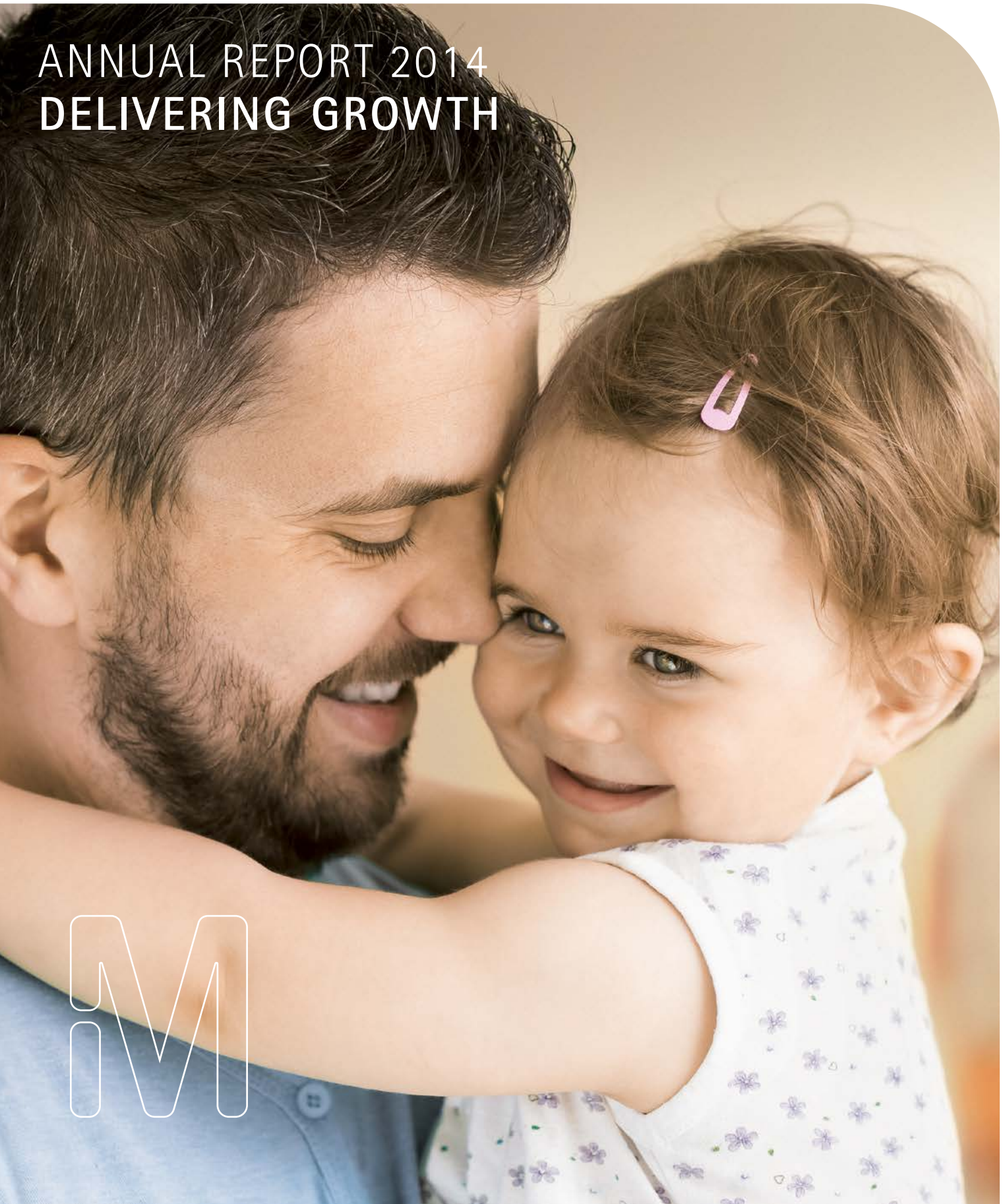
Merck KGaA
Darmstadt · Germany

ANNUAL REPORT 2014
DELIVERING GROWTH



DISCLAIMER

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GROUP →

KEY FIGURES

€ million	2014	2013	Change in %
Total revenues	11,500.8	11,095.1	3.7
Sales	11,291.5	10,700.1	5.5
Operating result (EBIT)	1,762.0	1,610.8	9.4
Margin (% of sales)	15.6	15.1	
EBITDA	3,122.9	3,069.2	1.7
Margin (% of sales)	27.7	28.7	
EBITDA pre one-time items	3,387.7	3,253.3	4.1
Margin (% of sales)	30.0	30.4	
Earnings per share (€)[1]	2.66	2.77	–4.0
Earnings per share pre one-time items (€)[1]	4.60	4.39	4.8
Business free cash flow	2,605.1	2,960.0	–12.0

[1] Taking into account the share split; previous year's figures have been adjusted accordingly. See "Earnings per share" in the Notes to the Consolidated Financial Statements.

GROUP →

SALES

€ million

GROUP →

EBITDA PRE ONE-TIME ITEMS

€ million

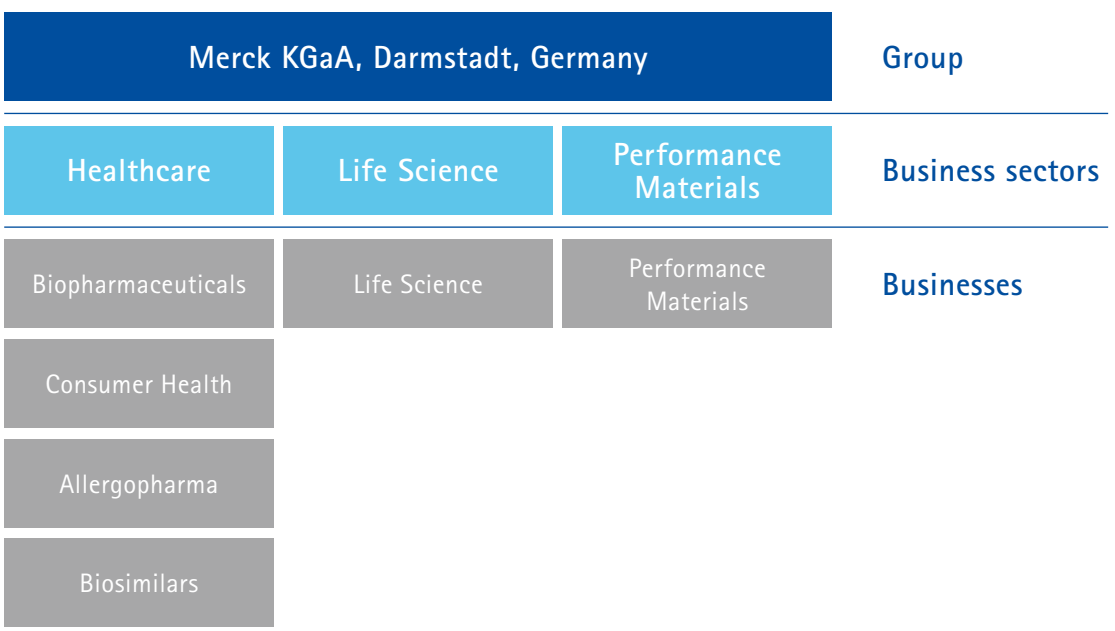
GROUP →

Merck KGaA, Darmstadt, Germany, is a leading company for innovative and top-quality high-tech products in healthcare, life science and performance materials. Around 39,000 employees work in 66 countries to improve the quality of life for patients, to foster the success of customers and to help meet global challenges.

GROUP →

BUSINESS SECTORS AND BUSINESSES

as of January 1, 2015



Effective January 1, 2015 the Group changed the structure of its financial reporting. As of the first quarter of 2015, the following three business sectors will be used for reporting purposes:
→ Healthcare comprises the Biopharmaceuticals, Consumer Health, Allergopharma and Biosimilars businesses.
→ Life Science refers to the business of the same name.
→ Performance Materials corresponds to the business of the same name.

"WE ARE ALL PURSUING ONE GOAL: DELIVERING GROWTH WITH OUR IDEAS AND COMMITMENT TO OUR DAILY WORK. TO BENEFIT OUR PATIENTS, OUR CUSTOMERS, OUR SHAREHOLDERS AND OUR SOCIETY."

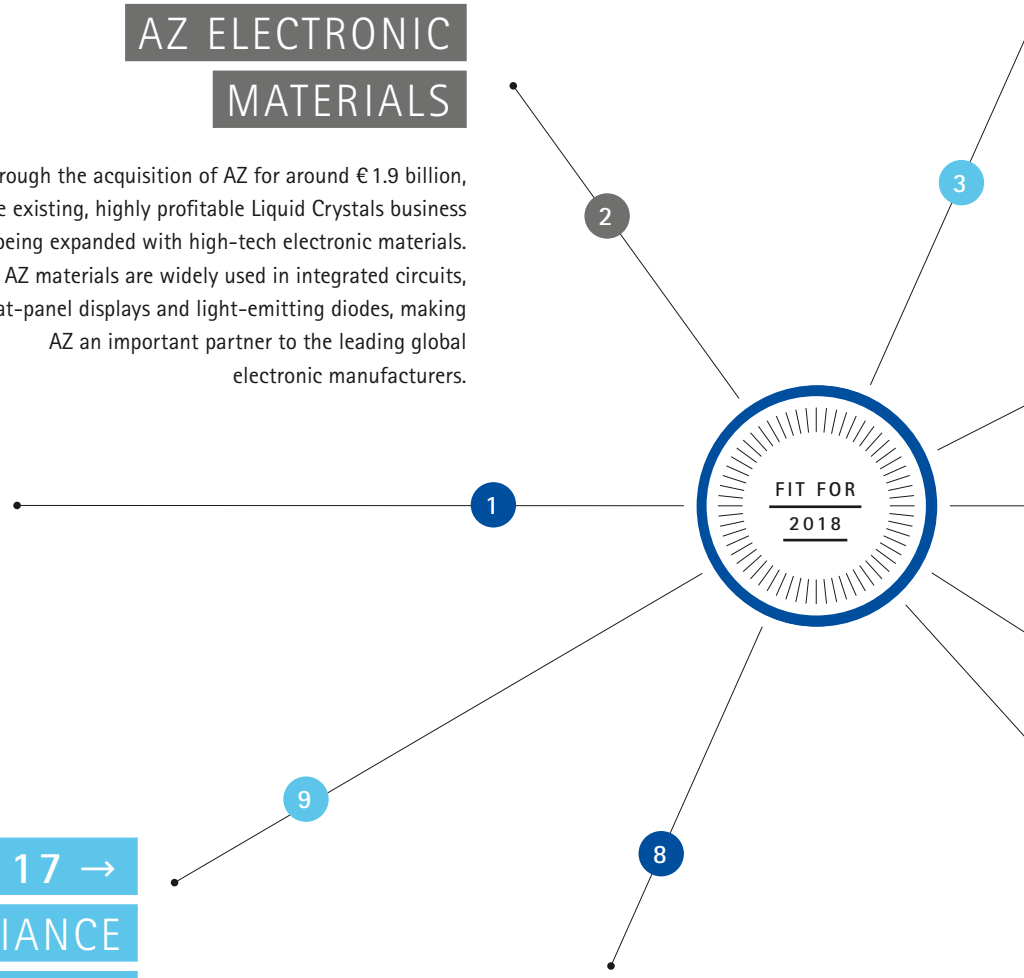
KARL-LUDWIG KLEY, Chairman of the Executive Board of Merck KGaA, Darmstadt, Germany

MAY 2 → ACQUISITION OF AZ ELECTRONIC MATERIALS

Through the acquisition of AZ for around € 1.9 billion, the existing, highly profitable Liquid Crystals business is being expanded with high-tech electronic materials. AZ materials are widely used in integrated circuits, flat-panel displays and light-emitting diodes, making AZ an important partner to the leading global electronic manufacturers.

MARCH 26 → SHARE SPLIT ANNOUNCED

Subsequent to a doubling in the value of its shares since the beginning of 2011, the company announces a share split in a ratio of 1:2. The share split became effective on June 30.



NOVEMBER 17 → STRATEGIC ALLIANCE WITH PFIZER IN IMMUNO-ONCOLOGY

Merck KGaA, Darmstadt, Germany, and Pfizer will jointly develop and commercialize a highly promising anti-PD-L1 antibody from its research pipeline. In value terms, the transaction is the largest so far in the biopharmaceutical industry for a single asset at this stage of development. Immuno-oncology is about mobilizing the body's own immune system to fight tumor cells.

SEPTEMBER 30 → "PROUD TO BE AN ORIGINAL" EMPLOYEE CAMPAIGN LAUNCHED

Merck KGaA, Darmstadt, Germany, kicks off a global communications campaign called "Proud to be an Original". The campaign offers its 39,000 employees worldwide the opportunity to express their pride in working for the company.

AUGUST 1 → NEW CFO TAKES OFFICE

Marcus Kuhnert joins the Group as Member of the Executive Board and Chief Financial Officer.

AUGUST 27 → GROUNDBREAKING AT A NEW PHARMACEUTICALS MANUFACTURING SITE IN CHINA TAKES PLACE

The company holds the groundbreaking ceremony for its new pharmaceutical manufacturing site in Nantong, China, the new facility will be its second-largest worldwide. As of 2017, it will mainly focus on the bulk production and packaging of medicines referenced in China's essential drug list.

SEPTEMBER 1 → GROUNDBREAKING CEREMONY FOR NEW GLOBAL HEADQUARTERS

The expansion of the company´s site in Darmstadt into a contemporary global headquarters is clearly taking shape. The symbolic groundbreaking officially marks the launch of the "ONE Global Headquarters" project.

SEPTEMBER 18 → PLAN TO STRENGTHEN THE EXECUTIVE BOARD ANNOUNCED

Effective January 1, 2015, Stefan Oschmann becomes Vice Chairman of the Executive Board. On the same date, Belén Garijo becomes a Member of the Executive Board and assumes the leadership of the Healthcare business sector of Merck KGaA, Darmstadt, Germany.

SEPTEMBER 22 → AGREEMENT TO ACQUIRE SIGMA-ALDRICH SIGNED

The company announces an agreement to acquire Sigma-Aldrich for US$ 17.0 billion. The combination would establish one of the leading players in the US$ 130 billion global life science industry. On December 5, Sigma-Aldrich shareholders approve the merger with our company.

The world is changing at breathtaking speed. Megatrends, which characterize the deep-seated social and technological changes taking place around the globe, are one reason. In this Annual Report, we take a closer look at four global trends. Our magazine shows how we are meeting them, positioning ourselves optimally for the future and taking decisive steps to help shape tomorrow.

TREND/1 → YOUNGER FOR LONGER

6 – 11

While life expectancy is increasing, birth rates are declining, even in many dynamic emerging countries. We are the global leader in fertility treatment.

TREND/2 → MARKETS IN MOTION

12 – 17

The middle class is growing – worldwide. As incomes rise, so do consumption and health awareness. We see these new markets as future hubs, and are becoming even more international.

TREND/3 → A CRYSTAL CLEAR FUTURE

18 – 25

The digital revolution is changing people's lives around the globe. With our expertise in liquid crystals and insights into future trends, our company is technology leader and key driver of future developments.

TREND/4 → HEALTH FOR EVERYONE

26 – 31

For many people around the world, access to innovative health solutions is more of a dream than a reality. In order to change this, we have committed ourselves to numerous projects, for instance in the fight against schistosomiasis.

TO OUR SHAREHOLDERS →

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→ The full Consolidated Financial Statements can be found on our website at: **ar2014.emdgroup.com**

TREND/1 →
AGING POPULATIONS

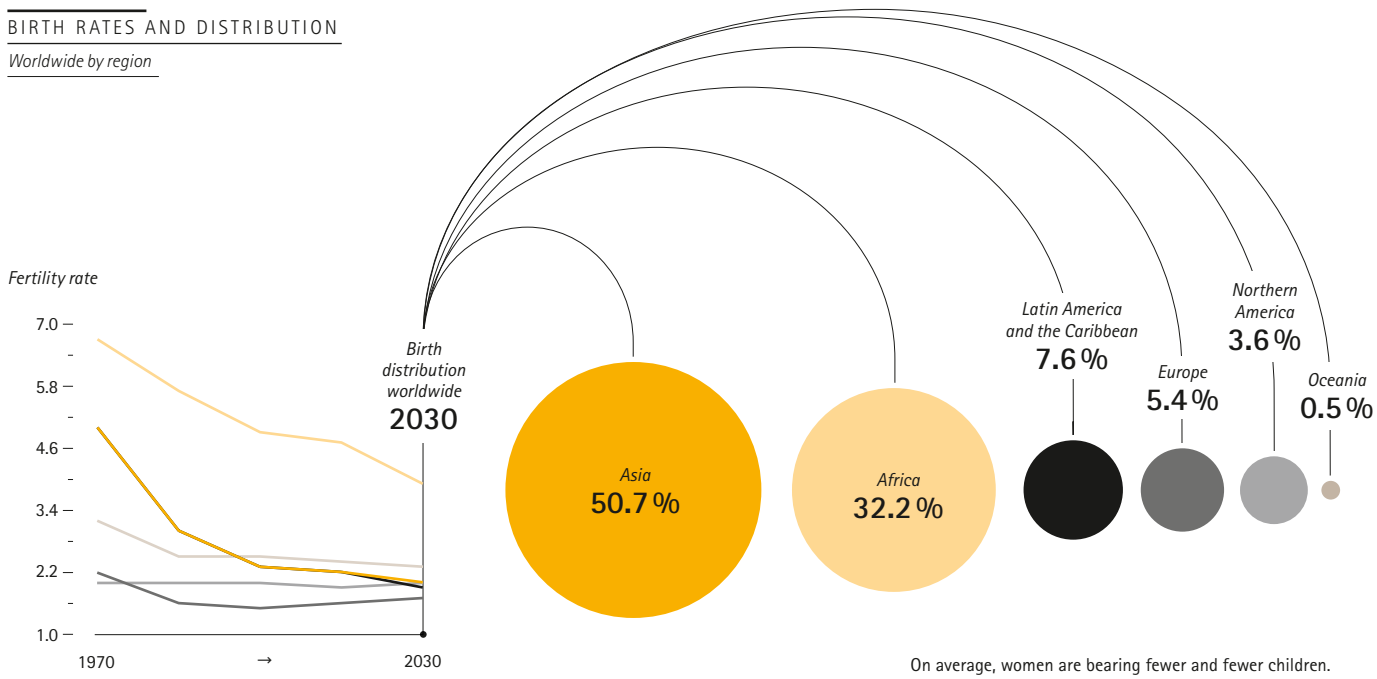
YOUNGER FOR LONGER

"What one has wished for in youth, in old age one has in abundance." More and more people can relate to this quote from Johann Wolfgang von Goethe as life expectancies steadily increase worldwide. Birth rates, meanwhile, are sinking. These developments are reflected in our portfolio of products and services – including those that treat infertility and further cancer research.

FERTILITY →

BIRTH RATES AND DISTRIBUTION

Worldwide by region



Source: United Nations, World Fertility Patterns 2013

On average, women are bearing fewer and fewer children. In Asia, the fertility rate is likely to decline significantly. Yet according to a forecast of the global distribution of births in 2030, in absolute terms the majority of children will be born in Asia.

"Catch me if you can!" yells Lovis as he races across the playground. Little Henri runs behind his older brother, shouting. The two boys keep their parents on their toes. But for Silke (41) and Jens (44), achieving this happy family was a long and difficult process. "At around the age of 30, I felt ready to start a family. At the time, Jens was still in awe of the responsibility of having a family, but I was able to convince him. Then, however, I couldn't get pregnant," Silke explains. There was a medical reason for this. When she was 17 Silke suffered from pelvic inflammatory disease, which blocked her fallopian tubes. "Although I had suspected this, it still came as a shock," Silke recalls. After numerous discussions, the couple decided to try artificial insemination. One frequently used method is in vitro fertilization (IVF), a procedure in which the egg is fertilized outside the body. After ovulation is induced, the egg cells are removed through the vagina and placed in a test tube with the sperm and then transferred back afterwards. "The treatment took three years; it was not an easy time for us," says Jens. Silke agrees, "I put myself under tremendous pressure and suffered from mood swings. And the negative test results made me very sad." Not until the seventh attempt did they suddenly hear the words, "Congratulations, you're pregnant!" The elation over the birth of Lovis in February 2008 was followed by another shock. The baby had cerebral hemorrhaging. "After a difficult period, Lovis is a happy, normal boy today," the parents report with relief. And he now has a younger brother to play with. Henri was born in summer 2011. This time, Silke became pregnant immediately after the first attempt. "Maybe it was because I was much more relaxed," Silke says today. Silke and Jens experienced an "emotional rollercoaster" during their efforts to become parents. Artificial insemination was ultimately successful, however – twice in fact. "We wanted these children so very much," the couple says with conviction, gazing with pride at their sons.

FULFILLING THE DESIRE FOR CHILDREN THROUGH FERTILITY TREATMENT

What Silke and Jens went through is certainly no isolated case.

Roughly one in seven couples in Germany is unable to bear children due to fertility disorders. The yearning to have a baby of their own can quickly become a tale of woe. But many couples are able to fulfill their desire for a child through artificial insemination. The per-cycle success rate for in vitro fertilization is about 70 %. Hormone therapy is of decisive importance in treating infertility. As the world leader in the fertility drug industry, Merck KGaA, Darmstadt, Germany, supplies hormones for each phase of the reproductive cycle – from developing the egg cell to the early stage of pregnancy. The company has also developed a wealth of products in this area, including a computerized test that improves the prospects of a successful pregnancy by identifying viable embryos. As a result of the intensive research and development efforts, around two million children have now been born thanks to its products.

"There are many causes of fertility disorders. Half of cases are due to women, the other half to men. However, in many cases advanced age is the reason," says Professor Dr. Heribert Kentenich from the Fertility Center Berlin. Particularly in modern industrial nations, career plans or individual fulfillment come first and many couples delay family planning – sometimes for too long. "By the age of 30, a woman's probability of a successful pregnancy begins to decline, and at 40 the odds become very low," Professor Kentenich explains. Despite this, the trend is clear: Fewer and fewer women are having their first child before the age of 30. Naturally, the topic of

"BY THE AGE OF 30, A WOMAN'S PROBABILITY OF A SUCCESSFUL PREGNANCY BEGINS TO DECLINE, AND AT 40 THE ODDS BECOME VERY LOW."

PROF. DR. HERIBERT KENTENICH →
FERTILITY CENTER BERLIN

SILKE AND JENS →
ASSISTED REPRODUCTIVE TECHNOLOGY HELPED SILKE AND JENS TO HAVE THEIR CHILDREN LOVIS (RIGHT) AND HENRI.

FILLING OF READY-TO-USE SYRINGES →
UNDER CLEANROOM CONDITIONS AT A PHARMACEUTICAL PRODUCTION PLANT IN DARMSTADT, GERMANY.

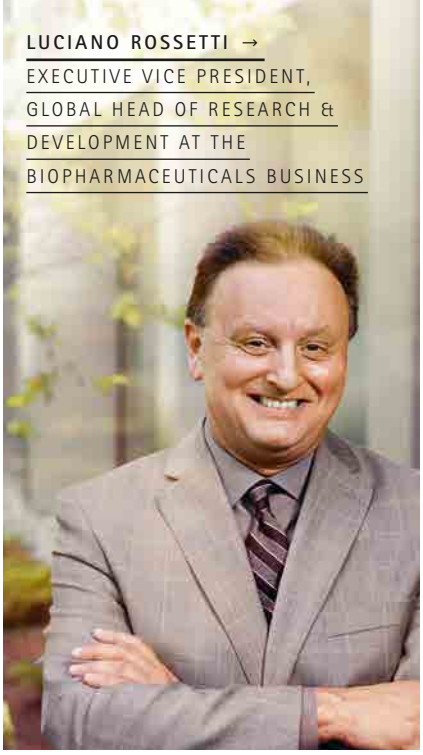
infertility is not confined to western industrialized nations. However, in many countries it is a taboo topic. For this reason, in 2014 Merck KGaA, Darmstadt, Germany, launched a widespread educational campaign in India in order to overcome the culturally driven obstacle of silence.

LONGER LIFE EXPECTANCY THANKS TO MEDICAL ADVANCES

Birth rates continue to decline worldwide, especially in highly developed societies and in the emerging markets of Asia and Latin America. At the same time, life expectancy is increasing (see text on right) with growing numbers of people who are getting older and older. This development is giving rise to new challenges. This relates not only to typical age-related diseases such as neurodegenerative disorders that the medical world is aiming to fight. Therapies to treat chronic diseases can also help younger patients to remain active members of the workforce and society for longer. One of the company's goals is to help people with neurodegenerative disorders such as multiple sclerosis by offering therapies that substantially help to improve their quality of life. The same applies to cancer therapy. Thanks to highly specialized biopharmaceuticals, many tumors can now be cured through early detection and treatment. And the company continues to drive progress in cancer research with new approaches that focus primarily on harnessing the immune system to fight cancer. "In the field of immuno-oncology, we are testing treatment possibilities for our anti-PD-L1 antibody in several different pivotal clinical studies across multiple types of cancer, including non-small cell lung cancer and ovarian cancer, as well as Merkel cell carcinoma, a rare form of skin cancer," said Luciano Rossetti, Head of Global Research and Development at the Group's Biopharmaceuticals business. The broad range of innovative materials, reagents, test kits and equipment from the Life Science business of Merck KGaA, Darmstadt, Germany, also supports medical progress. Diverse products make the development and manufacture of new medicines much easier – from filtration, sample preparation and cell biology instruments, products used in oncology and neurology, in molecular biology and stem cell research, or for infectious diseases and metabolic disorders.

HIGH QUALITY OF LIFE IN OLD AGE

Growing older does not necessarily mean becoming more ill. The vast majority of "new" senior citizens feel fitter for longer. They are active, like to travel and consume, and they take care of themselves. The company is responding to the increasingly health-conscious older population with over-the-counter products for the self-treatment of minor complaints. In pharmacies around the globe, consumers can find products tailored to the varying requirements of older men and women – for example the Seven Seas Perfect7® range, a combination made from sources of natural fish oil rich in omega-3 fatty acids, with important vitamins and minerals. Products like these are helping a growing number of people enjoy a high quality of life in old age. In order to maintain their appearance, they can rely on cosmetic active ingredients, for example substances that offer protection from UV radiation, combat aging of the skin and regulate the skin's moisture balance. If wrinkles persist, they can be covered with a skin-colored silicate powder.



LUCIANO ROSSETTI →
EXECUTIVE VICE PRESIDENT, GLOBAL HEAD OF RESEARCH & DEVELOPMENT AT THE BIOPHARMACEUTICALS BUSINESS

→ Declining birth rates

In the early 1960s, the worldwide fertility rate averaged 4.9 children per woman. In 2012, the rate had fallen to 2.6 children overall, and in industrialized countries to 1.6. Women in Germany currently give birth to an average of just 1.4 children. When the birth rate falls below the replacement-level fertility rate of 2.1 children per woman, population numbers shrink. In a global comparison, the African continent has the highest fertility rate of 4.4 children per woman.

→ Life expectancy and world population are rising

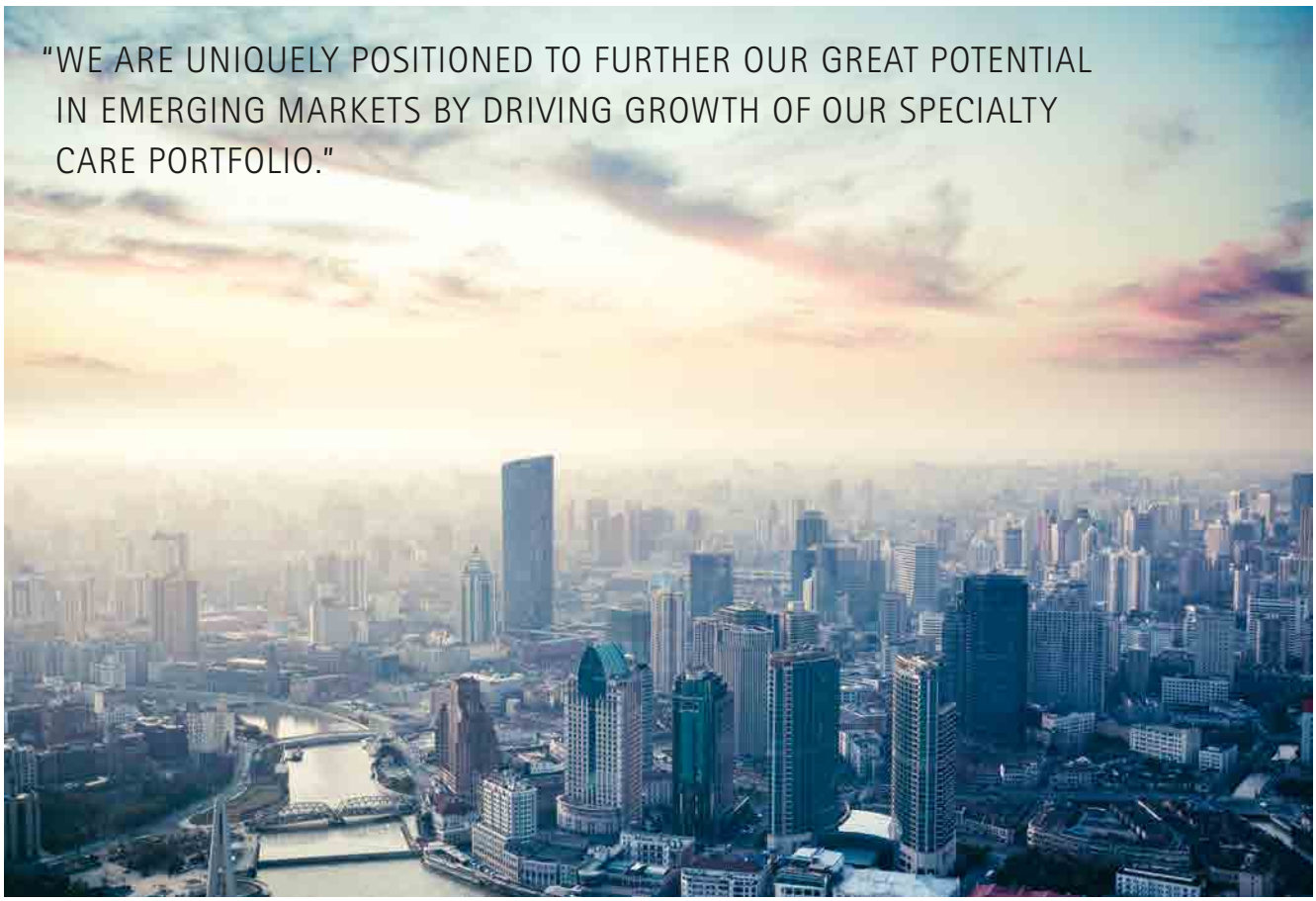
Recent UN studies show that the world population will grow from the current 7 billion to 11 billion people by the year 2100. Africa's population will show a particularly dynamic development. It is likely to increase between now and then from 1 billion to 4 billion people. Increasing life expectancy is the main driver of population growth worldwide. In 1900, life expectancy in Germany was approximately 45 years; today a girl born in Germany can expect to live to the age of 83, and a boy to the age of 78. Researchers believe life expectancies around the world will continue to increase at varying rates, depending on the region.

TREND/2 →
GROWING
MIDDLE CLASS

MARKETS IN MOTION

The world is converging – with amazing dynamism. Economic boundaries are blurring, and global competition is heating up at an accelerating rate. We are strengthening our presence in emerging markets and preparing ourselves for a successful future.

MEETA GULYANI →
EXECUTIVE VICE PRESIDENT, HEAD OF STRATEGY & GLOBAL FRANCHISES AT THE BIOPHARMACEUTICALS BUSINESS



"WE ARE UNIQUELY POSITIONED TO FURTHER OUR GREAT POTENTIAL IN EMERGING MARKETS BY DRIVING GROWTH OF OUR SPECIALTY CARE PORTFOLIO."

DANIEL STAMM →
HEAD OF GLOBAL PHARMA PROCESSING AT THE LIFE SCIENCE BUSINESS

"ON THE TECHNOLOGY FRONT, WE ARE SEEING INCREASING VOLUMES OF BIOLOGIC DRUG PRODUCTION."

Not long ago, there was still a clear world order, one that was founded above all on differences – political, ideological and economic. Yet since the fall of the Iron Curtain, these differences have been increasingly disappearing, eliminated by the march of globalization. New free trade agreements have resulted in enormous economic areas – the markets are in motion. The once profound differences between developing, emerging and industrialized countries are crumbling, primarily due to a growing level of prosperity. According to estimates, the middle class will represent around 60% of the world's population by the year 2030, with the Asia-Pacific region accounting for two-thirds of that figure. This "emerging middle class" is still a long way off from attaining the income level of central Europe. Yet in the past several decades, many millions of people have risen out of poverty in emerging markets such as China, India and Brazil. Urbanization is the key to this economic growth. People from rural areas are finding jobs in the megacities, where they are earning rising incomes and spending heavily on everything from their first flat-screen TV to their first car. Multinational corporate groups, which are increasingly building production facilities in Asia, are driving this dynamic development. More and more, the expanding middle class is leading to a profound sociocultural transformation, including a higher level of education, greater political interest and growing health awareness. Optimists view this transformation as a long-term upward spiral of prosperity.

A WELL-HONED STRATEGY

The new world economic order is significantly impacting the strategic direction of global players such as Merck KGaA, Darmstadt, Germany. It is giving rise not only to incredible opportunities, but to risks as well. After all, the competition is not slumbering; in many sectors, new competitors are springing up everywhere. Now more than ever, it is therefore necessary for companies to be in the right place at the right time, with the right products. And to equip themselves for the future. Success tomorrow will only come to those who invest in innovative technologies today, make meaningful acquisitions, forge strategic alliances and expand local capacities; to those who optimize their processes as well as attract and retain a qualified workforce. Merck KGaA, Darmstadt, Germany, recognized the signs of the times early on and is acting accordingly. The company does not view emerging markets merely as sales markets with enormous potential, but also as key technology and production hubs. This is why the presence in these markets, has been significantly expanded, whether that means OTC products for consumer health, liquid crystals for consumer electronics, laboratory products for the life science sector, or medical care. In addition to this, the company is creating more efficient structures and processes through its "Fit for 2018" transformation and growth program. "We have significantly increased our efficiency in the last few years and will continue on this successful course. We are already well-positioned in global growth markets. We are making targeted investments in our businesses in order to further expand our strong position in Healthcare, Life Sciences and Performance Materials," says Karl-Ludwig Kley, Chairman of the Executive Board.

HEALTH AS A KEY FACTOR

Growth is being driven by the need for effective medicines, which is predicted to rise further. With the increase in prosperity, the birth rate is dropping, families are being started later in life, and average life expectancy is on the rise (see page 11). The prevalence of diseases of civilization such as diabetes and cardiovascular disorders is predicted to increase even further. And Merck KGaA, Darmstadt, Germany, offers health solutions to address these issues. "Emerging markets have accounted for almost two-thirds of the Group's Biopharmaceuticals business' organic growth over the last several years," says Meeta Gulyani, Executive Vice President, Head of Strategy & Global Franchises at the Biopharmaceuticals business. "We are uniquely positioned to further our great potential in emerging markets by driving growth of our specialty care portfolio," she explains.

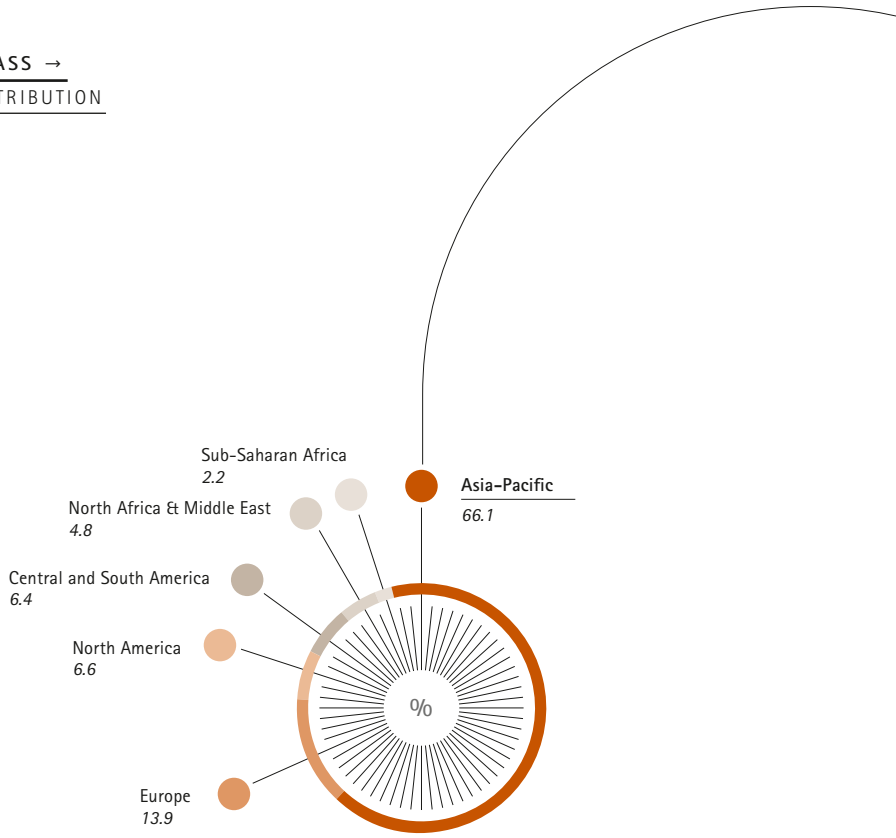
Among other areas, the company is investing in biosimilars, which are subsequent versions of innovator biopharmaceuticals made by a different company following patent expiration of the innovative product. Another important step is the strategic alliance with Pfizer, which was announced in November 2014 and will allow the two companies to jointly strengthen and accelerate the development of immuno-oncology assets.

The consumer health care market is also experiencing extremely dynamic growth in emerging markets such as China, India, Russia, and Latin America, along with markets in the Middle East and Africa. This growth is being driven by increasing health awareness among the emerging middle class, as well as the desire to feel young and healthy until as late an age as possible. Market research on the expanding middle class segment in Africa shows that health has become synonymous with prosperity. "Health is the key to realizing a higher standard of living. Good health enables better performance, success and recognition in one's professional as well as private life," says Erich Nobis, Vice President, Intercontinental at Consumer Health, particularly with a view to emerging markets. This business encompasses products tailored to the markets and target groups, such as food supplements for preventive health care, along with informational material for consumers and training for personnel. "In order to accomplish this, we have to be close to consumers, which means we have to build and expand our organizations in the core markets. Here, qualified employees with a cultural background in the respective market are especially important," notes Nobis.

LEVERAGING GLOBAL OPPORTUNITIES

The Life Science business is also on a growth course and is leveraging the opportunities offered by both mature and emerging markets. Every year, the company develops new reliable products for the life science industry, "Scientists are everywhere and science happens across the globe. Traditional sources of scientific funding in North America and Europe are still leading, but stagnating as government funding is constrained and pharmaceutical research is consolidating," says Daniel Stamm, Head of Global Pharma Processing at the Life Science business. Many emerging markets are investing heavily to develop biosimilar production capabilities. Backed by favorable demographics as well as improving education standards, Africa and the Middle East have the potential to foster a new generation of scientists. "On the technology front, we are seeing increasing volumes of biologic drug production, of both currently off-patent drugs as well as a burgeoning pipeline of new biological entities. Cellular analysis is becoming more relevant, as is the purity of lab water and chemicals," says Stamm.

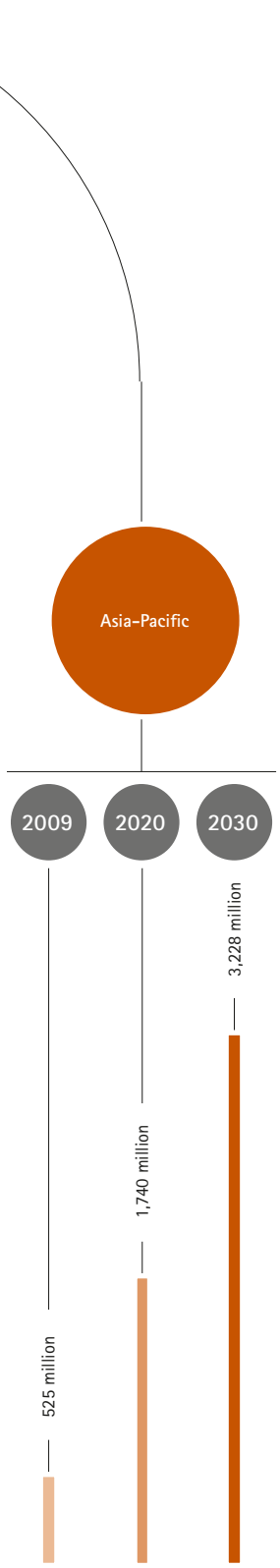
MIDDLE CLASS →
GLOBAL DISTRIBUTION
in 2030



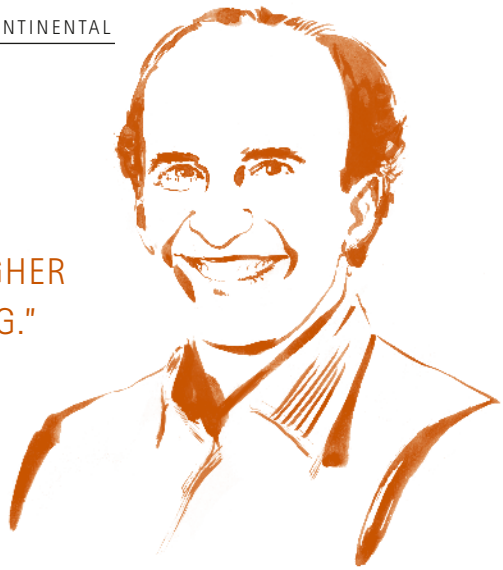
Source: United Nations Human Development Report 2013

The middle class is growing worldwide, and this growth is especially strong in Asia. In 2030, well over two-thirds of the middle class will reside in Asian countries.

