an emissions modification that reduces the amount of emissions but does not bring the vehicles into compliance with original certification standards, in addition to cash payments. Volkswagen will also make cash payments to certain former Generation 2 owners or lessees.

In September 2016, Volkswagen announced that it had finalized an agreement to resolve the claims of Volkswagen branded franchise dealers in the United States relating to TDI vehicles and other matters asserted concerning the value of the franchise. The settlement agreement includes a cash payment of up to USD 1.208 billion, and additional benefits to resolve alleged past, current, and future claims of losses in franchise value. On January 18, 2017, a fairness hearing on whether final approval should be granted was held, and on January 23, 2017, the court granted final approval of the settlement agreement. Certain members of the class may appeal to an US appellate court the decision to finally approve the settlement; the deadline to do so has not yet expired.

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Additionally, in the USA, some putative class actions, some individual customers' lawsuits and some state or municipal claims have been filed in state courts.

Volkswagen reached separate agreements with the attorneys general of 44 US states, the District of Columbia and Puerto Rico, to resolve their existing or potential consumer protection and unfair trade practices claims – in connection with both 2.0 l TDI and 3.0 l TDI vehicles in the USA - for a settlement amount of USD 603 million. Six states did not join these settlements and still have consumer claims outstanding: Arizona, New Jersey, New Mexico, Oklahoma, Vermont and West Virginia. The attorneys general of 18 US states (Alabama, Illinois, Maine, Maryland, Massachusetts, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New Mexico, New York, Ohio, Pennsylvania, Tennessee, Texas, Vermont and Wyoming) and some municipalities have also filed suits in state and federal courts - and the state of Washington has asserted a penalty claim through administrative proceedings - against Volkswagen AG, Volkswagen Group of America, Inc. and certain affiliates, seeking civil penalties and injunctive relief for alleged violations of environmental laws. Alabama, Illinois, Maine, Maryland, Massachusetts, Minnesota, Missouri, Montana, New Hampshire, New York, Ohio, Pennsylvania, Tennessee, Texas, Washington and Wyoming participated in the state settlements described above with respect to consumer protection and unfair trade practices claims, but those settlements did not include claims for environmental penalties. In addition, although it has not yet filed an action, Delaware has entered into an agreement to toll the statute of limitations for its environmental claims through the end of February 2017. Two other states - Oregon and Wisconsin - signed agreements tolling the statute of limitations for their environmental claims through the end of 2016, but they have not requested an extension or filed actions. Another state (Connecticut) has expressed its intention to participate in environmental settlement discussions without filing suit.

In addition to lawsuits described above, for which provisions have been recognized, a putative class action has been filed on behalf of purchasers of Volkswagen AG American Depositary Receipts, alleging a drop in price purportedly resulting from the matters described in the EPA's "Notices of Violation." A putative class action has also been filed on behalf of purchasers of certain USD-denominated Volkswagen bonds, alleging that these bonds were trading at artificially inflated prices due to Volkswagen's alleged mis-

statements and that the value of these bonds declined after the EPA issued its "Notices of Violation."

These lawsuits have also been consolidated in the federal multidistrict litigation proceeding in the State of California described above. Volkswagen is of the opinion that it duly complied with its capital market obligations. Therefore, no provisions have been recognized. In addition, contingent liabilities have not been disclosed as they currently cannot be measured.

In Canada, civil consumer claims and regulatory investigations have been initiated for vehicles with 2.0 l and 3.0 l engines. On December 19, 2016, Volkswagen AG and other Canadian and US Volkswagen Group companies reached a class action settlement in Canada with consumers relating to 2.0 l diesel vehicles. Also on December 19, 2016, Volkswagen Group Canada agreed with the Commissioner of Competition in Canada to a civil resolution of its regulatory inquiry into consumer protection issues as to those vehicles. Civil consumer claims and the Commissioner's investigation with respect to 3.0 l diesel vehicles remain pending. Also, criminal enforcement related investigations by the federal environmental regulator and quasi-criminal enforcement related investigations by a provincial environmental regulator are ongoing in Canada related to 2.01 and 3.01 diesel vehicles. Provisions have been recognized for possible obligations stemming from pending lawsuits in Canada.

