

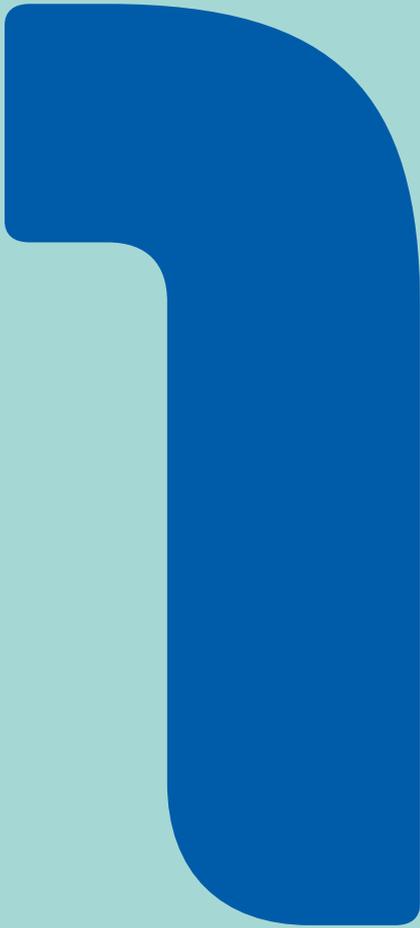
To Our Shareholders

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To Our Shareholders

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Dear shareholders, dear friends
of Merck,

It is a great pleasure for me to write to you for the first time as Chairman of the Executive Board and CEO of Merck. First, and most importantly: our company is doing superbly. Merck is in excellent shape.

In 2016, we again achieved profitable growth. Compared with 2015, our sales increased by 17%, setting a new record at € 15 billion. EBITDA pre exceptionals, the key financial indicator used to steer our operating business, grew by 23.7% to € 4.5 billion. Profit after tax in 2016 came in at € 1.6 billion, an increase of 45.3%. At the same time, we lowered our net financial debt by over € 1 billion to € 11.5 billion. As shareholders, you benefit from this good business performance. In 2016, our share price developed well, advancing from € 89.57 at the beginning of the year to € 99.15 at year-end, equivalent to an 11% increase in value, nearly four percentage points better than that of the DAX, Germany's blue-chip index. For 2016, we will propose to the Annual General Meeting a dividend of € 1.20.

The excellent performance of our business shows that we are on the right track. Our strategy is working. First and foremost, this is due to the accomplishments of the more than 50,000 men and women who work for Merck worldwide. I would like to sincerely thank all of them for their strong engagement and passion, with which they have moved our company forward.

For Merck management, 2016 was a year of change. On April 30, 2016, I took over the chairmanship of the Executive Board. Two new members, Udit Batra and Walter Galinat, were appointed to the Executive Board, assuming responsibility for the Life Science and Performance Materials business sectors, respectively.



Stefan Oschmann
Chairman of the Executive Board and CEO

Merck is a vibrant science and technology company. We perform research and manufacture products in a wide variety of fields – from cancer therapy and laboratory technology to liquid crystals in smartphones. Yet all of our business activities have a common driving force: scientific curiosity. Our work on new technologies for a better life reflects our tremendous passion for discovery. And that is where we are investing. In 2016, we spent € 2 billion on research and development.

Our efforts are paying off. We made significant progress in all three business sectors last year.

Healthcare reached important milestones on its journey towards launching new medicines. We submitted cladribine tablets for approval in Europe to treat relapsing-remitting multiple sclerosis. We are also making progress in immuno-oncology. We submitted avelumab, our active ingredient that we are co-developing with the U.S. company Pfizer, for approval in the United States and Europe for the treatment of Merkel cell carcinoma, a rare and aggressive form of skin cancer. In China, our business developed extremely well. In 2016, we were the fastest-growing international pharmaceutical company in this highly promising market.

For patients, we develop more than medicines. Fertility is one such example. Worldwide, around 2.5 million “Merck babies” have been born to date with the help of our fertility drugs. We are proud of this. To help more couples who wish to become parents, we are expanding our offerings. Not only medicines, but also technologies play a crucial role in successful fertility treatment. In cooperation with Genea Biomedx of Australia, we therefore offer solutions that support all important treatment steps undertaken by in vitro fertilization laboratories – for better treatment outcomes and even more happy families.

Our Life Science business sector benefited from strong demand in the biopharmaceutical industry and grew faster than the market. The integration of Sigma-Aldrich, which we acquired in 2015, is progressing better than expected. At the end of 2016, we had already achieved € 105 million in annually recurring cost synergies as compared with the originally planned amount of € 90 million. Moreover, we are expecting additional, previously unplanned top-line synergies. Overall, we now assume that total annual synergies from the acquisition will total € 280 million in 2018 instead of € 260 million.