For the Performance Materials business, the key goal is to underpin its global leadership position in liquid crystals and functional pigments, as well as to expand this position through investments in new technologies. Effect pigments make coatings, plastics, print products, and cosmetics shine. In its business with effect pigments, which are used in automotive coatings, the company is thus also benefiting from the boom the automotive industry is experiencing in emerging markets. "Today it is more important than ever before to think outside the box, and to meld the familiar with the unfamiliar in order to develop truly innovative content, products and applications," summarizes Walter Galinat, who heads the Performance Materials business sector of Merck KGaA, Darmstadt, Germany. With this philosophy, the company is laying the ideal foundation for success in dynamic markets.



ERICH NOBIS →
VICE PRESIDENT, INTERCONTINENTAL CONSUMER HEALTH



"HEALTH IS THE KEY TO REALIZING A HIGHER STANDARD OF LIVING."

TREND/3 →
DIGITIZATION

A CRYSTAL CLEAR FUTURE

The digital revolution is impacting our lives in a variety of ways – especially as users of communication media. Whether for smartphones, laptops or flat-screen televisions, we as global liquid crystals market and technology leader are driving the development of cutting-edge displays.

PRODUCTION OF LIQUID CRYSTALS →
IN ATSUGI, JAPAN

Technology is not merely moving forward – it is making quantum leaps. In the age of digitization, our world is undergoing a breathtaking transformation. The global volume of electronic data is doubling every two years, and computing power is continuously reaching new heights, breaking one record after another. Cloud computing, big data and the Internet of Things are the buzzwords of the digital debates. As a global communication and information medium, the Internet is profoundly changing people's day-to-day lives – from consumer behavior and the exchange of ideas and experiences, to the transmission of knowledge.

The information explosion unleashed by the Web is viewed by social scientists as the basis of a modern understanding of democracy, and by economists as a growth driver. Online marketing along with the real-time analysis of relevant customer and market data using digital technologies have become key competitive factors for companies. Smartphones and tablet computers have long been making the Internet mobile. This represents a rapid shift; mobile phones were once only affordable to wealthy customers, who could also use the devices to tone their muscles. In today's world, it would be a real challenge for the average user to get through a single day without a smartphone. These networked fonts of information have gone mainstream and, in the digital age, are now the constant companion of people everywhere.

INTUITIVE DISPLAY CONTROL

The situation is no different for Mark Verrall. He demonstratively swipes his index finger over his display, smiles and says, "We have already accomplished a great deal and will go on to accomplish much more." Verrall, who holds a PhD in Chemistry, was recently appointed Head of Display Materials R&D. He has been working for the company for 25 years and has contributed to the unique success story of liquid crystal displays (LCDs) – a tale in which the "swipe" represents a particularly exciting chapter. "Intuitive touchscreen control is what turned smartphones and tablet computers into a mass phenomenon," says Verrall.

MARK VERRALL →
HEAD OF DISPLAY MATERIALS R&D

"INTUITIVE TOUCHSCREEN CONTROL IS WHAT TURNED SMARTPHONES AND TABLET COMPUTERS INTO A MASS PHENOMENON."

When people swipe their fingers across the user interface, they are most likely setting liquid crystal molecules in motion – the Darmstadt-based company serves around 60% of the global market. The unique thing about this technology is that liquid crystals have a state of matter somewhere between a liquid, whose molecules flow around one another freely, and a crystal, which consists of strictly oriented molecules. In the liquid crystal mixture, the rod-shaped molecules align like a school of fish and control the electromagnetic waves of light. When an electrical current is applied, the liquid crystals change their alignment, thereby transmitting more or less light.

SUCCESS THANKS TO CLOSE PARTNERSHIPS

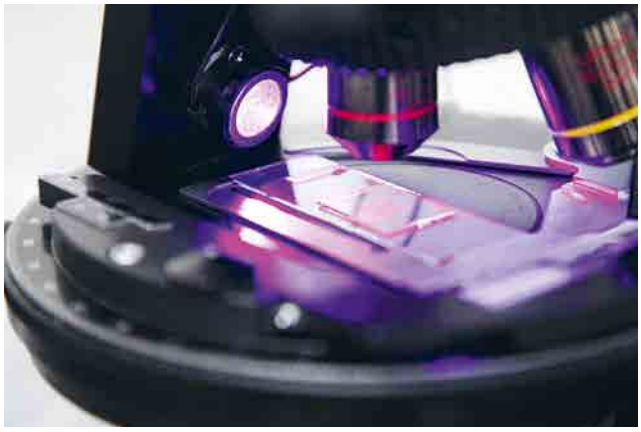
For many years, people failed to recognize the potential of liquid crystals, which were discovered in 1888 and would later become an astounding success. While by the end of the 1960s scientists of Merck KGaA, Darmstadt, Germany, had come up with the idea of the flat-screen display, it would take some time for this dream to become a reality. Initially, liquid crystals were used in the LC displays of pocket calculators and digital watches. In close cooperation with customers – electronics companies, particularly in Japan – the company drove the technological development of LCDs. Decades of experience have resulted in liquid crystals that generate brilliant, high-contrast, razor-sharp images and that enable rapid frame rates for movies and animation. They are found in ultra-thin, large-screen TVs, as well as in mobile phones, electronic games and digital cameras. Through partnerships with primarily Asian display and device manufacturers, Merck KGaA, Darmstadt, Germany, has

WAVELENGTH-DISPERSIVE X-RAY SPECTROMETRY →
IN AN R&D CLEANROOM
IN ATSUGI, JAPAN

RESEARCH →
IN A LABORATORY OF EMD PERFORMANCE MATERIALS IN BRANCHBURG, NJ (USA)

"WE CREATE ADDED VALUE THROUGH NEW PRODUCTS FOR SEMICONDUCTORS WITH UNPRECEDENTED LEVELS OF EFFICIENCY."

RICO WIEDENBRUCH →
HEAD OF INTEGRATED CIRCUIT MATERIALS



MICROSCOPE SLIDE →
IN A LIQUID CRYSTALS RESEARCH LABORATORY IN ATSUGI, JAPAN

MARK VERRALL

"THESE ARE ALL INNOVATIONS TO WHICH OUR ADVANCED MATERIAL DEVELOPMENTS HAVE CONTRIBUTED, AND THE MARKET CONTINUES TO EVOLVE AT AN INCREASING RATE."

established itself as the global technology and market leader. In addition, strategic acquisitions are being made to secure a successful future, such as the takeover of AZ Electronic Materials. "This company supplies specialty chemicals for other display components, which makes them a perfect fit for our portfolio," Verrall says. The acquisition of AZ has led to the creation of the new Integrated Circuit Materials business unit, headed by Rico Wiedenbruch. "Our customers are constantly demanding new materials in order to further miniaturize semiconductors and boost their capacity. We create added value for them through new products for semiconductors with unprecedented levels of efficiency," says Wiedenbruch, who is convinced of the business unit's potential. "Such products can be highly profitable and achieve a strong market position within a few years," he notes.

EVER BIGGER, EVER SHARPER

But back to liquid crystals. In the fast-moving electronics industry, manufacturers are focused on reducing their devices' appetite for energy while extending battery life. The new Ultra Bright FFS technology allows the liquid crystal layer to transmit 15% more background light, which can then be used for image rendering. This reduces the power consumption of the device by 30%. The consumer electronics industry is characterized by a constant flow of innovations. In particular, TV screens are becoming larger and larger with increasingly sharp definition. For instance, the full HD standard has been succeeded by ultra HD, where the lines of pixels have increased from the previous 1,080 to 2,160. Thus, the number of pixels has quadrupled from around two million to eight million. Curved screens and computer monitors are likewise providing improved image quality. How do they do this? In a conventional flat screen, the pixels at the edges are farther away from the viewer than those in the middle, which can slightly distort the viewer's perspective. By contrast, the new curved technology provides a more three-dimensional cinematic experience.

NEW APPLICATIONS READY FOR LAUNCH

"These are all innovations to which our advanced material developments have contributed, and the market continues to evolve at an increasing rate," says Mark Verrall, who proceeds to name even more examples. For instance, Verrall notes the great potential of organic light-emitting diodes (OLEDs), the development of which the company is also driving. OLEDs are already being used in the display of many mobile phones, and they are gaining ground for use in TV screens as well. Organic light-emitting diodes are self-illuminating, which means they require no additional light source. OLED screens provide more even lighting and high contrast, among other benefits. According to Verrall, flexible OLED displays that can be bent, folded or rolled up will lead to completely new possibilities. "The prototypes are very thin and lightweight, and yet are still robust. They also possess a particularly high luminance," says Verrall. He adds that it might soon be possible to open up a smartphone and turn it into a tablet PC. Furthermore, flexible displays are paving the way for many other applications – from wristwatches and display panels, to decorative home elements. Soon, buildings fitted with windows based on LC technology could be given a futuristic look. These windows consist of two panes of glass that are glued together at a distance of a few micrometers. The application of a low-voltage electric current controls how much light the window transmits, enabling continuously variable switching in just seconds from light to dark and vice versa. If light and temperature are optimally managed, this technology can significantly boost energy efficiency. It will be possible to integrate these high-tech windows into conventional windows with very little effort.

Just when Verrall is about to launch into the next example, his smartphone vibrates – it's time for his next appointment. Being constantly available is both a blessing and a curse of the digital age. No doubt Verrall could continue to name many more examples of emerging technologies, impressive evidence of the quantum leaps being made by the company.

DISPLAYING FUTURES 2014 →
PARTICIPANT IMPRESSIONS

"What influence do innovative display solutions have on architecture and on the lives of people in urban environments?" This question was discussed by experts at a symposium entitled "Building Innovation – Displaying Architecture", which Merck KGaA, Darmstadt, Germany, held in Shanghai in November 2014. The speakers included Adam Greenfield, Doreen Heng Lui, Amish Patel and Tim Edler, who are quoted here and on the next page. The symposium was part of the "Displaying Futures" series, which was launched in 2011. "Displaying Futures" creates space for interaction, interdisciplinary exchange and mutual inspiration for display and material producers, designers, architects, artists, scientists and experts from other fields. The aim is to develop scenarios beyond pure technical approaches that show how constantly changing human needs with respect to communication and mobility are impacting the properties of displays and how display and material producers can already adapt to these today. In 2015, the symposium will be held in the United States and thus outside Asia for the first time.

"THE FUTURE OF COMMUNICATION BETWEEN THE DIGITAL AND HUMAN WORLDS WILL BE FACILITATED BY THE USE OF DISPLAYS, SMALL AND LARGE."

AMISH PATEL, MICROSOFT →

A design producer at Microsoft, Patel focuses on the understanding of how human user interfaces and interaction languages need to evolve in both software and hardware.

DOREEN HENG LIU, NODE →

NODE (Nansha Original DEsign or NO DEsign) was established in early 2004. This small and high-quality design firm in the Pearl River Delta currently employs ten architects and designers. Doreen Heng Liu is its principal architect.

"OUR CHALLENGE AS ARCHITECTS IS TO DESIGN USING MATERIALS THAT ARE SUSTAINABLE, ENERGY-EFFICIENT, AND REPRESENTATIVE, YET AT THE SAME TIME INEXPENSIVE. THUS, WE ARE CONSTANTLY LOOKING FOR NEW PRODUCTS THAT CAN HELP US REACH THESE GOALS."

TIM EDLER, REALITIES:UNITED →

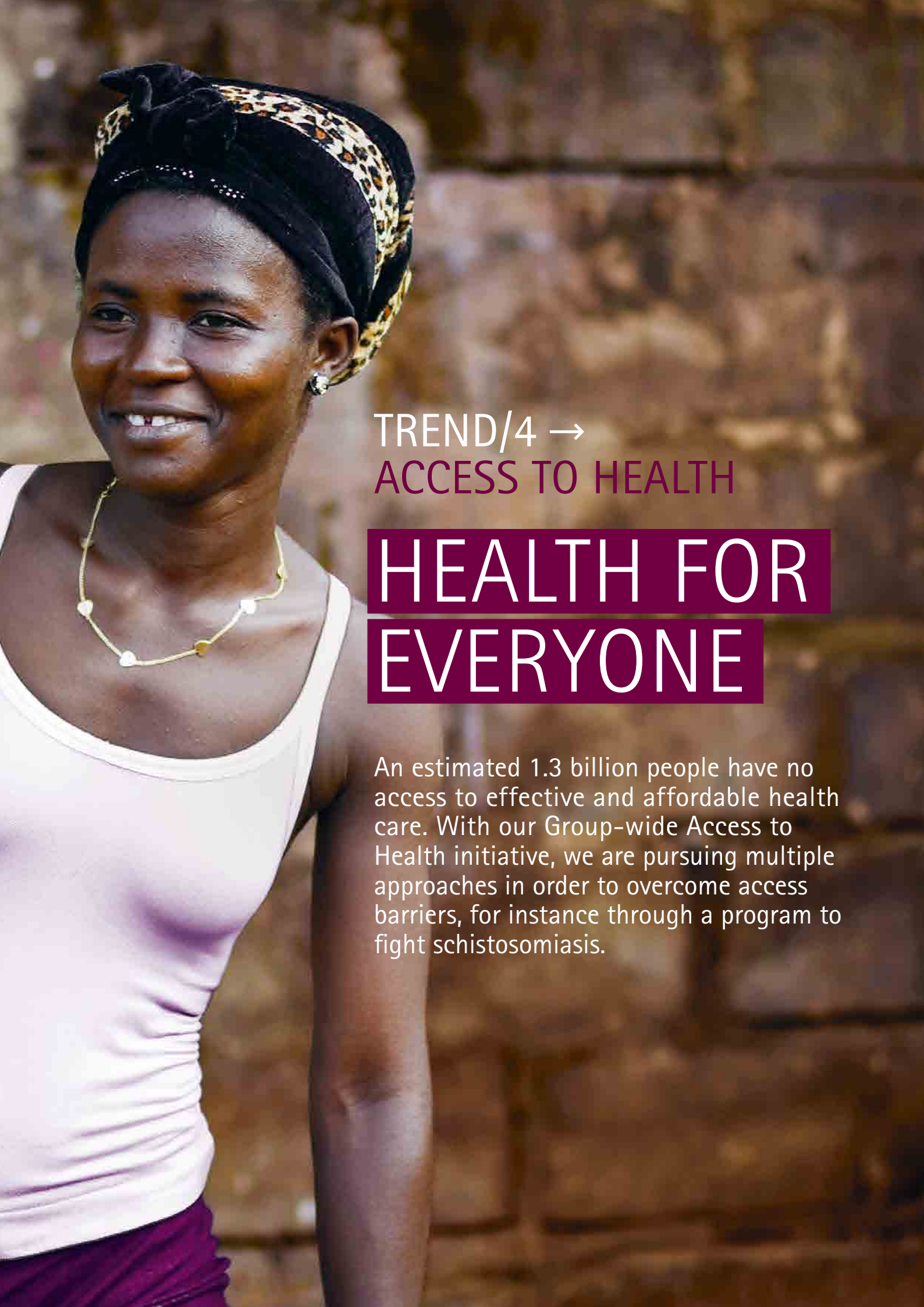
In 2000, the brothers Tim Edler and Jan Edler founded realities:united, a studio for art, architecture and technology. They develop and support architectural solutions, usually incorporating new media and information technologies.

"ONCE MEDIA ELEMENTS STOP BEING SEEN AS EXCEPTIONAL SPOTS COINED BY HIGH INTENSITY IN EVERY POSSIBLE WAY – COLOR, SPEED, RESOLUTION, CONTENT, NARRATION, COST, ENERGY – WE EXPECT THAT MEDIA ELEMENTS WILL MERGE INTO ARCHITECTURE AT A MUCH LOWER LEVEL OF INTENSITY AND ON A MUCH LARGER PHYSICAL SCALE."

"WE ENGINEER TOOLS TO SERVE A GIVEN END, WE DEPLOY THEM INTO THE WORLD, AND THE WORLD MOLDS ITSELF AROUND THEIR PRESENCE, CREATING NEW DESIRES, NEW DEMANDS, NEW RISKS AND NEW OPPORTUNITIES."

ADAM GREENFIELD, URBANSCALE →

An American writer and urbanist, Greenfield is the founder and managing director of Urbanscale, an urban systems design practice based in New York.



TREND/4 →
ACCESS TO HEALTH

HEALTH FOR EVERYONE

An estimated 1.3 billion people have no access to effective and affordable health care. With our Group-wide Access to Health initiative, we are pursuing multiple approaches in order to overcome access barriers, for instance through a program to fight schistosomiasis.

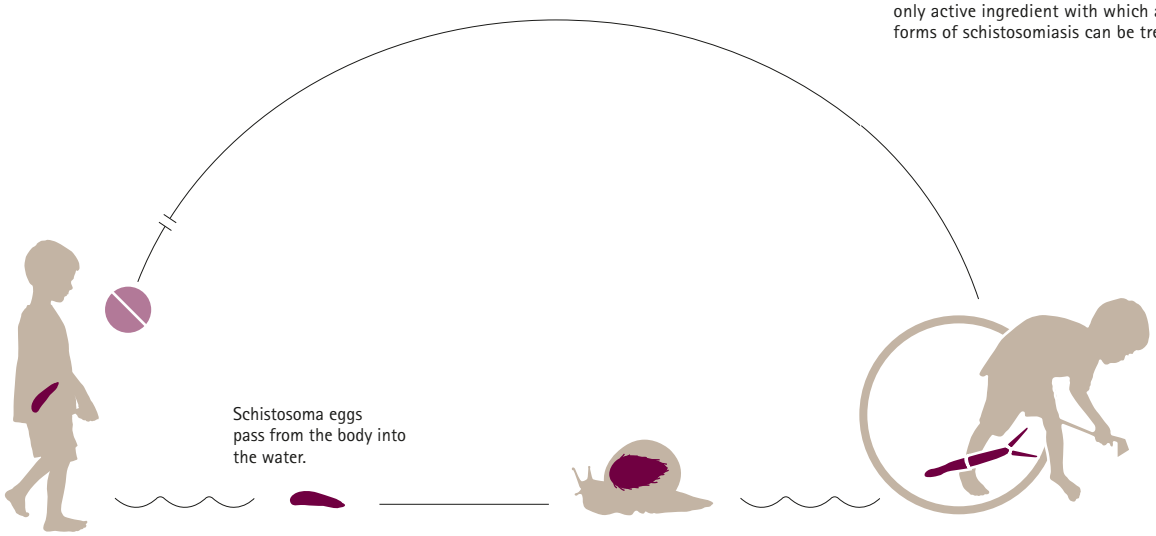
The hazard lurks in water in which people swim, fish or wash clothes. In stagnant freshwater, the larvae of the schistoma worm penetrate the skin and enter the blood vessels of their victims, infecting them. This infectious tropical disease affects no fewer than 240 million people worldwide, mainly in Africa but also in parts of South America and Asia. The acute symptoms range from a rash to life-threatening fever. The long-term consequences include chronic inflammation of various organs, which can also lead to death. Up to 200,000 of those infected die each year from the effects of the disease. It is a vicious cycle. The female's eggs infest inner organs such as the colon, spleen or liver, where the larvae develop into worms, the eggs of which are then excreted via the urine or feces of those infected. Freshwater snails then act as a host in which the eggs develop into larvae, which in turn penetrate the human body. This cycle can be broken by the active ingredient praziquantel, which Merck KGaA, Darmstadt, Germany, developed as part of a research collaboration in the 1970s. It was a milestone in the treatment of the worm disease that has made it possible to cure schistosomiasis in many millions of people.

With its broad-based Praziquantel Donation Program, the company has been actively supporting the World Health Organization (WHO) in the fight against the dangerous disease in Africa since 2007. To date, it has donated around 200 million tablets to WHO. Altogether, more than 54 million patients, primarily children, have been treated. "However, millions of children worldwide still suffer from schistosomiasis. The disease prevents them from learning and weakens development potential in the affected countries. We want to give children new opportunities while at the same time promoting economic growth and making a brighter future possible," says Stefan Oschmann, Vice Chairman of the Executive Board, whose responsibilities include the topic of Corporate Responsibility. Meeting this ambitious goal calls for sophisticated logistics. The company produces the medicine in Mexico and transports it in coordination with WHO and the respective health ministries to the affected countries thousands of kilometers away. "We want to work with multiple constituencies in a strong alliance to help fight schistosomiasis worldwide," explains Frank Gotthardt, Head of Public Affairs & Corporate Responsibility, who is responsible for the program. The infection rate is especially high among children and the symptoms that result are particularly serious; schistosomiasis stunts growth, causes learning disabilities and leads to anemia. The problem is that in its current form, the medication is not suitable for children under the age of six. "Together with international partners, we are therefore developing a new pediatric formulation of praziquantel for young children, which is now being investigated in initial clinical trials," says Jutta Reinhard-Rupp, Head of the Group's Global Health Translational Platform.

FRANK GOTTHARDT →
HEAD OF PUBLIC AFFAIRS & CORPORATE RESPONSIBILITY

"WE WANT TO WORK WITH MULTIPLE CONSTITUENCIES IN A STRONG ALLIANCE TO HELP FIGHT SCHISTOSOMIASIS WORLDWIDE."

TRANSMISSION OF SCHISTOSOMIASIS →
VIA PEOPLE AND INTERMEDIATE HOSTS



People infected with worm eggs contaminate freshwater with their excreta.

Once in the water, miracidia hatch from the eggs and use the freshwater snail as an intermediate host…

…and then grow into cercaria. The cercaria penetrate human skin, primarily attacking the bladder and colon via the blood and lymphatic systems.

ACCESS TO HEALTH: A FOUR-PILLAR STRATEGY

The Praziquantel Donation Program is one of the many activities within the scope of the Access to Health initiative. Core competencies across the company are leveraged to provide health solutions to underserved populations and patients in developing countries. Improving access to health involves a complex and broad range of tasks, e. g. researching, developing and refining health solutions, creating efficient health systems and distribution channels, offering products at affordable prices, as well as educating health workers and patients. The company's strategy focuses on four areas, the so-called "4As": Availability, Affordability, Awareness, and Accessibility. Availability includes refining health solutions that address unmet needs and are tailored to local environments; affordability is about helping patients who are unable to pay for the health solutions they need; awareness focuses on empowering people to make informed decisions through education and training; and accessibility aims at strengthening supply chains in order to deliver and reach out efficiently at the point of care.

PUTTING PATIENTS FIRST

The Access to Medicine Foundation has recognized the Group's strategic approach in its Access to Medicine Index. Every two years, the index compiled by the non-profit international foundation assesses the initiatives by the world's leading pharmaceutical companies to promote access to medicine in developing countries. In 2014, the company ranked sixth, moving up two places compared with 2012 (see page 60).

STEFAN OSCHMANN →
VICE CHAIRMAN OF THE EXECUTIVE BOARD

"PATIENTS ARE AT THE CORE OF ALL OUR EFFORTS. WE WILL DO EVERYTHING WE CAN TO BETTER HELP THEM WHILE WORKING TO FURTHER LOWER THE BARRIERS TO ACCESS."

"The repeated improvement in our ranking proves that our diverse activities have become an integral part of how we conduct business. Patients are at the core of all our efforts. We will do everything we can to better help them while working to further lower the barriers to access," says Stefan Oschmann. Apart from the commitment to the fight against schistosomiasis, the foundation praised a new business model in India. The Suswastha pilot program is aimed at increasing access to health care products at an affordable price in rural India. The company's Capacity Advancement Program (CAP) seeks to improve access to and the quality of diabetes treatment in Africa and India.

ENSURING ACCESS TO SAFE MEDICINES

The numerous projects based on the Access to Health strategy are bearing fruit around the world, with a clear focus on the rural regions of developing countries. For instance, a rural pharmacy has been developed – a pharmacy specifically designed for Africa that is being piloted in Ghana. The pharmacy is inside a 30 m^2 container that can be transported by truck to remote communities, pre-equipped and with minimal assembly required. "We are providing rural populations with direct and safe access to medicines and professional advice," says Ronke Ampiah, Head of the Rural Pharmacy project. Safe provision also means that the medicines are neither substandard nor counterfeit. That's because these could be lethal if, for instance, patients take entirely ineffective medications for malaria. The packaging is largely identical; the international police organization Interpol estimates that up to 30 % of all medicines in developing countries are either counterfeit or substandard. The Global Pharma Health Fund (GPHF), a non-profit initiative funded by Merck KGaA, Darmstadt, Germany, is dedicated to fighting counterfeit medicines. The most effective tool is a mobile, compact laboratory that can be used to identify counterfeit medicines quickly and easily. Reference samples are used to test the identity and concentration of 75 active ingredients in total, ranging from anti-malarial drugs and antibiotics to analgesics and antipyretics. This is another initiative through which the company is helping to improve access to health in developing countries.

→ More information can be found online in **"M – The Explorer Magazine"**

www.emdgroup.com/praziquantel

ACCESS TO MEDICINE →
THE GROUP IS ELIMINATING BARRIERS TO ACCESS, PRIMARILY IN RURAL AREAS

A MOBILE MINILAB →
COUNTERFEIT MEDICINES CAN BE DETECTED QUICKLY AND EASILY

01
TO OUR SHAREHOLDERS

Pages 32 – 41

034 Letter from Karl-Ludwig Kley
038 The Executive Board
040 Company Shares

KARL-LUDWIG KLEY
Chairman of the Executive Board

Dear Shareholders and Friends,

Our company has completed another good year. We again achieved profitable growth. The "Fit for 2018" transformation program, with which we are shaping the future of our company, is showing its effect. With the acquisition of AZ Electronic Materials (AZ), the offer to acquire Sigma-Aldrich and our alliance with Pfizer in immuno-oncology, we have laid the foundations for future growth.

In 2014, our sales rose by 5.5% to € 11.3 billion. EBITDA pre one-time items, our most important earnings indicator, increased by 4.1% to € 3.4 billion. Through solid organic growth and acquisition-releated increases, we were able to make up for negative foreign exchange effects. Profit after tax declined slightly by 3.7% to € 1.2 billion.

Business free cash flow decreased to € 2.6 billion, which was 12.0% below the very high level of 2013. At the beginning of 2014, we completely eliminated our net financial debt. As a result of the acquisition of AZ Electronic Materials in May 2014, it had temporarily increased to € 2.2 billion as of June 30, 2014. Yet by year-end, we had already lowered it to below € 0.6 billion.

The capital market has recognized the positive development. The share price soared by 20.4% in 2014 – the largest increase in the DAX. On November 27, our shares even hit a new all-time high of € 80.40. We are pleased by this even though our company doesn't think just in quarters, but also in generations.

We want our shareholders to partake in the successful development of the company. Therefore, we will propose to the Annual General Meeting an increase in the dividend by € 0.05 to € 1.00 per share. The total dividend payment takes into account the 1:2 share split in 2014 and also takes into consideration the capital resources required for the Group's further transformation steps.

Please allow me to address the key strategic steps taken in 2014:

→ The measures to improve our efficiency were successfully completed. Consequently, in 2014 we embarked on the next phase of "Fit for 2018", sharpening our focus on growth.
→ The acquisition and integration of AZ Electronic Materials, a leading premium supplier of high-tech materials, were also completed. The portfolio includes process chemicals for the manufacture of integrated circuits, such as those used in smartphones, as well as photoresists used to manufacture flat-screen televisions. Our liquid crystals remain the gold standard in display technology. With AZ, they are complemented by specialty chemicals for the technology behind displays.
→ We will be working closely with the U.S. pharmaceutical company Pfizer on the development and global commercialization of our immuno-oncology anti-PD-L1 antibody. With this groundbreaking alliance, we are entering a highly promising growth market with a compound from our own pipeline.
→ In September, we announced our intention to acquire the U.S. life science company Sigma-Aldrich. This would be the largest acquisition in the company's almost 350-year history. Once we receive antitrust clearance of this acquisition, we will be able to offer our customers a much broader product portfolio as well as the industry's leading e-commerce platform. At the same time, the acquisition would strengthen our global presence in the life science market, above all in North America and in the fast-growing markets of Asia.

These developments are the result of our long-term transformation and growth strategy. I have been reporting to you since 2007 on our progress: With the acquisitions of Serono, Millipore and AZ and the divestment of our Generics business, we have extensively rebuilt our portfolio. We have globalized our organization and filled key positions with the right people. We have modernized our processes and implemented extensive efficiency measures. The Group is thus well-placed to take the next growth steps from a position of strategic and financial strength.

Now that more and more pieces of the mosaic are coming together, the big picture is becoming visible. Our company is transforming into a highly specialized technology company with the goal of improving the lives of patients and customers.

The world is changing rapidly, and our company is changing too. In 2014, the growth markets of Asia and Latin America for the first time accounted for the largest proportion of Group sales. Their contribution increased by 2 percentage points to 38 %. In order to further capture the potential of these markets for the Group, we need to be close to local customers. For instance in China, we opened our Liquid Crystals Center in Shanghai and laid the cornerstone for a major pharmaceutical manufacturing facility in Nantong.

We offer technologies and solutions that make a positive contribution to our rapidly changing times. Aging populations are a global challenge, as are the issue of broad access to health for everyone, and the digitization of our society. We are resolutely focusing on innovation in order to continue to offer good solutions to these challenges. The most visible sign is the Innovation Center, which is currently being built at the heart of our global headquarters in Darmstadt. It is to become a hub of creativity at our company.

But as we develop the company further, we will not lose focus. We will continue to concentrate on fields in which we have the competencies and resources to make meaningful contributions. In the future, we will group them into three business sectors in our financial reporting:

→ *Healthcare* comprises the Biopharmaceuticals, Consumer Health, Allergopharma and Biosimilars businesses.
→ *Life Science* includes the Life Science business and offers room for the planned acquisition of Sigma-Aldrich.
→ *Performance Materials* consists of liquid crystals, the AZ Electronic Materials business, pigments and new materials.

Customers and patients remain at the center of all our efforts. Innovation, efficiency, and a global presence are not an end in itself. The only way for us to achieve our own objectives is by meeting the needs of customers and patients with innovative products and the highest quality standards. We are aiming for long-term, sustainable growth in line with our six corporate values, namely courage, achievement, responsibility, respect, integrity, and transparency.

All this is made possible by our 39,000 employees around the world. Each and every day, they work on high-quality products, improved solutions for customers as well as on innovative approaches for a healthier as well as more comfortable and pleasant life. And through their work, they continue to write our success story. I owe my thanks to every single one of our employees.

Merck KGaA, Darmstadt, Germany, is superbly positioned to shape its future further. I thank you for your trust and support. Please continue to accompany us into an exciting, successful and sustainable future.

KARL-LUDWIG KLEY
Chairman of the Executive Board

THE EXECUTIVE BOARD OF THE GROUP →

BERND RECKMANN, MARCUS KUHNERT, KARL-LUDWIG KLEY, STEFAN OSCHMANN, BELÉN GARIJO, KAI BECKMANN

from left to right

BERND RECKMANN
Member of the Executive Board
CEO Life Science and Performance Materials
Responsibility for Group functions:
Environment, Health, Safety, Security, Quality

MARCUS KUHNERT
Member of the Executive Board
Chief Financial Officer
Responsibility for Group functions:
Group Accounting & Subsidiaries;
Group Controlling & Risk Management;
Corporate Finance; Mergers & Acquisitions;
Group Tax; Investor Relations

KARL-LUDWIG KLEY
Chairman of the Executive Board
Responsibility for Group functions:
Group Legal & Compliance; Group Internal Auditing;
Group Communications

STEFAN OSCHMANN
Vice Chairman of the Executive Board
Responsibility for Group functions:
Group Strategy; Patents & Scientific Services;
Public Affairs & Corporate Responsibility

BELÉN GARIJO
Member of the Executive Board
CEO Healthcare

KAI BECKMANN
Member of the Executive Board
Responsibility for Group functions:
Group Human Resources; Group Information Services;
Group Procurement; Inhouse Consulting;
Site Operations

Short biographies
More information can be found at www.emdgroup.com
→ Management → Executive Board

COMPANY SHARES

AT A GLANCE

In 2014, the share price of Merck KGaA, Darmstadt, Germany, rose by 20%, thus outperforming the DAX® by 18 percentage points. The shares were around 7 percentage points stronger than the relevant pharmaceutical industry index and also outperformed the relevant chemical industry index by nearly 17 percentage points. They reached an annual high of € 80.40 at the end of November 2014, also marking a new all-time high. On December 30, 2014, they closed only marginally lower at € 78.42.

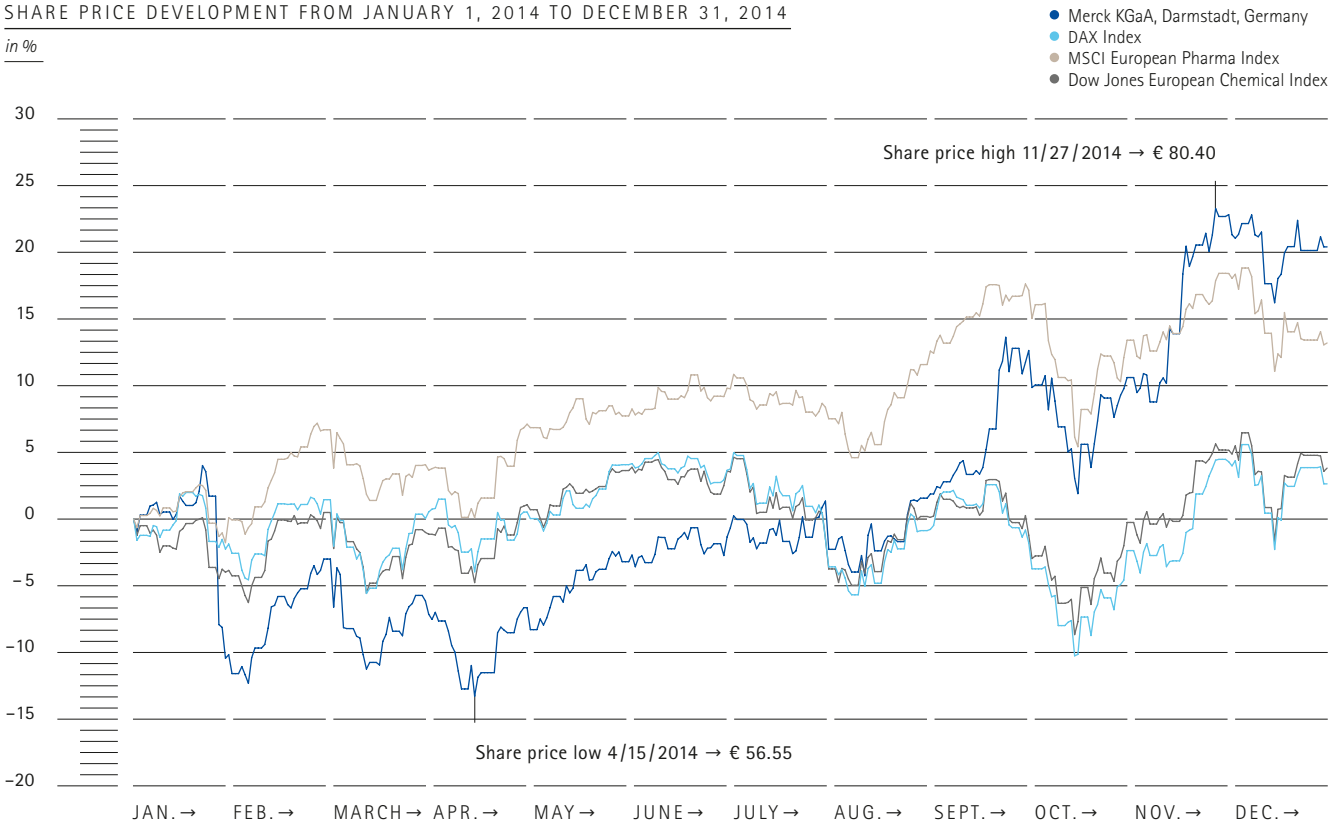
After a period of weakness in the first half of 2014, in which the share price sank by 3% in absolute terms and showed a weaker development than the relevant comparative indices, a noticeable improvement could be seen at the beginning of the second half of the year. Continuously good business figures that met or even exceeded the expectations of market participants, a successful Investor & Analyst Day of the Biopharmaceuticals division on September 18, 2014, and the announcements of the acquisition of Sigma-Aldrich on September 22 and of the collaboration with Pfizer in immuno-oncology on November 17 were welcomed by analysts and investors, leading to a new all-time share price high at the end of November.

The average daily trading volume increased noticeably by 36%, from about 469,000 in 2013 to a good 639,000 shares. The North America region continued to dominate and its share increased in comparison with the previous year to around 47% (2013: 43%). By investor type, GARP (growth at reasonable price) and value investors dominated, as in the previous year. At the end of 2014, the top five investors held around 39% of the free float (2013: 36%).

On June 30, 2014, the 1:2 share split became effective. The price and number of the shares of Merck KGaA, Darmstadt, Germany, were adjusted accordingly. On May 9, 2014, the Annual General Meeting resolved to redivide the share capital of Merck KGaA, Darmstadt, Germany, so that one existing company no-par value share with a pro rata amount of the share capital of € 2.60 is to be divided into two no-par value shares with a pro rata amount of the share capital of € 1.30 each (share split).

COMPANY SHARES →

SHARE PRICE DEVELOPMENT FROM JANUARY 1, 2014 TO DECEMBER 31, 2014



Source: Bloomberg (closing rates)

COMPANY SHARES →

SHARE DATA[1,2]

		2014	2013
Dividend[3]	€	1.00	0.95
Share price high	€	80.40	65.25
Share price low	€	56.55	48.53
Year-end share price	€	78.42	65.13
Daily average number of shares traded[4]	units	639,067	468,616
Market capitalization[5] (at year-end)	€ million	34,095	28,315
Market value of authorized shares[6] (at year-end)	€ million	10,135	8,417

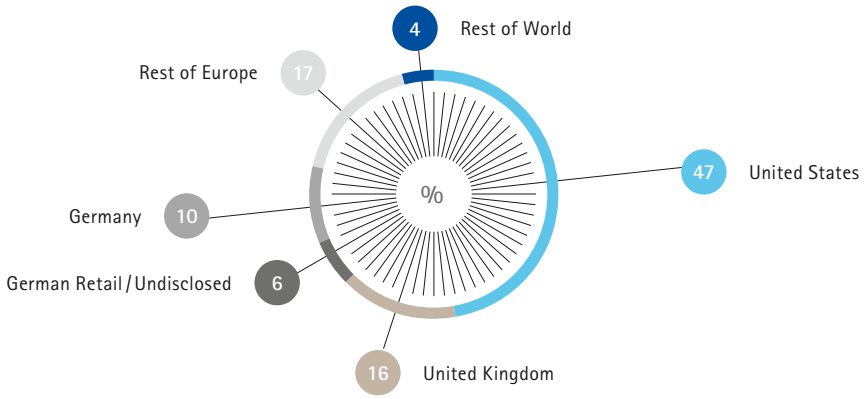
[1] Share-price relevant figures have been adapted to the 1:2 share split as of June 30, 2014.
[2] Share-price relevant figures relate to the closing price in XETRA® trading on the Frankfurt Stock Exchange.
[3] 2014 subject to approval by the Annual General Meeting.
Source: Bloomberg, Thomson Reuters

[4] Based on the floor trading systems of all German exchanges and the regulated market on XETRA®.
[5] Based on the theoretical number of shares (434.8 million).
[6] Based on the number of shares in free float (129.2 million).

COMPANY SHARES →

IDENTIFIED INVESTORS BY REGION AS OF DECEMBER 2014

in %



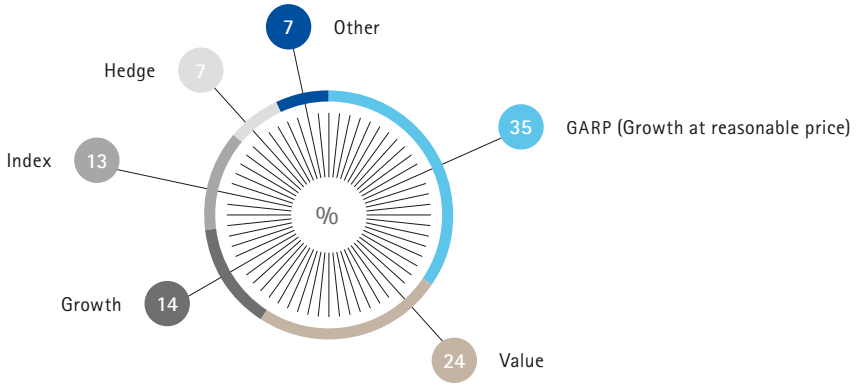
Source: Orient Capital

Total number of shares outstanding: 129.2 million

COMPANY SHARES →

IDENTIFIED INVESTORS BY TYPE AS OF DECEMBER 2014

in %



Source: Orient Capital

02
GROUP MANAGEMENT REPORT

→

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FUNDAMENTAL INFORMATION ABOUT THE GROUP

THE GROUP

Merck KGaA, Darmstadt, Germany, is a global corporate group headquartered in Darmstadt, Germany. With a history dating back nearly 350 years, it is the world's oldest pharmaceutical and chemical company. The Group holds the global rights to the Merck name and brand. The only exceptions are Canada and the United States, where the company operates as EMD Serono, EMD Millipore und EMD Performance Materials.

The Group's product portfolio ranges from innovative pharmaceuticals and biopharmaceutical products, to specialty chemicals, high-tech materials and life science tools. Until December 31, 2014, in other words the period covered by this Annual Report, Merck KGaA, Darmstadt, Germany, used a reporting structure consisting of four divisions: the Biopharmaceuticals division, Consumer Health, Performance Materials and the Life Science division. The following presentation also reflects this structure.

In line with its strategic direction effective January 1, 2015, the Group is organized into three business sectors: Healthcare, Performance Materials and Life Science, which comprise the Group's six businesses. This structure will be used in the financial reports of the Group as of January 1, 2015 and will be reflected for the first time in the report on the first quarter of 2015.

BIOPHARMACEUTICALS

The Biopharmaceuticals division discovers, develops, manufactures and markets innovative pharmaceutical and biological prescription drugs to treat cancer, multiple sclerosis (MS), infertility and growth disorders, as well as certain cardiovascular and metabolic diseases. As the company's largest division, in 2014 the Biopharmaceuticals division generated 51% of Group sales and 51% of EBITDA pre one-time items (excluding Corporate and Other). The present Biopharmaceuticals division was formed in 2007 with the acquisition of the Swiss biopharmaceutical company Serono SA, which was integrated stepwise into the prescription drugs business. With headquarters in Darmstadt, Germany, the Biopharmaceuticals division offers leading brands in specialty medicine indications.