#### 5. Risk assessment regarding the diesel issue

To protect against the currently known legal risks, including suitable expenses for defense and legal advice related to the diesel issue, existing information and assessments at the time indicated the need to recognize expenses in the reporting year to the amount of €5.1 billion (previous year: €7.0 billion). Prior-year provisions for legal risks in an amount of €0.4 billion had to be reversed through profit or loss. In addition, in relation to the diesel issue - insofar as these can be adequately measured at this stage - especially the contingent liabilities in conjunction with lawsuits filed by investors to the amount of €3.1 billion (previous year: €1.0 billion) were disclosed in the notes. The provisions recognized, the contingent liabilities disclosed and the other latent legal risks are partially subject to substantial estimation risks given the complexity of the individual factors, the ongoing approval process with the authorities and the fact that the independent and comprehensive investigations have not yet been completed.

#### Additional important legal cases

ARFB Anlegerschutz UG (haftungsbeschränkt), Berlin, brought an action against Porsche Automobil Holding SE, Stuttgart, Germany, and Volkswagen AG for claims for damages allegedly assigned to it in the amount of approximately €2.26 billion. The plaintiff asserts that these claims are based on alleged breaches by the defendants of legislation to protect the capital markets in connection with Porsche's acquisition of Volkswagen shares in 2008. With its April 2016 ruling, the district court of Hanover submitted numerous goals for discovery to the higher regional court in Celle in an attempt to prompt a model case decision. In all other cases, the claims were thrown out for being inadmissible. In various cases since 2010, investors initiated conciliation proceedings for other alleged damages - including claims against Volkswagen AG – that amounted to approximately €4.6 billion in total and also related to transactions at that time. In each case, Volkswagen rejected the claims asserted and refused to participate in any conciliation proceedings.

In 2011, the European Commission opened antitrust proceedings against European truck manufacturers concerning inappropriate exchange of information during the period 1997-2011 and sent a statement of objections to MAN, Scania and the other truck manufacturers concerned in November 2014. With its settlement decision as of July 19, 2016 the European Commission has fined five European truck manufacturers excluding MAN and Scania. MAN was not fined as the company had informed the EU Commission about the cartel as a key witness. With regard to Scania, the antitrust proceedings will be continued. Scania has decided to fully exercise its rights of defense in the ongoing investigation. A provision of €0.4 billion was recognized in order to cover possible fines. Furthermore, antitrust lawsuits for damages from customers were received. As is the case in any antitrust proceedings, this may result in further lawsuits for damages.

The Annual General Meeting of MAN SE approved the conclusion of a control and profit and loss transfer agreement between MAN SE and Volkswagen Truck & Bus GmbH (formerly Truck & Bus GmbH), a subsidiary of Volkswagen AG, in June 2013. In July 2013, award proceedings were instituted to review the appropriateness of the cash settlement set out in the agreement in accordance with section 305 of the Aktiengesetz (AktG – German Stock Corporation Act) and the cash compensation in accordance with section 304 of the AktG. It is not uncommon for noncontrolling interest shareholders to institute such proceedings. In July 2015, the Munich Regional Court ruled in the first instance that the amount of the cash settlement payable to the noncontrolling interest shareholders of MAN should be increased from €80.89 to €90.29 per share; at the same time, the amount of the cash compensation was confirmed. The assessment of liability for put options and compensation rights granted to noncontrolling interest shareholders was adjusted in 2015. Both applicants and Volkswagen Truck & Bus GmbH have appealed to the Higher Regional Court in Munich. Volkswagen continues to maintain that the results of the valuation are correct. The appropriateness of the valuation was confirmed by the audit firms engaged by the parties and by the court-appointed auditor of the agreement.