Performance Materials once again maintained its global market and technology leadership in liquid crystals – even during a period of overstocking of LC displays. At the same time, we are further diversifying our business. One technology that holds great promise and potential for high growth is OLED, or organic light-emitting diodes. It is already one of our fastest-growing businesses today. And we are strengthening our market position, for instance through a new production plant, which we inaugurated in Darmstadt in September. We aim to be a leading global supplier of OLED materials in the future. In addition, our semiconductor materials business delivered growth rates in 2016 that were far above-average.

Technological progress is fundamentally changing our markets. New suppliers with innovative business models are shaking things up. This means that remaining idle is an easy way to fall behind. We want to cooperate with leading tech companies and start-ups. Just recently we formed a close partnership with Palantir, a leading U.S. company for complex data analytics. Our Accelerator program offers emerging companies with highly promising business models financial support and access to our experts. Additionally, we are taking financial stakes in the most promising start-ups in healthcare, life science, performance materials, and beyond. For this purpose, we doubled the volume of Merck Ventures, our venture capital fund for these types of investment, to € 300 million.

Yet we also have a lot of plans for our existing business. In Healthcare, we want to launch a new medicine or new indication per year. We hope to be able to register avelumab in further cancer indications. At the same time, we have other highly promising active ingredients in oncology, immuno-oncology and immunology that are currently being investigated in clinical trials.

In Life Science, our work to realize the full synergy potential of the Sigma-Aldrich acquisition will continue through 2018. At the same time, we're aiming for our business to continue to grow faster than the market. To this end, we are focusing on promising new offerings, such as gene editing tools and services. This exciting technology is now more accessible and easier to use, enabling scientists to study how a specific gene or variation of a gene can affect a disease or certain types of cancer. We want to rank among the leading technology suppliers in this growing and important market.

Specialty chemicals from Performance Materials offer great potential for future mobility. Our Automotive Platform developed specifically for this purpose illustrates this well. Our products include liquid crystals for free-form displays, antennas with high data transmission power, OLEDs and LEDs for headlights, semiconductor materials for sensors, as well as functional pigments. It's already certain today that a lot of Merck will be inside the cars of tomorrow.

Ladies and gentlemen,

Our business prospects are good. We have a clear strategy. But as a company with an international presence, we are concerned about political developments that could restrict global trade. Reliable international framework conditions and open markets are essential – for both our company and for overall economic development.

At the same time, technological progress pays little heed to political uncertainty and is advancing at lightning speed. We want to help shape this change. Scientific curiosity is our driving force. That's because we know breakthroughs begin with curiosity. And breakthroughs are what we want to achieve in the coming years. For patients, for our customers, and of course for you, our shareholders.

It is a special honor for me to lead this unique company. Merck is well-positioned for sustainable and profitable growth. We have a lot planned. We are curious about the future. I hope that you share our curiosity – and that you will continue to support us as shareholders.

Sincerely,

A handwritten signature in blue ink, reading "Stefan Oschmann". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Stefan Oschmann
Chairman of the Executive Board and CEO

The Executive Board

Marcus Kuhnert, Stefan Oschmann, Kai Beckmann,
Udit Batra, Walter Galinat, Belén Garijo

from left to right



Marcus Kuhnert

Member of the Executive Board
Chief Financial Officer

Responsibility for Group functions:
Group Accounting; Group Controlling &
Divisional Controlling; Group Tax; Group
Treasury; Finance Operations; Mergers &
Acquisitions; Investor Relations

Stefan Oschmann

Chairman of the Executive
Board & CEO

Responsibility for Group functions:
Group Strategy & Transformation; Group
Legal & Compliance; Group Internal
Auditing; Group Communications

Kai Beckmann

Member of the Executive Board
Chief Administration Officer

Responsibility for Group functions:
Group Human Resources; Group Business
Technology; Group Procurement;
Environment, Health, Safety, Security,
Quality; Inhouse Consulting; Site
Operations



Udit Batra
Member of the Executive Board
CEO Life Science

Walter Galinat
Member of the Executive Board
CEO Performance Materials
Responsibility for Group functions:
Patents & Scientific Information

Belén Garijo
Member of the Executive Board
CEO Healthcare
Responsibility for Group functions:
Public Affairs & Corporate Responsibility

Our Shares

At a glance

Overall, the development of the stock markets in 2016 was subdued. Following weak performance in the first three quarters, share prices only started to pick up more noticeably towards the end of the year. By contrast, our share price rose nearly 11% over the entire period, finishing the year at € 99.15. Merck shares thus again outperformed all the relevant comparative indices in 2016: The performance of Merck shares was nearly 4 percentage points stronger than that of the DAX® and almost 7 percentage points better than the relevant chemical industry index. Even more pronounced was the difference to the relevant pharmaceutical index, which our shares outperformed by nearly 23 percentage points.