The Biopharmaceuticals division commercializes its products worldwide and has a strong presence in established markets. The Biopharmaceuticals division's products are available in various countries and regions of the world under different brand names. The regions of Europe and North America contributed 64% of divisional sales in 2014. In recent years, the Biopharmaceuticals division has steadily expanded its presence in the Emerging Markets region, which accounted for 29% of the division's sales in 2014.

Rebif®, the Biopharmaceuticals division's top-selling product, is used to treat relapsing forms of multiple sclerosis, which is one of the most common neurological diseases among young adults.

Erbitux® is the second best-selling drug in the Biopharmaceuticals division's product portfolio and its flagship product in Oncology. The product is a standard of care in multiple lines of metastatic colorectal cancer (mCRC) therapy as well as of both recurrent / metastatic and locally advanced squamous cell carcinoma of the head & neck (SCCHN).

On November 17, 2014, the Biopharmaceuticals division entered into a global strategic alliance with Pfizer Inc. to develop and commercialize MSB0010718C, an investigational anti-PD-L1 antibody currently in development by the Biopharmaceuticals division as a potential treatment for multiple tumor types, thereby accelerating the two companies' presence in immuno-oncology. The two companies have also agreed to combine resources and expertise to advance Pfizer's preclinical-stage anti-PD-1 antibody into Phase I trials. As part of the strategic alliance, the Biopharmaceuticals division will co-promote Pfizer's Xalkori®, a medicine to treat non-small cell lung cancer in the United States and several other key markets.

The Biopharmaceuticals division also offers products that help couples to conceive a child and is the only company to offer the most complete and clinically proven portfolio of fertility drugs for every stage of the reproductive cycle, including recombinant versions of the three hormones needed to treat infertility. As a leader and innovator, the Biopharmaceuticals division supports the improvement of success in Assisted Reproductive Technology not only with drugs, but also innovative technologies, for example to assess embryo viability. The products in the Fertility franchise are an important growth driver for the Biopharmaceuticals division. This is due to different factors, such as the increasing demand in emerging markets and the trend of couples postponing childbearing until later in life when natural fertility declines.

The General Medicine franchise mainly includes brands to treat cardiometabolic diseases. Although no longer patent-protected, the excellent brand equity built over decades makes the flagship products cornerstones for the treatment of chronic cardiovascular or metabolic diseases. This applies, for example, to Glucophage®

containing the active ingredient metformin, the drug of choice for first-line treatment of type 2 diabetes, as well as to Concor® containing bisoprolol, the leading beta-blocker for chronic cardiovascular diseases such as hypertension, as well as Euthyrox® (levothyroxine) as the leading treatment for hypothyroidism. Particularly in emerging markets, there is a continuous rise in demand for cardiometabolic therapies. This is due to both increasing life expectancy and in part also to growing prosperity in this region, along with the resulting changes in lifestyle and dietary habits. Beyond developing life cycle management products to capitalize on the Biopharmaceuticals division's strong brand equity, the company entered into a long-term strategic partnership with Lupin Ltd. of India to broaden the General Medicine portfolio in emerging markets with affordable, high-quality medicines.

The Biopharmaceuticals division is continuously working to improve ways to administer medicines and active ingredients. For several years, the Biopharmaceuticals division has been developing novel injection devices, which make injections more user-friendly and at the same time more reliable for patients than conventional or prefilled syringes. In addition, these products make it easier for health care practitioners and patients to ensure adherence and thus to reach their treatment goals. Examples are the easypod™ electromechanical injection devices for the delivery of Saizen® (somatropin) and RebiSmart™ for Rebif® (interferon beta-1a). Additionally, both easypod™ and RebiSmart™ are able to wirelessly transfer data such as injection times, dates and doses to the Web-based software systems easypod™ connect and MSdialog.

The Biopharmaceuticals division is advancing its research and development (R&D) portfolio across the areas of oncology, immunooncology and immunology, and continues to invest in developing programs in multiple sclerosis. With its expertise in discovery and early development, as well as approximately 25 projects in clinical development, the Biopharmaceuticals division is focused on delivering differentiated new therapies to patients with unmet medical needs.

In addition, Merck KGaA, Darmstadt, Germany, has two further pharmaceutical business units that operate as independent businesses within the Healthcare business sector since the new organizational structure took effect on January 1, 2015. Allergopharma is specialized in developing high-dose hypoallergenic products for specific immunotherapy and diagnosis of type 1 allergies (such as hay fever or allergic asthma). Biosimilars is developing biological medicines that are similar to an existing registered biological medicine (the "reference medicine"). The company is moving ahead with the development of a portfolio of biosimilar compounds applicable to various disease areas including oncology and autoimmune diseases. The focus is on developing molecules through in-house research and development as well as through partnerships.

As of January 1, 2014, two product groups were transferred from the Biopharmaceuticals division to Consumer Health. These are Neurobion®, a vitamin B-based analgesic, and Floratil®, a leading brand in the probiotic antidiarrheal segment in Brazil. Sales of the two products totaled € 265 million in 2013. The effects of the product group transfers on the Biopharmaceuticals division's figures for 2013 are presented in the following table.

BIOPHARMACEUTICALS →
ADJUSTED

€ million	2013 reported	adjustment	adjusted
Sales	6,325.8	– 265.4	6,060.4
Total revenues	5,953.6	– 265.2	5,688.4
Operating result (EBIT)	893.0	– 99.9	793.1
Margin (% of sales)	15.0		13.9
EBITDA	1,886.5	– 99.9	1,786.6
Margin (% of sales)	31.7		31.4
EBITDA pre one-time items	1,955.0	– 99.9	1,855.1
Margin (% of sales)	32.8		32.6
Business free cash flow	1,875.7	– 88.6	1,787.1

CONSUMER HEALTH

Consumer Health manufactures and markets over-the-counter pharmaceuticals. Consumer Health focuses on a number of well-known strategic brands such as Neurobion®, Bion®, Seven Seas®, Nasivin®, Femibion®, and Dolo-Neurobion®, as well as Floratil®, Sangobion®, Vigantoletten®, Apaisyl®, and Kytta®. In 2014, Consumer Health contributed 7% to Group sales and 5% to EBITDA pre one-time items (excluding Corporate and Other). Consumer Health has a high market penetration in Europe, Latin America and Southeast Asia, and is generating particularly strong growth in emerging markets, especially in India, Indonesia and Brazil, which have firmly established themselves among the top-ten markets in terms of sales. The key new product launch of Seven Seas® Perfect7® was chosen by the customers of the British health and beauty retailer Boots as the winner of the "2014 Favourite Newcomer" award.

Global megatrends favor the future growth of Consumer Health. People are becoming more health-conscious and concerned with their own physical well-being. Preventive health care and as little invasive medication as possible are becoming increasingly important – in both established and emerging markets, characterized by a growing middle class with specific needs.

On January 1, 2014, two product groups from the Biopharmaceuticals division were transferred to Consumer Health. These are Neurobion®, a leading global brand in the vitamin B segment, and Floratil®, a leading brand in the probiotic antidiarrheal segment in Brazil. The transfer of the two strong brands makes better use of the potential of the consumer-oriented business model of Consumer Health. Furthermore, Consumer Health has considerably strengthened its presence in the Emerging Markets region. This is a step in the journey towards having at least three leading brands and achieving a market share of at least 3% in each of its key markets. The share of Consumer Health sales accounted for by Emerging Markets increased from 28% (unadjusted year-earlier figure) to 50% in 2014 as a result of the product transfer. The effects of the product group transfers on Consumer Health's figures for 2013 are shown in the following table.

CONSUMER HEALTH →
ADJUSTED

€ million	2013 reported	2013 adjustment	2013 adjusted
Sales	479.6	265.4	745.0
Total revenues	476.9	265.2	742.1
Operating result (EBIT)	62.2	99.9	162.1
Margin (% of sales)	13.0		21.8
EBITDA	71.1	99.9	171.0
Margin (% of sales)	14.9		23.0
EBITDA pre one-time items	72.5	99.9	172.4
Margin (% of sales)	15.2		23.2
Business free cash flow	83.9	88.6	172.5

Effective May 15, 2014, Uta Kemmerich-Keil took over the leadership of Consumer Health, thus succeeding Udit Batra as President and Chief Executive Officer. Kemmerich-Keil was previously CEO of Allergopharma, the global Allergy business unit.

PERFORMANCE MATERIALS

Performance Materials comprises the Group's entire specialty chemicals business. The portfolio includes high-tech performance chemicals for applications in fields such as consumer electronics, lighting, coatings, printing technology, plastics, and cosmetics. The acquisition in May 2014 of AZ Electronic Materials (AZ), a leading supplier of high-tech materials for the electronics industry, significantly strengthened Performance Materials.

Performance Materials' share of Group sales increased in 2014 to 18% (2013: 15%) and its share of EBITDA pre one-time items (excluding Corporate and Other) rose to 25% (2013: 23%). The results of AZ have been included since May 2, 2014. The EBITDA margin pre one-time items amounted to 43.4% of sales.

Up until December 31, 2014, i.e. during the reporting period, Performance Materials consisted of four business units: Liquid Crystals, Pigments & Cosmetics, Advanced Technologies and AZ. Effective January 1, 2015, Performance Materials was organized into the following business units: Display Materials, Pigments & Functional Materials, Integrated Circuit Materials comprising the AZ business with specialty chemicals for use in integrated circuits (semiconductors), as well as Advanced Technologies.

The Liquid Crystals business, which became part of the Display Materials business unit on January 1, 2015, generated more than half of Performance Materials' sales in 2014. With a high market share, Merck KGaA, Darmstadt, Germany, has established itself as the global market and technology leader in liquid crystal mixtures. The market is highly consolidated. In addition, barriers to market entry exist due to the technological complexity of liquid crystals and the high quality requirements of customers and consumers. The seven largest LC display manufacturers are primarily among the customers of the Liquid Crystals business. The company has the broadest product offering in the industry and offers, among other things, liquid crystals based on PS-VA and IPS technologies. This enables Performance Materials to meet individual customer needs and offer solutions for all display sizes, from smartphones and tablet computers to large-size television screens. The Group is pursuing a strategy of leveraging its expertise in liquid crystals in order to develop new fields of application for innovative liquid crystal technology. On July 1, 2014, the company completely acquired Peer+, a Dutch specialist for smart window technology. The company has meanwhile been fully integrated. With the acquisition of its long-standing cooperation partner Peer+, the Group is further advancing the development of the future-oriented market for liquid crystal windows (LCW). The major innovation of liquid crystal windows lies in their continuously variable switching functionality from light to dark in just seconds. In January 2015, the first LCW panels were installed in the new modular Innovation Center in Darmstadt. At the same time, the new technology is being presented to a wider audience at exhibitions and congresses.

The Pigments & Functional Materials business unit develops and markets a comprehensive product portfolio of decorative effect pigments and functional materials. The effect pigments are primarily used in automotive and industrial coatings, plastics, printing applications, and cosmetics in order to give products a unique shine. Functional materials include laser marking, conductive additives and applications for counterfeit protection, as well as high-quality cosmetic active ingredients, for example for use in skin care, sun protection or insect repellants.

Merck KGaA, Darmstadt, Germany, completed the integration of AZ and its global workforce of around 1,100 employees according to schedule by the end of 2014. During the integration phase in 2014, AZ was treated as an independent business unit within Performance Materials for reporting purposes. On January 1, 2015, AZ was transferred to the Integrated Circuit Materials business unit. As a key partner to leading global electronics manufacturers, in 2014 AZ generated nearly 80% of its sales in Asia. AZ materials are widely used in integrated circuits, flat-panel displays and light-emitting diodes. The AZ portfolio thus optimally complements the range of materials offered by Performance Materials.

The Advanced Technologies business unit invests in future-oriented research and development, supporting the growth and sustainable competitiveness of Performance Materials. The business unit also manufactures and markets materials for organic light-emitting diodes (OLEDs), which are used in new lighting applications and display technologies. The performance of the OLED materials business was very positive in 2014. The demand for OLED materials from the company increased significantly, particularly in Asian countries. At the same time, the customer base expanded.

LIFE SCIENCE

The Life Science division has a broad product and technology portfolio and offers innovative solutions for scientists and engineers in the life science industry. Life science comprises the research branches of natural and engineering sciences concerned with the structure and behavior of living organisms. The Life Science division's products and services are used in the research, development and manufacture of biotechnological and pharmaceutical drug therapies, as well as in research and application laboratories. In addition, products and services from the Life Science division also reach adjacent markets, such as food and beverages. The Life Science division was established in 2010 following the acquisition of the Millipore Corporation. It is a leading supplier of life science tools.

In 2014, the Life Science division contributed 24% to Group sales and 19% to EBITDA pre one-time items (excluding Corporate and Other). The majority of sales are generated by consumables. This enables the Life Science division to achieve recurring sales and stable, attractive cash flows in an industry that is characterized by stringent regulatory requirements. A highly diversified and loyal customer base additionally ensures a favorable risk profile. At the same time, the Life Science division benefits from its broad portfolio and its global reach. The Life Science division comprises three business areas: Bioscience, Lab Solutions and Process Solutions, as well as multiple specialized business fields.

The main product groups of the Bioscience business area include tools and consumables for filtration and sample preparation, reagents and kits for cell biology experiments, as well as small tools and consumables for cell analysis. With these products, the Life Science division supports its customers in understanding complex biological systems and identifying new target molecules. The Bioscience business area accounted for 15% of the Life Science division's sales in 2014. Since innovation is a key component of Bioscience, the Life Science division offers complete and validated applications to make research processes faster and more efficient.

The Lab Solutions business area manufactures products for research as well as analytical and clinical laboratories in a wide variety of industries. The business area accounted for 41% of the Life Science division's sales in 2014. It is one of the leading suppliers of laboratory water equipment, laboratory chemicals and consumables. In addition, Lab Solutions develops and markets test solutions to identify microbial contamination, for example in pharmaceutical products, food and drinking water. For inorganic chemistry, Lab Solutions supplies ultrapure reagents, including salts, acids, caustic alkalis, and buffering agents. It also manufactures reference materials for instrumental analysis and products for inorganic trace analysis. In 2014, the Lab Solutions business area launched new Steritest™ Symbio Pumps for easier, safer and more reliable sterility testing of pharmaceutical products in laminar flow hoods, isolators and cleanrooms. The Steritest™ Symbio Pumps were developed to address stringent pharmaceutical testing requirements. The launch continues the Life Science division's 40-year legacy of providing groundbreaking sterility testing products.

Additionally, the Life Science division underlined its technology leadership with the announcement that its Chromocult® Coliform Agar (CCA) has been used by the International Organization for Standardization (ISO®) as the only suitable culture medium to develop a revised standard for enumerating coliform bacteria and E. coli in water samples to replace Lactose TTC Agar. The completely revised ISO® 9308-1 standard became effective on September 16, 2014.

The Process Solutions business area offers a diversity of products to pharmaceutical and biotechnology companies that enable customers to manufacture large- and small-molecule drugs safely, effectively and cost-efficiently. Accounting for 44% of the Life Science division sales in 2014, Process Solutions offers its customers continuous innovations, highest quality standards as well as high reliability of supply. In addition, the business area's portfolio comprises more than 400 chemicals for the synthesis of active pharmaceutical ingredients as well as drug delivery compounds. The offering in biotech production comprises products supporting cell growth and gene expression, a wide range of filtration systems, as well as salts and sugars. The single-use solutions offered by the Process Solutions business area provide increased operational flexibility to biopharmaceutical customers since they eliminate time- and cost-intensive cleaning procedures. Moreover, these single-use solutions are compatible with various products, reducing investment costs for customers.

On March 17, 2014, the Life Science division announced a clinical research, licensing and joint development agreement with Sysmex Corporation of Japan. This collaboration will use the Life Science division's flow cytometry technology as a platform to accelerate the creation of new, more powerful diagnostic tools for research in blood disorders. If successful, Sysmex and the Life Science division will collaborate on developing the imaging flow technology platform for future commercialization in hematology.

On May 15, 2014, Udit Batra, who formerly headed Consumer Health, took over the leadership of the Life Science division, succeeding Robert Yates as President and Chief Executive Officer.

On August 20, 2014, the Life Science division and Samsung BioLogics announced the signing of a Memorandum of Understanding for a strategic alliance in the biopharmaceutical business. The proposed alliance is intended to encompass a long-term supply agreement in which the Life Science division will provide raw materials for biopharmaceutical manufacturing.

On September 22, 2014, Merck KGaA, Darmstadt, Germany, and Sigma-Aldrich announced that they had entered into a definitive agreement under which the company will acquire Sigma-Aldrich for US$ 17.0 billion (€ 13.1 billion), establishing one of the leading players in the global life science industry. The closing of the transaction is expected in mid-2015, subject to regulatory approvals and other customary closing conditions.

OBJECTIVES AND STRATEGIES OF THE GROUP

In 2007, Merck KGaA, Darmstadt, Germany, launched a transformation process aimed at securing its future through profitable growth in highly specialized niche markets within today's Healthcare, Life Science and Performance Materials business sectors of Merck KGaA, Darmstadt, Germany.

This process started with the large-scale acquisitions of Serono SA in 2007 and the Millipore Corporation in 2010. In 2011, the company embarked on the "Fit for 2018" transformation and growth program with a new executive management team. In the first phase, the company created the foundation for profitable growth by introducing a new leadership organization and a comprehensive, Group-wide efficiency program. The second phase, which started in 2014, is aimed at successively implementing the growth options identified by establishing three strong platforms for sustainable profitable growth. Merck KGaA, Darmstadt, Germany, is building on its core competencies:

→ Closeness to existing businesses
→ Innovative strength
→ Customer proximity (to offer tailored solutions)
→ Focus on specialty businesses

Moreover, the company is aiming to expand its business model systematically and continuously to include new technologies and partnerships. In 2014, three important milestones were achieved in the implementation of the Group strategy:

→ Through the acquisition of AZ Electronic Materials, which was completed in May, the product base and new customer offerings were expanded by new technologies.
→ With the announcement of the planned acquisition of Sigma-Aldrich in September, the foundation was laid for enhancing the Group's position in the attractive life science industry. The aim of the planned merger is to offer customers a broader range of products and services as well as the industry's leading e-commerce platform.
→ With the November announcement of the agreement with Pfizer on a strategic alliance for anti-PD-L1, the Group wants to accelerate its presence in immuno-oncology by combining the strengths and capabilities of the two companies in the highly competitive anti-PD-1/anti-PD-L1 space. Up to 20 immuno-oncology clinical development programs are planned for commencement in 2015, including up to six pivotal registration studies. The alliance also has the potential to accelerate the company's entry into the U.S. oncology market through the co-promotion of Xalkori®.

In line with its strategic agenda and focus on three growth platforms, effective January 1, 2015, the company organizationally repositioned itself. The previous four divisions have been replaced by three **business sectors**:

→ **Healthcare** comprises the Biopharmaceuticals, Consumer Health, Allergopharma and Biosimilars businesses.
→ **Life Science** consists of the Life Science business.
→ **Performance Materials** corresponds to the business of the same name.

The strategic transformation into a specialist for innovative high-tech solutions in Healthcare, Life Science and Performance Materials is reflected by the composition of sales. Within the Healthcare business sector of Merck KGaA, Darmstadt, Germany, the Biopharmaceuticals business today generates more than 65 – 70 % of its sales with biopharmaceuticals. In 2006, there was only one such product, Erbitux®, which accounted for less than 10 % of sales. The classic Chemicals business has increasingly become a premium materials business that offers Merck KGaA, Darmstadt, Germany, customers a wide range of value-adding products. Today, high-tech materials and life science tools make up around 80 % of sales in the Life Science and Performance Materials business sectors of Merck KGaA, Darmstadt, Germany. In 2006, the share was around 30 %.

GENERAL PRINCIPLES AND GROUP STRATEGY

The year 2018 will mark the 350th anniversary of Merck KGaA, Darmstadt, Germany. The general principles of the "Fit for 2018" transformation and growth program and the Group strategy are to serve as a compass beyond 2018 as well.

General principles

In its business endeavors, the company orients towards general principles. They help those responsible within the company to shape strategic plans and to make decisions.

The structure of Merck KGaA, Darmstadt, Germany, with members of the Merck family as personally liable partners requires the Group Executive Board, whose members are also personally liable partners, to pay special attention to the long-term development of value. Therefore, sustainability plays a special role at the company. The objective is to align the long-term development of the company with the legitimate interests of shareholders, whose engagement in the Group is normally of a shorter duration. That

is why the business portfolio of Merck KGaA, Darmstadt, Germany, must always be balanced so that it reflects an optimum mix of entrepreneurial opportunities and risks. The company achieves this through diversification in the Healthcare, Life Science and Performance Materials business sectors of Merck KGaA, Darmstadt, Germany, as well as through its geographic breadth with respect to growth sources.

For Merck KGaA, Darmstadt, Germany, the principle of sustainability applies not only to economic aspects. Instead, it also encompasses responsibility for society and environmental preservation. With its current and future product portfolio, the company wants to help solve global challenges and shape a sustainable future. That is also why innovation is the basis of the company's business activities; it is the prerequisite for future growth. Merck KGaA, Darmstadt, Germany, is continually working on innovative products and services for patients and customers and relies on a continual process of internal innovation throughout all areas of the company.

Group strategy

The Group focuses on innovative and top-quality high-tech products in the Healthcare, Life Science and Performance Materials business sectors of Merck KGaA, Darmstadt, Germany. The company's goal is sustainable and profitable growth. Merck KGaA, Darmstadt, Germany, intends to achieve this by growing organically and by further developing its competencies, as well as by making targeted acquisitions that complement and expand existing strengths in meaningful ways. Building on leading products in all its businesses, the company aims to generate income that is largely independent of the prevailing economic cycles. Moreover, the aim is to further expand the strong market position in emerging markets in the medium to long term. In 2014, the Emerging Markets region contributed 38 % to Group sales.

STRATEGIC INITIATIVES

Capability initiatives

As the company continues to grow in size and the business becomes increasingly global, the Group is to be seen as ONE company. ONE Group stands not only for a strong brand, but also for a performance-oriented global company with a strong sense of "we". Merck KGaA, Darmstadt, Germany, is more than the sum of its parts. Therefore, the company has launched four capability initiatives.

The capability initiative **ONE Brand** aims to strengthen the value of the brand, to increase the company's global visibility and reputation and to become more attractive to customers, partners and talent globally.

The framework for talent development, compensation and performance management is to be harmonized globally (**ONE Talent Development, Rewards and Performance Management**). As part of this initiative, the company will focus on establishing a consistent and integrated talent and performance management process and improving the talent portfolio by proactively identifying and sourcing talent as well as ensuring workforce diversity.

The goal of the third capability initiative **ONE Process Harmonization, Standardization and Excellence** is to better coordinate processes and apply them consistently. This is particularly the case with software applications. Continuous improvement will take place through benchmarking. Ultimately, this will allow the company to adapt rapidly to business changes as well as to integrate future acquisitions both seamlessly and efficiently.

The importance of the Group's global headquarters in Darmstadt is to increase along the lines of **ONE Global Headquarters**. The company in Darmstadt is to become a vibrant home for creativity, scientific exchange and innovation. By laying the cornerstone for a modular Innovation Center in 2014, the company created the basis for cross-functional and Group-wide cooperation on projects.

Business initiatives

Furthermore, Merck KGaA, Darmstadt, Germany, has set up a range of business initiatives in order to expand the existing portfolio as well as to capture new business opportunities. The following initiatives are of major significance:

Biosimilars

The company wants to use its expertise in developing, manufacturing and commercializing high-quality biotechnological medicines in order to create a competitive biosimilars portfolio. The focus is on developing molecules through in-house research and development as well as through partnerships.

Research & Development at the Biopharmaceuticals business

The Biopharmaceuticals business introduced a more entrepreneurial model to elevate the performance dynamics of its research and development. Based on Translational Innovation Platforms (TIPs), the Biopharmaceuticals business wants to foster long-term planning and an entrepreneurial mindset, validated by an independent advisory board of external experts (see below).

OLEDs

Performance Materials aims to further expand its global leadership position in display materials. The Group expects OLED technology to increase in importance in the future. Performance Materials is therefore investing in developing a comprehensive OLED portfolio. By 2018, Merck KGaA, Darmstadt, Germany, aims to be a leading supplier of OLED materials.

BUSINESS STRATEGIES

Healthcare business sector

Biopharmaceuticals

The Biopharmaceuticals business aims to become a preferred global biopharmaceutical partner through its enduring commitment to transforming patients' lives with innovative specialty medicines, leading brands and high-value solutions. Global megatrends such as world population growth and a general increase in life expectancy are bolstering the demand for the Biopharmaceuticals business' products. The Biopharmaceuticals business is well-positioned for sustainable growth.

The first pillar of the Biopharmaceuticals business' strategy is to deliver innovation globally. The portfolio decision-making process has been improved and a rigorous project prioritization implemented with shorter timelines to phase transitions. Efficiency in R&D has been strengthened with the development of biomarkers to improve patient outcomes, with a focus on selected core therapeutic areas and with the creation of Translational Innovation Platforms. The Biopharmaceuticals business has three priority development programs: atacicept in immunology, evofosfamide (TH-302) in oncology and avelumab in immuno-oncology, an anti-PD-L1 antibody that the Biopharmaceuticals business will develop and commercialize with Pfizer as a potential treatment for multiple tumor types.

The second pillar of the Biopharmaceuticals business' strategy is to maximize the existing portfolio in developed markets. In the Multiple Sclerosis franchise, the vision is to remain a leader by providing innovative solutions that include drugs, devices and services to help people living with multiple sclerosis. The Biopharmaceuticals business plans to fully exploit the potential of Rebif®, its top-selling product, in an increasingly competitive multiple sclerosis market and to position it as the best interferon-based therapeutic option for patients who suffer from the relapsing form of the disease, driving differentiation via smart injection devices and the first multiple sclerosis e-Health platform. In Fertility, the focus is on expanding market leadership and on providing innovative services and technologies beyond drugs. In Oncology, the Biopharmaceuticals business promotes the value of Erbitux® to personalized treatments, especially in Europe and Japan, and emphasizes the importance of offering patients complete testing for RAS status in order to ensure optimum treatment. The Biopharmaceuticals business will also ensure launch readiness in these innovation-driven markets. Through the co-promotion of Xalkori® with Pfizer, the Biopharmaceuticals business is entering the U.S. oncology market and preparing for the future launch of its anti-PD-L1 antibody.

The third pillar of the Biopharmaceuticals business strategy is to expand further in Emerging Markets. With a growing middle class, extended health care coverage, a shift towards chronic diseases, and rising demand for biologics, Emerging Markets are a key driver for the Biopharmaceuticals business, accounting for over 60% of organic growth between 2011 and 2013. In Emerging Markets, the Biopharmaceuticals business is implementing strategic growth initiatives in its General Medicine and specialty medicine franchises to address specific needs. The Biopharmaceuticals business is leveraging capabilities and local channels, for example by extending the breadth and depth of promotion in China, expanding its portfolio via regional and local licensing, and supporting market developments in Fertility. The Biopharmaceuticals business is also investing selectively and growing its flagship brands with new formulations (Euthyrox® or Glucophage®), fixed-dose combinations (Concor®) and devices (Saizen®). The Biopharmaceuticals business is repatriating business, taking back the promotion of Merck KGaA, Darmstadt, Germany, products from industry partners where attractive. And it is expanding the focus of its portfolio with growth initiatives in biologics.

Biosimilars

The Biosimilars business is committed to providing access to high-quality biologics to more patients all over the globe. The unit is developing a biosimilars portfolio focused on oncology and inflammatory disorders, through both in-house research and development expertise in biologics, and partnerships with other biosimilar players. The initiation of Phase III trials is planned for 2015/2016 onwards. Biosimilars is an attractive market in which the company is well-positioned as it can build on existing strengths and capabilities across the biosimilars value chain. This includes the ability to leverage internal assets or source capabilities from suppliers to ensure compliance with regulatory requirements, secure market access across key markets such as the Emerging Markets region, leverage commercial manufacturing capabilities and flexibility, as well as adopt a tailored go-to-market approach. The company has also established strategic alliances with Dr. Reddy's in India to co-develop several oncology compounds and with Bionovis in Brazil to supply the Brazilian market with biological products under the Product Development Partnership (PDP) policy of the Brazilian Ministry of Health.

This is to be expanded by another, as yet undisclosed in-licensing agreement for a late-stage biosimilar.

Allergopharma

The market for causal allergy therapies is a global growth market. On the one hand, the global market growth expected by market researchers will be generated by an increasing number of people with allergies, and on the other hand it is based on the growing use of specific immunotherapy (SIT) in many emerging markets. Allergopharma is a manufacturer of diagnostics and prescription drugs for allergen immunotherapy (AIT). AIT (hyposensitization, desensitization, allergy immunization) is the only causal therapy for treating allergies to unavoidable allergens. AIT is primarily carried out by physicians who specialize in allergies, such as ENT doctors, dermatologists, pediatricians and pulmonologists. With its own research department and in cooperation with research institutes and other partners, the Group is helping develop a better understanding of the immunological mechanism that underlies the development of allergies and is actively working on the next generation of drugs for allergen immunotherapy. Plans to expand production in Reinbek near Hamburg in 2016, thus expanding capacity, will advance global expansion and will also help to meet the increasingly high manufacturing standards. As was previously the case, products to diagnose and treat type 1 allergies such as hay fever or allergic asthma will be manufactured here under ultrapure, sterile conditions.

Consumer Health

In 2012 and 2013, Consumer Health undertook steps to strategically realign the internal organization while sharpening its focus on core brands and particularly attractive key markets. In 2014, Consumer Health forged ahead with its growth agenda, particularly in the emerging markets of Latin America and Southeast Asia. As a result, Consumer Health achieved organic sales growth of 5.4 %, clearly exceeding general market growth. To this end, the company is pursuing a clear strategy: The aim is for Consumer Health to achieve a market share of at least 3 % by 2021 in each of its top 20 markets (including France, Mexico, Brazil, Germany, Indonesia, India, and the United Kingdom), with at least three brands in leading positions.

An important milestone within the framework of this strategy was the transfer of the Neurobion® and Floratil® brands from the former Biopharmaceuticals division to Consumer Health in 2014. Neurobion® is a leading global brand in the vitamin B segment and Floratil® is a leading brand in the probiotic antidiarrheal segment in Brazil. Following their transfer to Consumer Health in 2014, both brands clearly demonstrated potential to focus more closely on consumer wishes and needs in core markets. For instance, the growth of Floratil® in the key market of Brazil increased more than tenfold. Further important components of implementing the "3 x 3" strategy are geographic expansion of existing brands into new markets, such as the recent market launch of the Bion® brand in Brazil, as well as possible inorganic growth through tactical takeovers and product acquisitions, as long as these are in line with the strategic direction.

Life Science business sector

Life Science

The Life Science business is one of the leading players in the attractive global life science tools industry. The business has a global presence across the laboratory and process markets – two broad customer sub-segments with differing needs. The strategy in laboratory markets is based on three success factors: a broad and attractive portfolio, a simple customer interface and an organization able to deal with complexity, for example more than 70,000 products serving over 1 million customers. The three key success factors for the process markets strategy are a deeply technical field force, product depth in developed markets as well as portfolio breadth in emerging markets.

The Life Science business will focus on expanding its presence across laboratories in emerging geographies as well as gaining share of wallet in North America. The Life Science business aims to continue to grow above market by accelerating growth in the process solutions and key laboratory businesses. This includes maintaining above-market R&D investments to remain on the innovation forefront, solving customer needs and delivering sustainable, profitable growth.

The planned acquisition of Sigma-Aldrich would establish one of the leading players in the life science industry, fostering key capabilities fully in line with the Life Science business' strategy.

Performance Materials business sector

Performance Materials

The demand for high-tech products in general and for innovative display solutions in particular has seen high global growth in recent years. This trend is not expected to weaken in the coming years. Instead, the Group assumes that increasing demand for these types of consumer goods will come from a growing middle class in emerging markets. Therefore Performance Materials will defend its position as the market and technology leader for liquid crystals and further expand it as far as possible.

Since the typical life cycle of LC mixtures is less than three years, innovation will remain the key success factor. The liquid crystals pipeline of Performance Materials is well-stocked with new technologies such as self-aligned vertical alignment (SA-VA), advanced fringe field switching (FFS), as well as projects with applications beyond displays.

The Group's OLED business, which is part of the Advanced Technologies business unit, posted strong, above-average growth in 2014. Performance Materials wants to further position itself in the OLED market and play a leading role in this market segment in the medium to long term. Lower production costs for OLED displays are a precondition for this. External partnerships will also be used in the future to ensure the required exchange of technology and expertise.

The acquisition of AZ Electronic Materials has sustainably strengthened the portfolio and the market position of Performance Materials. All integration measures were successfully implemented in 2014, adding a further premium business to the existing profitable businesses. AZ is a manufacturer of ultrapure, innovative specialty chemicals and materials for use in integrated circuits (semiconductors) and equipment, in flat-panel displays, and for photolithographic printing. Both Performance Materials and AZ have very similar and attractive business models based on innovation, customer proximity, high market share and profitability in the growth areas of displays, semiconductors, organic electronics, and lighting.

Within its Pigments & Functional Materials business unit, the company continues to focus on high-quality brands that add value for customers as well as on market segments with growth potential. These include effect pigments, e.g. for automotive coatings, and functional materials, e.g. for laser marking.

STRATEGIC FINANCIAL AND DIVIDEND POLICY

For reasons of sustainability, Merck KGaA, Darmstadt, Germany, generally follows a conservative financial policy. Apart from a solid balance sheet with transparent and healthy structures, this policy is reflected by the selection of financing sources, liquidity management, key financial indicators, the dividend policy, and risk management. The company generates high business free cash flow and its return on capital employed has been sustainably maintained at a high level.

In the context of the ongoing Group-wide efficiency program, in the past years cash was reserved with high priority to fund restructuring measures across all divisions and regions. In 2014, liquid funds were then used in particular for the acquisition of AZ Electronic Materials (Performance Materials).

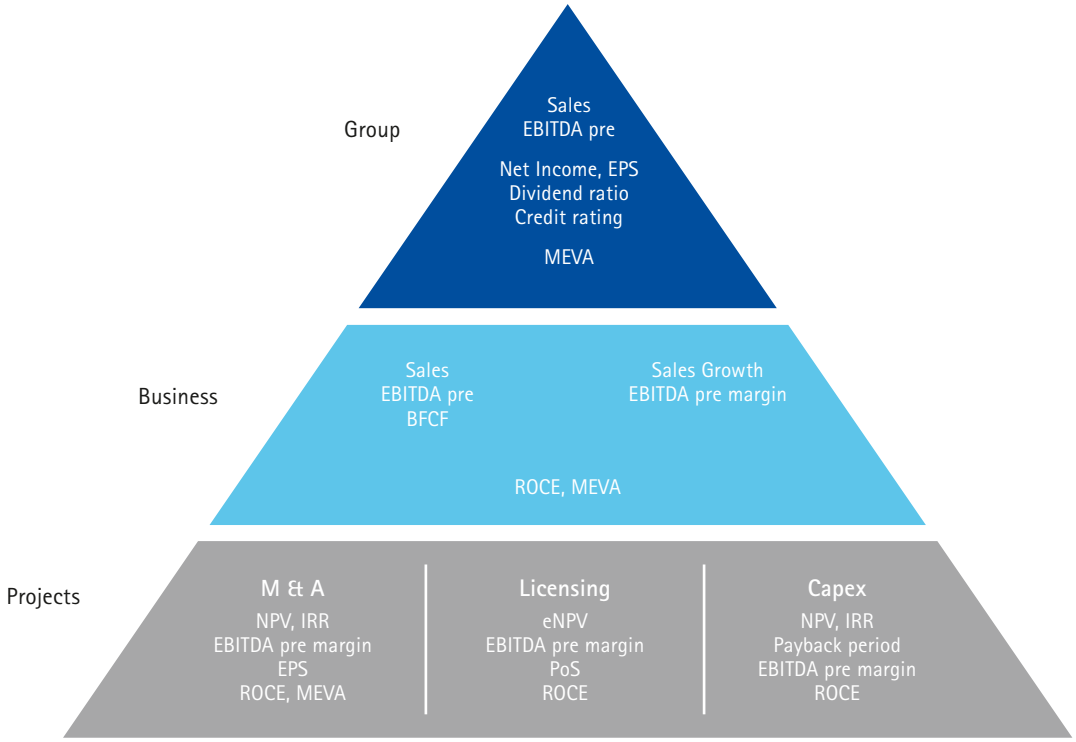
One-time expenses in connection with restructuring measures as well as costs related to the integration of acquired businesses have also been assumed for 2015. With the planned acquisition of Sigma-Aldrich (Life Science) in 2015 – subject to the successful closing of the transaction – liquid funds would likewise again be used for inorganic growth. Accordingly, in the coming years, the repayment of the financial liabilities taken up in connection with this acquisition would be at the fore, along with the associated ongoing interest payments. In this case, initial one-time expenses for the integration could already be incurred then. However, smaller, so-called bolt-on acquisitions are still not ruled out. In addition, the company will also invest in organic growth initiatives as part of its "Fit for 2018" transformation and growth program.

The Group is pursuing a sustainable dividend policy. Provided that the economic environment develops in a stable manner, the current dividend represents the minimum level for future dividend proposals. The dividend policy follows the business development and earnings increase of the coming years. However, dividend growth could deviate, e.g. within the scope of restructuring or in the event of significant global economic developments. The company also aims for a target corridor of 20 – 25% of EPS pre one-time items.

INTERNAL MANAGEMENT SYSTEM OF THE GROUP

As a global company with a diverse portfolio of products and services, Merck KGaA, Darmstadt, Germany, uses a comprehensive framework of indicators to manage performance. The most important KPI (key performance indicator) to measure performance is EBITDA pre one-time items.

The Value Creation and Financial KPI Pyramid, which summarizes the important financial performance measures of the Group, reflects the comprehensive framework of financial KPIs to steer the businesses and prioritize the allocation of cash resources. It consists of three managerial dimensions, which require the use of different indicators: Group, Business and Projects.



Abbreviations

EBITDA pre = Earnings before interest, income tax, depreciation and amortization pre one-time items
EPS = Earnings per share
MEVA = Value added of Merck KGaA, Darmstadt, Germany
BFCF = Business free cash flow
ROCE = Return on capital employed
NPV = Net present value
IRR = Internal rate of return
eNPV = expected Net present value
PoS = Probability of success

KEY PERFORMANCE INDICATORS OF THE GROUP AND ITS BUSINESSES

The three key performance indicators sales, EBITDA pre one-time items[1], and business free cash flow[1] are the most important factors for assessing operational performance. Reference to these KPIs can therefore be found in the Report on Economic Position, the Report on Risks and Opportunities, and in the Report on Expected Developments. As the most important indicators of the Group's financial business performance, the KPIs are key elements of the company's performance management system.

Sales

Sales are defined as the revenues from the sale of goods and services rendered to external customers net of value added tax and after sales deductions such as rebates or discounts. Sales are the main indicator of business growth in the Group and therefore an important parameter of external as well as internal performance measurement.

GROUP →
SALES

€ million / change in %	2014	2013	Change
Sales	**11,291.5**	**10,700.1**	**5.5**

EBITDA pre one-time items

EBITDA pre one-time items is the main performance indicator measuring ongoing operational profitability and is used internally and externally. To allow for a better understanding of the underlying operational performance, it excludes from the operating result depreciation and amortization as well as one-time items. One-time items are restricted to the following categories: impairments, integration costs / IT costs, restructuring costs, gains / losses on the divestment of businesses, acquisition costs, and other one-time items. The classification of specific income and expenses as one-time items follows clear definitions and underlies strict governance at Group level. Within the scope of internal performance management, EBITDA pre allows for the necessary changes or restructuring without penalizing the performance of the operating business.

GROUP →
RECONCILIATION EBIT TO EBITDA PRE ONE-TIME ITEMS

€ million / change in %	2014	2013	Change
Operating result (EBIT)	**1,762.0**	**1,610.8**	**9.4**
Depreciation and amortization	1,261.6	1,237.9	1.9
Impairment losses / Reversals of impairment losses	99.3	220.5	– 55.0
EBITDA	**3,122.9**	**3,069.2**	**1.7**
Restructuring costs	83.9	130.5	– 35.7
Integration costs / IT costs	87.2	49.0	78.0
Gains / losses on the divesment of businesses	–1.9	2.3	–182.6
Acquisition-related one-time items	85.0	0.0	–
Other one-time items	10.6	2.3	365.2
EBITDA pre one-time items	**3,387.7**	**3,253.3**	**4.1**

[1] Financial indicators not defined by International Financial Reporting Standards.

Business free cash flow (BFCF)

Business free cash flow comprises the major cash-relevant items that the individual businesses can influence and are under their full control. It sums up EBITDA pre one-time items less investments in property, plant and equipment, software, advance payments for intangible assets, as well as changes in inventories and trade accounts receivable. To manage working capital on a regional and local level, the businesses use the two indicators days sales outstanding and days in inventory.

GROUP →
BUSINESS FREE CASH FLOW

€ million / change in %	2014	2013	Change
EBITDA pre one-time items	**3,387.7**	**3,253.3**	**4.1**
Investments in property plant and equipment and software as well as advance payments for intangible assets	– 527.5	– 446.2	18.2
Changes in inventories as reported in the balance sheet	–185.5	59.7	–
Changes in trade accounts receivable as reported in the balance sheet	– 214.2	93.2	–
Adjustment first-time consolidation of AZ Electronic Materials S.A.	144.6	–	–
Business free cash flow	**2,605.1**	**2,960.0**	**–12.0**

INVESTMENTS AND VALUE MANAGEMENT

Sustainable value creation is essential to secure the long-term success of the company. To optimize the allocation of financial resources, the Group uses a defined set of parameters as criteria for the prioritization of investment opportunities and portfolio decisions.

Net present value

The main criterion for the prioritization of investment opportunities is net present value. It is based on the discounted cash flow method and is calculated as the sum of the discounted free cash flows over the projection period of a project. Consistent with the definition of free cash flow, the weighted average cost of capital (WACC), representing the weighted average of the cost of equity and cost of debt, is used as the discount rate. Depending on the type and location of a project different mark-ups are applied to the WACC.