Since November 2016, Volkswagen has been responding to information requests from the EPA and CARB related to automatic transmissions in certain vehicles.

Additionally, thirteen putative class actions have been filed against Audi and certain affiliates alleging that defendants concealed the existence of "defeat devices" in Audi brand vehicles with automatic transmissions. A number of these putative class actions have been transferred to the federal multidistrict litigation proceeding in the State of California.

In line with IAS 37.92, no further statements have been made concerning estimates of financial impact or about uncertainty regarding the amount or maturity of provisions and contingent liabilities, particularly in relation to the diesel issue and the European Commission's investigation. This is so as to not compromise the results of the proceedings or the interests of the Company.

#### Strategies for hedging financial risks

In the course of our business activities, financial risks may arise from changes in interest rates, exchange rates, raw materials prices, or share and fund prices. Management of financial and liquidity risks is the responsibility of the central Group Treasury department, which minimizes these risks using nonderivative and derivative financial instruments. The Board of Management is informed of the current risk situation at regular intervals.

We hedge interest rate risk – where appropriate in combination with currency risk – and risks arising from fluctuations in the value of financial instruments by means of interest rate swaps, cross-currency swaps and other interest rate contracts with generally matching amounts and maturities. This also applies to financing arrangements within the Volkswagen Group.

Foreign currency risk is reduced in particular through natural hedging, i.e. by flexibly adapting our production capacity at our locations around the world, establishing new production facilities in the most important currency regions and also procuring a large percentage of components locally. We hedge the residual foreign currency risk using hedging instruments. These include currency forwards, currency options and cross-currency swaps. We use these transactions to limit the currency risk associated with forecasted cash

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flows from operating activities, intragroup financing and liquidity positions in currencies other than the respective functional currency, for example as a result of restrictions on capital movements. The currency forwards and currency options can have a term of up to six years. We thus hedge our principal foreign currency risks, mostly against the euro and primarily in Argentine pesos, Australian dollars, Brazilian real, sterling, Chinese renminbi, Hong Kong dollars, Indian rupees, Japanese yen, Canadian dollars, Mexican pesos, Norwegian krones, Polish zloty, Russian rubles, Swedish kronor, Swiss francs, Singapore dollars, South African rand, South Korean won, Taiwan dollars, Czech koruna, Hungarian forints and US dollars.

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Increased volatility in future cash flows is to be expected from the current uncertainties regarding the effects of the diesel issue on the Volkswagen Group. This could impact the hedging result.

Raw materials purchasing entails risks relating to the availability of raw materials and price trends. We limit these risks mainly by entering into forward transactions and swaps. We have used appropriate contracts to hedge some of our requirements for commodities such as aluminum, lead, coal, copper, platinum, palladium and rhodium over a period of up to seven years. Similar transactions have been entered into for the purpose of supplementing and improving allocations of CO<sub>2</sub> emission certificates.

Pages 291 to 299 of the notes to the consolidated financial statements explain our hedging policy, the hedging rules and the default and liquidity risks, and quantify the hedging transactions mentioned. Additionally, we disclose information on market risk within the meaning of IFRS 7.

#### Risks arising from financial instruments

Channeling excess liquidity into investments and entering into derivatives contracts gives rise to counterparty risk. Partial or complete failure by a counterparty to perform its obligation to pay interest and repay principal, for example, would have a negative impact on the Volkswagen Group's earnings and liquidity. We counter this risk through our counterparty risk management, which we describe in more detail in the section entitled "Principles and Goals of Financial Management" starting on page 122. In addition to counterparty risk, the financial instruments held for hedging purposes hedge balance sheet risks, which we limit by applying hedge accounting.

By diversifying when selecting business partners, we ensure that the impact of a default is limited and the Volkswagen Group remains solvent at all times, even in the event of a default by individual counterparties.