In a generally weak market in the first quarter, Merck shares hit their annual low of € 71.40 on February 11, 2016. At the end of 2015, concerns about macroeconomic activity had already resurfaced in the markets. These related mainly to economic developments in China and in emerging markets as well as to the perceptible oil price decline. Moreover, our report on the full-year results of 2015, which included first qualitative indications of expected sales and earnings performance in 2016, triggered cautious reactions by some market participants with regard to our future earnings potential.

However, in the course of the following months, our share price recovered noticeably, both in absolute terms and relative to the relevant comparative indices. Among other things, the presentation of a succession of good quarterly results that were either in line with or above market expectations, along with steady, consecutive upgrades of the guidance on our business performance in 2016, most likely helped to ease the initial concerns of some market participants.

Additionally, in early June 2016, we presented clinical data on our key pipeline compound avelumab at both the important pharmaceutical ASCO meeting (American Society of Clinical Oncology) in Chicago, Illinois (USA) and during a conference call. This update was received positively by investors and analysts. The referendum in the United Kingdom concerning the country's exit from the European Union led to noticeable share price corrections in the financial markets. However, Merck shares largely remained unaffected by this development owing to the company's broad geographic positioning and limited dependence on this market. The situation was similar as of mid-August 2016, when share prices, specifically in the pharmaceutical sector, began to weaken noticeably. Among

other things, this was due to increasing uncertainty among market participants over potentially significant changes in the United States, the world's largest pharmaceutical market, in the run-up to the presidential elections. Another important reason was disappointing clinical data presented by a competitor in the field of immuno-oncology. However, our share price only reflected this to an insignificant extent and even marked its annual high of € 100.05 on August 11, 2016. Instead, positive economic data and a significant recovery in oil prices led to a share price pick-up in the broader stock market, which also benefited Merck shares. Merck's broad positioning and limited dependence on a single industry were most likely the key reasons for this assessment by market participants. Our Capital Market Day on October 13, 2016 also resonated very well with investors and analysts, who, as in 2015, had the opportunity to meet members of the management of all our business sectors and to engage in an in-depth dialogue with them. The good development of the Merck share price in the summer saw further acceleration towards the end of the year with the announcement of good third-quarter results, the partly unexpected outcome of the U.S. presidential elections in November 2016 as well as the development of the euro/U.S. dollar exchange rate, which showed a favorable trend for European companies. Merck shares closed at € 99.15, which was close to their annual high reached in August 2016.