Internal rate of return (IRR)

The internal rate of return is a further important criterion for the assessment of acquisition projects and investments in property, plant and equipment. It is the discount rate that makes the present value of all future free cash flows equal to the initial investment or the purchase price of an acquisition. A project adds value if the internal rate of return is higher than the weighted cost of capital including mark-ups.

Return on capital employed (ROCE)

In addition to NPV and IRR, ROCE is an important metric for the assessment of investment projects. It is calculated as the operating result (EBIT) pre one-time items divided by the sum of property, plant and equipment, intangible assets, trade accounts receivable and trade accounts payable, as well as inventories.

Payback period

An additional parameter to prioritize investments into property, plant and equipment is the payback period, which indicates the time in years after which an investment will generate positive net cash flow.

Value added of Merck KGaA, Darmstadt, Germany (MEVA)

MEVA gives information about the financial value created in a period. Value is created when the return on capital employed (ROCE) of the company or the business is higher than the weighted average cost of capital (WACC). MEVA metrics provide the Group with a powerful tool to weigh investment and spending decisions against capital requirements and investors' expectations.

CAPITAL MARKET-RELATED PARAMETERS

Net income and earnings per share (EPS)

Earnings per share are calculated by dividing profit after tax attributable to the shareholders of Merck KGaA, Darmstadt, Germany, (net income) by the weighted average number of theoretical shares outstanding. The use of a theoretical number of shares takes into account the fact that the general partner's capital is not represented by shares. To provide a more comparable view, the company also publishes EPS pre, which excludes one-time items and amortization of intangible assets and is based on the company's underlying tax ratio.

Credit rating

The rating of the credit worthiness of Merck KGaA, Darmstadt, Germany, by external agencies is an important indicator with respect to the company's ability to raise debt capital at attractive market conditions. The capital market makes use of the assessments published by independent rating agencies in order to assist debt providers in estimating the risks associated with a financial instrument. The company is currently assessed by Moody's and Standard & Poor's (S&P). The most important factor for the credit rating is the ability to repay debt, which is determined in particular by the ratio of operating cash flow to (net) financial debt.

Dividend ratio

With the aim of ensuring an attractive return to shareholders, Merck KGaA, Darmstadt, Germany, pursues a reliable dividend policy with a target payout ratio based on EPS pre one-time items (see definition above).

OTHER RELEVANT/NON-FINANCIAL PERFORMANCE MEASURES

Apart from the indicators of the financial performance of the businesses, non-financial measures also play an important role in furthering the success of the company. From a Group perspective, specifically innovations in the businesses as well as the attraction and retention of highly qualified employees are of central importance.

Innovation

Innovation is the foundation of the business and will also be the prerequisite for future success in changing markets. Merck KGaA, Darmstadt, Germany, is continuously working to develop new products and service innovations for patients and customers. Indicators for the degree of innovation are defined individually depending on the specifics of the respective businesses.

Talent retention

Employing a highly qualified and motivated workforce is the basis for achieving the Group's ambitious business goals. Therefore, the company puts a strong focus on establishing the processes and the environment needed to attract and retain the right talent with the right capabilities at the right time. To measure the success of the related measures, the Group has implemented talent retention as an important non-financial indicator.

CORPORATE RESPONSIBILITY

Responsible conduct plays a key role in the company's corporate culture – with respect to employees, products, the environment, and society. Over the course of nearly 350-year history of Merck KGaA, Darmstadt, Germany, the principle of corporate responsibility has become a firm pillar of corporate governance. It is part of daily conduct and is thus a fundamental prerequisite for the Group's business success.

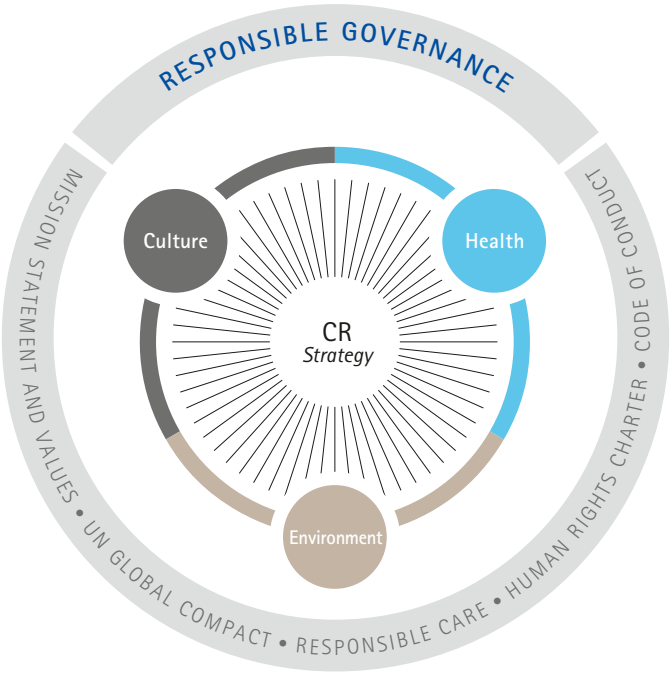
STRATEGY AND MANAGEMENT

Our corporate responsibility (CR) activities are directed by our Group-wide CR Committee, which consists of representatives from the businesses and relevant Group functions. Stefan Oschmann, Vice Chairman of the Executive Board, became chairman of this committee in January 2015. As a global company, our ambition is to create added value for consumers, market partners and the community while also helping them lead better lives.

Mankind is confronted with global societal challenges such as climate change, resource scarcity and insufficient access to health in low- and middle-income countries. We believe that we can help resolve these global challenges through our innovative products in the Healthcare, Life Science and Performance Materials sectors, as well as through responsible governance.

All of our CR activities come under the umbrella of "responsible governance" (see page 63 et seq.). Based on our corporate strategy, at the end of 2014 we selected three strategic spheres of activity from our CR framework in which we seek to excel. Our aim is to hone the Group's competitive edge while helping to sustainably secure its future.

CORPORATE RESPONSIBILITY AT THE GROUP →



→ **Health:** We aim to help underserved populations in low- and middle-income countries to gain access to high-quality health solutions.
→ **Environment:** A number of our innovative chemical and life science products contribute to environmental protection or help our customers conserve energy.
→ **Culture:** Culture inspires people and opens up their minds to new possibilities. As a high-tech, research-based company, we therefore promote cultural projects worldwide. Moreover, we are engaged in educational projects, especially since education is key to making culture accessible.

Merck KGaA, Darmstadt, Germany, supports relevant initiatives concerning responsible governance. The company is a member of the United Nations Global Compact and is committed to complying with the compact's principles regarding human rights, labor standards, environmental protection and anti-corruption. Moreover, we also live our corporate responsibility through our commitment to follow the guidelines of the Responsible Care Global Charter, an initiative of the International Council of Chemical Associations (ICCA). This charter aims to continuously improve the products and services of the chemical industry in terms of environmental protection, health, plant safety and security. The Group was among the first companies to sign the revised version of the Responsible Care Global Charter. In addition, we are a member of the "Chemie³" initiative, a collaboration between the German Chemical Industry Association (VCI), the German Employers' Federation of the Chemical Industry (BAVC), and the German Mining, Chemical and Energy Industrial Union (IG BCE). As part of this globally unique collaboration, the partners aim to make sustainability a core part of the chemical industry's guiding principles and to jointly drive the sector's position within the German economy as a key contributor to sustainable development.

To the Group, corporate responsibility does not merely mean taking action, but also listening. The dialogue with our various stakeholder groups is therefore highly important to us. These stakeholders include our employees, our business associates, the Merck family, investors, regulatory agencies, and associations. We also engage in a continuous exchange in order to create transparency and clearly demonstrate how we live the Group's Values. One example of this exchange is a conference held on the topic of "Germany needs the chemical industry. Sustainability – a prerequisite for growth and prosperity?", which the company held in September 2014 in collaboration with its Chemie³ partners, VCI, BAVC and IG BCE. The sustainability conference took place during the German event series entitled "The Chemistry is Right in Darmstadt", which the company, Darmstadt – the city of science, and the Technical University of Darmstadt are offering from September 2014 to June 2015. To prepare for the conference, the Group organized an expert workshop in July 2014 with representatives from the worlds of politics, business and society.

Thanks to good performance with respect to responsible, sustainable entrepreneurial conduct, the company was again included in the FTSE4Good index in 2014. To be included in this leading international sustainability index, a company must demonstrate socially conscientious, ecological and ethical conduct. In 2014, Merck KGaA, Darmstadt, Germany, maintained its good position in other major sustainability indices as well. For instance, we were once more included in the STOXX Global ESG Leaders index. Moreover, the company has remained listed on the Euronext Vigeo Eurozone 120 index, which features the 120 most progressive companies in Europe in terms of ecological, social and governance-related criteria.

STRATEGIC SPHERE OF ACTIVITY: HEALTH

Access to Health (A2H) is a strategic priority for Merck KGaA, Darmstadt, Germany (see page 26 et seq.). Through our A2H approach, which spans all our businesses, we aim to help improve sustainable access to high-quality health solutions for underserved populations and communities in low- and middle-income countries. Recognizing that access is a complex and multifaceted challenge with no one-size-fits-all solution, our programs and initiatives are tailored to global, regional and local needs. We realize that we cannot work alone to address all the access gaps and that partnerships, collaboration and dialogue are key to delivering sustainable access results.

Stefan Oschmann, Vice Chairman of the Executive Board, plans to focus his presidency of the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) on accelerating access to high-quality health solutions for people in low- and middle-income countries. Oschmann was elected President of the IFPMA for a two-year term at the 27th IFPMA Assembly in New York, USA in November 2014.

In November 2014, the Access to Medicine Foundation of the Netherlands recognized our efforts to improve access to health. In the 2014 Access to Medicine Index, the company ranked sixth, moving up two places compared to 2012 and 11 places compared to 2010. Every two years, the index assesses the world's leading pharmaceutical companies with respect to their activities and initiatives to promote access to medicine in developing countries.

The company's holistic Access to Health strategy focuses on four areas, known as the "4As of Access" framework: Availability, Affordability, Awareness, and Accessibility. In its ranking, the Access to Medicine Foundation particularly recognized the Group for its strategic and comprehensive access approach and its access initiatives.

Availability

Availability entails the research, development and refinement of health solutions that address unmet needs and are tailored to local environments. Through partnerships and innovative alliances, Merck KGaA, Darmstadt, Germany, is working to tackle diseases most affecting developing countries. One example is our engagement within the Pediatric Praziquantel Consortium. Through this public-private partnership, the Group is developing a pediatric formulation of praziquantel to treat the worm disease schistosomiasis. In March 2014, the consortium was awarded a prestigious research grant from the Japanese Global Health Innovation Technology Fund. Another example is our partnership with the non-profit research foundation Medicines for Malaria Venture, to develop new anti-malarials.

Affordability

Merck KGaA, Darmstadt, Germany, seeks to address affordability challenges by providing assistance to those who are unable to pay for the health solutions they need. To tackle these challenges, we have taken a pro-access approach through our intellectual property initiatives and are engaging in equitable pricing strategies. In 2014, the Group joined WIPO Re:Search, an open innovation platform sponsored by the World Intellectual Property Organization. With over 90 members worldwide, the platform accelerates early discovery for infectious diseases through intellectual property and knowledge sharing. Furthermore, the company is supporting the World Health Organization (WHO) in the fight against the worm disease schistosomiasis in Africa. The company donates Cesol® 600 tablets containing the active ingredient praziquantel to WHO. In 2014, the Group's donation to WHO amounted to more than 72 million tablets. Since the start of the program, over 54 million patients, primarily children, have been treated. At the end of 2014, the company joined with partners to establish the Global Schistosomiasis Alliance in order to help eliminate schistosomiasis worldwide.

Awareness

Merck KGaA, Darmstadt, Germany, contributes to raising awareness by providing health workers, communities and patients with appropriate tools, knowledge, information and skills to help them make informed decisions. In its report on the Guiding Principles on Access to Healthcare (GPAH), the corporate network Business for Social Responsibility (BSR) recognized the Access Dialogues initiated by Merck KGaA, Darmstadt, Germany, as a best practice for information exchange and discussion between public and private stakeholders. In India, the Group initiated the Suswastha project. The aim is to provide underserved rural populations with affordable health solutions and to engage patients through community-level meetings as well as educative health programs. The Global Pharma Health Fund, a charitable organization funded by Merck KGaA, Darmstadt, Germany, fights counterfeit medicines in developing countries and emerging economies. Additionally, within the scope of the Capacity Advancement Program (CAP) of Merck KGaA, Darmstadt, Germany, the company seeks to improve access to and the quality of diabetes treatment in Africa and India.

Accessibility

Merck KGaA, Darmstadt, Germany, promotes initiatives to strengthen supply chains and to develop localized health solutions in order to deliver and reach out efficiently at the point of care. One example is the Group's Temptation Project, which uses heat and humidity sensors to monitor transportation conditions of all its products shipped from Europe to the rest of the world. Furthermore, the company supports the expertise and training of managers in Africa, Asia and Latin America to strengthen local quality manufacturing standards. The BSR GPAH status report recognized the River Ambulance in India as an innovative approach to reaching underserved populations. The company supports the non-governmental organization River Narmada Samagra, which among other things transports health workers and provides solutions to local populations living in the remote region along the Narmada River.

STRATEGIC SPHERE OF ACTIVITY: ENVIRONMENT

Through our products, we are helping to overcome global challenges such as climate change and resource scarcity. At the same time, we are also helping our customers achieve their own sustainability goals.

Developing sustainable products

We strive to continuously enhance the sustainability footprint of our products and are working to offer our customers products that enable them to reduce the negative impact of their own activities, as well as to achieve their own sustainability goals. For instance, we are developing innovative materials for energy-efficient liquid crystal and OLED displays and are thus helping our customers develop environmentally sustainable processes. Thanks to liquid crystals from Merck KGaA, Darmstadt, Germany, displays consume approximately 20% less energy in comparison to the preceding generation of technology. The new UB FFS technology (ultra-brightness fringe field switching) provides displays with up to 15% more light transmittance, thus further reducing energy consumption. Merck KGaA, Darmstadt, Germany, is also developing liquid crystals for new applications. For instance, we are working with architects, glass makers and facade manufacturers to create the windows of tomorrow. Our ambitious goal is to use smart windows to make buildings more energy-efficient.

Within the scope of our cosmetic products business, we are working to sustainably procure and produce cosmetic ingredients as well as optimize the related production processes. In dialogue with our customers from the cosmetics industry, we are also developing cosmetic formulations that meet strict sustainability criteria and address the current trend towards more natural cosmetics. Several of our products have been certified by Ecocert, an independent organization that represents high international standards for environmentally sustainable products.

At the Life Science business, the Design for Sustainability (DfS) program is especially aimed at reducing environmental impacts, also through customers' own use, for example their greenhouse gas emissions and water use. In 2014, the Life Science business completed the integration of the DfS approach into the product development process. Beginning with the concept stage, product teams identify potential environmental impacts in various product life cycle stages as well as opportunities to make improvements. A scorecard is used to assess product designs in six focus categories: Materials, Energy and Emissions, Waste, Water, Packaging, as well as Usability and Innovation.

Additionally, the Group fosters its employees' ideas for new businesses through its Innospire program. In 2014, the program centered on the topics of energy conservation, conversion and efficiency, water treatment, water quality analyses, and efficient water consumption, along with patient focus, personalized medicine and digital / mobile health. The employees of Merck KGaA, Darmstadt, Germany, were called upon to submit suggestions for new materials and systems, as well as for new business models. During the 2014 Innospire program, 300 ideas were submitted, including some that pertained to the aforementioned topics.

STRATEGIC SPHERE OF ACTIVITY: CULTURE

Cultural promotion is a core element of our engagement in society that reflects the company's centuries-old tradition of supporting art and culture. After all, culture nurtures characteristics that are indispensable to our business activities as a high-tech company: creativity, enthusiasm for new discoveries and the courage to transcend boundaries. Our cultural engagement focuses on music, literature and education.

Deutsche Philharmonie of Merck KGaA, Darmstadt, Germany

The Deutsche Philharmonie of Merck KGaA, Darmstadt, Germany, is our musical ambassador. We consider classical music to be the universal language that brings people together; as such, it represents an important part of our culture. The concerts of this professional ensemble are highly popular, with around 26,000 people attending them per year. They represent an integral part of the cultural life in the vicinity of our global headquarters in Darmstadt. Special events for children and adolescents as well as collaboration with schools, such as the orchestra workshop held once a year since 2010, aim to make classical music more accessible to young people.

Additionally, the Deutsche Philharmonie of Merck KGaA, Darmstadt, Germany, regularly invites international ensembles to play in Darmstadt while also touring the globe itself. In 2014 the orchestra gave a charity concert in the United Arab Emirates to raise money for patients with multiple sclerosis.

Fostering literature

Literature can stimulate the imagination; it can alleviate fears and give courage. Literature can also address scientific topics, thus furthering a deeper understanding of science and research. Through our engagement, we aim to help society better accept science and scientific progress. In addition, as an international company, we foster writers who further cultural exchange in our globalized world.

The company grants and promotes four literary prizes worldwide. Since 1964, we have been sponsoring the renowned Johann Heinrich Merck Award for Literary Critique and Essay, which is presented by the German Academy for Language and Poetry at its annual autumn conference. The award, which comes with a € 20,000 prize, went to publicist Carolin Emcke in 2014.

For 12 years, Merck KGaA, Darmstadt, Germany, has been sponsoring the Premio Letterario of Merck KGaA, Darmstadt, Germany, in Italy. This award is worth € 10,000 and recognizes authors who build bridges between literature and science, thereby making them accessible to a wide audience. In 2014, the award went to Carlo Rovelli, an Italian physicist, and to Francisco Gonzales-Crussi, a Mexican physician and writer.

In India, the company collaborates with the Goethe-Institut Calcutta to present the Merck Tagore Award of Merck KGaA, Darmstadt, Germany, which is worth 500,000 Indian rupees (around € 7,200); this literary prize is granted every two years to

authors who have made a distinctive contribution to the cultural exchange between Germany and India. In April 2014, the award went to Professor Pramod Talgeri, Vice-Chancellor of the India International Multiversity.

In October 2014, the company and the Goethe-Institut Tokyo presented the first-ever Merck Kakehashi Literature Prize of Merck KGaA, Darmstadt, Germany. Worth a total of € 20,000, this award is granted to contemporary works by German authors that are made accessible to a wider readership in Japan. The prize went to German author Arno Schmidt for his book "Seelandschaft mit Pocahontas" (Lake Scenery with Pocahontas) and to the book's Japanese translator, Jun Wada.

Education

We view education as a key component of culture – and vice versa. Education can help us understand culture. But culture can also build a bridge to education; it can stimulate curiosity and nurture creativity. We therefore support educational projects at many of our sites, by granting scholarships for instance, or sponsoring specific classes. In order to promote young scientists, for example, the Group has been organizing the renowned annual "Jugend forscht" competition for the German federal state of Hesse every year since 1996.

RESPONSIBLE GOVERNANCE

Responsible business practices form the foundation of our operating business. We minimize ethical, economic and legal risks so as to secure the Group's license to operate. We take responsibility for our products, our employees, the environment and the community.

Responsibility for our products

The safety of our products is at the core of our corporate responsibility. As long as used properly, our products should pose no risk to customers or the environment, nor should our pharmaceuticals have a negative benefit-risk evaluation. We therefore examine safety across the entire life cycle of our products and continuously take steps to minimize risks. We make our products safer to use by providing patients and customers with extensive information material so that they can use the products in a responsible, safe and proper manner.

Through our Pharma Code for Conducting Pharmaceutical Business and Pharmaceutical Operations, we set standards for responsible marketing activities in order to ensure that patients and health care professionals have access to relevant information and that patients receive effective treatment.

(1) Safety of chemical products

There are numerous regulations intended to ensure that chemicals pose no risk to humans or the environment. Compliance with these regulatory requirements is an important part of our work. Through our Group-wide Product Safety Chemicals policy, we have introduced global processes for defining, steering and implementing product safety, and have established the corresponding management structures. The company incorporates all relevant national and international chemical regulations into its policies and regulations and adheres to them. This includes for instance the EU chemicals regulation REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) and CLP (Classification, Labelling and Packaging of Substances and Mixtures, EU GHS). Furthermore, we are committed to transparency. For instance, in line with the Global Product Strategy, an international initiative of the chemical industry, we provide our customers with product safety summaries for hazardous materials.

Merck KGaA, Darmstadt, Germany, has successfully completed the second phase of REACH implementation. All substances we produce or import in quantities ranging from 100 to 1,000 metric tons per year – 70 different substances in total – were successfully registered with the European Chemicals Agency (ECHA) by June 1, 2013. We are currently in phase three, during which we are working to register all substances produced or imported in quantities between one and 100 metric tons per year by mid-2018. We are fully on schedule with our activities.

(2) Safety of drugs

In everything we do, our number-one priority is patient safety. Ultimate responsibility for drug safety at the Biopharmaceuticals business is borne by our Medical Safety and Ethics Board (MSEB), which is chaired by our Global Chief Medical Officer. The Biopharmaceuticals business' Global Drug Safety unit is responsible for continuously and systematically monitoring the safety of our drugs (pharmacovigilance). This unit processes safety information from various sources such as clinical trials, adverse reaction reports and scientific literature in order to provide patients with risk-benefit evaluations during the entire life cycle of a drug.

(3) Quality of products

Our goal is to provide customers and patients with high-quality brand-name products. Through our quality vision, "Quality is embedded in everything we do!" we remind our employees of their responsibility – across all divisions, all Group functions and all levels of the company.

(4) Supplier management

The company sources raw materials, packaging materials, technical products, components, and services from suppliers in more than 120 countries. Our basic expectations for suppliers and service providers include their compliance with fundamental environmental and social standards, which are primarily derived from the core labor standards of the ILO (International Labour Organisation), from the UN Global Compact, and from the Code of Conduct of the BME (German Federal Association for Materials Management, Purchasing and Logistics). Since 2013, our Group Procurement Policy and Responsible Sourcing Principles have defined our procurement practices and are now integrated into our general terms and conditions. They therefore constitute the foundation of every sourcing transaction and procedure.

Due to the growing significance of emerging markets as sourcing markets for the Group, we have reinforced our efforts to ensure adherence to our supply chain standards.

In addition, the company regularly requests self-disclosures from suppliers and conducts supplier audits. In order to underscore the importance of supplier management as part of our corporate responsibility, we joined the Together for Sustainability (TfS) chemical industry initiative at the end of 2014. Starting in 2015, we will have access to a significantly greater number of supplier assessments via the TfS network, which we can then use to select and manage our suppliers.

Responsibility for our employees

Employees are crucial to the success of a company. They therefore play a central role in our business endeavors. In accordance with the Group's Values, we live a culture of mutual esteem and respect. We want to contribute to entrepreneurial success by recruiting, developing and motivating the most suitable employees. We therefore place a strategic focus on the topics of talent development, compensation and performance management. Furthermore, we want to strengthen the diversity of our employees (see also "Employees" on page 77 et seq.).

Responsibility for the environment

In the manufacture of our products, we seek to impact the environment as little as possible. This especially includes efficiently conserving resources such as energy, water and raw materials while also continuously reducing our emissions and waste.

(1) Environmental management system

Our Corporate EHS Policy defines our principles and strategies for environment, health and safety. It is implemented through internal guidelines and instruction manuals on compliant behavior in day-to-day operations, such as the Group EHS Security and Quality Manual. At all sites, the local EHS managers are in charge of operational environmental protection measures. These employees continually receive training and obtain additional qualifications.

Since our businesses are constantly changing, our environmental management system must also remain flexible and adaptable. For this reason, we have internal and external audits conducted on a regular basis to determine whether the ISO 14001 requirements are still being met. In 2014, Merck KGaA, Darmstadt, Germany, received the ISO 14001 group certificate for its environmental management system for the sixth consecutive year. This certificate covers 58 sites, including eight of the nine production sites of the newly acquired AZ Electronic Materials.

Spending on environmental protection, health and safety totaled € 146 million in 2014, which also includes investments made during the year.

(2) Focus topics: Energy efficiency, greenhouse gas emissions, water scarcity

Climate change and its consequences are one of the main challenges facing society in the 21st century. As a responsible company, it is especially important to contribute to climate protection, which is why we have set ourselves the goal of reducing total direct and indirect greenhouse gas emissions by 20% by 2020, measured against the 2006 baseline.

In order to achieve this goal, the company has launched a climate protection program called EDISON that consolidates all climate change mitigation and energy efficiency activities of the Group. In 2015, as in the three preceding years, the Executive Board will earmark additional funds specifically for measures to conserve energy and reduce greenhouse gas emissions. Through more than 300 EDISON projects that have been initiated since 2012, the company aims to annually save around 60 metric kilotons of CO_2 in the medium term. In 2014, the Group lowered its total greenhouse gas emissions by around 9% relative to the 2006 baseline, despite growth in its operating business.

Around two-thirds of the EDISON projects planned Group-wide have already been or are being rolled out, including major energy generation projects as well. In November 2014, the company commissioned a carbon-neutral biomass energy plant in Goa, India. In December 2014, a further biomass energy station was commissioned in Jaffrey, New Hampshire, USA. At the Darmstadt site, the Group is spending around € 27 million on the construction of two state-of-the-art energy stations. The first of these two stations, which supplies the site's pharmaceutical production operations and research activities with power, was commissioned in July 2014. The second station is currently under construction and will cover the refrigeration requirements of the site's chemical plants and laboratories, among other power needs. Once both plants are in operation, the site's CO_2 emissions will decrease by around 2,500 metric tons per year.

CORPORATE RESPONSIBILITY →
ENERGY CONSUMPTION (IN GWH)

	2010	2011	2012	2013	2014
Total energy consumption	**1,505**	**1,497**	**1,556**	**1,566**	**1,622**
Direct energy consumption	**919**	**920**	**940**	**1,001**	**1,071**
Natural gas	799	802	827	884	937
Liquid fossil fuels	105	105	100	102	107
Biomass and other self-generated renewable energy	15	13	13	15	27
Indirect energy consumption	**586**	**577**	**616**	**565**	**551**
Electricity	518	519	502	500	466
Steam, heat, refrigeration	68	58	114	65	85

Portfolio-adjusted in accordance with the Greenhouse Gas Protocol (including the new production sites of AZ).

CORPORATE RESPONSIBILITY →
CO_2EQ EMISSIONS (EQ = EQUIVALENTS)

Emissions in kilotons, Scope 1 and 2	2010	2011	2012	2013	2014
Total CO_2eq emissions	**577**	**541**	**551**	**567**	**524**
Direct CO_2eq emissions	352	318	321	350	323
Indirect CO_2eq emissions	225	223	230	217	201

Portfolio-adjusted in accordance with the Greenhouse Gas Protocol (including the new production sites of AZ).

Energy management plays a key role in our efforts for sustainable energy efficiency and climate change mitigation. the Group's production sites in Darmstadt and Gernsheim account for around 40% of the company's global energy consumption. In 2012, both of these sites qualified for ISO 50001 – Energy Management System certificates, which were reaffirmed in 2014. The Molsheim site in France, the Poseung site in Korea and the Taoyuan site in Taiwan received the ISO 50001 certificate in 2014 for the first time. The Wiesbaden site was certified for the first time in January 2015. Counting the Bari and Tiburtina sites in Italy, eight the company production sites have a certified energy management system.

The results of the Carbon Disclosure Project likewise indicate that the Group is on the right path. In 2014, Merck KGaA, Darmstadt, Germany, again ranked in performance band B in the Climate Performance Scoring, and was thus clearly in the upper range of all participating companies in the Germany, Austria and Switzerland category. In the Climate Disclosure Scoring, which rates the thoroughness and transparency of a company's reporting, the Group scored 87 out of 100 points, putting it well above the average. The Carbon Disclosure Project, an independent non-profit organization, assessed the emissions reduction progress and climate change reporting of companies.

In addition to energy, in 2014 Merck KGaA, Darmstadt, Germany, also focused on the topic of water. We examined our sites to determine which ones are located in regions where water is scarce and thus an especially precious resource. Based on a detailed assessment, we plan to implement sustainable water management systems at these sites.

Responsibility for society

The Group sees itself as part of society, not only at its individual locations, but also at a global level. Taking responsibility towards society is an integral part of our entrepreneurial approach. We believe that we can make an important contribution to the community through our knowledge, our skills and our products.

Our social responsibility activities are primarily focused on those areas in which we have specific expertise stemming from our core businesses. We are thus engaged in health and environmental projects and support education, specifically in the natural sciences. We provide disaster relief in emergency situations, especially in those regions in which we operate.

Our subsidiaries are also engaged in a wide variety of local projects. The company has defined overarching criteria for selecting projects, while the decisions concerning specific local projects are made by our subsidiaries. In 2014, the Group spent a total of € 50.8 million on community engagement activities. Of the total monetary and non-monetary donations made by our subsidiaries in 2014, 61 % went to Emerging Markets (Latin America and Asia, excluding Japan), 37 % to Europe, as well as 2 % to the North America and the Rest of World regions.

RESEARCH AND DEVELOPMENT AT THE GROUP

Merck KGaA, Darmstadt, Germany, conducts research and development worldwide in order to develop new products and services designed to improve the quality of life of patients and customers. In 2014, the company focused on further optimizing the relevance and efficiency of its research and development activities. For this purpose, the Group increased the number of new collaborations with external research and development partners.

Around 4,700 employees work for Merck KGaA, Darmstadt, Germany, researching innovations to serve long-term health and technology trends in established and emerging markets as well as in developing countries.

The company spent around € 1.7 billion on research and development in 2014. In our research and development activities, we focus on both in-house research and external collaborations, which enable us to increase the productivity of our research while simultaneously reducing financial outlay.

The organizational set-up of our research and development activities reflects the structure of the Group. Within the Executive Board, Stefan Oschmann, who became Vice Chairman of the Executive Board at the beginning of 2015, was responsible for the Biopharmaceuticals and Consumer Health divisions until December 31, 2014. Effective January 1, Belén Garijo assumed this responsibility as a Member of the Executive Board. Bernd Reckmann is responsible for Performance Materials and Life Science.

BIOPHARMACEUTICALS

General

The Biopharmaceuticals division's R&D continues to evolve with a focus on both strategic and operational improvements. In the course of 2014, with new leadership in place after the appointment of Luciano Rossetti, MD, as Executive Vice President and Head of Global R&D in July, the R&D organization further enhanced the structure of R&D to strengthen collaboration across the spectrum of Research, Development and Commercial, prioritized key development programs, and created a governance model founded on collaboration, agility and objectivity in science.

Along with a sustained effort to foster an environment of end-to-end development – from early research through to late-stage development and product registration – there is also a resolute commitment to ensuring the patient's needs are the primary driver in all decision-making. A patient-centric approach to R&D is becoming increasingly inherent across the Biopharmaceuticals division, from research of the highest quality through to quick and efficient clinical development. Across the continuum of R&D, there is a renewed energy to build a solution-oriented, collaborative and accountable culture that delivers value to the business and to patients. With an unwavering focus on world-class science and the development of strategic external opportunities, the Biopharmaceuticals division R&D aims to accelerate its pipeline.

Research and development strategy

In 2014, the Biopharmaceuticals division's R&D continued its change strategy to better position the organization for success in the years to come. Today, founded on a solution-oriented and collaborative mindset, almost 2,300 R&D professionals are working to advance innovation across the Biopharmaceuticals division R&D pipeline.

In Research, the early phases of discovery remain structured across three distinct yet closely aligned Translational Innovation Platforms (TIPs): Oncology, Immuno-Oncology, and Immunology, as well as a specific department focused on Global Health, which targets critical health needs in vulnerable populations.

With early development now part of Global Development, R&D teams share the common goal of advancing programs in a seamless fashion, collaborating to identify the right strategies for key programs as they progress along the pipeline, and aligning with Commercial from the earliest stages in the process, in order to build the right target product profile in the most effective way possible.

Program prioritization became a critical priority in 2014, streamlining the R&D portfolio based on key data milestones, among other things. With a core set of compounds now targeted as high-priority, the R&D organization can better distribute resources across its programs to optimize their potential for success.

With hubs in Darmstadt, Germany; Boston, Massachusetts, USA; Tokyo, Japan; and Beijing, China, the broad footprint of the Biopharmaceuticals division gives it access to innovation in its key markets. Across the entire biopharma spectrum – from academia and hospitals to research institutions and other companies in the biopharmaceutical industry – the Biopharmaceuticals division complements its internal expertise by leveraging the experience and knowledge of others through partnerships. In 2014, the Biopharmaceuticals division delivered clear examples of this strategic priority, announcing agreements with several companies and academic institutions around the world, as well as awarding external grants for research innovation in several disease areas, as detailed in the next section.

With a forward-looking view, the global R&D organization of the Biopharmaceuticals division is positioning itself for future success. Strong collaboration, an unwavering commitment to exceptional science and a focus on objective decision-making are the key principles that will guide the R&D teams in 2015. As a recent example, the Global Medical Affairs (GMA) organization underwent a complete redesign and strategic refocusing in 2014. Patient centricity was at the core of this effort which has several cornerstones: enhancement of therapeutic area expertise in key areas, a global best-practice sharing working style and the establishment of a novel function known as medical excellence. The new GMA organization was launched in August and implementation at headquarters, in regions and in countries worldwide is progressing rapidly, and is on track for completion in early 2015. The new organization is already delivering enhanced value to life cycle management of the Biopharmaceuticals division's registered products, as well as contributing significantly to the late-stage development process.

At the Biopharmaceuticals division's Investor & Analyst Day in September, the company gave an update on its plans for its Biosimilars activities. In addition to the already disclosed investment plan of € 100 million for 2014, the unit plans to continue to invest in 2015, depending on the outcome of ongoing Phase I studies. Existing partnerships with India's Dr. Reddy's and Brazil's Bionovis will be expanded by another, as yet undisclosed in-licensing agreement for a late-stage biosimilar, initially for smaller emerging markets. Between 2015 and 2016, Merck KGaA, Darmstadt, Germany, plans to initiate between two and five Phase III clinical trials.

BIOPHARMACEUTICALS PIPELINE IN 2014

The Biopharmaceuticals division's core R&D fields include oncology, immuno-oncology, immunology and neurology. The development pipeline continues to be weighted towards oncology; however, 2014 saw important scientific and business development advances in several disease areas. In line with its open collaborative model in R&D, the Biopharmaceuticals division entered into a number of collaborations during 2014, some of which are highlighted below.

In addition, the company announced the launch of the Biopharmaceutical division's Global Grants with a total annual investment of over € 20 million, thereby underscoring the company's commitment to funding scientific innovation and independent medical education around the world. The Grants for Innovation in Research identify and fund what are considered to be the most promising research projects in specific fields worldwide, originating from across the biopharma spectrum, including: academia, research centers, and smaller biotech companies. During the third quarter, Grants for Innovation were awarded in the areas of Multiple Sclerosis, Oncology, Growth Disorders and Fertility.

Oncology

There were several important changes in the oncology pipeline during 2014. Evofosfamide (also known as TH-302), an investigational hypoxia-activated prodrug which is being developed in collaboration with Threshold Pharmaceuticals, is currently being evaluated in two Phase III trials, respectively in locally advanced, unresectable or metastatic soft tissue sarcoma (STS) and in advanced pancreatic cancer. A pre-planned interim efficacy and safety analysis of the STS study was performed in the third quarter of 2014. The Independent Data Monitoring Committee (IDMC), which conducted the analysis, recommended that the study should continue as planned to its natural conclusion. The analysis of the primary endpoint, overall survival (OS), is expected to be conducted in 2016. This date is only an approximation since the final analyses will be triggered only when a certain number of events have occurred. The second Phase III study (known as MAESTRO), which is being performed in advanced pancreatic cancer, reached planned enrollment of 660 patients in October. It is estimated that the final analysis of the primary endpoint of this trial, which is OS, will be performed in 2016. A Phase II trial of evofosfamide in combination with pemetrexed as a potential second-line treatment for patients with advanced non-squamous non-small cell lung cancer (NSCLC) was initiated in the second quarter of 2014. The primary endpoint in this 440-patient trial is OS.

As regards Erbitux® (cetuximab), new biomarker findings from a retrospective analysis of the completed Phase III CRYSTAL study were presented at the American Society of Clinical Oncology (ASCO) 50th Annual Meeting in Chicago. This study compared Erbitux® plus FOLFIRI with FOLFIRI alone in the first-line treatment of metastatic colorectal cancer (mCRC). A significant clinical improvement in terms of response rate, progression-free survival and overall survival was observed in patients with RAS wild-type tumors when Erbitux® was added to FOLFIRI compared with patients receiving FOLFIRI alone. Additionally, the results of the FIRE-3 study, a randomized, controlled, open-label, Phase III trial to compare the efficacy of Erbitux® plus FOLFIRI with bevacizumab plus FOLFIRI in first-line KRAS wild-type mCRC (mCRC), were published in Lancet Oncology in August 2014. Updated results in the RAS wild-type population were presented at the 2014 ESMO Congress in Madrid in September. While the primary endpoint of increased overall response rate with Erbitux® plus FOLFIRI compared with bevacizumab plus FOLFIRI was not met, a pre-planned exploratory analysis in the patient sub-group selected based on RAS status showed a statistically significant difference in overall survival in favor of Erbitux®. Given this clinically meaningful difference in overall survival, the authors state that "the data suggest that FOLFIRI plus cetuximab should be chosen as the first-line treatment regimen for patients with RAS wild-type mCRC." (Lancet Oncology 2014; 15: 1,065–1,075).

These results are in line with the Erbitux® label as updated by the European Medicines Agency (EMA) in December 2013, and were included in an update of the Summary of Product Characteristics in June 2014. They confirm that RAS biomarker testing is essential for patient-centric care and is thus a truly personalized approach to the treatment of mCRC. Results of a second randomized, controlled, open-label, Phase III trial (CALGB / SWOG 80405), comparing Erbitux® plus chemotherapy (either FOLFOX or FOLFIRI based on each investigator's choice) as compared to bevacizumab plus chemotherapy, were presented at the ASCO 2014 Congress and the ESMO 2014 Congress. Although showing a slight but not significant trend towards improved overall survival for patients in the RAS wild-type population treated with Erbitux® plus chemotherapy, the results seemed to differ from those of the aforementioned study. However it should be noted that the data so far are immature and the final results have not yet been published in a peer-reviewed journal.

The Chinese Food and Drug Administration (SFDA) issued a negative opinion concerning the application of Erbitux® in squamous cell carcinoma of the head and neck (SCCHN) because it considered the bridging study in Chinese patients inadequate to justify approval in China. The Biopharmaceuticals division decided to perform a randomized, controlled study in China in SCCHN with a view to obtaining approval for this indication. Erbitux® is currently registered in over 90 countries in this indication.

In June, the Group announced it had signed an agreement to collaborate with Sysmex Inostics GmbH, Hamburg, Germany, for the development and commercialization of a blood-based RAS biomarker test for patients with mCRC. Blood-based biomarker testing is a faster and easier approach for determining the mutation status of tumors as it requires only a small blood sample rather than a tissue biopsy procedure. The test has the potential to provide mutation status results within days, which in turn can help guide treatment decisions. In addition, it may become the method of choice in situations where a tissue biopsy is difficult to obtain, for example in patients whose physical condition does not allow for a surgical procedure.

After a careful analysis, the Biopharmaceuticals division decided not to pursue its development program for Sym004, and to return the rights to the compound to Symphogen for further development. This decision was not related to any new safety or efficacy findings. It will allow the company to refocus its efforts on other pipeline candidates.

Subsequent to the promising results of pre-clinical work and the ongoing Phase I trial of its c-Met kinase inhibitor tepotinib (MSC 2156119J), the Biopharmaceuticals division decided to embark on Phase I / II studies in solid tumors, especially focusing on the indications of NSCLC and hepatocellular carcinoma. Studies in both indications were initiated in the first quarter of 2014.

For abituzumab, an investigational anti-integrin monoclonal antibody designed to target certain integrins expressed on tumor and endothelial cells, two Phase II trials were completed this year. The results of the POSEIDON study, a combination of abituzumab with Erbitux® and irinotecan in KRAS wild-type mCRC, were presented at the ESMO World Congress on Gastrointestinal Cancer. Although the primary endpoint of increased progression-free survival was not met, the addition of abituzumab to Erbitux® and irinotecan resulted in a trend toward improved overall survival; high $\alpha v\beta 6$ integrin expression was identified as a potential predictive marker of increased response rate, as was prolonged overall survival in the abituzumab treatment arms. Further biomarker analyses are warranted to confirm and further validate the current findings. The results of the PERSEUS study in patients with metastatic castration-resistant prostate cancer were presented at the

2014 ASCO Meeting. No significant improvement in progression-free survival was observed and development therefore will not continue in this indication.

BGB-290 (an inhibitor of poly [ADP-ribose] polymerase, or PARP), currently being developed in collaboration with BeiGene, entered Phase I clinical testing in patients with solid tumors.

Enrollment was discontinued in a combination Phase II study of the MEK inhibitor pimasertib (a small-molecule inhibitor of MEK, an enzyme that is a part of a pathway that is frequently activated in many types of solid tumors) and the PI3K/mTOR inhibitor from Sanofi U.S. (SAR245409) in low-grade serous ovarian cancer. This decision was based on the results of a futility analysis, conducted by the IDMC, which indicated that the trial was no longer expected to achieve its objective of showing a meaningful difference between the efficacy of the combination compared with pimasertib alone. However, the safety profile was in line with previous clinical data for this combination, and no unusual toxicities outside of those associated with this class were observed. The further development of pimasertib in pancreatic cancer was also discontinued as a Phase II study in this indication did not reach its primary endpoint of prolongation of progression-free survival. Pimasertib will continue to be investigated in patients with NRAS mutant malignant melanoma in a Phase II trial which is fully recruited, and expected to report results on progression-free survival (primary endpoint) during 2015. Additionally, a Phase Ib trial in solid tumors, in collaboration with Sanofi U.S., investigating pimasertib in combination with Sanofi U.S.'s hDM2 antagonist (SAR405838) will also continue.

MSC 2490484A (DNA-PK inhibitor), a small-molecule inhibitor of the repair mechanisms of DNA damage in cancer cells, entered Phase I clinical testing in patients with solid tumors.