Risks arising from trade receivables and from financial services are explained in more detail in the notes to the consolidated financial statements, starting on page 291.

#### Liquidity risk

We ensure that the Company remains solvent at all times by holding liquidity reserves, through confirmed credit lines and through our money market and capital market programs. We cover the capital requirements of the financial services business mainly by raising funds at matching maturities in the national and international financial markets as well as through customer deposits from the direct banking business.

Projects are financed by, among other things, loans provided by development banks such as the European Investment Bank (EIB), the International Finance Corporation (IFC) and the European Bank for Reconstruction and Development (EBRD), or by national development banks such as Kreditanstalt für Wiederaufbau (KfW) and Banco Nacional de Desenvolvimento Econômico e Social (BNDES). Lines of credit from banks supplement our broadly diversified refinancing structure.

Our ability to use refinancing instruments may possibly be restricted or precluded due to the diesel issue. A downgrade of the Company's rating could also adversely affect the terms associated with the Volkswagen Group's borrowings.

Information on the ratings of Volkswagen AG, Volkswagen Financial Services AG and Volkswagen Bank GmbH can be found on page 117 of this report.

#### Residual value risk in the financial services business

In the financial services business, we agree to buy back selected vehicles at a residual value that is fixed at inception of the contract. Residual values are set at a realistic amount so that we are able to leverage market opportunities. We evaluate the underlying lease contracts at regular intervals and recognize any necessary provisions if we identify any potential risks.

Management of the residual value risk is based on a defined feedback loop ensuring the full assessment, monitoring, management and communication of risks. This Group Management Report Report

process design ensures not only professional management of residual risks but also that we systematically improve and enhance our handling of residual value risks.

As part of our risk management, we use residual value forecasts to regularly assess the appropriateness of the provisions for risks and the potential for residual value risk – also with a view to the emissions issue. In the process, we compare the contractually agreed residual values with the fair values obtainable. These are determined utilizing data from external service providers and our own marketing data. We do not take account of the upside in residual market values when making provisions for risks.

More information on residual value risk and other risks in the financial services business, such as counterparty, market and liquidity risk, can be found in the 2016 Annual Report of Volkswagen Financial Services AG.

#### Reputational risks

The reputation of the Volkswagen Group and its brands is one of the most important assets and forms the basis for long-term business success. Our policy on issues such as integrity, ethics and sustainability is in the public focus. One of the basic principles of running our business is therefore to pay particular attention to compliance with legal requirements and ethical principles. However, we are aware that misconduct or criminal acts of individuals and the resulting reputational damage can never be fully prevented. In addition, media reactions can have a negative effect on the reputation of the Volkswagen Group and its brands. This impact could be amplified through insufficient communication.

Moreover, the above-described individual risks that may arise in the course of our operating activities may turn into a threat to the Volkswagen Group's reputation. 201

#### Other factors

Going beyond the risks already outlined, there are other factors that cannot be predicted and whose repercussions are therefore difficult to control. Should these transpire, they could have an adverse effect on the further development of the Volkswagen Group. In particular, these factors include natural disasters, epidemics and terrorist attacks.

#### Overall assessment of the risk and opportunity position

The Volkswagen Group's overall risk and opportunity position results from the specific risks and opportunities shown above. We have put in place a comprehensive risk management system to ensure that these risks are controlled. The most significant risks to the Group may result from a negative trend in unit sales of, and markets for, vehicles and genuine parts, from the failure to develop and produce products in line with demand and from quality problems. Risks relating to the diesel issue still remain for the Volkswagen Group which, when aggregated, are among the most significant risks. Taking into account all the information known to us at present, no risks exist which could pose a threat to the continued existence of significant Group companies or the Volkswagen Group.