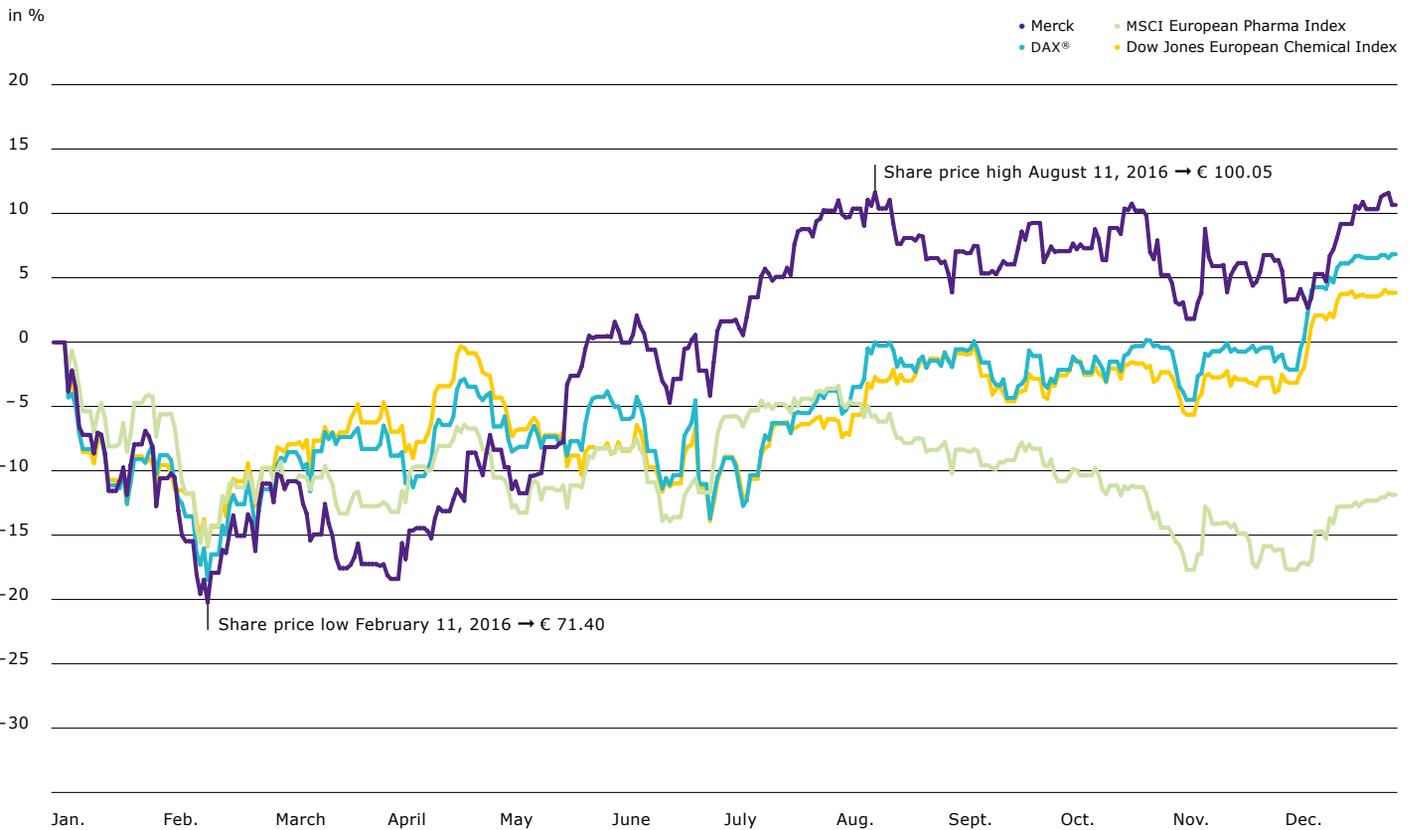
In addition to the discussions at Capital Market Day in October 2016 and the conference call on our research and development pipeline in June 2016, members of Merck's executive management and IR team held in-depth briefings with more than 700 investors and analysts worldwide in 2016. These took place within the scope of investor conferences, roadshows and conference calls. In April 2016, the Merck Investor Relations team achieved first place in the prestigious "All-Europe Executive 2016 Ranking" by Institutional Investor Magazine in the category "Best Investor Relations Program – Nominated by the Sell Side" in the pharmaceutical sector (third place in 2015). More than 700 portfolio managers and 900 sell-side analysts took part in the survey, rating important criteria such as credibility, competence, expertise and objectivity in communication with financial market participants as well as reaction speed as regards future developments within the company or in response to inquiries.

The average daily trading volume of our shares decreased by around 18% from approximately 563,000 in 2015 to roughly 464,000 in 2016. The North America region again dominated the free float in 2016, yet its proportion decreased to around 31% in comparison with the previous year (2015: 38%). By investor type,

GARP (growth at reasonable price) and value-oriented investors dominated, as in the previous year. However in 2016, growing interest could be seen among growth-oriented investors, who meanwhile hold nearly 30% of the free float. At the end of 2016, the top five investors held around 18% of the free float (2015: 19%).

MERCK SHARES

Share price development from January 1, 2016 to December 31, 2016



Source: Bloomberg (closing rates) on XETRA®

MERCK SHARES

Key share price data¹

		2016	2015
Dividend	€	1.20	1.05
Share price high	€	100.05	111.25
Share price low	€	71.40	74.90
Year-end share price	€	99.15	89.57
Daily average number of Merck shares traded ²	units	468,408	563,370
Market capitalization ³ (at year-end)	€ million	43,108	38,943
Market value of authorized shares ⁴ (at year-end)	€ million	12,814	11,576

¹Share-price relevant figures relate to the closing price in XETRA® trading on the Frankfurt Stock Exchange.

²Based on the floor trading systems of all German exchanges and the regulated market on XETRA®.

³Based on the theoretical number of shares (434.8 million).

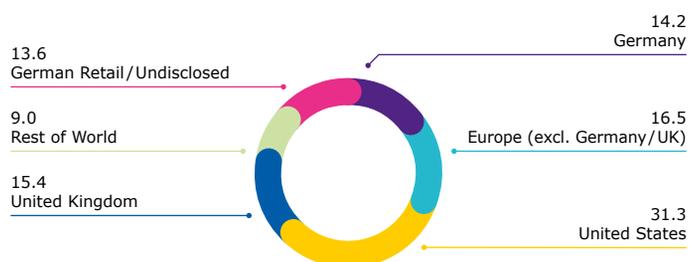
⁴Based on the number of shares in free float (129.2 million).

Source: Bloomberg, ThomsonReuters.

MERCK SHARES

Identified investors by region as of December 2016

in %



Source: Nasdaq Shareholder Identification.
 Total number of shares outstanding: 129.2 million.

MERCK SHARES

Identified investors by type as of December 2016

in %



Source: Nasdaq Shareholder Identification.