The Biopharmaceuticals division and Sutro Biopharma, a privately held biotechnology company, entered into a collaboration and license agreement to develop next-generation antibody drug conjugates (ADCs) for multiple targets in oncology. The Biopharmaceuticals division and Mersana Therapeutics, Inc. also announced a cooperation agreement to develop next-generation ADCs. ADCs are composed of an antibody linked to a cytotoxic drug, whereby the antibody part specifically targets and delivers the cytotoxic drug to cancer cells, which could lead to higher drug levels at the tumor site.

In October 2014, the Biopharmaceuticals division, the Institute of Cancer Research (ICR), London, and the Wellcome Trust, London, entered into a co-development and license agreement building on two independent research programs at both the ICR and the Biopharmaceuticals division to identify inhibitors of tankyrase, an enzyme of the poly (ADP-ribose) polymerase (PARP) family. In a joint effort, this collaboration will aim to progress chemical compounds that have emerged from both organizations' tankyrase inhibitor programs towards clinical development. At the end of the collaboration period, the Biopharmaceuticals division will take over full responsibility for the selected clinical development candidate. The agreements mentioned above underline the Biopharmaceuticals division's approach to employing a collaborative research and development model, creating strategic partnerships in order to drive innovation.

Immuno-Oncology

For avelumab (also known as MSB0010718C), an investigational anti-PD-L1 antibody currently in development, initial data from the Phase I dose escalation study in solid tumors were presented at ASCO 2014. The study is advancing rapidly and anti-tumor activity of avelumab has already been observed in a number of patients, notably in NSCLC and in ovarian cancer. Avelumab is also being tested in a Phase II study initiated in July 2014 in patients with metastatic Merkel cell carcinoma. This is an aggressive form of skin cancer, which is rare and currently has limited treatment options. The study is a multicenter, single-arm, open trial in patients who have previously been treated with one line of chemotherapy.

In November 2014, the Group announced that it had entered into a global strategic alliance with Pfizer Inc. to develop and commercialize avelumab in order to accelerate both companies' presence in immuno-oncology. The antibody will be developed as a single agent as well as in various combinations with Pfizer's and the Biopharmaceuticals division's broad portfolio of approved and investigational pipeline candidates. The two companies will also combine resources and expertise to advance Pfizer's anti-PD-1 antibody into Phase I trials. As part of the strategic alliance, Merck KGaA, Darmstadt, Germany, will co-promote Pfizer's Xalkori®, a medicine to treat NSCLC, in the United States and several other key markets. Global collaboration with Pfizer is expected to accelerate the development of avelumab in multiple tumor types. Up to 20 high priority immuno-oncology clinical development programs are expected to commence in 2015, including up to six pivotal registration studies. The global alliance is expected to enable the Group's entry into the U.S. oncology market and to strengthen its Oncology franchise in several other important global markets.

Concerning tecemotide, an investigational cancer immunotherapy (also known as L-BLP25), a Phase III study called START2 was initiated in April 2014, following the results of the START study of tecemotide in stage III NSCLC. Although START did not meet its primary endpoint of demonstrating an improved OS with tecemotide compared with placebo in the overall patient population, data from an exploratory analysis of a pre-defined subgroup of patients who received tecemotide after concurrent chemo-radiotherapy (CRT), showed that these patients survived longer. However in September, the results of study EMR 63325-009, a Phase I/II trial in Japanese patients with stage III, unresectable, locally advanced NSCLC, the majority of whom had received concurrent CRT, indicated that no effect had been observed for either the primary endpoint, OS, or for any of the secondary efficacy endpoints. Based on these results, the Biopharmaceuticals division decided to discontinue the clinical development program for tecemotide.

After a careful analysis of its pipeline assets the Biopharmaceuticals division decided to discontinue development of NHS-IL2 (MSB0010445), also known as Selectikine, which was in Phase II testing in advanced melanoma. This decision was not related to any new safety or efficacy findings. It will allow the company to refocus its efforts on other pipeline candidates.

Merck KGaA, Darmstadt, Germany, and MorphoSys entered into a strategic immuno-oncology collaboration to discover and develop therapeutic antibodies against immune checkpoints. Under the terms of the agreement, the two companies will join forces to develop therapies that modulate the immune system's natural ability to fight tumors. MorphoSys will apply its proprietary Ylanthia® antibody phage library and technology platform to identify antibodies against targets of interest. With its strong portfolio and capabilities in the field of immuno-oncology and clinical development, the Biopharmaceuticals division will be fully responsible for execution of development from Phase I onwards.

Immunology

In the field of Immunology, a Phase IIb study of atacicept, an anti-Blys and anti-APRIL fusion protein, in patients with systemic lupus erythematosus (SLE) was initiated. This study is known as ADDRESS II and follows the promising results of the completed APRIL SLE study which were presented at the Annual Meeting of the European League against Rheumatism (EULAR) in 2013. ADDRESS II is a double-blind, placebo-controlled study of atacicept given at two doses in 279 patients with active SLE to assess its efficacy and safety in reducing SLE-disease activity in patients receiving standard-of-care therapy. The outcome of this study is expected in 2016. A two-year long-term extension study (ADDRESS II LTE) has also been initiated in order to develop atacicept's safety database.

Also aiming at the treatment of SLE, an agreement was entered into by Merck KGaA, Darmstadt, Germany, Pfizer Inc. and the Broad Institute in Cambridge, Massachusetts, in April. The collaboration is focused on the genomic profiling of patients with SLE and lupus nephritis. The goal of this research project, which will be jointly funded by Merck KGaA, Darmstadt, Germany, and Pfizer, is to identify biomarkers to better define target patient populations for future therapies as well as to discover potential novel drug targets for innovative therapies.

The FORWARD study, a Phase II trial of sprifermin, an investigational fibroblast growth factor given at four doses vs placebo in patients with primary osteoarthritis of the knee, is being conducted in collaboration with the Group's strategic alliance partner, Nordic Bioscience Clinical Development. The study completed enrollment in mid-2014, following the inclusion of 549 patients, and the outcome of the study is expected to become available in 2016. Following the completion of a Phase I study in healthy volunteers of the anti-IL-17-A/F nanobody, MSB 0010841 (also known as ALX-0761), a Phase Ib study in patients with psoriasis has been initiated.

A small-molecule BTK inhibitor (MSC 2364447) entered Phase I clinical testing in healthy volunteers in the third quarter of 2014. This investigational agent is a highly selective inhibitor of the Bruton's tyrosine kinase (BTK), which is important in the development and functioning of various immune cells including B lymphocytes and macrophages. Preclinical research suggests it may be therapeutically useful in certain autoimmune diseases.

Neurology

The Biopharmaceuticals division and the Institute of Experimental Neurology at San Raffaele University and Research Hospital in Milan announced the continuation of a strategic alliance to develop pre-clinical and clinical research projects in the field of neurodegenerative diseases. The translational research will focus on developing innovative therapies against serious and disabling neurological diseases affecting young adults in particular, such as multiple sclerosis (MS). Established in 2004, the renewal of this partnership extends the agreement between the parties for two additional years.

Following completion of a Phase I clinical study that demonstrated encouraging MRI results following intradermal treatment of patients with relapsing multiple sclerosis (RMS) with ATX-MS-1467, an investigational immune-tolerizing agent, a Phase II study has been initiated in RMS.

Following a thorough portfolio review, the Biopharmaceuticals division decided not to pursue further development of plovamer acetate, an investigational second-generation copolymer for relapsing-remitting MS. As a consequence, the Phase II study was terminated early. Merck KGaA, Darmstadt, Germany, and Ono Pharmaceutical reached a mutual agreement to terminate the license agreement on ceralifimod (ONO-4641) since the project did not meet the company's threshold for continued investment.

The Biopharmaceuticals division remains committed to driving innovation in the field of MS and improving the lives of people living with the disease. In refocusing the pipeline, additional resources will be available to strengthen our pipeline in this area and bring additional, meaningful products and devices to people with MS.

Fertility

In the field of Fertility, a Phase III trial of Pergoveris® was initiated in the first quarter of 2014 and enrollment was already completed, following the inclusion of 946 patients, in the third quarter. The trial, which is known as ESPART® (Evaluating the Efficacy and Safety of Pergoveris® in ART), is a multicenter, randomized, controlled, single-blind trial with the primary endpoint being the total number of retrieved oocytes. The study is designed to assess the efficacy and safety of Pergoveris® (follitropin alfa and lutropin alfa) versus Gonal-f® (follitropin alfa) for multifollicular development as part of an Assisted Reproductive Technology (ART) treatment cycle in women who are classified as poor ovarian responders (POR) to previous ART. Data are expected in 2015.

Endocrinology

In the field of Endocrinology, the Biopharmaceuticals division announced in April that the Phase IIIb study of Kuvan® (sapropterin dihydrochloride) had met its primary endpoint. At the Society for the Study of Inborn Errors of Metabolism (SSIEM) Annual Symposium in Innsbruck in early September, detailed 26-week data from the study known as SPARK (Safety Pediatric EfficAcy PhaRmacokinetic with Kuvan®) were presented. Results from the study showed that the addition of Kuvan® at a dose of 10 or 20 mg/kg/day to a phenylalanine-restricted diet significantly increased phenylalanine tolerance in children with phenylketonuria (PKU) who are below four years of age and responsive to Kuvan®, compared with patients on diet alone. The SPARK study was requested by the EMA as a post-authorization measure. Given the positive outcome of the study, the Biopharmaceuticals division has submitted an application to the EMA for a label extension.

BIOPHARMACEUTICALS PIPELINE, AS OF DECEMBER 31, 2014

Therapeutic area	Compound	Indication	Status
Oncology	Evofosfamide (TH-302; hypoxia-activated prodrug)	Soft tissue sarcoma	Phase III
	Evofosfamide (TH-302; hypoxia-activated prodrug)	Pancreatic cancer	Phase III
	Evofosfamide (TH-302; hypoxia-activated prodrug)	Non-small cell lung cancer	Phase II
	Evofosfamide (TH-302; hypoxia-activated prodrug)	Melanoma	Phase II
	Evofosfamide (TH-302; hypoxia-activated prodrug)	Hematological malignancies & solid tumors	Phase I
	Abituzumab (DI17E6; anti-integrin mAb)	Colorectal cancer	Phase II
	Pimasertib (MEK inhibitor)	Melanoma	Phase II
	Pimasertib / hDM2 inhibitor combination	Solid tumors	Phase I[1]
	Tepotinib (MSC 2156119J; c-Met kinase inhibitor)	Solid tumors	Phase I
	MSC 2363318A (P70S6K and Akt inhibitor)	Solid tumors	Phase I
	BGB-283 (BRAF inhibitor)	Solid tumors	Phase I
	BGB-290 (PARP inhibitor)	Solid tumors	Phase I
	MSC 2490484A (DNA-PK inhibitor)	Solid tumors	Phase I
Immuno-Oncology	MSB 0010360N (NHS-IL12; cancer immunotherapy)	Solid tumors	Phase I[2]
	Avelumab (MSB 0010718C; anti-PD-L1 mAb)	Merkel cell skin carcinoma	Phase II
	Avelumab (MSB 0010718C; anti-PD-L1 mAb)	Solid tumors	Phase I
Immunology	Atacicept (anti-Blys / anti-APRIL fusion protein)	Systemic lupus erythematosus	Phase II
	Sprifermin (fibroblast growth factor 18)	Osteoarthritis	Phase II
	MSB 0010841 (ALX-0761; anti-IL-17 A / F nanobody)	Psoriasis	Phase I
	MSC 2364447 (BTK inhibitor)	Healthy volunteers	Phase I
Neurodegenerative Diseases	ATX-MS-1467 (immune-tolerizing agent)	Multiple sclerosis	Phase II
Fertility	Pergoveris® (follitropin alfa and lutropin alpha)	Assisted Reproductive Technology, poor ovarian responders	Phase III
Endocrinology	Kuvan® (sapropterin dihydrochloride)	PKU in pediatric patients < 4 years	Submitted for approval[3]

[1] Combined with hDM2 inhibitor (SAR405838) from Sanofi, conducted under the responsibility of Sanofi.
[2] Sponsored by the National Cancer Institute (USA).
[3] Post-approval request by the European Medicines Agency (EMA). EMA application under review.
More information on ongoing clinical trials can be found at www.clinicaltrials.gov.

IL: Interleukin
hDM2: Human Double Minute 2 homolog
mAb: Monoclonal antibody
MEK: Mitogen Activated Protein Kinase
EGFR: Epidermal Growth Factor Receptor
PARP: Poly [ADP-Ribose] Polymerase
BTK: Bruton's Tyrosine Kinase
PKU: Phenylketonuria

CONSUMER HEALTH

In its Consumer Health business, the company markets over-the-counter medicines and food supplements in Europe – primarily for France, Germany, and the United Kingdom – as well as in Latin America and Southeast Asia, where sales volumes are rising. The focus of research and development activities in Consumer Health is on constantly improving tried and proven formulations consistent with the needs of consumers. Innovations by Consumer Health center on consumers and their needs. On the one hand, established products are being adapted to changing consumer needs while on the other hand, new technological innovations are being developed to satisfy entirely new needs. A good example of this is the new product Apaisyl® Nits Detect, which colors nits on the scalp with a fluorescent dye, thus making it much easier to comb them out. Since 2014 the Group has been increasingly entering into cooperation agreements with independent research institutions in order to tap into their expertise in developing new and existing products in a targeted manner. At the same time, Consumer Health is further developing its established brand-name products by making them simpler to use and by offering accompanying services.

PERFORMANCE MATERIALS

Merck KGaA, Darmstadt, Germany, is the undisputed market and technology leader in liquid crystals, which are primarily used in televisions and mobile communication applications. We are also one of the leading suppliers of decorative and functional effect pigments. Our high-tech materials and solutions are used by customers in the consumer electronics, lighting, coatings, printing technology, plastics applications, and cosmetics industries. In Performance Materials, the Group is also focusing on the growth dynamics of emerging markets. As a new part of Performance Materials, AZ Electronic Materials (AZ) brings additional fields of business to the company portfolio. AZ serves two main markets, the sector of IC Materials for integrated circuit manufacture, and materials for display applications (Optronics).

Liquid crystals

In the area of LC displays for mobile devices, Merck KGaA, Darmstadt, Germany, has developed a new LC switching mode, UB-FFS technology (ultra-brightness fringe field switching). The new LC switching mode has the potential to increase display light transmittance by 15%. The new technology offers many advantages: Firstly, it reduces energy consumption and increases the battery life of the mobile devices. Secondly, it improves mobile display quality and supports the trend towards higher resolutions. The market launch is proceeding faster than expected. The new switching mode is already used in many smartphones and tablet PCs.

The Merck KGaA, Darmstadt, Germany, "LC 2021" strategic initiative combines the company's future LC activities, with a special focus on applications beyond displays. For example, liquid crystals can regulate the light and heat transmittance of windows in building facades. Since the acquisition in July 2014 of the remaining interest in Peer+, a Dutch specialist for smart window technology, the company has now been fully integrated. Merck KGaA, Darmstadt, Germany, is investing further in LC windows, the new name for the material development of these applications. The pilot production of the windows is in full swing. Several examples were installed in the Group's own Innovation Center at the Darmstadt site in early 2015. Collaborations with partners in the glass and facade technology sector are planned for broad-based marketing of the windows.

In November, a team of Merck KGaA, Darmstadt, Germany, won the 2014 Meyer-Galow Prize for business chemistry. Four LC researchers and managers were recognized for their work on the project "Energy-efficient liquid crystals for smartphones and tablet PCs".

OLEDs

Organic light-emitting diodes (OLEDs) are used in innovative lighting applications and display technologies. They provide brilliant colors and sharp images from any viewing angle; they have a long lifespan and are highly energy-efficient. In addition, OLEDs enable round or flexible displays, making them perfect for use in the latest technical applications. One such example is the smartwatch, a wristwatch that provides Internet access along with additional computer functionality.

The name of the Merck KGaA, Darmstadt, Germany, product line for these types of applications is livilux®. The company has developed a strong portfolio of worldwide patents, based on more than ten years of experience. Development partnerships with customers are a way of testing new technologies and making them market-ready. For instance, Performance Materials has co-developed a technology that can be used to print OLED displays in collaboration with printer manufacturer Seiko Epson. While the Group contributed its expertise in OLED material and ink development to the collaboration, Seiko Epson contributed its expertise in print heads featuring Micro Piezo inkjet technology as well as process expertise. The jointly developed technology offers the advantage of lower costs and higher material efficiency. In contrast to evaporated OLED displays, the materials are applied at room temperature and under normal pressure in the case of printed OLED displays. In addition, this technique only deposits material in the areas where diodes are actually located, thereby helping to conserve resources.

High-quality pigments and functional materials

Besides high-quality decorative effect pigments, the company also offers functional materials used, for example, in laser marking of plastics, conductive coatings, and heat-reflective glazing for greenhouses. The Meoxal® brand is the latest development in effect pigments. These pigments captivate with their brilliant color saturation and exceptional performance, as a result of their innovative layer technology and the use of aluminum flakes as substrate. They are highly suitable for a multitude of high-performance applications, especially for automotive and plastic coatings. The third pigment in the new brand family – Meoxal® Atacama Red – was launched in the second quarter of 2014.

With Xirallic® NXT, the Performance Materials division is launching a new patented product generation of the well-known high-tech effect pigments. These offer customers an exceptional "living-sparkle-effect", high styling potential and consistent quality. The first product of the new generation – Xirallic® NXT Panthera Silver – is a dark-gray, metallic effect pigment, which the Group has been offering since April 2014.

AZ Electronic Materials

In the IC (Integrated Circuit) Materials business, which supplies products for integrated circuit manufacture, AZ has developed a range of products for "Extreme UV Lithography" (EUV) applications which has already been qualified by several customers from the semiconductor industry for their processes. AZ's "shrink" technology makes it possible to reduce lithographically generated structures after patterning, thus circumventing resolution limitations of existing exposure equipment in a cost-effective manner. New products are on the verge of production implementation. AZ is a leader in Directed Self Assembly (DSA), a revolutionary technology which is crucial to all advanced semiconductor manufacturers. In DSA, the information for the smallest structures is already contained in the chemical make-up of the coating material. Additionally, AZ is intensively engaged in developing thick perhydropolysilazane (PHPS) products for 3D-chip-technology as well as novel insulator materials.

The continuous development of flat-panel display technology towards larger formats and higher operating frequencies requires the use of transistors with feature sizes that are at the limit of the resolution capability of the exposure tools. In the Optronics business, AZ has successfully transferred from its IC sector so-called tandem resin technology with a specific molecular weight distribution, thus achieving a photoresist resolution near the theoretical resolution limit. In silicon technology, new siloxane materials are in an advanced stage of qualification as planarization materials for high-resolution displays and as a thin film barrier for OLED lighting.

LIFE SCIENCE

With nearly 800 employees focused on R&D, the Life Science division is working with customers to develop innovative solutions for the research, development and production of pharmaceutical and biotech processes worldwide. Through dedicated collaboration on new scientific and engineering insights, the Life Science division serves as a strategic partner to customers and helps advance the promise of life science.

In 2014, the Life Science division launched over 20 new products, proving the innovative power of its Research & Development organization, and once again received R&D Magazine 100 Awards for innovative products. The 52nd annual R&D Awards recognize the 100 most technologically significant products introduced onto the market over the past year. The Life Science division's products that were recognized are the SmartFlare™ detection reagent and Clarisolve® depth filters.

The SmartFlare™ detection reagent is a novel probe capable of detecting specific mRNAs and miRNAs in live, intact cells. This technology allows for carrier-free cellular endocytosis of the reagent, followed by detection and relative quantitative analysis of RNA levels. Because the reagent leaves the cell after the detection event, the same sample can be used for any downstream analysis, meaning it is possible to assess multiple biomarkers or downstream functionalities in the same cells.

Clarisolve® depth filters are specifically tuned to the particle size distribution of various pretreatment methodologies, enabling the fastest and most efficient way to clarify high-density streams and easily transfer processes from upstream to downstream without the use of centrifugation. Clarisolve® depth filters were designed for high cell density / titer mammalian cell culture feed streams for mAb production. Early success has also been achieved in microbial and vaccine applications.

In March 2014, the Life Science division announced a clinical research, licensing and joint development agreement with Sysmex Corporation of Japan. This collaboration will use the Life Science division's flow cytometry technology as a platform to accelerate the creation of new, more powerful diagnostic tools for research in blood disorders. If successful, Sysmex and the Life Science division will collaborate on developing the imaging flow technology platform for future commercialization in hematology.

In the second quarter of 2014, the Life Science division launched a € 12 million investment in its Molsheim, France facility. This investment will expand the Life Science division's ready-to-use (RTU) media manufacturing capabilities, better provide security of supplies for customers in the region, and sustain the heipha Hycon product lines. The increased manufacturing capacity will serve global market demand, and will ensure sufficient capacity to support the market growth.

The Bioscience business area launched Simplicon™ RNA Reprogramming Technology, which uses synthetic self-replicating RNA to create large numbers of human induced pluripotent stem cells (iPSCs) using a single transfection step. This efficient reprogramming of somatic cells offers a more defined and safer system for iPSC generation.

The Process Solutions business area expanded Provantage® upstream bioproduction services to the North American market. The expansion provides North American customers with media and feed screening, small-scale material production, and optimization of conditions for scale-up and technology transfer. Process Solutions also announced a new Formulation Lab in India, its first outside of Europe. The Lab is strategically located at Nerul, Navi Mumbai, with easy accessibility from the major pharmaceutical manufacturing centers at Ahmedabad, Goa and Hyderabad. The facilities at the lab are built to provide services and application assistance to the pharmaceutical industry for classical pharmaceutical clients working on solid-dose formulations.

2014 also marked the 40th anniversary of the Steritest™ system, the first closed filtration device for sterility testing. Since introducing the Steritest™ system in 1974, the Life Science division has improved standards in sterility testing, reducing the risk of false positive and false negative results, increasing reliability and streamlining workflows for microbiologists around the world. As part of the celebration of 40 years of sterility testing, the Life Science division will be launching three new pumps in 2014.

In August 2014, the Life Science division and Samsung BioLogics signed a Memorandum of Understanding for a strategic alliance in the biopharmaceutical business. The proposed alliance is intended to encompass a long-term supply agreement in which the Life Science division will provide raw materials for biopharmaceutical manufacturing.

In the third quarter of 2014, the Life Science division also announced the opening of a new Biomanufacturing Sciences Training Center (BSTC) facility in Tokyo, Japan. The state-of-the-art facility is designed to help biopharmaceutical companies develop manufacturing processes and find solutions to processing challenges in collaboration with engineers from the Life Science division. The goal for this facility, now the ninth of its kind for the Life Science division, is to enhance the customer experience by delivering innovation, quality products, and comprehensive technological support – all major components of our product and service portfolio offering.

In December, the Life Science division launched its first round of new large lab water purification systems (AFS) expanding the ability to feed high throughput analyzers.

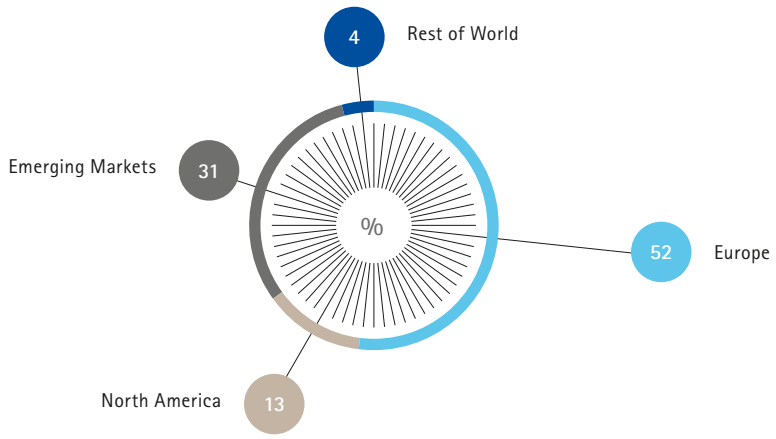
EMPLOYEES

Employees are crucial to the success of Merck KGaA, Darmstadt, Germany. We are therefore focusing on recruiting the right employees with the right capabilities at the right time and retaining this talent. Within the context of our Group strategy we also place particular emphasis on talent development, compensation and performance management. In addition, we want to foster employee diversity in order to be optimally positioned to meet future challenges together with our workforce.

As of December 31, 2014, the Group had 39,639 employees worldwide (2013: 38,154.) The slight increase in the number of employees is largely attributable to the integration of AZ Electronic Materials. In 2014, the company was represented by a total of 146 companies in 65 countries.

DISTRIBUTION OF EMPLOYEES → BY REGION

in %



Strategic initiative: "ONE Talent Development, Rewards and Performance Management"

Within the framework of the "Fit for 2018" program, the company launched the capability initiative "ONE Talent Development, Rewards and Performance Management" as part of its Group strategy. The aim is to attract highly qualified graduates from around the world to the Group and to retain them.

Performance management

Merck KGaA, Darmstadt, Germany, considers it important to identify employee potential early on and foster it on an individual basis. We want to offer our talent attractive career opportunities, continual personal and professional development as well as prospects within the company. Our processes are also meant to help strengthen the performance culture at the company and to ensure that internal positions are filled in an even more efficient manner. In 2014, we rolled out the talent and performance management process at Merck KGaA, Darmstadt, Germany, globally. The evaluations of all participating employees are now carried out on the same basis and are recorded in a uniform IT system.

In this context we systematically combine talent recognition with the Performance Management Process, which allows us to objectively assess the performance of each individual employee. Clear objectives, differentiated and open feedback, and individual development plans are important prerequisites for personal development, as well as for the success of the company. As of 2015, the Group will be linking the variable bonus more closely with performance. In this way we will create greater incentives for employees to achieve top performance, while at the same time allowing them to participate to a greater extent in the success of the company.

Internal talent development and external recruiting

Through the aforementioned approach, the Group aims to bolster its performance culture and develop talent in a more targeted manner. We succeeded with this again in 2014, expanding our workforce pool to internally fill management positions when they become vacant. In 2014, the vast majority of management position vacancies were also filled by internal candidates. In addition, the company recruited external executives in order to add new outside perspectives to our long-standing in-house expertise.

Merck KGaA, Darmstadt, Germany, is using the motto "Make great things happen" to position itself in the global job market, which conveys to potential applicants a sense of what makes the company unique: an inspiring, motivating work environment in which innovations thrive; an environment in which everyone has the opportunity to apply their ideas and engagement to benefit customers and the company, while at the same time growing as employees.

Focus areas: Internationality, demographics, gender ratio

In our global markets, we want to hire the right people and retain them. It is also our goal to anchor knowledge about our growth markets within the company. Therefore, as part of our diversity and inclusion strategy, we are focusing on topics such as internationality, demographics and gender balance.

People from a total of 122 different nations work at Merck KGaA, Darmstadt, Germany. Only 27 % of our employees are German citizens and 72 % work outside Germany.

In Germany, several other EU countries, the United States, and Japan we must prepare ourselves for demographic change. In these countries, the average age of our employees exceeds 40 – and we assume that this figure will continue to rise in the coming years. In Europe, we are addressing these demographic challenges through various programs. These include adapting workplaces to the needs of older employees and establishing a health management program to maintain their ability to do their jobs. In addition, the company created the preconditions in 2014 in order to attract the interest of even more young specialists to the Group and to retain them.

Women currently make up 41 % of the workforce. Since the ratio of women to men varies widely across the different regions, divisions and functions, the company has set itself the goal of increasing the percentage of female employees wherever they are underrepresented. Here we take into account the situation that is typical for the industry as well as regional differences.

A diverse management team

We believe that balanced diversity among management enhances career advancement opportunities for talented employees while also helping to provide a broad experience base within the company. In addition, it allows for differentiated decision-making, thereby making a significant contribution to the success of the company.

As a global company, Merck KGaA, Darmstadt, Germany, considers it highly important to have an international management team. Currently, 60 % of our managers – meaning positions rated Global Grade 14 and above in our Global Grading System – have a nationality other than German. Altogether, 67 different nationalities are represented in such positions.

The percentage of management positions held by women (Global Grade 14 and above) is currently 26 % Group-wide. In the subsidiaries outside Germany, this percentage is higher than at global headquarters in Darmstadt. Likewise, more women work in managerial positions in our Pharmaceuticals business than in our Chemicals business. Certain Group functions such as IT have a lower percentage of women in management positions. However, the figures are clearly increasing across the Group as a whole. The company has reached its strategic goal of raising the percentage of management positions held by women from 25 % to 30 % and intends to further increase this percentage by 2016. In order to achieve this ambition, the Group is implementing numerous measures at local level. In 2014, we filled two of four divisional leadership positions with employees who are not from Germany. In addition, Belén Garijo, a native of Spain, joined the Executive Board and took over leadership of the Healthcare business sector of Merck KGaA, Darmstadt, Germany, at the beginning of 2015.

Workforce diversity

To us, diversity means much more than having a certain gender ratio and is not only important to us on a managerial level, but also throughout the entire workforce. Together with a culture of inclusion, diversity promotes innovation and improves team performance. In addition to the Chief Diversity Officer, who is responsible for strategically managing diversity within the company, we also established the Diversity Council in 2013. This aims to build further buy-in for diversity and inclusion within the company. The council consists of high-ranking managers from all parts of the company. In 2014, the Diversity Council developed the Diversity Framework, which bundles the diversity and inclusion strategies. It focuses on the following topics: recruiting the right people to work for the company, developing and retaining them, promoting efficient collaboration, driving innovations and improvements, and serving customers with diverse needs.

In addition, the company supports specific employee networks in order to foster exchange among like-minded individuals. In 2014, we launched a project to develop the individual members of the networks in a targeted manner and to utilize the potential of the networks to an even greater extent for the Group's business activities. The results were presented to the Diversity Council and will be implemented in 2015.

Industrial safety

As a responsible employer, it is especially important to us to do everything in our power to prevent workplace-related illnesses and accidents. We apply the lost time injury rate (LTIR) as an indicator to determine the success of measures aimed at accident prevention as well as occupational health and safety. This internationally recognized key performance indicator describes the number of workplace accidents resulting in lost time of more than one day per one million working hours. Merck KGaA, Darmstadt, Germany, set itself the goal of reducing the LTIR to 2.5 by 2015. In 2014, we again outperformed this goal, achieving an LTIR of 1.8. This continuous rate of improvement can be particularly attributed to the "BeSafe!" program, which was launched in 2010. "BeSafe!" is a global initiative with harmonized standards and local modules for the specific requirements at individual sites. This program focuses on engaging managers in the safety culture and empowering our employees to take responsibility for their own safety. In 2014, we continued to sensitize our employees to workplace hazards through numerous activities and awareness campaigns.

Since 2010, the Group has been presenting the Safety Excellence Award annually in order to underscore the importance of safety. It is granted to all production sites with no workplace accidents on record for the year. In 2014, 42 out of production 69 sites were recognized. The company also issued a Group Health Policy in 2014. The aim is to maintain and systematically strengthen the health and performance capability of employees.

Despite our efforts to prevent accidents, there were two workplace accidents resulting in fatalities in 2014. In Venezuela, an employee died in a car accident. In Pakistan, an employee was killed while performing maintenance work on a scissor lift.

Vocational and advanced training

The Group continues to place a great deal of importance on the vocational and advanced training of its employees. In 2014, we therefore also maintained a constant vocational training rate at Darmstadt, the company's largest site. In 2014, 498 young people were enrolled in vocational training programs at this site, in a total of 24 different occupations. Since 2014, Merck KGaA, Darmstadt, Germany, has been giving unlimited employment contracts to all apprentices working in occupations for which the company has sustainable demand. The hiring rate – taking into account voluntary terminations – has been around 90% for several years now. We also continue to offer vocational training to a large number of young people at other sites.

As part of the "MobiPro-EU" program of the Federal German Ministry of Labour and Social Affairs, for the first time five young people from Spain started an apprenticeship at the company in Darmstadt in 2014. "Start in die Ausbildung", a German program to prepare young people for an apprenticeship, was continued with 20 interns, the same number as in 2013.

Our global advanced training program ensures that our employees and managers around the world develop the relevant skills that we need in order to implement our company strategy and to continue to succeed in the future. In 2014, we launched special management programs in China and the Middle East, among other things. So far, a total of 160 managers have participated. An example is the "Emerging Markets Management" program for young, local managers, which focuses on business management topics, tailored to suit the Group.

Work-life balance

Merck KGaA, Darmstadt, Germany, wishes to help its employees achieve a good balance between their professional and personal objectives. This maintains and strengthens their motivation and performance potential, enabling them to better schedule their lives to suit their own needs.

In Germany and the United States, the company offers various flexible working hour models. In 2013, the Group implemented Mywork at Merck KGaA, Darmstadt, Germany at the Darmstadt, Gernsheim and Grafing sites for all exempt employees. The flexible working model aims to strengthen a culture of performance and trust within the company. Employees can choose their working hours and work location freely. In October 2014, this was also extended to non-exempt employees whose positions are suitable for the working model. At the end of 2014, a total of around 3,500 employees benefited from Mywork at Merck KGaA, Darmstadt, Germany.

Globally, 5% of our employees worked part-time in 2014. 11% of our part-time employees are men. In addition, the company offers its employees throughout Germany comprehensive advice and assistance with regard to finding childcare and nursing care, as well as home and garden services. At various sites, employees benefit from childcare options that Merck KGaA, Darmstadt, Germany, subsidizes. A daycare center with capacity for 150 children has been operating at the Darmstadt site for more than 40 years, financially supported by the Merck family.

REPORT ON ECONOMIC POSITION
MACROECONOMIC AND SECTOR-SPECIFIC ENVIRONMENT

The year 2014 was characterized by the repercussions of the financial crisis and uncertainties regarding future economic and political developments. According to the most recent report published by the International Monetary Fund (IMF), global gross domestic product (GDP) grew by 3.3 % in 2014, which was 0.4 percentage points more than in 2013. While the industrialized countries generated an increase of 1.8 %, emerging markets continued to make the largest contribution to global growth, with GDP in emerging economies rising by 4.4 %.

The GDP of the United States, the world's largest economy, grew by 2.2 % in 2014, which was 0.4 percentage points slower than the 2013 forecast. Growth in the United States was stalled by a decline in exports and a harsh winter. For the eurozone, the IMF noted an increase of 0.8% in GDP. While particularly the countries of southern Europe continued to struggle with the consequences of the sovereign debt crisis, some nations, for example Germany, showed signs of recovery.

The company's performance was influenced by general global trends as well as the continued growing importance of emerging markets. In 2014, the Emerging Markets region accounted for around 80 % of The Group's organic sales growth. While the Life Science division generated around 50 % of its sales growth in the Emerging Markets region, the sales growth of both Performance Materials (approx. 80 %) and Consumer Health (approx. 70 %) was particularly strong in this region. The Biopharmaceuticals division generated its sales growth nearly entirely in the Emerging Markets region, thus compensating for a slight sales decline in Europe.

Healthcare market

IMS Health, a market research firm specialized in the health sector, reported 8.1 % sales growth for the pharmaceutical market in 2014. This sales increase approximately corresponded to the 2013 forecast. The increase was primarily attributable to emerging markets. For instance, the pharmaceutical market of China posted growth of 11.6 % and in Latin America, the pharmaceutical market grew by as much as 15.1 %. However, after having seen slightly declining growth rates in 2013, the United States and Europe also reported growth of 11.7 % and 2.5 % respectively. According to the market research institute Evaluate Pharma, particularly the markets for multiple sclerosis therapies and type 2 diabetes treatments delivered above-average growth rates of 13 % and 14 % respectively. Whereas the market for oncology therapies to treat colorectal cancer saw a 2 % decline in sales, sales of Erbitux®, one of the Biopharmaceuticals division's top-selling products, increased organically by around 6 % in this indication.

Nicholas Hall, a market research firm for the pharmaceutical industry, reported a 4.0 % increase for the global over-the-counter drug market in 2014, which fell 1 percentage point short of the forecast made in 2013. Latin America and Asia were growth drivers here, while Europe posted growth of 2.4 %.

Market for high-tech materials

With its liquid crystals business, the Group is the leading producer of liquid crystal mixtures for the display industry. According to market researchers from Display Search, the display industry registered a sharper sales increase of 10 % in 2014 following slightly lower sales growth of 5 % in 2013, based on the surface areas of liquid crystal displays sold. Liquid crystals remain the leading display technology, with growth primarily coming from the increasing size of television screens.

The markets for automotive coatings and cosmetics are crucial to the company's Pigments business. As reported by the German Automobile Industry Association (VDA), global automobile sales increased by 2 % in 2014. Declines in other markets were offset by growth in China (+10 %), as well as the United States and western Europe (+4 % each). Nevertheless, global automobile sales growth in 2014 fell by 3 percentage points compared with 2013 (+5 %). According to Euromonitor International, global consumption of materials used to produce cosmetics grew by 1.9 %, with Asia reporting the highest growth rate of 4.9 %.

The semiconductor industry is one of the main sales markets for AZ Electronic Materials, another key business for the Performance Materials division. According to Gartner, a market research institute specializing in technology and electronics markets, the semiconductor industry grew by 7.2 % in 2014 compared with 5.0 % in 2013.

Life science market

The Life Science division is a leading supplier of products and services for general laboratory applications, as well as for the research, development and production of drug therapies of biological and chemical origin.

For the global laboratory product market relevant to the Lab Solutions business, the market research firm Frost & Sullivan calculated slight growth of 2.6% for 2014. Growth was thus 0.8 percentage points higher than the original forecast for the year 2014 (+1.8%). In terms of growth, the individual regions varied considerably. In comparison with 2013, the market situation in Europe (+1.6%) and the United States (+2.5%) improved, especially due to positive market developments in Germany, the United Kingdom and Spain, as well as an initial slight improvement in the U.S. academic and government sectors. Emerging economies grew much more strongly than industrialized countries; however their 11.9% share of the global market volume remains relatively low. The main drivers of growth in emerging economies were India (+8.7%) and China (+8.5%).

The demand for Process Solutions products depends heavily on the sales as well as research & development activities of pharmaceutical companies. Both primary influencing factors had a positive impact on the Process Solutions market, leading to noticeable growth. Global pharmaceutical sales increased by 8.1% according to IMS Health. Moreover, research & development spending increased by 3.2% compared with the previous year, according to the market research firm Evaluate Pharma, and the number of Phase I to III clinical trials continues to increase, leading to higher demand for Process Solutions products. This is mostly being driven by greater demand for monoclonal antibodies as well as increased biosimilars development and biological manufacturing, particularly in emerging markets.

REVIEW OF FORECAST AGAINST ACTUAL BUSINESS DEVELOPMENTS

In the Annual Report for 2013, Merck KGaA, Darmstadt, Germany, forecast slight organic sales growth for the Group in 2014, mainly driven by the Life Science and Consumer Health divisions. For EBITDA pre one-time items in 2014, a value at the 2013 level was expected. This assumed that significantly reduced royalty and license income, higher investments in research and development activities in the Biosimilars business unit and expected negative foreign exchange effects could be compensated for by the positive effect resulting from the implemented efficiency measures. Business free cash flow was forecast to decrease slightly owing to further imminent investments in strategic growth projects.

In event of the successful acquisition and consolidation of AZ Electronic Materials as of the second quarter of 2014, Merck KGaA, Darmstadt, Germany, had forecast a moderate increase in Group sales and EBITDA pre one-time items as well as a slight improvement in business free cash flow for 2014, compared with 2013.

Since the Group was able to successfully complete the acquisition of AZ Electronic Materials and the first-time consolidation of the business as of May 2, 2014, the forecast assuming the acquisition of AZ Electronic Materials is used for the following comparison.

Regarding the forecast of slight organic sales growth in the Annual Report for 2013, the company showed moderate organic sales growth of 4.0% in 2014. This was mainly attributable to the organic sales developments of the Biopharmaceuticals division and Performance Materials, which exceeded expectations. The Group's organic sales growth was reduced by negative foreign exchange effects amounting to –1.8%. However, owing to the appreciation of the U.S. dollar and important Asian currencies in the fourth quarter, negative foreign exchange effects were not as pronounced as expected. Due to the acquisition of AZ Electronic Materials and the associated positive acquisition effect of 3.3%, the Group achieved overall sales growth of 5.5% in the actual course of business and thereby fulfilled its forecast of a moderate increase in sales.

Thanks to stable sales of the drug Rebif® and organic growth in all other key franchises, the Biopharmaceuticals division achieved organic growth of 3.6%. Assuming that sales of Rebif® would decline, the division still expected stable organic sales at the beginning of 2014. The Performance Materials division achieved organic sales growth of 4.1% due to slightly higher sales than expected in the Liquid Crystals business unit, as well as the good performance of the Advanced Technologies business unit. Only slight organic growth had been forecast. As a result of the positive acquisition effect arising from the acquisition of AZ Electronic Materials, the Performance Materials division was able to significantly increase sales overall as forecast. The Consumer Health and the Life Science divisions achieved organic sales growth of 5.4% and 4.5% respectively in accordance with the corresponding forecasts.

As forecast, EBITDA pre one-time items of the Group, which amounted to € 3,388 million in 2014, increased moderately in comparison with 2013, particularly as a result of the acquisition of AZ Electronic Materials. EBITDA pre one-time items of the Biopharmaceuticals division declined slightly by –1.3% as expected. This was mainly attributable to lower royalty and license income from Humira®, as well as the loss of royalty and license income from Avonex® and Enbrel®. The Consumer Health division did not achieve the forecast of a moderate increase in EBITDA pre one-time items due to higher marketing and selling expenses, showing a slight decline of 1.7% to € 169 million. In line with the forecast, the Performance Materials division posted a significant increase in EBITDA pre one-time items to € 895 million, due to the integration of the AZ Electronic Materials business. Likewise as forecast, the Life Science division posted a slight increase in EBITDA pre one-time items to € 659 million thanks to moderate organic sales growth. EBITDA pre one-time items of Corporate and Other showed an improvement of 15.5% to € –166 million particularly as a consequence of slightly higher gains from currency hedging, thereby achieving a more positive result than expected.

Declining by –12.0% compared with 2013, the development of the Group's business free cash flow to € 2,605 million fell short of forecasts. As expected, the decrease at the Biopharmaceuticals division was caused by the initiation of further investments in growth projects, as well as lower EBITDA pre one-time items. In the other divisions, the increase in inventories and trade accounts receivable was primarily responsible for the deviation.