This annual report contains forward-looking statements on the business development of the Volkswagen Group. These statements are based on assumptions relating to the development of the economic and legal environment in individual countries and economic regions, and in particular for the automotive industry, which we have made on the basis of the information available to us and which we consider to be realistic at the time of going to press. The estimates given entail a degree of risk, and actual developments may differ from those forecast. Any changes in significant parameters relating to our key sales

markets, or any significant shifts in exchange rates relevant to the Volkswagen Group, will have a corresponding effect on the development of our business. In addition, there may be departures from our expected business development if the assessments of the factors influencing sustainable value enhancement, as well as risks and opportunities, presented in this annual report develop in a way other than we are currently expecting, or if additional risks and opportunities or other factors emerge that affect the develop-ment of our business.

Prospects for 2017 Group Management Report

## Prospects for 2017

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The Volkswagen Group's Board of Management expects the global economy to record slightly higher growth in 2017 than in the previous year. We believe risks will arise from protectionist tendencies, turbulence in the financial markets and structural deficits in individual countries. In addition, growth prospects will continue to be hurt by geopolitical tensions and conflicts. We expect the economic upturn to continue in the large majority of industrialized nations, with stable rates of expansion overall. Most emerging markets will probably see faster growth than in the previous year. We expect the strongest rates of expansion in Asia's emerging economies.

We expect trends in the passenger car markets in the individual regions to be mixed in 2017. Overall, growth in global demand for new vehicles will probably be slower than in the reporting period. We anticipate that sales volume in Western Europe and the German passenger car market will be slightly lower than in the previous year. In the Central and Eastern European markets, demand for passenger cars should exceed the weak prior-year figure. We expect that the market volume for passenger cars and light commercial vehicles (up to 6.35 tonnes) in North America in 2017 will be a little lower than the prior-year figure. On the South American market for passenger cars and light commercial vehicles, overall demand is expected to rise slightly compared with the previous year. The passenger car markets in the Asia-Pacific region look set to continue their growth trajectory at a slightly weaker pace.

We expect trends in the markets for light commercial vehicles in the individual regions to be mixed again in 2017. Overall, we envisage a slight increase in demand.

In the markets for mid-sized and heavy trucks that are relevant for the Volkswagen Group, new registrations in 2017 are set to rise slightly above the prior-year level, while a moderate year-on-year increase is expected in new registrations of buses in the relevant markets.

We believe that automotive financial services will continue to be very important for vehicle sales worldwide in 2017.

The Volkswagen Group is well positioned to deal with the mixed developments in automotive markets around the world. Our broad, selectively expanded product range featuring the latest generation of engines as well as a variety of alternative drives puts us in a good position globally compared with our competitors. The Group's further strengths include in particular its unique brand portfolio, its steadily growing presence in all major world markets and its wide selection of financial services. Our range of models covers almost all key segments, with offerings from small cars to super sports cars in the passenger car segment, and from pickups to heavy trucks and buses in the commercial vehicles segment, as well as motorcycles. The Volkswagen Group brands will further optimize their vehicle and drivetrain portfolio in 2017 to concentrate on the most attractive and fastest-growing market segments.

Our goal is to offer all customers the mobility and innovations they need, sustainably strengthening our competitive position in the process.

We expect that deliveries to customers of the Volkswagen Group in 2017 will moderately exceed the prior-year volume amid persistently challenging market conditions.

Challenges will arise particularly from the economic situation, intense competition in the market, exchange rate volatility and the diesel issue.

We expect the sales revenues of the Volkswagen Group and of the Passenger Car Business Area and Commercial Vehicles Business Area to grow by up to 4% year-on-year in 2017. In terms of the Group's operating profit, we anticipate an operating return on sales of between 6.0% and 7.0% in 2017. In the Passenger Cars Business Area, we expect an operating return on sales in the range of 6.5-7.5%. For the Commercial Vehicles Business Area, we anticipate an operating return on sales of between 3.0 and 5.0%. In the Power Engineering Business Area, we expect a substantial year-on-year decline in sales revenue but also a lower operating loss. For the Financial Services Division, we are forecasting sales revenue and the operating profit at the prior-year level.