Review of forecast against actual business developments in 2014

	Actual results 2013 € million	Forecast 2014 in Annual Report 2013	Guidance for 2014 provided in Q1/2014 Interim Report	Q2/2014 Interim Report	Q3/2014 Interim Report	Actual results 2014 € million
Group						
Sales	10,700	moderate increase, slight organic growth	€ 10.9–11.1 billion	€ 10.9–11.1 billion	€ 11.0–11.2 billion	11,291 (+5.5/ +4.0% org./ +3.3% acquisition)
EBITDA pre one-time items	3,253	moderate increase	€ 3.3–3.4 billion	€ 3.3–3.4 billion	€ 3.3–3.4 billion	3,388 (+4.1%)
Business free cash flow	2,960	slight increase	€ 2.7–2.8 billion	€ 2.7–2.8 billion	€ 2.7–2.8 billion	2,605 (–12.0%)
Earnings per share pre one-time items[1]	€ 4.39	–	€ 4.50–4.75	€ 4.50–4.75	€ 4.50–4.75	€ 4.60 (+4.8%)
Biopharmaceuticals						
Sales[2]	5,688	organic stable on a comparable basis	organic stable	slight organic growth	slight organic growth	5,783 (+1.7%/ +3.6% org.)
EBITDA pre one-time items[2]	1,855	slight decline on a comparable basis	€ 1.75–1.85 billion	€ 1.75–1.83 billion	€ 1.77–1.83 billion	1,831 (–1.3%)
Business free cash flow[2]	1,787	moderate decline on a comparable basis	€ 1.5–1.6 billion	€ 1.5–1.6 billion	€ 1.5–1.6 billion	1,577 (–11.7%)
Consumer Health						
Sales[2]	742	moderate increase on a comparable basis	moderate organic growth	moderate organic growth	moderate organic growth	766 (+3.2%/ +5.4% org.)
EBITDA pre one-time items[2]	172	moderate increase on a comparable basis	€ 170–180 million	€ 170–180 million	€ 170–180 million	169 (–1.7%)
Business free cash flow[2]	172	slight increase on a comparable basis	€ 150–170 million	€ 150–170 million	€ 150–160 million	124 (–28.1%)
Performance Materials						
Sales	1,642	significant increase	slight organic growth	slight organic growth	slight organic growth	2,060 (+25.4%/ +4.1% org./ +22.8% acquisition)
EBITDA pre one-time items	780	significant increase	€ 830–880 million	€ 850–880 million	€ 860–880 million	895 (+14.8%)
Business free cash flow	788	significant increase	€ 720–770 million	€ 720–770 million	€ 720–770 million	700 (–11.2%)
Life Science						
Sales	2,628	slight increase	moderate organic growth	moderate organic growth	moderate organic growth	2,682 (+2.1%/ +4.5% org.)
EBITDA pre one-time items	643	slight increase	€ 640–670 million	€ 640–670 million	€ 640–670 million	659 (+2.5%)
Business free cash flow	494	stable	€ 460–490 million	€ 460–490 million	€ 460–490 million	419 (–15.2%)
Corporate and Other						
EBITDA pre one-time items	–197	stable	€ –170– –200 million	€ –160– –190 million	€ –160– –190 million	–166 (-15.5%)
Business free cash flow	–281	–	~ € –240 million	€ –200– –230 million	€ –200– –220 million	–215 (-23.7%)

[1]Based on the number of shares following the share split, which was approved by the Annual General Meeting on May 9, 2014.
[2]Previous year's figures have been adjusted, see "The Group" in the Group management report.

COURSE OF BUSINESS AND ECONOMIC POSITION
GROUP

OVERVIEW OF 2014

→ Sales increase by 5.5% to € 11.3 billion – organic growth of 4.0%, acquisition-related increases of 3.3% as well as slight negative foreign exchange effects of –1.8%
→ Emerging Markets contribute significantly to organic sales growth
→ EBITDA pre one-time items increase by 4.1% to around € 3.4 billion – main drivers were the Performance Materials division due to the first-time consolidation of AZ Electronic Materials (AZ) as well as the successful operating business of Liquid Crystals
→ Improvement in earnings per share before one-time items by 4.8% to € 4.60
→ Business free cash flow remains at a high level
→ Net financial debt as of December 31, 2014 only increased slightly to € 0.6 billion, despite payment of the AZ purchase price of € 1.9 billion
→ Only a slight adjustment to the long-term credit ratings to "A" with negative outlook (Standard & Poor's) and "Baa1" with negative outlook (Moody's), despite the announcement of the acquisition of the Sigma-Aldrich Corporation (Sigma-Aldrich) for around US$ 17 billion

GROUP →
KEY FIGURES

€ million	2014	2013	Change in %
Total revenues	11,500.8	11,095.1	3.7
Sales	11,291.5	10,700.1	5.5
Operating result (EBIT)	1,762.0	1,610.8	9.4
Margin (% of sales)	15.6	15.1	
EBITDA	3,122.9	3,069.2	1.7
Margin (% of sales)	27.7	28.7	
EBITDA pre one-time items	3,387.7	3,253.3	4.1
Margin (% of sales)	30.0	30.4	
Earnings per share pre one-time items (€)[1]	4.60	4.39	4.8
Business free cash flow	2,605.1	2,960.0	–12.0

[1]Taking into account the share split; previous year's figures have been adjusted accordingly. See "Earnings per share" in the Notes to the Group accounts.

Development of sales and results of operations

In 2014, the Group generated sales of € 11,291 million (2013: € 10,700 million). This represented an increase in sales of 5.5% or € 591 million compared with 2013. Organic growth of 4.0% was responsible for the vast majority of this improvement. Acquisitions/divestments (net) increased sales overall by 3.3% or € 355 million. The first-time consolidation of AZ in the Performance Materials division as of May 2, 2014 made a positive contribution of € 375 million to Group sales in 2014. Owing to the divestment of the Life Science division's Discovery and Development Solutions business field, which became effective on March 31, 2014, sales declined in comparison with 2013 by € – 20 million (see "Acquisitions and divestments as well as assets held for sale and disposal groups" in the Notes to the Group accounts). Negative foreign exchange effects lowered sales by –1.8%.

The development of sales in the individual quarters in comparison with 2013 as well as the respective organic growth rates are presented in the following overview:

GROUP →

SALES AND ORGANIC GROWTH BY QUARTER[1]

€ million / organic growth in %

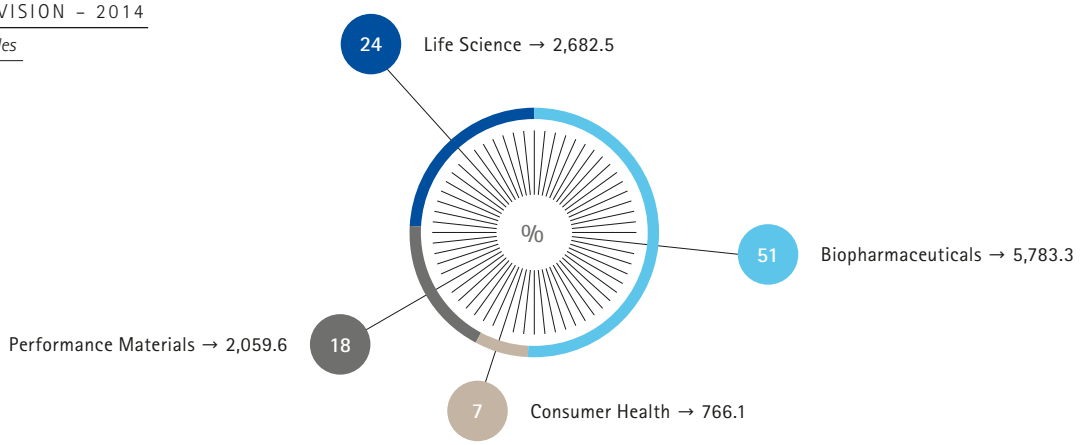
[1] Quarterly breakdown unaudited.

In 2014, the Biopharmaceuticals division generated 51 % of Group sales (2013: 53 %), remaining the largest division by sales. The Life Science and Performance Materials division's followed, contributing 24 % (2013: 25 %) and 18 % (2013: 15 %) to Group sales, respectively. The three percentage point increase in the contribution of Performance Materials to Group sales is largely due to the acquisition of AZ. As in 2013, the Consumer Health division accounted for 7 % of Group sales.

GROUP →

SALES BY DIVISION – 2014

€ million / % of sales

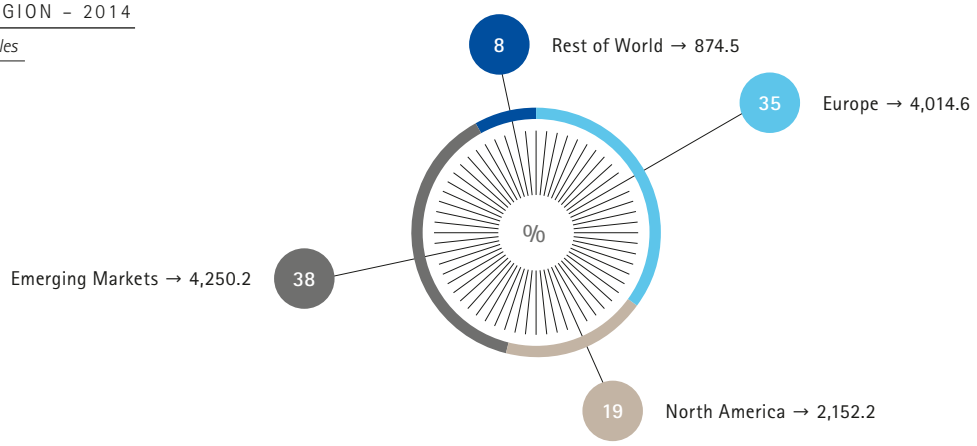


GROUP →
SALES COMPONENTS BY DIVISION – 2014

€ million / change in %	Sales	Organic growth	Exchange rate effects	Acquisitions / divestments	Total change
Biopharmaceuticals	5,783.3	3.6	–1.9	–	1.7
Consumer Health	766.1	5.4	–2.2	–	3.2
Performance Materials	2,059.6	4.1	–1.5	22.8	25.4
Life Science	2,682.5	4.5	–1.7	–0.7	2.1
Group	**11,291.5**	**4.0**	**–1.8**	**3.3**	**5.5**

In 2014, all four divisions of the Group posted organic sales increases with growth rates of between 3.6% and 5.4% as well as negative foreign exchange effects of around –2% in each division. Achieving an organic sales growth rate of 3.6%, which corresponded to an absolute increase of € 207 million, the Biopharmaceuticals division made the strongest absolute contribution to organic sales growth, followed by the Life Science division with organic sales growth of € 119 million equivalent to a growth rate of 4.5% and Performance Materials with € 67 million, or 4.1%. At 5.4%, Consumer Health generated the highest organic growth rate of all the operating divisions, equivalent to an absolute sales increase of € 40 million. Owing to the first-time consolidation of AZ, the Performance Materials division posted the highest overall sales increase of 25.4%, representing an absolute increase of € 418 million.

GROUP →
SALES BY REGION – 2014
€ million / % of sales



Dynamic business in the Emerging Markets region, which encompasses Latin America and Asia excluding Japan, fueled global organic sales growth, accounting for around 80 % of the total increase in organic sales of the Group. The growth rate in the Emerging Markets region was 9.1 %, corresponding to an absolute organic sales increase of € 347 million. In particular, the Biopharmaceuticals division was the main driver of this development. Taking into consideration acquisition-related increases as well as negative foreign exchange effects, the Group increased its sales in the Emerging Markets region by a total of 12.0 % to € 4,250 million (2013: € 3,796 million). In 2014, the region thus increased its contribution to Group sales by two percentage points to 38 %.

Sales in Europe only increased slightly by 0.8 % to € 4,015 million (2013: € 3,985 million). This increase was mainly attributable to the acquisition of AZ. Europe's contribution to Group sales thus fell to 35 % (2013: 37 %).

Sales in North America amounted to € 2,152 million (2013: € 2,078 million) and thus increased by 3.6 % or € 74 million in comparison with the previous year. With a slight organic sales increase of 1.7 % and coupled with negative exchange rate effects of 1.8 %, North America's contribution to Group sales was 19 %, as in 2013.

The Rest of World region, i.e. Japan, Africa and Australia / Oceania, generated € 875 million (2013: € 842 million) or 8 % of Group sales, as in the previous year. Organic and acquisition-related growth was dampened by negative foreign exchange effects (– 6.9 %), which were mainly attributable to the Japanese yen. Overall, sales increased by 3.9 % in this region in 2014.

GROUP →

SALES COMPONENTS BY REGION – 2014

€ million / change in %	Sales	Organic growth	Exchange rate effects	Acquisitions / divestments	Total change
Europe	4,014.6	0.2	– 0.1	0.7	0.8
North America	2,152.2	1.7	0.1	1.8	3.6
Emerging Markets	4,250.2	9.1	– 3.5	6.4	12.0
Rest of World	874.5	5.0	– 6.9	5.8	3.9
Group	**11,291.5**	**4.0**	**– 1.8**	**3.3**	**5.5**

The consolidated income statement of the Group is as follows:

GROUP →
CONSOLIDATED INCOME STATEMENT

	2014		2013		Change	
	€ million	in %	€ million	in %	€ million	in %
Sales	**11,291.5**	**100.0**	**10,700.1**	**100.0**	**591.4**	**5.5**
Royalty, license and commission income	209.3	1.9	395.0	3.7	–185.7	–47.0
Total revenues	**11,500.8**	**101.9**	**11,095.1**	**103.7**	**405.7**	**3.7**
Cost of sales[1]	–3,526.4	–31.2	–3,041.7	–28.4	–484.7	15.9
(of which: amortization of intangible assets)[1]	*(–94.0)*		*(–49.2)*		*(–44.8)*	*(91.2)*
Gross profit[1]	**7,974.4**	**70.6**	**8,053.4**	**75.3**	**–79.0**	**–1.0**
Marketing and selling expenses[1]	–3,104.9	–27.5	–3,088.5	–28.9	–16.4	0.5
(of which: amortization of intangible assets)[1]	*(–719.0)*		*(–762.0)*		*(43.0)*	*(–5.7)*
Royalty, license and commission expenses	–537.5	–4.8	–567.0	–5.3	29.5	–5.2
Administration expenses	–608.6	–5.4	–562.4	–5.3	–46.2	8.2
Research and development costs[1]	–1,703.7	–15.1	–1,506.6	–14.1	–197.1	13.1
(of which: amortization of intangible assets)[1]	*(–3.8)*		*(–2.3)*		*(–1.5)*	*(64.6)*
Other operating expenses and income	–257.7	–2.3	–718.1	–6.7	460.4	–64.1
Operating result (EBIT)	**1,762.0**	**15.6**	**1,610.8**	**15.1**	**151.2**	**9.4**
Financial result	–205.0	–1.8	–222.2	–2.1	17.2	–7.7
Profit before income tax	**1,557.0**	**13.8**	**1,388.6**	**13.0**	**168.4**	**12.1**
Income tax	–392.2	–3.5	–179.5	–1.7	–212.7	118.4
Profit after tax	**1,164.8**	**10.3**	**1,209.1**	**11.3**	**–44.3**	**–3.7**
Attributable to non-controlling interests	–7.5	–0.1	–6.9	–0.1	–0.6	8.4
Net income	**1,157.3**	**10.2**	**1,202.2**	**11.2**	**–44.9**	**–3.7**

[1]The disclosure of amortization of intangible assets (excluding software) has been changed. See "Accounting and measurement principles" in the Notes to the Group accounts.

Royalty, license and commission income declined by –47.0% to € 209 million in 2014 (2013: € 395 million). This sharp drop of € –186 million was mainly due to the decrease in royalty, and license and commission income in the Biopharmaceuticals division. Total revenues (sales plus royalty, license and commission income) rose by 3.7% to € 11,501 million (2013: € 11,095 million).

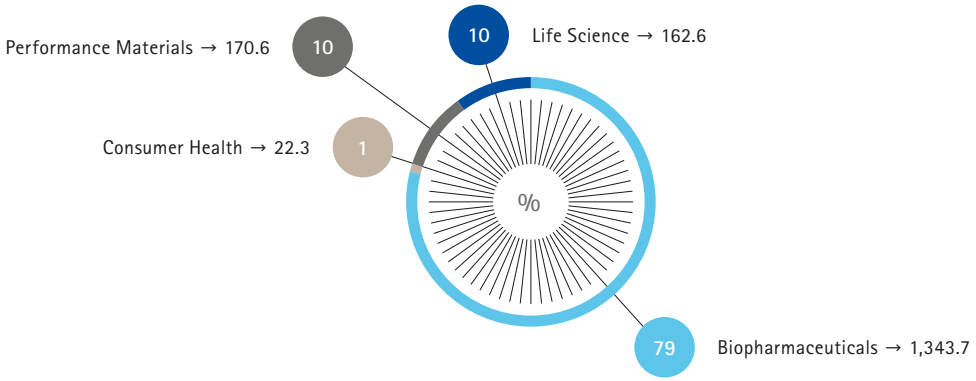
Including cost of sales, which increased by 15.9% to € 3,526 million in 2014, the Group recorded gross profit of € 7,974 million (2013: € 8,053 million). The strong increase in cost of sales was due among other things to organic sales growth in all divisions, as well as the first-time consolidation of AZ. As part of the purchase price allocation, the acquired inventories of AZ were stepped up to fair values on the date of first-time consolidation. In 2014, € 45 million of this step-up was recognized as an expense in cost of sales. In addition, cost of sales of the Performance Materials division rose due to the amortization of intangible assets in connection with the AZ purchase price allocation. Along with stronger sales growth in regions with lower margins as well as isolated production and supply bottlenecks in the Biopharmaceuticals division, gross margin, i.e. gross profit as a percentage of sales, declined to 70.6% (2013: 75.3%) in 2014. In addition to the aforementioned effects, the sharp decline in royalty, license and commission income also had a negative effect on gross margin.

The increase in research and development costs was mainly attributable to the Biopharmaceuticals division and included in particular expenses for provisions set up for unavoidable subsequent costs that are likely to be incurred in connection with the discontinuation of clinical development programs. Consequently, 79 % of Group-wide research and development spending was attributable to this division (2013: 78 %). The Group research spending ratio (research and development costs as a percentage of sales) rose accordingly to 15.1 % (2013: 14.1 %).

GROUP →

RESEARCH AND DEVELOPMENT COSTS BY DIVISION – 2014

€ million / in %



In 2014, the improvement in other operating expenses and income (net) to € –258 million (2013: € –718 million) mainly reflected the adjustment of provisions for litigation, lower expenses from one-time items and higher foreign exchange gains (see also "Other operating expenses and income" in the Notes to the Group accounts). However, other operating expenses and income were affected in 2014 by higher impairments of intangible assets in connection with the discontinuation of clinical development programs in the Biopharmaceuticals division.

Owing to the good performance of the Merck KGaA, Darmstadt, Germany, share price compared with the DAX, expenses from additions to provisions within the scope of the company's Long-Term Incentive Plan (LTIP) were higher in 2014 than in the previous year. The intrinsic value of the Share Units of Merck KGaA, Darmstadt, Germany, (MSUs) was recognized under the respective functional costs in the income statement depending on the field of activity of the eligible participants. MSUs are virtual shares in the Group that eligible executives and employees could receive at the end of a three-year performance period within the scope of the LTIP.

As a result of the development of income and expenses described above, the operating result (EBIT) of the Group increased by 9.4 % to € 1,762 million in 2014.

The improvement in the financial result by € 17 million to € –205 million was largely attributable to the positive development of the interest result (see also "Financial Result" in the Notes to the Group accounts).

Income tax expenses of € 392 million (2013: € 180 million) led to a tax ratio of 25.2 % (2013: 12.9 %). The low tax ratio of the previous year was attributable to one-time deferred tax income (see also "Income Tax" in the Notes to the Group accounts).

Net income, i.e. profit after tax attributable to Merck KGaA, Darmstadt, Germany, shareholders, in 2014 was € 1,157 million (2013: € 1,202 million). Taking the share split into account, this resulted in earnings per share of € 2.66 (2013: € 2.77).

The key financial indicator used to steer operating business, EBITDA pre one-time items, climbed 4.1 % to € 3,388 million (2013: € 3,253 million). The resulting EBITDA pre margin of 30.0 % nearly reached the year-earlier level (30.4 %). The reconciliation of the operating result (EBIT) to EBITDA pre one-time items is presented under "Internal management system of the Group".

The development of EBITDA pre one-time items in the individual quarters in comparison with 2013 is presented in the following overview:

GROUP →

EBITDA PRE ONE-TIME ITEMS AND CHANGE BY QUARTER[1]

€ million / change in %

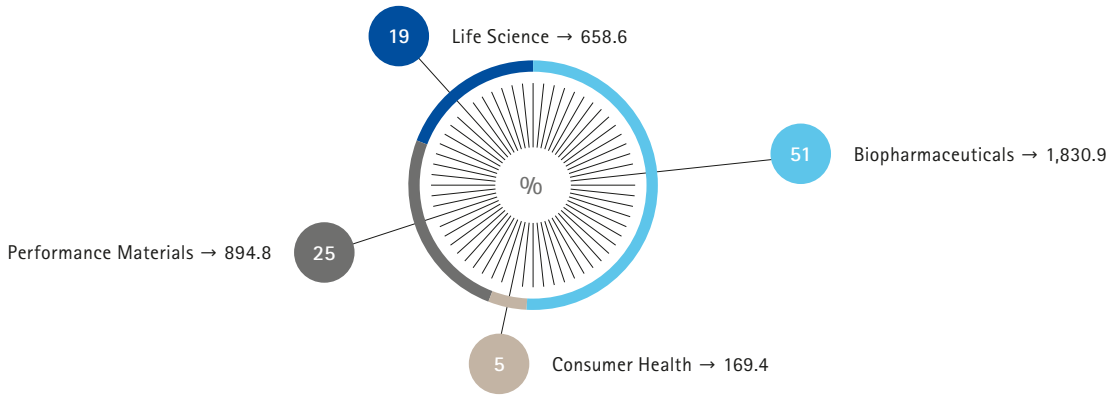
[1] Quarterly breakdown unaudited.

The increase in EBITDA pre one-time items was mainly attributable to the Performance Materials division, which achieved the strongest rise in EBITDA pre one-time items of all the operating divisions with an absolute increase of € 115 million. The division thus increased its share of Group EBITDA pre one-time items by two percentage points to 25 % (2013: 23 %). This excludes the € –166 decline due to Corporate and Other. With a share of 51 % (2013: 54 %, excluding Corporate and Other), the Biopharmaceuticals division's contribution to EBITDA pre one-time items was the highest among all the operating divisions. The percentage contributions of the Life Science division and Consumer Health remained at the previous year's level of 19 % and 5 % respectively.

GROUP →

EBITDA PRE ONE-TIME ITEMS BY DIVISION – 2014

€ million / in %



Not presented: Decline in Group EBITDA pre one-time items by € –166 million due to Corporate and Other.

Net assets and financial position

GROUP →

BALANCE SHEET STRUCTURE

	Dec. 31, 2014		Dec. 31, 2013		Change	
	€ million	in %	€ million	in %	€ million	in %
Current assets	**10,480.4**	**40.3**	**7,384.5**	**35.5**	**3,095.9**	**41.9**
of which:						
Cash and cash equivalents	2,878.5		980.8		1,897.7	
Current financial assets	2,199.4		2,410.5		–211.1	
Trade accounts receivable	2,235.6		2,021.4		214.2	
Inventories	1,659.7		1,474.2		185.5	
Other current assets	1,507.2		497.6		1,009.6	
Non-current assets	**15,529.7**	**59.7**	**13,434.1**	**64.5**	**2,095.6**	**15.6**
of which:						
Intangible assets	11,395.5		9,867.2		1,528.3	
Property, plant and equipment	2,990.4		2,647.2		343.2	
Other non-current assets	1,143.8		919.7		224.1	
Total assets	**26,010.1**	**100.0**	**20,818.6**	**100.0**	**5,191.5**	**24.9**
Current liabilities	**6,601.4**	**25.4**	**3,898.8**	**18.7**	**2,702.6**	**69.3**
of which:						
Current financial liabilities	2,075.9		440.4		1,635.5	
Trade accounts payable	1,539.4		1,364.1		175.3	
Current provisions	561.7		494.7		67.0	
Other current liabilities	2,424.4		1,599.6		824.8	
Non-current liabilities	**7,607.7**	**29.2**	**5,850.6**	**28.1**	**1,757.1**	**30.0**
of which:						
Non-current financial liabilities	3,561.1		3,257.5		303.6	
Non-current provisions	626.1		1,011.1		–385.0	
Provisions for pensions and other post-employment benefits	1,820.1		910.9		909.2	
Other non-current liabilities	1,600.5		671.1		929.4	
Equity	**11,801.0**	**45.4**	**11,069.2**	**53.2**	731.8	**6.6**
Total liabilities and equity	**26,010.1**	**100.0**	**20,818.6**	**100.0**	5,191.5	24.9

The total assets of the Group amounted to € 26,010 million as of December 31, 2014. This represents an increase of € 5,192 million or 24.9 % over December 31, 2013 (€ 20,819 million). This sharp increase was primarily attributable to the following developments:

The issue of a hybrid bond with a volume of € 1.5 billion as well as higher other financial liabilities led in 2014 to an increase of around € 1.9 billion in liquid assets as well as financial liabilities, which relates to the financing of the planned acquisition of Sigma-Aldrich. Currency hedging transactions completed for the expected purchase price payment in U.S. dollars for the acquisition of Sigma-Aldrich in 2015 resulted in high positive market values that increased equity without affecting profit or loss as of December 31, 2014.

Within the scope of the global alliance entered into with Pfizer Inc., USA, in November 2014 on the development and commercialization of the anti-PD-L1 antibody, the Group received an upfront payment of US$ 850 million (€ 678 million). Based on the collaboration agreement, the Group will co-market Xalkori®, a drug for the treatment of non-small cell lung cancer, with Pfizer in the United States and certain other major markets over a multi-year period. Other current assets of € 294 million were capitalized for the entitlement to the right. Both the upfront payment received and the value of the right to co-market Xalkori® were recognized in the balance sheet as deferred revenues under other liabilities, leading to an increase of nearly € 1 billion in the balance sheet total as of December 31, 2014.

Owing to a weaker euro, positive foreign exchange effects resulted, which increased total assets by around € 0.9 billion as of December 31, 2014.

The first-time consolidation of AZ as of May 2, 2014 also had an effect on the consolidated balance sheet as of December 31, 2014. As part of the purchase price allocation for the AZ acquisition, the acquired assets and liabilities were measured at fair values in the balance sheet. On the date of first-time consolidation, this led to an increase in intangible assets (excluding goodwill) by € 1,051 million. The goodwill from the transaction amounted to € 818 million. The payment of the purchase price totaling € 1,875 million was made fully in cash. Further information on the purchase price allocation for the AZ acquisition can be found under "Acquisitions and divestments as well as assets held for sale and disposal groups" in the Notes to the Group accounts.

Equity increased by € 732 million to € 11,801 million (2013: € 11,069 million). This increase was mainly driven by total comprehensive income generated in 2014 (see the Consolidated Statement of Comprehensive Income in the consolidated financial statements). This was countered by dividend payments, the result transfer to E. Merck KG, Darmstadt, Germany, as well as the acquisition of the non-controlling interests in AZ Electronic Materials S.A. (see Consolidated Statement of Changes in Net Equity in the consolidated financial statements). Owing to the sharp increase in the balance sheet total, the equity ratio declined to 45.4 % as of December 31, 2014 (2013: 53.2 %).

The doubling of pension provisions to € 1.8 billion resulted mainly from the lowering of the discount rates used to calculate the present value of the defined benefit obligations of old-age pension plans. The resulting actuarial losses were recognized in the Consolidated Statement of Comprehensive Income and, taking into account deferred taxes, lowered the equity of the Group.

GROUP →

NET FINANCIAL DEBT

	Maturity	Interest rate (%)	Financial Covenant	Book value Dec. 31, 2014 € million	Book value Dec. 31, 2013 € million	Change € million	Change in %
Eurobond 2010/2015 (Nominal volume € 1,350 million)	March 2015	3.375	No	1,349.7	1,348.2	1.5	0.1
Eurobond 2009/2015 (Nominal volume € 100 million)	Dec. 2015	3.615[1]	No	100.0	100.0	–	–
Eurobond 2006/2016 (Nominal volume € 250 million)	June 2016	5.875	No	218.4	222.4	– 4.0	– 1.8
Eurobond 2009/2016 (Nominal volume € 60 million)	Nov. 2016	4.000	No	60.0	60.0	–	–
Eurobond 2009/2019 (Nominal volume € 70 million)	Dec. 2019	4.250	No	69.1	69.0	0.1	0.1
Eurobond 2010/2020 (Nominal volume € 1,350 million)	March 2020	4.500	No	1,344.1	1,343.1	1.0	0.1
Hybrid bond KGaA 2014/2074 (Nominal volume € 1,000 million)	Dec. 2074[2]	2.625[2]	No	986.2	–	986.2	–
Hybrid bond KGaA 2014/2074 (Nominal volume € 500 million)	Dec. 2074[3]	3.375[3]	No	496.7	–	496.7	–
Total bonds				**4,624.2**	**3,142.7**	**1,481.5**	**47.1**
Other financial liabilities			No	1,012.8	555.2	457.6	82.4
Total financial liabilities				**5,637.0**	**3,697.9**	**1,939.1**	**52.4**
less:							
Cash and cash equivalents				2,878.5	980.8	1,897.7	193.5
Current financial assets				2,199.4	2,410.5	– 211.1	– 8.8
Net financial debt				**559.1**	**306.6**	**252.5**	**82.3**

[1] Fixed by interest rate swaps.
[2] Merck KGaA, Darmstadt, Germany, has the right of first-time premature repayment in June 2021 for this tranche of the hybrid bond issued in December 2014; the nominal interest rate stated above has been fixed until this date.
[3] Merck KGaA, Darmstadt, Germany, has the right of first-time premature repayment in December 2024 for this tranche of the hybrid bond issued in December 2014; the nominal interest rate stated above has been fixed until this date.

The increase in financial liabilities as well as liquid assets is related to the financing of the planned acquisition of Sigma-Aldrich. Net financial debt rose by only € 252 million to € 559 million (2013: € 307 million), even though the payment of the purchase price for AZ amounting to around € 1.9 billion was financed in 2014. This illustrates yet again the high internal financing power of the Group. Expected future cash flows such as repayments and interest from financial liabilities are presented under "Management of financial risks" in the Notes to the Group accounts.

GROUP →
WORKING CAPITAL

€ million	Dec. 31, 2014	Dec. 31, 2013	Change € million	Change in %
Trade accounts receivable	2,235.6	2,021.4	214.2	10.6
Inventories	1,659.7	1,474.2	185.5	12.6
Trade accounts payable	–1,539.4	–1,364.1	–175.3	12.9
Working capital	**2,355.9**	**2,131.5**	**224.4**	**10.5**
% of sales	20.9 %	19.9 %		

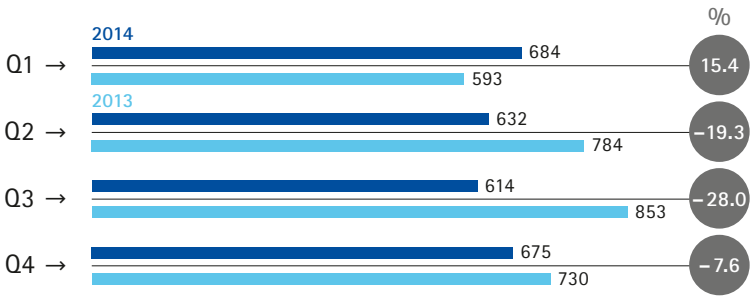
Working capital increased in 2014 by € 224 million. Approximately two-thirds of this increase were due to the first-time consolidation of AZ. Consequently, working capital increased to 20.9 % of sales (2013: 19.9 %).

Business free cash flow of the Group was € 2,605 million in 2014 (2013: € 2,960 million), which did not meet the high previous year's level. The composition of this financial indicator is presented in the Group management report under "Internal Management System of the Group".

The distribution of business free cash flow across the individual quarters as well as the percentage changes in comparison with 2013 were as follows:

GROUP →
BUSINESS FREE CASH FLOW AND CHANGE BY QUARTER[1]

€ million / change in %

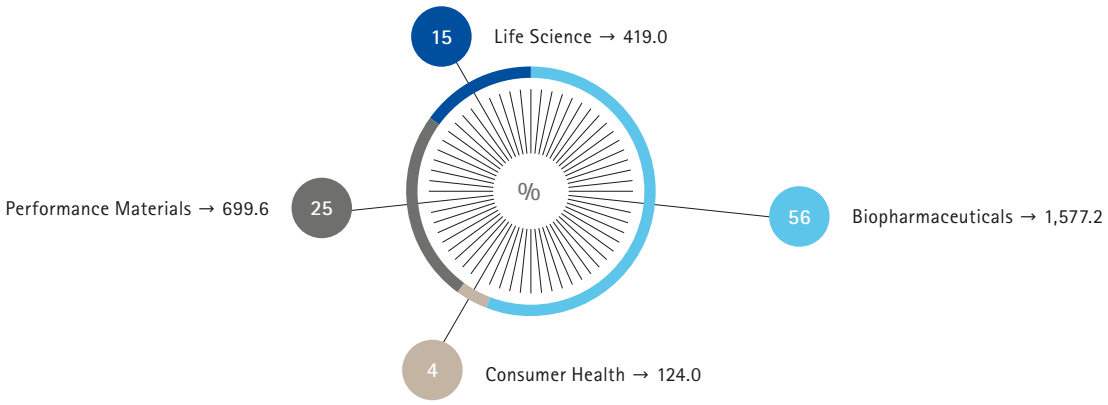


[1] Quarterly breakdown unaudited.

GROUP →

BUSINESS FREE CASH FLOW BY DIVISION – 2014

€ million / in %



Not presented: Decline in Group business free cash flow by € – 215 million due to Corporate and Other.

In 2014, all four operating divisions generated lower business free cash flow than in 2013. The Biopharmaceuticals division generated business free cash flow amounting to € 1,577 million (2013: € 1,787 million), thus raising its contribution to Group business free cash flow to 56 % (2013: 55 %). This excludes the decline of € – 215 million due to Corporate and Other. Performance Materials contributed € 700 million (2013: € 788 million) to this Group financial indicator, equivalent to 25 % (2013: 24 %). Taken together, the Life Science and Consumer Health divisions contributed 19 % (2013: 21 %) to Group business free cash flow.

The investments in property, plant, equipment and software included in the calculation of business free cash flow as well as advance payments for intangible assets increased in 2014 by 18.2 % to a total of € 528 million (2013: € 446 million). The investments in property, plant and equipment included therein amounted to € 485 million in 2014 (2013: € 408 million), of which € 220 million was attributable to strategic investment projects each with a project volume of more than € 2 million; the remainder was attributable to smaller capital spending projects.

In 2014, significant investments were approved for the expansion of the Darmstadt site. Some of these investments will serve to upgrade global headquarters. This includes the construction of an Innovation Center, a Visitors Center and an employee restaurant. A new laboratory building involving a total investment of € 65 million will bundle the pharmaceutical research activities of the Biopharmaceuticals division as of 2017. Moreover, OLED production capacity in the Performance Materials division will be expanded by an investment of € 31 million in order to meet growing market demand.

Production facilities at two further locations of the Biopharmaceuticals division are being significantly expanded. At the Aubonne site in Switzerland, € 27 million is being invested in a new packaging unit and at the Bari site in Italy, € 49 million is being invested in the expansion of the existing filling unit.

In 2014, the two rating agencies Moody's and Standard & Poor's adjusted the Group's long-term credit ratings owing to the expected higher level of debt in the course of the acquisition of Sigma-Aldrich. While Standard & Poor's has now issued a rating of "A" with negative outlook, (previously: "A" with stable outlook), Moody's changed its rating from "A3" with stable outlook to "Baa1" with negative outlook. An overview of the development of the company's rating for the period from 2009 to 2014 is presented in the Report on Risks and Opportunities.

In October 2014, the Group renewed its Debt Issuance Program with a volume of € 15 billion. The Debt Issuance Program forms the contractual basis for issuing bonds, thus giving the company flexibility in its issuing activities. It represents an important element of the Group's financing activities.

The development of key balance sheet figures is as follows:

GROUP →
KEY BALANCE SHEET FIGURES

in %		Dec. 31, 2014	Dec. 31, 2013	Dec. 31, 2012	Dec. 31, 2011	Dec. 31, 2010
Equity ratio	Equity / Total assets	45.4	53.2	48.1	47.4	46.3
Asset ratio	Non-current assets / Total assets	59.7	64.5	69.4	71.1	74.7
Asset coverage	Equity / Non-current assets	76.0	82.4	69.4	66.7	62.0
Finance structure	Current liabilities / Liabilities (total)	46.5	40.0	40.6	37.5	28.0

Overall assessment of business performance and economic situation

The Group can look back on a very successful 2014. The good development of the operating businesses made it possible to seamlessly build on the excellent results of 2013. Major progress was made with the implementation of the "Fit for 2018" transformation and growth program. With the acquisition of AZ and the formation of strategic partnerships, the Group succeeded in securing future growth and profitability. In particular, the planned acquisition of Sigma-Aldrich represents a milestone for the Group's Life Science business.

Group sales increased by 5.5% to € 11.3 billion in 2014. The acquisition of AZ, which was completed at the beginning of May 2014, increased sales by 3.3%. Sales rose not only as a result of acquisitions, but also organically by 4.0%. Whereas in the past years exchange rate developments of key currencies negatively affected sales, only a slight negative effect of –1.8% resulted in 2014.

The development of EBITDA pre one-time items, which increased in 2014 to € 3,388 million (2013: € 3,253 million), also shows the sustainable profitability strength of the Group. Business free cash flow amounted to € 2,605 million in 2014 (2013: € 2,960 million), falling short of the previous year's excellent figure.

The solid accounting and finance policy of the Group is reflected by the very good key balance sheet figures. The equity ratio as of December 31, 2014 was 45.4%, thus remaining at a very good level. Net financial debt only rose from € 307 million to € 559 million, despite the financing of the purchase price payment of € 1.9 billion for the acquisition of AZ. This shows that thanks to its high financing power, the company is well-prepared for the announced acquisition of Sigma-Aldrich. Against the backdrop of the superb liquidity position and financing base as well as the excellent business development, the economic position of the Group can be assessed positively overall. It represents an ideal starting basis for future organic and inorganic growth.

BIOPHARMACEUTICALS

BIOPHARMACEUTICALS →
KEY FIGURES

€ million	2014	2013[1]	Change in %
Total revenues	5,975.0	6,060.4	–1.4
Sales	5,783.3	5,688.4	1.7
Operating result (EBIT)	956.5	793.1	20.6
Margin (% of sales)	16.5	13.9	
EBITDA	1,786.0	1,786.6	–
Margin (% of sales)	30.9	31.4	
EBITDA pre one-time items	1,830.9	1,855.1	–1.3
Margin (% of sales)	31.7	32.6	
Business free cash flow	1,577.2	1,787.1	–11.7

[1] Previous year's figures have been adjusted, see "The Group" in the Group management report.

Development of sales and results of operations

In 2014, the Biopharmaceuticals division generated organic sales growth of 3.6%. Taking negative foreign exchange effects of –1.9% into account, divisional sales rose overall by 1.7% to € 5,783 million (2013: € 5,688 million). All the division's franchises contributed to the organic sales growth, with the highest absolute sales increase coming from the Fertility franchise. The Oncology franchise also achieved good organic sales growth with the biopharmaceutical Erbitux®. Used in the treatment of relapsing forms of multiple sclerosis, Rebif® performed well despite increasing competitive pressure. From a geographic perspective, as in previous years, the Emerging Markets region was the division's main growth driver, particularly in the General Medicine franchise (including CardioMetabolic Care).

The development of sales in the individual quarters in comparison with 2013 as well as the respective organic growth rates are presented in the following overview:

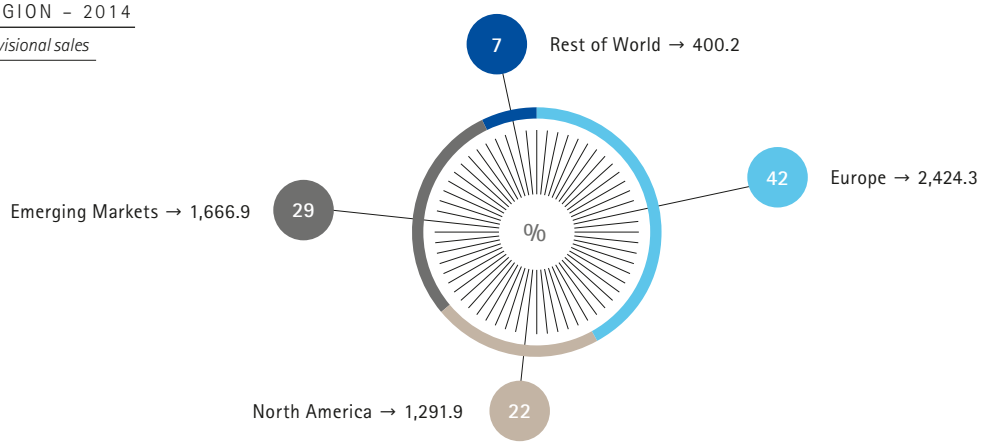
BIOPHARMACEUTICALS →
SALES AND ORGANIC GROWTH BY QUARTER[1,2]
€ million / organic growth in %

[1] Quarterly breakdown unaudited.
[2] Previous year's figures have been adjusted, see "The Group" in the Group management report.

BIOPHARMACEUTICALS →

SALES BY REGION – 2014

€ million / % of divisional sales



Europe, the division's top-selling region, posted a slight organic sales decline of –1.4 % and a negative foreign exchange impact of –0.3 %, thereby generating sales of € 2,424 million (2013: € 2,467 million). The share of divisional sales accounted for by Europe declined to 42 % (2013: 43 %). Some western European countries recorded a decline in sales.

At 13.5 %, the strongest organic growth was achieved in Emerging Markets, the division's second-largest region in terms of sales. Consequently, the share of sales generated by the Emerging Markets region increased by two percentage points to 29 %, thereby demonstrating the growing importance of this region. All franchises contributed to the organic sales growth of the division. The main drivers were Erbitux®, Gonal-f® (treatment of infertility) and medications to treat cardiovascular diseases and thyroid disorders. Taking negative currency effects of – 5.3 % into account, sales rose by a total of 8.2 % to € 1,667 million (2013: € 1,540 million).

Sales in North America amounted to € 1,292 million in 2014, which was slightly more than the previous year (2013: € 1,280 million). Rebif® and the Fertility franchise were primarily responsible for the organic sales increase of 1.0 %. Unfavorable foreign exchange effects were responsible for a decline of – 0.1 %. The North America region contributed 22 % to the division's sales (2013: 23 %).

In the Rest of World region, sales grew organically by 5.2 %, mainly powered by the good sales performance of Erbitux® and strong demand for products from the Fertility franchise. Including negative exchange rate effects of – 5.6 %, which were primarily attributable to the Japanese yen, sales totaled € 400 million (2013: € 402 million). Once again, the Rest of World region contributed 7 % to divisional sales.

BIOPHARMACEUTICALS →

SALES COMPONENTS BY REGION – 2014

€ million / change in %	Sales	Organic growth	Exchange rate effects	Acquisitions / divestments	Total change
Europe	2,424.3	–1.4	–0.3	–	–1.7
North America	1,291.9	1.0	–0.1	–	0.9
Emerging Markets	1,666.9	13.5	–5.3	–	8.2
Rest of World	400.2	5.2	–5.6	–	–0.4
Biopharmaceuticals divison	**5,783.3**	**3.6**	**–1.9**	**–**	**1.7**

In 2014, sales of the key products of the Biopharmaceuticals division developed as follows:

The drug Rebif®, which is used to treat relapsing forms of multiple sclerosis, only posted a slight organic sales decline in 2014, despite increasing competitive pressure from oral formulations. Amid currency headwinds of –1.2%, Rebif® sales amounted to € 1,840 million (2013: € 1,865 million). In North America, which generated 53% of Rebif® sales (2013: 51%) and is the largest market for this product, sales increased to € 971 million in 2014 (2013: € 956 million). Price increases compensated for lower sales volumes, leading to an organic sales increase of 1.5%. In Europe, which accounts for 38% of sales (2013: 40%) and is the second-largest region for the product, sales of Rebif® declined organically by –6.0% to € 698 million due to competition (2013: € 745 million). Together, the Emerging Markets and Rest of World regions continued to account for a 9% share of sales.

In 2014, sales of the oncology drug Erbitux® showed organic growth of 5.9%. Including the foreign exchange impact of –3.4%, which primarily stemmed from the Japanese yen and Latin American currencies, sales increased overall by € 22 million to € 904 million (2013: € 882 million). The Biopharmaceuticals division achieved organic growth in all three regions in which it holds the marketing rights. In Europe, the top-selling region for Erbitux® with a share of 56% (2013: 57%), sales totaled € 504 million (2013: € 501 million), which includes organic growth of 0.7% and insignificant negative exchange rate effects. At 18.1%, the Emerging Markets region generated the strongest organic growth, delivering sales of € 257 million for the division's oncology drug (2013: € 232 million). This region's contribution to total Erbitux® sales thus increased to 28% (2013: 26%). In the Rest of World region, Erbitux® sales declined slightly to € 144 million (2013: € 149 million), since organic growth of 4.1% was unable to offset negative foreign exchange effects of –7.7%. Business developments were positive in Japan, where organic growth amounted to 7.2%. This was mainly attributable to the approval of Erbitux® in head and neck cancer.

BIOPHARMACEUTICALS →

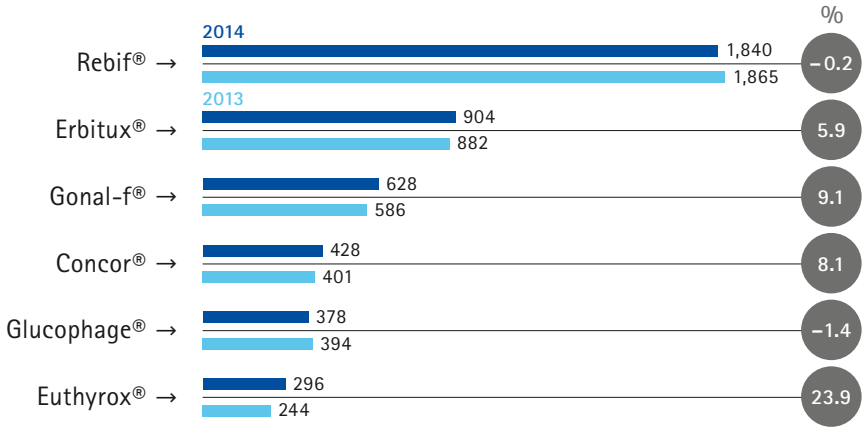
SALES AND ORGANIC GROWTH OF REBIF® AND ERBITUX® BY REGION – 2014

		Total	Europe	North America	Emerging Markets	Rest of World
Rebif®	€ million	1,839.8	698.0	970.7	138.5	32.6
	Organic growth in %	– 0.2	– 6.0	1.5	21.1	– 0.4
	% of sales	100	38	53	7	2
Erbitux®	€ million	903.7	503.5	–	256.6	143.6
	Organic growth in %	5.9	0.7	–	18.1	4.1
	% of sales	100	56	–	28	16

BIOPHARMACEUTICALS →

SALES AND ORGANIC GROWTH OF KEY PRODUCTS

€ million / organic growth in %



In 2014, the Biopharmaceuticals division generated organic sales growth of 9.1 % with Gonal-f®, the leading recombinant hormone used in the treatment of infertility. Including adverse foreign exchange effects, sales increased by 7.1 % to € 628 million (2013: € 586 million). Sales of Gonal-f® rose in all regions, with the highest absolute growth achieved in the Emerging Markets region. The other products in the Fertility portfolio also developed positively.

At € 394 million, sales by the Endocrinology franchise, which mainly consists of products to treat metabolic and growth disorders, reached the year-earlier figure. Organic growth of 2.0 % was offset by negative foreign exchange effects. Sales of the growth hormone Saizen®, the top-selling product of this franchise, saw an organic increase of 4.0 % as well as negative foreign exchange effects of – 3.3 %. Consequently, sales amounted to € 237 million (2013: € 235 million).

The Biopharmaceuticals division's General Medicine franchise (including CardioMetabolic Care), which consists of products to treat cardiovascular diseases and diabetes, among others, generated organic sales growth of 3.9 %. Including negative foreign exchange effects, sales amounted to € 1,671 million (2013: € 1,643 million). In particular, the organic sales growth of the beta-blocker Concor® and organic sales of products to treat thyroid disorders (Euthyrox®) developed well. The decline in sales of Glucophage®, which is used to treat diabetes, to € 378 million (2013: € 394) was largely due to the impact of negative currency effects in the first half of 2014, as well as supply constraints in Europe.

The results of operations developed as follows:

BIOPHARMACEUTICALS →
RESULTS OF OPERATIONS

	2014		2013[1]		Change	
	€ million	in %	€ million	in %	€ million	in %
Sales	**5,783.3**	**100.0**	**5,688.4**	**100.0**	**94.9**	**1.7**
Royalty, license and commission income	191.7	3.3	372.0	6.5	–180.3	–48.5
Total revenues	**5,975.0**	**103.3**	**6,060.4**	**106.5**	**–85.4**	**–1.4**
Cost of sales[2]	–1,119.7	–19.4	–1,024.4	–18.0	–95.3	9.3
(of which: amortization of intangible assets)[2]	*(–)*		*(–)*		*(–)*	*(–)*
Gross profit[2]	**4,855.3**	**84.0**	**5,036.0**	**88.5**	**–180.7**	**–3.6**
Marketing and selling expenses[2]	–1,780.2	–30.8	–1,813.6	–31.9	33.4	–1.8
(of which: amortization of intangible assets)[2]	*(–552.8)*		*(–596.7)*		*(43.9)*	*(–7.4)*
Royalty, license and commission expenses	–518.3	–9.0	–547.3	–9.6	29.0	–5.3
Administration expenses	–219.7	–3.8	–202.5	–3.6	–17.2	8.5
Research and development costs[2]	–1,343.7	–23.2	–1,178.1	–20.7	–165.6	14.1
(of which: amortization of intangible assets)[2]	*(–1.0)*		*(–)*		*(–1.0)*	*(–)*
Other operating expenses and income	–36.9	–0.6	–501.4	–8.8	464.5	–92.7
Operating result (EBIT)	**956.5**	**16.5**	**793.1**	**13.9**	**163.4**	**20.6**
Depreciation/Amortization/Reversals of impairments	829.5	14.3	993.5	17.5	–164.0	–16.5
(of which: one-time items)	*(4.7)*		*(189.1)*		*(–184.4)*	*(–97.5)*
EBITDA	**1,786.0**	**30.9**	**1,786.6**	**31.4**	**–0.6**	**–**
Restructuring costs	42.5		62.3		–19.8	–31.8
Integration costs/IT costs	2.4		6.2		–3.8	–61.5
Gains/losses on the divestment of businesses	–		–		–	–
Acquisition-related one-time items	–		–		–	–
Other one-time items	–		–		–	–
EBITDA pre one-time items	**1,830.9**	**31.7**	**1,855.1**	**32.6**	**–24.2**	**–1.3**

[1] Previous year's figures have been adjusted, see "The Group" in the Group management report.
[2] The disclosure of amortization of intangible assets (excluding software) has been changed. See "Accounting and measurement principles" in the Notes to the Group accounts.

Royalty, license and commission income, which is reported under total revenues along with sales, dropped substantially in 2014 by –48.5% to € 192 million (2013: € 372 million). This was due primarily to lower royalty and license income from Humira®, Avonex® and Enbrel®. Among other things, the agreement reached with Bristol-Myers Squibb in 2013 on the co-promotion of Glucophage® in China had a slightly positive effect on commission income in comparison with the previous year.

Taking into account the development of sales and total revenues as well as cost of sales, the gross profit of the Biopharmaceuticals division fell by € –181 million to € 4,855 million, leading to a gross margin of 84.0% (2013: 88.5%). This decrease was primarily due to lower royalty, license and commission income, but also to stronger sales growth in regions with lower margins as well as isolated production and supply bottlenecks.

The division's research spending ratio increased to 23.2% (2013: 20.7%). In 2014, an assessment of the R&D pipeline took place, leading to a prioritization of research activities and the discontinuation of multiple research projects. Provisions, which increased research and development costs in 2014, were set up for future expenses of the discontinued projects. In addition, investments in the Biosimilars pipeline led to higher research and development costs.

The strong improvement in other operating expenses and income (net) in 2014 mainly reflected the adjustment of provisions for litigation (see also "Other operating income and expenses" in the Notes to the Group accounts), as well as to the reduction in one-time expenses. Other operating expenses and income were affected by higher one-time expenses and impairments of intangible assets in connection with the discontinuation of multiple research projects (see "Intangible assets" in the Notes to the Group accounts).

After eliminating depreciation and amortization, and adjusted for one-time items, EBITDA pre one-time items declined by –1.3 % to € 1,831 million and the EBITDA margin pre one-time items was 31.7 % (2013: 32.6 %).

The development of EBITDA pre one-time items in the individual quarters in comparison with 2013 is presented in the following overview:

BIOPHARMACEUTICALS →

EBITDA PRE ONE-TIME ITEMS AND CHANGE BY QUARTER[1,2]

€ million / change in %

[1] Quarterly breakdown unaudited.
[2] Previous year's figures have been adjusted, see "The Group" in the Group management report.

Development of business free cash flow

In 2014, the Biopharmaceuticals division's business free cash flow amounted to € 1,577 million, falling short of the very high level of € 1,787 million in 2013. The decline of € 210 million was attributable to both higher capital spending as well as the development of inventories as well as trade accounts receivable, with foreign exchange effects accounting for the increase in both balance sheet items in 2014.

BIOPHARMACEUTICALS →

BUSINESS FREE CASH FLOW

€ million	2014	2013[1]	Change in %
EBITDA pre one-time items	1,830.9	1,855.1	–1.3
Investments in property, plant and equipment, software as well as advance payments for intangible assets	– 229.5	–164.3	39.7
Changes in inventories	– 21.8	41.7	–152.0
Changes in trade accounts receivable	– 2.4	54.6	–104.4
Business free cash flow	**1,577.2**	**1,787.1**	**–11.7**

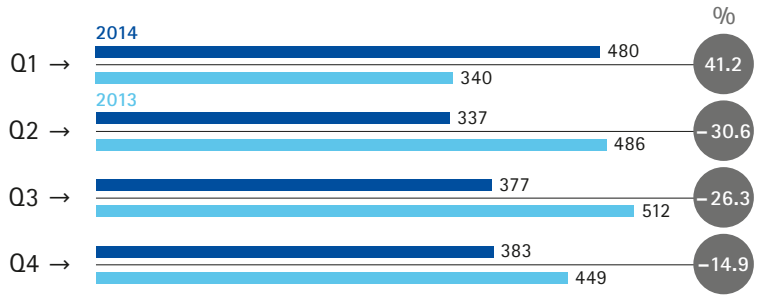
[1] Previous year's figures have been adjusted, see "The Group" in the Group management report.

The development of business free cash flow in the individual quarters in comparison with 2013 is presented in the following overview:

BIOPHARMACEUTICALS →

BUSINESS FREE CASH FLOW AND CHANGE BY QUARTER[1,2]

€ million / change in %



[1] Quarterly breakdown unaudited.
[2] Previous year's figures have been adjusted, see "The Group" in the Group management report.

CONSUMER HEALTH

CONSUMER HEALTH →
KEY FIGURES

€ million	2014	2013[1]	Change in %
Total revenues	768.8	745.0	3.2
Sales	766.1	742.1	3.2
Operating result (EBIT)	149.9	162.1	– 7.5
Margin (% of sales)	19.6	21.8	
EBITDA	160.4	171.0	– 6.2
Margin (% of sales)	20.9	23.0	
EBITDA pre one-time items	169.4	172.4	–1.7
Margin (% of sales)	22.1	23.2	
Business free cash flow	124.0	172.5	– 28.1

[1] Previous year's figures have been adjusted, see "The Group" in the Group management report.

Development of sales and results of operations

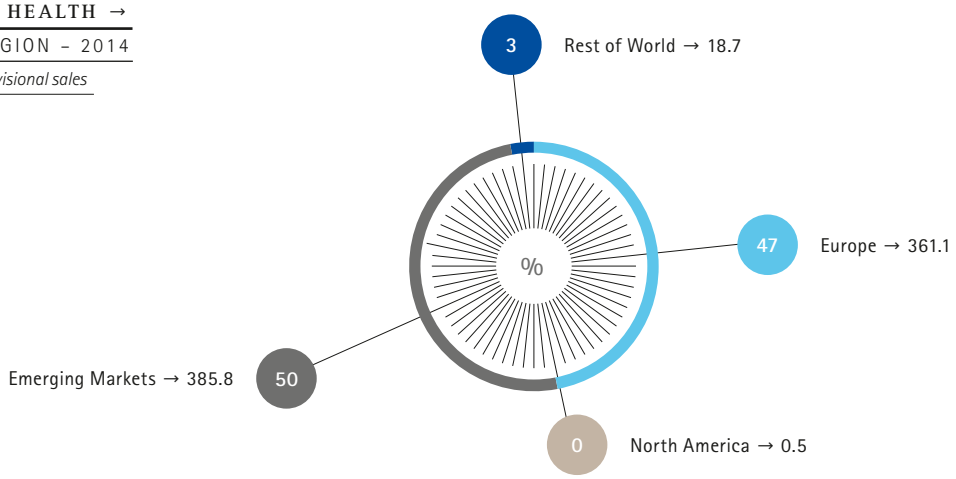
In 2014, sales by the Consumer Health division rose 3.2 % to € 766 million (2013: € 742 million). Organic growth of 5.4 % was countered by a negative foreign exchange impact of – 2.2 %. Organic sales growth was mainly driven by the strategic brands Neurobion®, Femibion® and Floratil®, as well as by local brands in Germany, where an increase in the market share of Femibion® was achieved.

The development of sales in the individual quarters in comparison with 2013 as well as the respective organic growth rates are presented in the following overview:

CONSUMER HEALTH →
SALES AND ORGANIC GROWTH BY QUARTER[1,2]
€ million / organic growth in %

[1] Quarterly breakdown unaudited.
[2] Previous year's figures have been adjusted, see "The Group" in the Group management report.

CONSUMER HEALTH →
SALES BY REGION – 2014
€ million / % of divisional sales



From a geographic perspective, the division's two most important regions, namely Emerging Markets and Europe, delivered solid organic growth rates. The Emerging Markets region, which accounts for 50 % of sales (2013: 51 %) and is the division's largest region, posted organic sales growth of 7.1 % and a negative foreign exchange impact of – 4.6 %. Sales in this region thus increased by a total of 2.5 % to € 386 million (2013: € 376 million). Neurobion® in particular proved to be a growth driver and achieved double-digit growth rates in Latin America. Sales benefited from the focus on consumer-oriented marketing activities. For instance in the growth market of Brazil, the anti-diarrheal Floratil® achieved a double-digit growth rate. In Asia, the growth drivers included not only Neurobion® but also the iron supplement Sangobion®. The performance of these two brands was very strong particularly in Indonesia and the Philippines.

In Europe, the Consumer Health division generated organic sales growth of 4.6 % supported by positive foreign exchange effects of 0.6 %, which led to an increase in sales to € 361 million (2013: € 343 million). Strong sales volumes of Femibion®, a nutritional supplement for pregnant women, local brands in Germany as well as Apaisyl®, a French brand of insect repellent and skin care products, more than offset weaker demand for Bion® as well as Nasivin®, which, for example, was impacted by a mild winter. The share of divisional sales accounted for by Europe remained constant at 47 % in 2014 (2013: 46 %).

CONSUMER HEALTH →
SALES COMPONENTS BY REGION – 2014

€ million / change in %	Sales	Organic growth	Exchange rate effects	Acquisitions / divestments	Total change
Europe	361.1	4.6	0.6	–	5.2
North America	0.5	– 56.5	1.6	–	– 54.9
Emerging Markets	385.8	7.1	– 4.6	–	2.5
Rest of World	18.7	– 8.0	– 5.3	–	– 13.3
Consumer Health	**766.1**	**5.4**	**– 2.2**	**–**	**3.2**

The results of operations developed as follows:

CONSUMER HEALTH →
RESULTS OF OPERATIONS

	2014		2013[1]		Change	
	€ million	in %	€ million	in %	€ million	in %
Sales	**766.1**	**100.0**	**742.1**	**100.0**	**24.0**	**3.2**
Royalty, license and commission income	2.7	0.4	2.9	0.4	– 0.2	– 5.0
Total revenues	**768.8**	**100.4**	**745.0**	**100.4**	**23.8**	**3.2**
Cost of sales[2]	– 250.7	– 32.7	– 243.0	– 32.7	– 7.7	3.2
(of which: amortization of intangible assets)[2]	*(–)*		*(–)*		*(–)*	*(–)*
Gross profit[2]	**518.1**	**67.6**	**502.0**	**67.6**	**16.1**	**3.2**
Marketing and selling expenses[2]	– 303.1	– 39.6	– 287.2	– 38.7	– 15.9	5.6
(of which: amortization of intangible assets)[2]	*(– 2.7)*		*(– 2.4)*		*(– 0.3)*	*(15.8)*
Royalty, license and commission expenses	– 2.6	– 0.3	– 2.4	– 0.3	– 0.2	6.2
Administration expenses	– 27.2	– 3.6	– 26.9	– 3.6	– 0.3	0.9
Research and development costs[2]	– 22.3	– 2.9	– 21.8	– 2.9	– 0.5	2.1
(of which: amortization of intangible assets)[2]	*(–)*		*(–)*		*(–)*	*(–)*
Other operating expenses and income	– 13.0	– 1.7	– 1.5	– 0.2	– 11.5	–
Operating result (EBIT)	**149.9**	**19.6**	**162.1**	**21.8**	**– 12.2**	**– 7.5**
Depreciation / Amortization / Reversals of impairments	10.5	1.4	8.9	1.2	1.6	17.6
(of which: one-time items)	*(–)*		*(–)*		*(–)*	*(–)*
EBITDA	**160.4**	**20.9**	**171.0**	**23.0**	**– 10.6**	**– 6.2**
Restructuring costs	9.0		1.2		7.8	–
Integration costs / IT costs	–		–		–	–
Gains / losses on the divestment of businesses	–		–		–	–
Acquisition-related one-time items	–		–		–	–
Other one-time items	–		0.2		– 0.2	–
EBITDA pre one-time items	**169.4**	**22.1**	**172.4**	**23.2**	**– 3.0**	**– 1.7**

[1] Previous year's figures have been adjusted, see "The Group" in the Group management report.
[2] The disclosure of amortization of intangible assets (excluding software) has been changed. See "Accounting and measurement principles" in the Notes to the Group accounts.

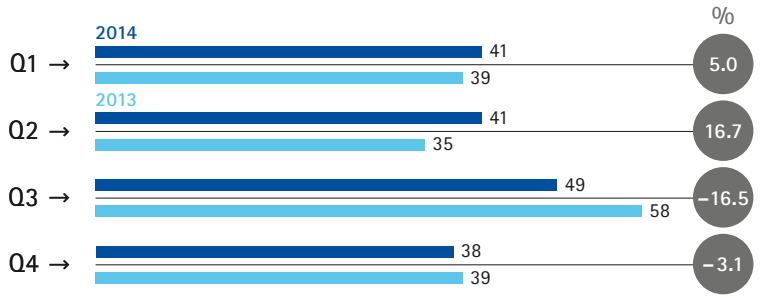
In 2014, the division's gross profit rose by 3.2 % to € 518 million. Consequently, gross margin was unchanged at 67.6 %. Higher marketing and selling expenses were largely related to the establishment of a consumer-oriented global marketing concept of the division to strengthen strategic brands. The decline in other operating expenses and income (net) to € –13 million (2013: € -2 million) was primarily attributable to the one-time expenses for restructuring measures included under this item. Adjusted for amortization and one-time items, the Consumer Health division reported EBITDA pre one-time items of € 169 million (2013: € 172 million), thus nearly reaching the earnings level of 2013 despite higher marketing and selling expenses. The EBITDA margin pre one-time items was 22.1 % in 2014 (2013: 23.2 %).

The development of EBITDA pre one-time items in the individual quarters in comparison with 2013 is presented in the following overview:

CONSUMER HEALTH →

EBITDA PRE ONE-TIME ITEMS AND CHANGE BY QUARTER[1,2]

€ million / change in %



[1] Quarterly breakdown unaudited.
[2] Previous year's figures have been adjusted, see "The Group" in the Group management report.

Development of business free cash flow

In 2014, business free cash flow of the Consumer Health division declined by € –48 million or –28.1% to € 124 million. This decrease was primarily the outcome of changes in inventories and trade accounts receivable in comparison with the previous year. The increase in these two balance sheet items lowered business free cash flow in 2014, whereas their development in 2013 had a positive impact on this financial indicator. Higher capital spending in 2014 also lowered business free cash flow.

CONSUMER HEALTH →

BUSINESS FREE CASH FLOW

€ million	2014	2013[1]	Change in %
EBITDA pre one-time items	169.4	172.4	–1.7
Investments in property, plant and equipment, software as well as advance payments for intangible assets	–10.5	–4.1	160.0
Changes in inventories	–20.6	2.0	–
Changes in trade accounts receivable	–14.3	2.2	–
Business free cash flow	**124.0**	**172.5**	**–28.1**

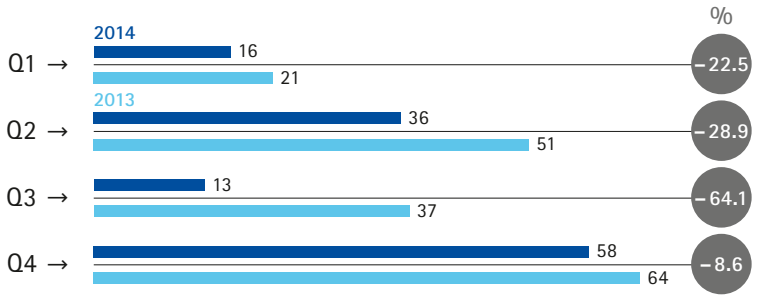
[1] Previous year's figures have been adjusted, see "The Group" in the Group management report.

The development of business free cash flow in the individual quarters in comparison with 2013 is presented in the following overview:

CONSUMER HEALTH →

BUSINESS FREE CASH FLOW AND CHANGE BY QUARTER[1,2]

€ million / change in %



[1] Quarterly breakdown unaudited.
[2] Previous year's figures have been adjusted, see "The Group" in the Group management report.

PERFORMANCE MATERIALS

PERFORMANCE MATERIALS →
KEY FIGURES

€ million	2014	2013	Change in %
Total revenues	2,060.5	1,644.4	25.3
Sales	2,059.6	1,642.1	25.4
Operating result (EBIT)	611.5	653.3	– 6.4
Margin (% of sales)	29.7	39.8	
EBITDA	803.6	765.8	4.9
Margin (% of sales)	39.0	46.6	
EBITDA pre one-time items	894.8	779.7	14.8
Margin (% of sales)	43.4	47.5	
Business free cash flow	699.6	787.8	– 11.2

Development of sales and results of operations

In 2014, sales of the Performance Materials division grew by 25.4% to € 2,060 million (2013: € 1,642 million). Both solid organic growth of 4.1% as well as acquisition-related sales increases of 22.8% or € 375 million contributed to this increase. Adverse foreign exchange effects lowered sales by –1.5%. Organic growth was delivered by all the existing business units, namely Liquid Crystals, Pigments & Cosmetics and Advanced Technologies, with Liquid Crystals making the largest absolute contribution to sales growth. The acquisition-related sales growth was due to the first-time consolidation of AZ as of May 2, 2014, the integration of which has been completed.

The Liquid Crystals business unit again maintained its market leadership position in liquid crystal materials in 2014. The two leading technologies (PS-VA and IPS) registered strong organic sales growth thanks to continued demand for high-quality (e.g. ultra high-definition) and large-size televisions. This growth was also bolstered by sales volume developments of the new UB-FFS technology, which is mainly used in smartphones and tablet PCs. Higher sales volumes were partly offset by the customary price declines for liquid crystals.

The Pigments & Cosmetics business unit achieved slight organic sales growth in 2014. Xirallic® pigments, which are primarily used in automotive coatings, as well as technical functional materials were the main drivers. Including negative currency effects, sales of the Pigments & Cosmetics business unit reached the year-earlier level.

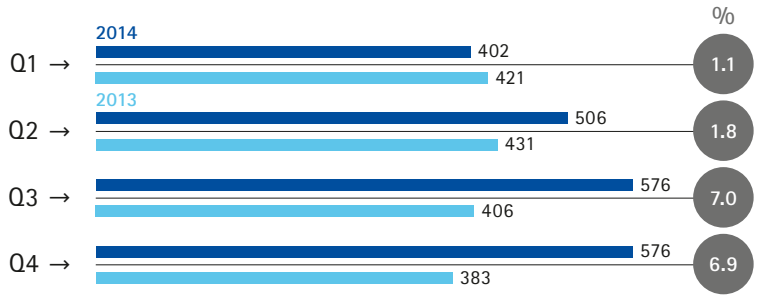
Thanks to higher demand for OLED displays, the Advanced Technologies business unit made a good contribution to the organic growth of the division.

The development of sales in the individual quarters in comparison with 2013 as well as the respective organic growth rates are presented in the following overview:

PERFORMANCE MATERIALS →

SALES AND ORGANIC GROWTH BY QUARTER[1]

€ million / organic growth in %

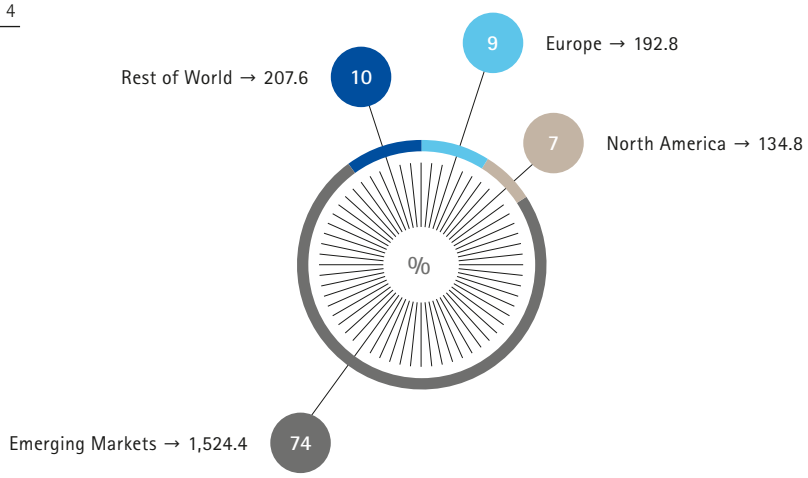


[1] Quarterly breakdown unaudited.

PERFORMANCE MATERIALS →

SALES BY REGION – 2014

€ million / % of divisional sales



Accounting for 74 % of sales (2013: 75 %), the Emerging Markets region again generated the vast majority of the division's sales. This is due to the concentration of liquid crystal customers as well as high-tech materials from the new AZ business unit in Asia. The division achieved organic sales growth of 4.4 % in this region. Sales in the Emerging Markets region rose by 19.8 % due to the acquisition of AZ. Taking negative foreign exchange effects of – 0.9 % into account, sales in this region rose to a total of € 1,524 million (2013: € 1,237 million).

The Rest of World region, which is dominated by Japan, recorded organic sales growth of 10.4 %. The acquisition of AZ contributed 31.9 % of this increase. Including a foreign exchange impact of – 8.9 %, which largely stemmed from the Japanese yen, sales in this region reached € 208 million (2013: € 156 million). The share of sales attributable to the Rest of World region thus remained unchanged at 10 %.

The division achieved sales of € 193 million in Europe (2013: € 164 million). The rise in sales was almost solely attributable to the first-time consolidation of AZ. The European share of divisional sales in 2014 was 9 % (2013: 10 %).

In North America, sales grew by 57.5 % to € 135 million (2013: € 86 million). This was driven by the acquisition-related sales increase of 61.4 %. Organic sales declined by – 4.3 % due to weaker demand from the cosmetic industry for products from the Pigments & Cosmetics business unit. Consequently, the region contributed 7 % to divisional sales in 2014 (2013: 5 %).

PERFORMANCE MATERIALS →
SALES COMPONENTS BY REGION – 2014

€ million / change in %	Sales	Organic growth	Exchange rate effects	Acquisitions / divestments	Total change
Europe	192.8	0.4	0.1	16.9	17.4
North America	134.8	– 4.3	0.4	61.4	57.5
Emerging Markets	1,524.4	4.4	– 0.9	19.8	23.3
Rest of World	207.6	10.4	– 8.9	31.9	33.4
Performance Materials	**2,059.6**	**4.1**	**– 1.5**	**22.8**	**25.4**

The results of operations developed as follows:

PERFORMANCE MATERIALS →
RESULTS OF OPERATIONS

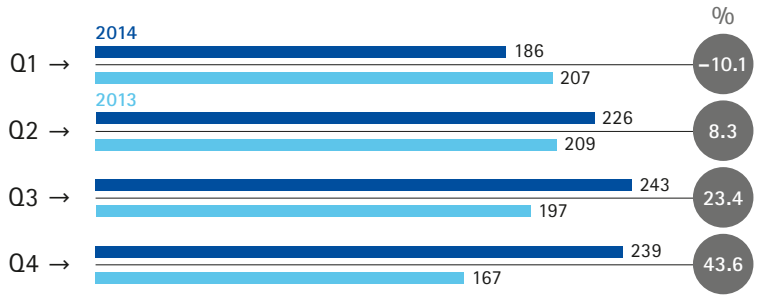
	2014		2013		Change	
	€ million	in %	€ million	in %	€ million	in %
Sales	**2,059.6**	**100.0**	**1,642.1**	**100.0**	**417.5**	**25.4**
Royalty, license and commission income	0.9	0.0	2.3	0.1	–1.4	–63.1
Total revenues	**2,060.5**	**100.0**	**1,644.4**	**100.1**	**416.1**	**25.3**
Cost of sales[1]	–983.2	–47.7	–617.1	–37.6	–366.1	59.3
(of which: amortization of intangible assets)[1]	*(–46.4)*		*(–1.2)*		*(–45.2)*	*(–)*
Gross profit[1]	**1,077.3**	**52.3**	**1,027.3**	**62.6**	**50.0**	**4.9**
Marketing and selling expenses[1]	–177.8	–8.6	–151.6	–9.2	–26.2	17.3
(of which: amortization of intangible assets)[1]	*(–11.7)*		*(–11.1)*		*(–0.6)*	*(6.0)*
Royalty, license and commission expenses	–1.1	–0.1	–1.3	–0.1	0.2	–13.4
Administration expenses	–56.1	–2.7	–27.8	–1.7	–28.3	101.4
Research and development costs[1]	–170.6	–8.3	–145.4	–8.9	–25.2	17.4
(of which: amortization of intangible assets)[1]	*(–2.8)*		*(–2.3)*		*(–0.5)*	*(22.6)*
Other operating expenses and income	–60.2	–2.9	–47.9	–2.9	–12.3	25.9
Operating result (EBIT)	**611.5**	**29.7**	**653.3**	**39.8**	**–41.8**	**–6.4**
Depreciation / Amortization / Reversals of impairments	192.1	9.3	112.5	6.9	79.6	70.9
(of which: one-time items)	*(–)*		*(–3.7)*		*(3.7)*	*(–)*
EBITDA	**803.6**	**39.0**	**765.8**	**46.6**	**37.8**	**4.9**
Restructuring costs	6.0		11.1		–5.1	–46.1
Integration costs / IT costs	12.2		2.8		9.4	–
Gains / losses on the divestment of businesses	4.6		–		4.6	–
Acquisition-related one-time items	68.4		–		68.4	–
Other one-time items	–		–		–	–
EBITDA pre one-time items	**894.8**	**43.4**	**779.7**	**47.5**	**115.1**	**14.8**

[1] The disclosure of amortization of intangible assets (excluding software) has been changed. See "Accounting and measurement principles" in the Notes to the Group accounts.

The development of the results of operations was significantly influenced by the inclusion of AZ. In particular, the sharp increase in cost of sales in 2014 related mainly to the first-time consolidation of AZ. The inventories from the acquisition were stepped up to fair values on the date of first-time consolidation. In 2014, the step-up of € 45 million was included as an expense in cost of sales. In addition, cost of sales rose due to the amortization of intangible assets in connection with the AZ purchase price allocation. As a consequence of these one-time expenses, the consolidated contribution of AZ to divisional gross profit was low in 2014. The gross margin of Performance Materials fell accordingly to 52.3 % (2013: 62.6 %). The decrease in the operating result (EBIT) to € 611 million was due among other things to the described AZ inventory revaluation, which was recognized as an expense as well as additional one-time expenses in connection with the acquisition of AZ. During the determination of EBITDA pre one-time items, these one-time effects from the inventory revaluation were added back. EBITDA pre one-time items thus includes the adjusted earnings contribution from AZ. Along with the very successful business performance of Liquid Crystals, EBITDA pre one-time items thus rose in 2014 by 14.8 % to € 895 million. The EBITDA margin pre one-time items fell to 43.4 % (2013: 47.5 %), reflecting in particular the lower margin of the AZ business.

The development of EBITDA pre one-time items in the individual quarters in comparison with 2013 is presented in the following overview:

PERFORMANCE MATERIALS →
EBITDA PRE ONE-TIME ITEMS AND CHANGE BY QUARTER[1]
€ million / change in %



[1] Quarterly breakdown unaudited.

Development of business free cash flow

In 2014, the Performance Materials division generated business free cash flow of € 700 million (2013: € 788 million). The sharp increase in trade accounts receivable as well as inventories was related to the acquisition of AZ, among other things. This first-time consolidation effect was offset by the adjustment amounting to € 145 million. Higher capital spending in 2014 also lowered cash flow. Consequently, the improvement in EBITDA pre one-time items could not offset the higher level of cash outflows overall.

PERFORMANCE MATERIALS →
BUSINESS FREE CASH FLOW

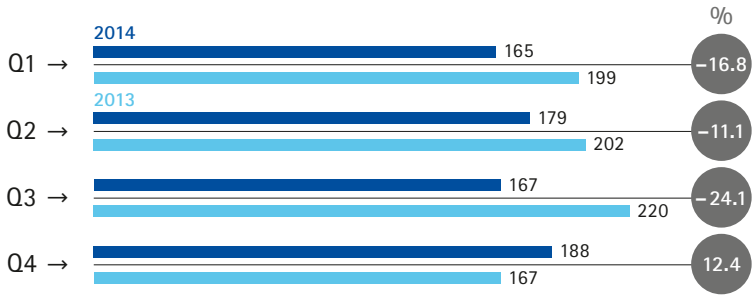
€ million	2014	2013	Change in %
EBITDA pre one-time items	894.8	779.7	14.8
Investments in property, plant and equipment, software as well as advance payments of intangible assets	–97.6	–71.7	36.1
Changes in inventories	–98.8	37.2	–
Changes in trade accounts receivable	–143.4	42.6	–
Adjustments first-time consolidation of AZ Electronic Materials	144.6	–	–
Business free cash flow	**699.6**	**787.8**	**–11.2**

The development of business free cash flow in the individual quarters in comparison with 2013 is presented in the following overview:

PERFORMANCE MATERIALS →

BUSINESS FREE CASH FLOW AND CHANGE BY QUARTER[1]

€ million / change in %



[1] Quarterly breakdown unaudited.

LIFE SCIENCE

LIFE SCIENCE →
KEY FIGURES

€ million	2014	2013	Change in %
Total revenues	2,696.5	2,645.3	1.9
Sales	2,682.5	2,627.5	2.1
Operating result (EBIT)	289.2	262.0	10.4
Margin (% of sales)	10.8	10.0	
EBITDA	598.9	589.8	1.5
Margin (% of sales)	22.3	22.4	
EBITDA pre one-time items	658.6	642.8	2.5
Margin (% of sales)	24.6	24.5	
Business free cash flow	419.0	493.8	–15.2

Development of sales and results of operations

In 2014, the Life Science division posted solid organic sales growth of 4.5%, which was driven by Process Solutions. The organic increase was countered by negative foreign exchange effects of –1.7%. In addition, the division's sales declined by –0.7% in comparison with 2013 owing to the divestment of the Discovery and Development Solutions business field as of March 31, 2014. Including these effects, sales rose overall by 2.1% to € 2,682 million (2013: € 2,628 million). The development of sales in the individual quarters in comparison with 2013 as well as the respective organic growth rates are presented in the following overview:

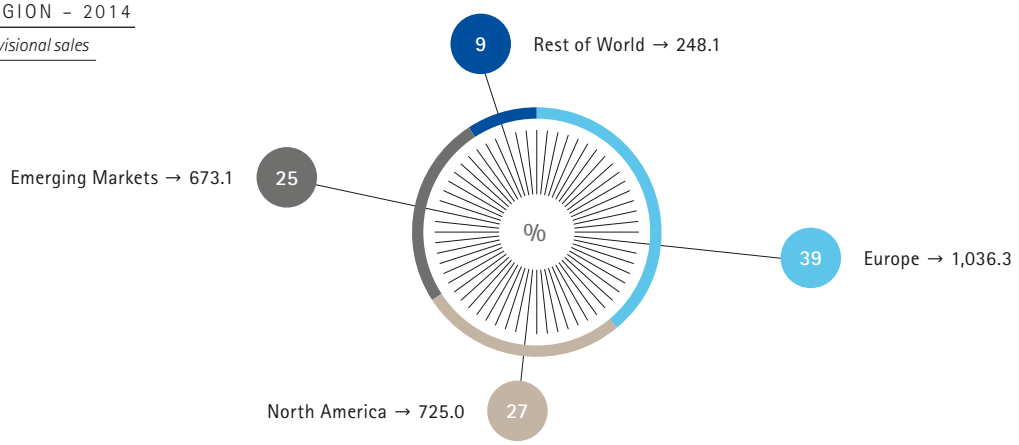
LIFE SCIENCE →
SALES AND ORGANIC GROWTH BY QUARTER[1]
€ million / organic growth in %

[1] Quarterly breakdown unaudited.

LIFE SCIENCE →

SALES BY REGION – 2014

€ million / % of divisional sales



In 2014, the Life Science division achieved organic growth in all regions. Accounting for an unchanged 39 % of divisional sales, Europe remained the division's largest geographic market, delivering organic growth of 2.7 % and sales of € 1,036 million (2013: € 1,010 million). In this region, the strong sales increases achieved by the Process Solutions business area more than offset the slightly weaker business of the Lab Solutions and Bioscience business areas.

In North America, the division achieved organic sales growth of 3.7 %, which was mainly driven by the Process Solutions business area and its products for biopharmaceutical manufacturing, supported by the solid sales performance of the Lab Solutions business area. Sales in North America rose to € 725 million (2013: € 711 million), which represented an unchanged share of 27 % of the Life Science division's global sales in 2014.

Sales developed very positively in the Emerging Markets region, which delivered organic sales growth of 9.1 %. Despite currency headwinds of – 4.2 %, sales rose to € 673 million (2013: € 642 million). The strong organic sales development was fueled by good demand for products from all the division's business areas, with Process Solutions delivering double-digit growth rates in particular. The share of divisional sales generated by the Emerging Markets region therefore increased by one percentage point to 25 %.

As a result of significant currency headwinds of – 7.8 %, especially relative to the Japanese yen, sales in the Rest of World region declined to € 248 million (2013: € 263 million). With slight organic growth of 2.5 %, this region's share of divisional sales declined to 9 % (2013: 10 %).

LIFE SCIENCE →

SALES COMPONENTS BY REGION – 2014

€ million / change in %	Sales	Organic growth	Exchange rate effects	Acquisitions / divestments	Total change
Europe	1,036.3	2.7	0.3	– 0.4	2.6
North America	725.0	3.7	0.2	– 2.0	1.9
Emerging Markets	673.1	9.1	– 4.2	– 0.1	4.8
Rest of World	248.1	2.5	– 7.8	– 0.4	– 5.7
Life Science division	**2,682.5**	**4.5**	**– 1.7**	**– 0.7**	**2.1**

The sales performance of each of the division's three business areas varied in 2014. Whereas the two top-selling business areas, Lab Solutions and Process Solutions, generated higher sales due to price and volume increases, sales of the Bioscience business area nearly remained stable.

The Process Solutions business area, which markets products and services for the pharmaceutical production value chain, generated sales organic growth of 8.9 %, which was the highest rate within the Life Science division. This increase resulted mainly from higher demand from the biotech industry for purification and sterilization products as well as filtration systems. Taking into account negative foreign exchange effects of – 1.1 % as well as the – 1.8 % decrease in sales due to the divestment of the Discovery and Development Solutions business field, sales amounted to € 1,187 million in 2014 (2013[1]: € 1,121 million). Process Solutions thus accounted for 44 % of divisional sales (2013: 43 %).

Sales by Lab Solutions, which accounted for a 41 % share (2013: 42 %) of divisional sales, generated organic sales growth of 1.9 % with its broad range of products for researchers and scientific laboratories. Currency headwinds of – 2.4 % led to slightly lower sales of € 1,093 million (2013[1]: € 1,099 million) for the business area. Higher sales were primarily achieved by the Lab Water and Biomonitoring business fields.

The Bioscience business area, which primarily markets products and services for academic and pharmaceutical research laboratories, recorded a slight organic sales decline of – 0.5 %. Including adverse foreign exchange effects of – 0.9 %, sales amounted to € 402 million (2013[1] : € 408 million). Here, for instance, lower demand for antibodies dampened sales. However, this was largely mitigated by higher demand from diagnostic laboratories for cell analysis products. At 15 %, the business area's share of divisional sales was unchanged in 2014.

[1] Previous year's figures have been adjusted owing to an internal reorganization.

LIFE SCIENCE →
SALES COMPONENTS BY BUSINESS AREA – 2014

€ million / change in %	Sales	Organic growth	Exchange rate effects	Acquisitions / divestments	Total change
Bioscience	402.5	–0.5	–0.9	–	–1.4
Lab Solutions	1,092.6	1.9	–2.4	–	–0.5
Process Solutions	1,187.4	8.9	–1.1	–1.8	6.0

The results of operations developed as follows:

LIFE SCIENCE →
RESULTS OF OPERATIONS

	2014		2013[1]		Change	
	€ million	in %	€ million	in %	€ million	in %
Sales	**2,682.5**	**100.0**	**2,627.5**	**100.0**	**55.0**	**2.1**
Royalty, license and commission income	14.0	0.5	17.8	0.7	–3.8	–21.4
Total revenues	**2,696.5**	**100.5**	**2,645.3**	**100.7**	**51.2**	**1.9**
Cost of sales[1]	–1,168.7	–43.6	–1,152.3	–43.9	–16.4	1.4
(of which: amortization of intangible assets)[1]	*(–47.6)*		*(–48.0)*		*(0.4)*	*(–0.8)*
Gross profit[1]	**1,527.8**	**57.0**	**1,493.0**	**56.8**	**34.8**	**2.3**
Marketing and selling expenses[1]	–844.1	–31.5	–835.2	–31.8	–8.9	1.1
(of which: amortization of intangible assets)[1]	*(–151.8)*		*(–151.9)*		*(0.1)*	*(–0.1)*
Royalty, license and commission expenses	–15.6	–0.6	–16.1	–0.6	0.5	–3.1
Administration expenses	–110.4	–4.1	–99.2	–3.8	–11.2	11.3
Research and development costs[1]	–162.6	–6.1	–159.8	–6.1	–2.8	1.8
(of which: amortization of intangible assets)[1]	*(–)*		*(–)*		*(–)*	*(–)*
Other operating expenses and income	–105.9	–3.9	–120.7	–4.6	14.8	–12.3
Operating result (EBIT)	**289.2**	**10.8**	**262.0**	**10.0**	**27.2**	**10.4**
Depreciation / Amortization / Reversals of impairments	309.7	11.5	327.8	12.5	–18.1	–5.6
(of which: one-time items)	*(–)*		*(17.3)*		*(–17.3)*	*(–)*
EBITDA	**598.9**	**22.3**	**589.8**	**22.4**	**9.1**	**1.5**
Restructuring costs	11.9		25.4		–13.5	–53.2
Integration costs / IT costs	31.6		23.9		7.7	32.5
Gains / losses on the divestment of businesses	–0.4		0.5		–0.9	–
Acquisition-related one-time items	16.6		–		16.6	–
Other one-time items	–		3.2		–3.2	–
EBITDA pre one-time items	**658.6**	**24.6**	**642.8**	**24.5**	**15.8**	**2.5**

[1] The disclosure of amortization of intangible assets (excluding software) has been changed. See "Accounting and measurement principles" in the Notes to the Group accounts.

Despite higher production costs and slightly lower royalty, license and commission income, gross profit rose by 2.3% in 2014 to € 1,528 million, leading to a higher gross margin of 57.0% (2013: 56.8%). In comparison with the previous year, the Life Science division increased its operating result (EBIT) by 10.4% to € 289 million. After eliminating depreciation and amortization, and adjusted for one-time items, EBITDA pre one-time items, the most important performance indicator, climbed 2.5% to € 659 million, which was mainly due to an increase in gross profit. This resulted in a stable EBITDA margin pre one-time items rise of 24.6%. (2013: 24.5%).

The development of EBITDA pre one-time items in the individual quarters in comparison with 2013 is presented in the following overview:

LIFE SCIENCE →

EBITDA PRE ONE-TIME ITEMS AND CHANGES BY QUARTER[1]

€ million / change in %

[1] Quarterly breakdown unaudited.

Development of business free cash flow

Despite higher EBITDA pre one-time items, business free cash flow of the Life Science division decreased to € 419 million in 2014 (2013: € 494 million). The decline of –15.2% was largely due to the increase in trade accounts receivable in 2014. Higher capital spending as well as an increase in inventories as of December 31, 2014 also lowered this key performance indicator. The increase in the two balance sheet items inventories and receivables as of December 31, 2014 was especially due to foreign exchange effects.

LIFE SCIENCE →

BUSINESS FREE CASH FLOW

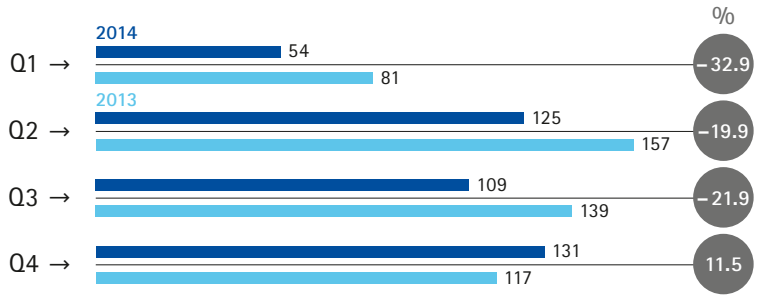
€ million	2014	2013	Change in %
EBITDA pre one-time items	658.6	642.8	2.5
Investments in property, plant and equipment, software as well as advance payments for intangible assets	–141.0	–121.7	15.9
Changes in inventories	– 44.2	–21.3	107.8
Changes in trade accounts receivable	– 54.4	– 6.0	–
Business free cash flow	**419.0**	**493.8**	**–15.2**

The development of business free cash flow in the individual quarters in comparison with 2013 is presented in the following overview:

LIFE SCIENCE →

BUSINESS FREE CASH FLOW AND CHANGE BY QUARTER[1]

€ million / change in %



[1] Quarterly breakdown unaudited.

CORPORATE AND OTHER

Corporate and Other comprises Group administration expenses for Group functions that cannot be directly allocated to the divisions, such as Finance, Procurement, Legal, Communications and Human Resources. Corporate costs additionally encompass expenses for central, non-allocated IT functions, including expenses related to the expansion and harmonization of IT systems within the Group. Accordingly, Corporate and Other has no sales to report. Gains or losses on operational currency hedging are also disclosed under Corporate and Other.

CORPORATE AND OTHER → KEY FIGURES

€ million	2014	2013	Change in %
Operating result (EBIT)	– 245.1	– 259.7	– 5.6
EBITDA	– 226.0	– 244.0	– 7.3
EBITDA pre one-time items	–166.0	–196.7	–15.5
Business free cash flow	– 214.7	– 281.2	– 23.7

In 2014, administration expenses reported under Corporate and Other decreased to € 195 million (2013: € 206 million). The net amount of operating expenses and income improved to € – 42 million (2013: € – 47 million), as increased operating foreign currency gains more than offset the higher level of one-time items. In 2014, the foreign currency result showed income of € 53 million (2013: € 32 million) and one-time expenses amounted to € 60 million (2013: € 47 million).

Overall, EBIT improved 5.6 % to € – 245 million (2013: € – 260 million) and EBITDA by 7.3 % to € – 226 million (2013: € – 244 million). Adjusted for one-time effects, EBITDA pre one-time items totaled € –166 million in 2014 (2013: € –197 million). The business free cash flow reported under Corporate and Other amounted to € – 215 million in 2014 (2013: € – 281 million).

REPORT ON RISKS AND OPPORTUNITIES

Risks and opportunities are inherent to entrepreneurial activity. The Group has put systems and processes in place to identify risks at an early stage and to counteract them by taking appropriate action. At Merck KGaA, Darmstadt, Germany, opportunity management is an integral component of internal decision-making processes such as short- and medium-term operational planning and intra-year business plans.

RISK AND OPPORTUNITY MANAGEMENT

Merck KGaA, Darmstadt, Germany, is part of a complex, global business world and is therefore exposed to a multitude of external and internal influences. Every business decision is therefore based on the associated risks and opportunities.

In our internal risk reporting, risks are defined as possible future events or developments that could lead to a negative deviation from our forecast (financial) targets. In parallel, opportunities are defined as possible events or developments that imply a positive deviation from our planned (financial) targets. Identified future events and expected developments are taken into account in internal planning provided that it can be assumed that their occurrence is likely in the planning period. The risks and opportunities presented in the following risk and opportunities report are those possible future events that could respectively lead to a negative or positive deviation from the topics covered by planning.

Risk management process

The objective of our risk management activities is to recognize, assess and manage risks early on and to implement appropriate measures to minimize them. The responsibilities, objectives and process of risk management are described in our internal risk management guideline. The business heads, managing directors of Merck KGaA, Darmstadt, Germany, subsidiaries, and the heads of Group functions are specified as employees with responsibility for risks. The group of consolidated companies for risk reporting purposes is the same as the group of consolidated companies for the consolidated financial statements. Every six months, the risk owners assess their risk status and report their risk portfolio to Risk Management. The Group uses special risk management software in the context of these activities.

If risk-mitigating measures can be taken, their impact on risk is also assessed. The residual risk after the implementation of mitigation measures is presented in the internal risk report as net risk. The planned timeframe for implementation and the assumed mitigation effect are tracked by Group Risk Management.

Group Controlling & Risk Management forms the organizational framework for risk management and reports directly to the Group Chief Financial Officer. Group Risk Management uses the information reported to determine the current risk portfolio for the Group, presenting this in a report to the Executive Board, the Supervisory Board and the Finance Committee with detailed explanations twice per year. Furthermore, significant changes in the assessment of the risks already known and new significant risks can be reported at any time and are communicated to the corporate bodies on an ad hoc basis.

For the standard process, a lower limit for reporting risks is set at a value of € 5 million and for the ad hoc process at a value of € 25 million. Risks below these limits are steered independently within the business sectors. The relevant timeframe for internal risk reporting is five years. The effects of risks described in this Report on Risks and Opportunities are presented as annual values. The assessment of the risks presented relates to December 31, 2014. There were no relevant changes after the end of the reporting period that would have necessitated an amended presentation of the risk situation of the Group.

Within the scope of audits, Group Internal Auditing regularly reviews the performance of risk management processes within the units and, at the same time, the communication of relevant risks from the operating units to Group Risk Management.

Opportunity management process

The risk management system described concentrates on business risks, and not on opportunities at the same time. The Group's opportunity management process is integrated into our internal controlling processes and carried out in the operating units on the basis of the Group strategy. The divisions analyze and assess potential market opportunities as part of strategy and planning processes. In this connection, investment opportunities are examined and prioritized in terms of their potential value proposition to the Group in order to ensure an effective allocation of resources. The company selectively invests in growth markets to leverage the opportunities of dynamic development and customer proximity at a local level.

If the occurrence of the identified opportunities is rated as likely, they are incorporated into the business plans and the short-term forecasts. Trends going beyond this or events that could lead to a positive development of the net assets, financial position and results of operations are presented in the following report as opportunities. These could have a positive effect on the Group's medium-term prospects and lead to a positive deviation from forecasts.

RISK AND OPPORTUNITY ASSESSMENT

Risks

The significance of risks to the Group is calculated on the basis of their possible negative impact on the forecast financial targets in conjunction with the probability of occurrence of the respective risk. In line with these two factors, risks are classified as "high", "medium" or "low". The underlying scales for measuring these factors are shown below:

PROBABILITY OF OCCURRENCE

Probability of occurrence	Explanation
< 20 %	Unlikely
20 – 50 %	Possible
51 – 80 %	Likely
> 80 %	Very likely

DEGREE OF IMPACT

Degree of impact	Explanation
> € 50 million	Critical negative impact on the net assets, financial position and results of operation
€ 20 – 50 million	Substantial negative impact on the net assets, financial position and results of operations
€ 5 – 20 million	Moderate negative impact on the net assets, financial position and results of operations
< € 5 million	Insignificant negative impact on the net assets, financial position and results of operations

The combination of the two factors results in the risk matrix below, which shows the individual risks and their significance to the Group.

RISK MATRIX

Impact	Risk matrix			
> € 50 million	Medium	Medium	High	High
€ 20 – 50 million	Medium	Medium	Medium	High
€ 5 – 20 million	Low	Medium	Medium	Medium
< € 5 million	Low	Low	Low	Low
Probability of occurrence	< 20 %	20 – 50 %	51 – 80 %	> 80 %

Opportunities

Opportunities are assessed in their respective specific business environment. Marketing measures for operational planning are usually quantified in relation to sales, EBITDA pre one-time items and business free cash flow. Net present value, the internal rate of return (IRR), the return on capital employed (ROCE) and the amortization period of the investment are primarily used to assess and prioritize investment opportunities. Similarly, scenarios are frequently set up to simulate the influence of possible fluctuations and changes in the respective factors on results. There is no overarching, systematic classification of the probability of occurrence and impact of opportunities.

INTERNAL CONTROL SYSTEM FOR THE CONSOLIDATED ACCOUNTING PROCESS

The objective of the internal control system for accounting is to implement controls that provide assurance that the financial statements are prepared in compliance with the relevant accounting laws and standards. It covers measures designed to ensure the complete, correct and timely conveyance and presentation of information that is relevant for the preparation of the consolidated financial statements and the management report of the Group.

The control system is subject to continuous further development and is an integral component of the accounting and financial reporting processes in all relevant local units and Group functions.

With respect to the accounting process, the internal control system measures are intended to reduce the risk of material false statements in the consolidated accounting process of the Group.

Key tools

The internal control system is geared to ensuring the accuracy of the consolidated accounting process and the implementation of internal controls for the preparation of compliant financial statements with reasonable assurance. The Group Accounting function centrally steers the preparation of the consolidated financial statements of Merck KGaA, Darmstadt, Germany, as the parent company of the Group. This Group function defines the reporting requirements that the Group's subsidiaries must meet as a minimum requirement. At the same time, this function steers and monitors the scheduling and process-related requirements of the consolidated financial statements. The Group-wide accounting guidelines form the basis for the preparation of the statutory financial statements of the parent company and of the subsidiaries, which are reported to Group Accounting; the guidelines are adapted to reflect changes in the financial regulatory environment and are updated in accordance with internal reporting requirements. Intra-group transactions are eliminated during the consolidation process. This gives rise to the need for a mirrored entry at the corresponding subsidiaries that is monitored during the consolidation process.

Group Accounting also ensures the timely central management of changes to the equity holding structure and correspondingly adapts the Group's scope of consolidation. The individual companies have a local internal control system. Where financial processes are handled by a Shared Service Center, the internal control system of the Shared Service Center is additionally applied. Both ensure that accounting complies with IFRS (International Financial Reporting Standards) and with the Group accounting guidelines.

Group Accounting provides support to the local contacts and ensures a consistently high quality of reporting throughout the entire reporting process.

The accounting process is designed at all levels to ensure a clearly defined segregation of duties and assignment of responsibilities to the units involved in the accounting process at all times within the scope of dual control.

For the assessment of balance sheet items, Group Accounting closely cooperates with Group Risk Management in order to correctly present potential balance sheet risks. For special issues, such as the measurement of intangible assets within the scope of company acquisitions or pension obligations, external experts are additionally involved where necessary. For the Group accounting process, the company uses a standard SAP software tool in most countries. Via a detailed authorization concept to limit user rights on a need-to-have basis, and in line with the principles of the separation of duties, the system contains both single-entity reporting and the consolidated financial statements.

The effectiveness of the Group's internal control system with regard to accounting and the compliance of financial reporting by the individual companies is confirmed by both the local managing director and the local chief financial officer when they sign the single-entity reporting. All the structures and processes described are subject to regular review by Group Internal Auditing based on an annual audit plan set out by the Executive Board. The results of these audits are dealt with by the Executive Board, the Supervisory Board and the Finance Committee.

The internal control system at the Group makes it possible to lower the risk of material misstatements in accounting to a minimum. However, no internal control system – regardless of its design – can entirely rule out a residual risk.

BUSINESS-RELATED RISKS AND OPPORTUNITIES

Political and regulatory risks and opportunities

As a global company, Merck KGaA, Darmstadt, Germany, faces political and regulatory changes in a large number of countries and markets.

Risk of more restrictive regulatory requirements regarding drug pricing, reimbursement and approval

In the Healthcare business sector the familiar trend towards increasingly restrictive requirements in terms of drug pricing, reimbursement and approval is continuing. These requirements can negatively influence the profitability of the company's products, also through market referencing between countries, and jeopardize the success of market launches and new approvals. Close communication with health and regulatory agencies serves as a preventive measure to avert risks. An estimation of the risks is market- and product-specific; overall the risk is seen as being likely for the Group and could have a critical negative impact on the net assets, financial position and result of operations. It is therefore classified as a medium risk.

Risk of stricter regulations for the manufacture, testing and marketing of products

Likewise, in its Life Science and Performance Materials business sectors must adhere to a multitude of regulatory specifications regarding the manufacture, testing and marketing of many of its products. Specifically in the European Union, the Group is subject to the European chemicals regulation REACH. It demands comprehensive tests for chemical products. Test procedures can be costly and time-intensive, and lead to a rise in manufacturing costs. Moreover, the use of chemicals in production could be restricted, which would make it impossible to continue manufacturing certain products. The company is constantly pursuing research and development in substance characterization, and in the possible substitution of critical substances in order to reduce the occurrence of this risk and therefore views it as unlikely. Nevertheless, it is still classified as a medium risk given its potential critical negative impact on the net assets, financial position and results of operations.

Risk of destabilization of political systems and the establishment of trade barriers

The destabilization of political systems (as for example in Ukraine and the Middle East) and the possible establishment of trade barriers as well as foreign exchange policy changes can lead to declines in sales in certain countries and regions. Diversification in terms of products, industries and regions serves to mitigate potential negative effects. The effects of corresponding risks are taken into account to the best of ability in the business plans for the countries and regions concerned. In particular, our business can furthermore be affected by macroeconomic developments in, for example, Venezuela, Argentina, Russia, and Greece. Corresponding sales strategy measures have been introduced in these countries to minimize the impact on business.

Nevertheless, the residual net risk could have critical negative effects on the net assets, financial position and results of operations and its occurrence is considered possible. The Group rates this as a medium risk overall.

Market risks and opportunities

Merck KGaA, Darmstadt, Germany, competes with numerous companies in the pharmaceutical, chemical and life science sectors. Rising competitive pressure can have a significant impact on the quantities sold and prices attainable for the Group's products.

Opportunities due to the further development of the Biosimilars business

The possibilities offered by the development and approval of biosimilars represent opportunities for Merck KGaA, Darmstadt, Germany. For instance, over the past two and a half years, the Group has moved forward with the development of its own Biosimilars business unit and has entered into partnerships with Dr. Reddy's Laboratories Ltd., India, among others, to co-develop a portfolio of biosimilars in oncology. Moreover, in April 2014, a Brazilian market partnership was established with Bionovis SA, Brazil, (Bionovis SA) for a portfolio of biosimilars. Although a significant contribution to sales is not to be expected before the medium to long term, the expenditure required for this has already been taken into account in the Group's planning.

Opportunities due to a new technology in the manufacture of OLED displays

The Group is building on more than ten years of experience in manufacturing organic light-emitting diode (OLED) materials as well as a strong portfolio of worldwide patents in order to develop ultrapure and extremely stable materials that are precisely tailored to customer requirements. The development in the OLED market is being driven by the diversification of applications for OLED displays. While OLED displays are mainly used today in small-area displays, for example smartphones, more and more large-area displays could also be based on OLED technology in the future. In order to overcome the technical and financial obstacles of the mass production of large-area OLED displays, the Group has been cooperating since the end of 2012 with Seiko Epson Corporation, Japan (Seiko Epson). This cooperation has opened up new avenues in the manufacture of OLED displays. The combination of durable OLED materials from the company and inkjet printing technology from Seiko Epson makes it possible to quickly and precisely produce high-resolution OLED displays using inkjet technology. The inkjet printing of large OLED displays can resolve the productivity problems of the conventional vapor-deposition processes. In addition, this technique deposits material only in the areas where

diodes are actually created, thus enabling the optimal use of materials and energy. Merck KGaA, Darmstadt, Germany, thus sees the possibility of significant market growth for OLED applications in the medium to long term and thus related opportunities for the company.

Opportunities due to new application possibilities for liquid crystals

Merck KGaA, Darmstadt, Germany, is pursuing a strategy of leveraging its expertise as the global market leader in liquid crystals in order to develop new fields of application for innovative liquid crystal technology, e.g. liquid crystal windows (LCW) or mobile antennas. With the acquisition of its long-standing cooperation partner Peer+ B.V., Netherlands, (Peer+ B.V.) the company is further advancing the development of the future-oriented market for LCW. Thanks to licrivision™ technology, LCW create new architectural possibilities. Through progressive brightness control, they can for example increase a building's energy efficiency. In 2015, the first pilot projects for LCW will begin, meaning that the technology will require intensive development work prior to market readiness. Consequently, the Group expects that the potential positive effects on the results of the Performance Materials business will only materialize in the medium to long term.

Antennas that can receive signals transmitted in the high frequency range (e.g. Ka and Ku band) can also be realized with the aid of corresponding liquid crystal mixtures. As a result, mobile data exchange could improve significantly in a wide variety of fields of application. Since liquid crystal materials for antennas are currently being developed, the market launch of liquid crystal antennas could still take a few years. Consequently, positive effects on the financial results of the Performance Materials business may only materialize in the medium to long term.

Risk due to increased competition and customer technology changes

In the pharmaceutical sector, both the Group's biopharmaceutical products and classical pharmaceutical businesses are exposed to increased competition from competing products. In the chemical sector, risks are posed by not only cyclical business fluctuations but also, particularly with respect to liquid crystals, changes in the technologies used or customer sourcing strategies. The company uses close customer relationships and in-house further developments as well as precise market analyses as mitigating measures.

The Group is in negotiations with a competitor regarding potential patent infringements in the Performance Materials business sector. Merck KGaA, Darmstadt, Germany, maintains that the competitor's patent infringement assertion is invalid owing to relevant prior art. The competitor has threatened to file patent infringement lawsuits. The company is prepared for a confrontation in this issue and will conduct negotiations with the aim of clarifying the situation.

Nevertheless, the market risk is still classified overall as a medium risk owing to its likely probability of occurrence and critical negative impact.

Risks and opportunities of research and development

For Merck KGaA, Darmstadt, Germany, innovation is a major element of the Group strategy. Research and development projects can experience delays, expected budgets can be exceeded, or targets remain unmet. Research and development are of special importance to the Pharmaceuticals business. In the course of portfolio management, the company regularly evaluates and, if necessary, refocuses research areas and all R&D pipeline projects.

Special mention should be made of the strategic alliance between Merck KGaA, Darmstadt, Germany, and Pfizer Inc., USA, (Pfizer Inc.) as a research and development opportunity in the Pharmaceuticals business. By making the required investments jointly and combining their strengths and expertise, the two companies will maximize the potential value of the research compound MSB0010718C, an anti-PD-L1 antibody from the Group. Owing to the relatively long cycles in active ingredient development, the company expects that the positive effects of its anti-PD-L1 antibody will be reflected in the results of the Healthcare business sector in the medium to long term and sees opportunities for an increase in future sales and profitability.

Risks of discontinuing development projects and regulatory approval of developed medicines

Sometimes development projects are discontinued after high levels of investment at a late phase of clinical development. Decisions – such as those relating to the transition to the next clinical phase – are taken with a view to minimizing risk. Furthermore, there is a risk that the regulatory authorities either do not grant or delay approval, which can have an impact on earnings. Additionally, there is the danger that undesirable side effects of a pharmaceutical product could remain undetected until after approval or registration, which could result in a restriction of approval or withdrawal from the market.

In 2014, the risk-benefit profile of individual development projects in the R&D portfolio was analyzed, leading to the prioritization of projects. This prioritization resulted in the termination of multiple development projects. Overall, the termination of the projects had a critical negative impact on the net assets, financial position and results of operations.

Risks and opportunities of product quality and availability

Risk of a temporary ban on products/production facilities or of non-registration of products due to non-compliance with quality standards

The Group is required to comply with the highest standards of quality in the manufacture of pharmaceutical products (Good Manufacturing Practice). In this regard the company is subject to the supervision of the regulatory authorities.

Conditions imposed by national regulatory authorities could result in a temporary ban on products/production facilities, and possibly affect new registrations with the respective authority. The Group takes the utmost effort to ensure compliance with regulations, regularly performs its own internal inspections and carries out external audits. Thanks to these quality assurance processes, the occurrence of a risk is unlikely, however cannot be entirely ruled out. Depending on the product concerned and the severity of the objection, such a risk can have a critical negative impact on the net assets, financial position and results of operations. Therefore, the Group rates this as a medium risk.

On a positive note in comparison with 2013, the FDA warning letter received in 2011 was closed, thus eliminating the risk resulting from this warning letter of a ban on importing products to the United States.

Risks of dependency on suppliers

Quality controls along the entire value chain reduce the risks related to product quality and availability. This starts with the qualification of our suppliers. Quality controls also include comprehensive quality requirements for raw materials, purchased semi-finished products and plants, as well as long-term strategic alliances in the case of supply- and price-critical precursor products. The Group is dependent on individual suppliers of precursor products for some of its main products. In the event that one of these suppliers curtails or discontinues production, or supply is disrupted, this could possibly have a critical negative impact on the Group business concerned. With long-term strategic alliances for precursor products critical to supply and price as well as alternative sourcing strategies, the company reduces the probability of occurrence of these risks and rates them as unlikely. Overall, these are classified as medium risks.

Damage and product liability risks

Further risks include the risk of operational failures due to force majeure, for example natural disasters such as floods or earthquakes, which could lead to a substantial interruption or restriction of business activities. Insofar as it is possible and economical to do so, the Group limits its damage risks with insurance coverage, the nature and extent of which is constantly adapted to current requirements. Although the occurrence of these risks is considered unlikely, an individual event could have a critical negative effect on the net assets, financial position and results of operations and is therefore classified as a medium risk.

Companies in the chemical and pharmaceutical industries are exposed to product liability risks in particular. Product liability risks can lead to considerable claims for damages and costs to avert damages. The Group has taken out the liability insurance that is standard in the industry for such risks. However, it could be that the insurance coverage available is insufficient for individual cases. Although the occurrence of product liability claims in excess of the existing insurance coverage is considered unlikely, individual cases could still have a critical negative effect on the net assets, financial position and results of operations. The company therefore rates potential product liability risk as a medium risk.

Risks due to product-related crime and espionage

Owing to its portfolio, the company is exposed to a number of sector-specific crime risks. This relates primarily to products, including, among other things, counterfeiting, illegal channeling, misuse as well as all types of property crime, including attempts at these crimes. Crime phenomena such as cybercrime and espionage could equally affect our innovations or innovation ability as such; this includes in particular undesirable losses of information in all relevant possible ways, both in the IT area as well as with respect to non-IT-based threats.

To combat product-related crime, Merck KGaA, Darmstadt, Germany, established an internal coordination network covering all functions and businesses ("Anti-Counterfeiting of Merck KGaA, Darmstadt, Germany") several years ago. In addition, security measures are in use to protect products against counterfeiting. Innovative technical security solutions and defined preventive approaches are used to ward off dangers relating to cybercrime and espionage. Measures to prevent risks and to prosecute identified offenses are conducted in all the relevant crime areas in close and trustworthy cooperation with the responsible authorities.

The impact of these risks on business operations depends on the respective individual case, product-specific factors, the value chain, as well as on regional aspects in particular. Group Security is responsible for the overall coordination of all measures in this area. Overall, the threat resulting from crime in general is seen as being likely for the company and is classified as a medium risk.

Opportunities due to an expanding local presence in high-growth markets

In the coming years, Merck KGaA, Darmstadt, Germany, still anticipates above-average growth for all its business sectors in the markets of Latin America, the Middle East and Africa as well as Asia. In order to further enable this growth, the Group has moved forward with several investment projects, such as the construction of new production facilities for liquid crystals and the establishment of a new pharma production site in China. Moreover, the company is strengthening its activities in Africa through strategic investments as well as geographic expansion in selected regions. The greater local presence and customer proximity could lend the company a key competitive edge and, in the medium to long term, offer the opportunity for significant additional growth in sales and EBITDA pre one-time items.

FINANCIAL RISKS AND OPPORTUNITIES

As a corporate group that operates internationally and due to its presence in the capital market, the company is exposed to various financial risks and opportunities. Above all, these are liquidity and counterparty risks, financial market risks and opportunities, risks of fluctuations in the market values of operational tangible and intangible assets, as well as risks and opportunities from pension obligations.

Risk and opportunity management in relation to the use of financial instruments

In the area of financial risks and opportunities, the Group uses an active management strategy to reduce the effects of fluctuations in exchange and interest rates. The management of financial risks and opportunities by using derivatives in particular is regulated by extensive guidelines. There is a ban on speculation and derivative transactions entered into are subject to ongoing risk management procedures. Trading, settlement and control functions are strictly separated.

Liquidity risks

In order to ensure its continued existence, a company must be able to fulfill its commitments from operating and financial activities at all times. Merck KGaA, Darmstadt, Germany, therefore has a central Group-wide liquidity management process to reduce potential liquidity risks. Furthermore, the company has a multi-currency revolving credit facility of € 2 billion with a term of five years and an extension option of one year that, above and beyond the Group's positive operating cash flow, ensures continuing solvency if any liquidity bottlenecks occur. As our loan agreements do not contain any financial covenants, these agreed lines of credit can be accessed even if the company's credit rating should deteriorate. Additionally, the Group has a commercial paper program with a maximum volume of € 2 billion as well as a debt issuance program that forms the contractual basis for the issue of bonds with a nominal volume of up to € 15 billion.

A purchase price of US$ 17 billion is payable for the planned acquisition of Sigma-Aldrich. This is covered by cash on hand as well as further syndicated credit lines with a bank consortium and currency hedging. Some of the credit lines are being successively replaced by the issuance of bonds.

Overall, the liquidity risk is rated as unlikely.

Counterparty risks

Counterparty risks arise from the potential default by a partner in connection with financial investments, loans and financing commitments on the one hand and receivables in operating business on the other.

As for counterparty risks from financial transactions, the Group reviews all positions relating to trading partners and their credit ratings on a daily basis. The company manages financial risks of default by diversifying its financial positions and thereby by the active management of its trading partners. Significant financial transactions involving credit risk are entered into with banks and industrial companies that have a good credit rating. Moreover, the Group's large banking syndicate – the multi-currency revolving credit facility of € 2 billion was syndicated by 19 banks – reduces possible losses in the event of default.

The solvency and operational development of trading partners are regularly reviewed as part of the management of operational counterparty risks. Sovereign risks are also analyzed. The volume of receivables of each customer is capped in line with their credit ratings. Risk-mitigating measures, such as credit insurance, are utilized as appropriate. Nevertheless, defaults by isolated trading partners, even those with outstanding credit ratings, cannot be entirely ruled out, although rated as unlikely (further information can be found in "Credit risks" under "Management of financial risks" in the Notes to the Group accounts).

Counterparty risk is classified as a medium risk overall owing to the unlikely probability of occurrence with a potential critical negative effect.

Financial market opportunities and risks

As a result of its international business activities and global corporate structure, the Group is exposed to risks and opportunities from fluctuations in exchange rates. These result from financial transactions, operating receivables and liabilities, forecast future cash flows from sales and costs in foreign currency. The Group uses derivatives to manage and reduce the aforementioned risks and opportunities (further information can be found in "Derivative financial instruments" in the Notes to the Group accounts). Foreign exchange risks with a potential critical negative effect on the net assets, financial position and results of operations are rated as possible.

Future refinancing, particularly the financing of the Sigma-Aldrich acquisition, and monetary deposits are subject to the risks and opportunities of interest rate fluctuations. These are also managed and reduced using derivatives. Interest rate risks with a potentially significantly negative impact are considered unlikely and pose medium risks overall.

Risks of impairment on balance sheet items

The carrying amounts of individual balance sheet items are subject to the risk of changing market and business conditions and thus to changes in fair values as well. The need for write-downs could lead to significant non-cash profit burdens and changes in balance sheet ratios. This applies in particular to the high level of intangible assets including goodwill, which mainly derive from the purchase price allocations made in connection with past acquisitions (further information can be found under "Intangible assets" in the Notes to the Group accounts). All relevant risks were assessed during the preparation of the consolidated financial statements and taken into account accordingly. The Group rates risks beyond this as low.

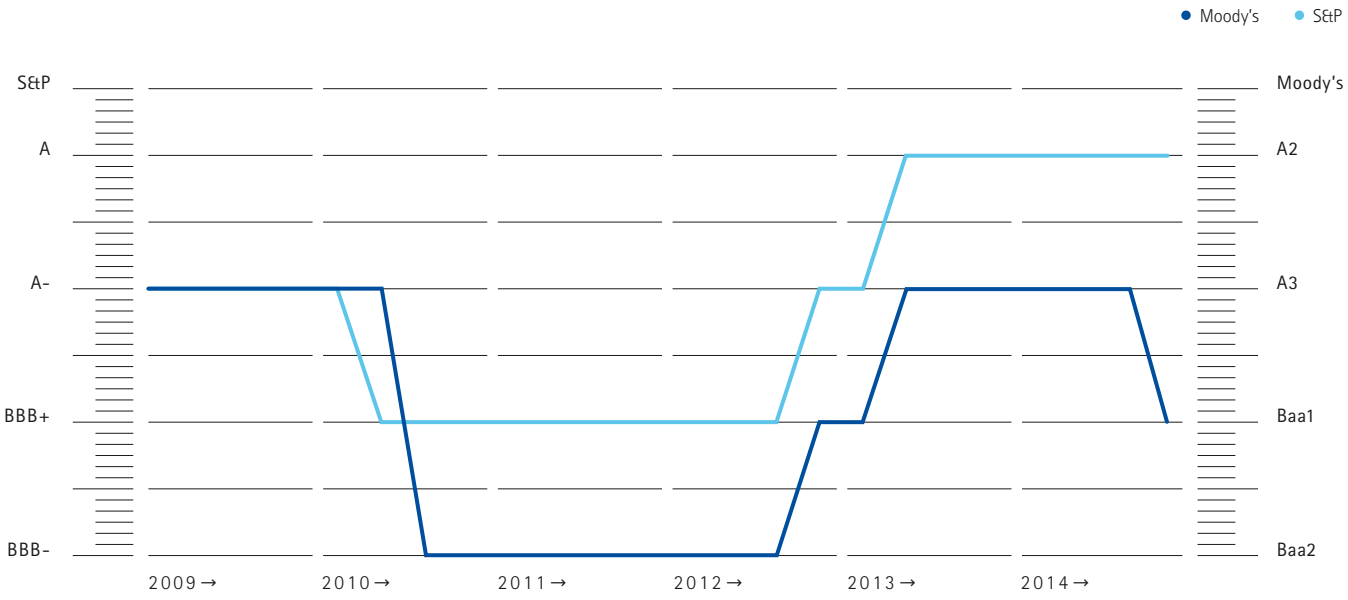
Risk and opportunities from pension obligations

Merck KGaA, Darmstadt, Germany, has commitments in connection with pension obligations. The present value of defined benefit obligations can be significantly increased or reduced by changes in the relevant valuation parameters, e.g. the interest rate or future salary increases. Pension obligations are regularly assessed as part of annual actuarial reports. Some of these obligations are covered by the pension provisions reported in the balance sheet, while other obligations are externally funded (further information can be found under "Provisions for pensions and other post-employment benefits" in the Notes to the Group accounts). To the extent that pension obligations are covered by plan assets consisting of interest-bearing securities, shares, real estate, and other financial assets, decreasing or negative returns on these assets can adversely affect the fair value of plan assets and thus result in further additions to pension provisions. By contrast, rising returns increase the value of plan assets, thereby resulting in excess cover of plan liabilities. The Group increases the opportunities of fluctuations in the market value of plan assets on the one hand and reduces the risks on the other by using a diversified investment strategy. The risk due to pension obligations is possible, could moderately impact the net assets, financial position and result of operations, and is considered to be medium.

Assessments by independent rating agencies

The capital market uses the assessments published by rating agencies to help lenders assess the risks of a financial instrument. The Group is currently rated by the agencies Standard & Poor's and Moody's. While Standard & Poor's issued a long-term rating of A with a negative outlook, Moody's issued it a Baa1 rating with a negative outlook. The drop in the Moody's rating by one grade in comparison with the previous year as well as the negative outlook of both rating agencies is due to the expected higher debt level in the course of the Sigma-Aldrich transaction. In line with market procedures, the company's financing conditions are closely tied to its rating. The better a rating, the more favorably the Group can generally raise funds on the capital market or from banks.

REPORT ON RISKS AND OPPORTUNITIES →
OVERVIEW OF RATING DEVELOPMENT:



Source: Own illustration.

LEGAL RISKS

Merck KGaA, Darmstadt, Germany, generally strives to minimize and control its legal risks. The Group has taken the necessary precautions to identify threats and defend its rights where necessary.

Nevertheless, the Group is still exposed to litigation risks or legal proceedings. These include in particular risks in the areas of product liability, competition and antitrust law, pharmaceutical law, patent law, tax law, and environmental protection. As a research-based company, the company has a valuable portfolio of industrial property rights, patents and brands that could become the target of attacks and infringements. The outcome of future proceedings or those currently pending is difficult to foresee. Generally, it is not possible to rule out that the Group will face third-party claims arising from the same issue despite the conclusion of legal proceedings. Court or official rulings or settlements can lead to expenses with a significant impact on our business and earnings.

Tax risks are reviewed regularly and systematically by Group Tax. Corresponding standards and guidelines are used in order to identify tax risks at an early stage as well as to review, evaluate and correspondingly minimize them. Measures to reduce risks are coordinated by Group Tax together with the subsidiaries abroad.

Merck KGaA, Darmstadt, Germany, views the legal matters described below as the most significant legal risks. This should not be seen as an exhaustive list of all legal disputes currently ongoing.

Risks from product-related and patent law disputes

The litigation risk with Israel Bio-Engineering Project Limited Partnership ("IBEP") was eliminated as of the end of 2014. IBEP asserted claims for property rights and the payment of license fees for the past and the future. The legal disputes were connected to the financing of the development of medical research projects in the early 1980s. The Group had taken appropriate accounting measures for these legal disputes in the past. In 2014, the company achieved a settlement with IBEP according to which the legal disputes were settled in exchange for a sum of money. The settlement led to lower cash payments than previously expected.

The Group is involved in a patent dispute in the United States with Biogen IDEC Inc. (Massachusetts, USA) ("Biogen"). Biogen claims that the sale of Rebif® in the United States infringes on a Biogen patent. The patent in question was granted to Biogen in 2009 in the United States. Subsequently, Biogen sued Merck KGaA, Darmstadt, Germany, and other pharmaceutical companies for infringement of this patent. The Group defended itself against all allegations and brought a countersuit with the claim that the patent was invalid and not infringed on by the company's actions. A Markman hearing took place in January 2012, however a decision has not yet been announced. The parties are currently engaged in court-ordered mediation proceedings that have not yet officially ended. It is currently not clear when a first-instance decision will be made. Merck KGaA, Darmstadt, Germany, has taken appropriate accounting measures. Given the potential critical negative effects of the legal dispute on the financial position in case of a negative decision, the Group nevertheless classifies this as a high risk.

Risks due to antitrust and other government proceedings

Raptiva®: In December 2011, the federal state of São Paulo sued Merck KGaA, Darmstadt, Germany, for damages because of alleged collusion between various pharmaceutical companies and an association of patients suffering from psoriasis and vitiligo. This collusion is alleged to have been intended to increase sales of the medicines from the companies involved to the detriment of patients and state coffers. Moreover, patients are also suing for damages in connection with the product Raptiva®. The Group has taken appropriate accounting measures for these issues. Risks in excess of this with a substantial negative effect on the net assets, financial position and results of operations cannot be ruled out, but are considered unlikely. This is rated as a medium risk.

In one jurisdiction, the company is subject to a government investigation regarding compliance with foreign exchange transfer restrictions. In this connection, the responsible authorities are investigating whether import prices led to impermissibly high foreign exchange transfers. Appropriate accounting measures have been taken for repayments and fines that are estimated to be probable due to the uncertain legal situation in the affected country. The Group rates this as a medium risk since significant negative effects on the financial position cannot be ruled out.

Risks from drug pricing by the divested Generics Group

Paroxetine: In connection with the divested generics business, the company is subject to antitrust investigations by the British Competition and Market Authority (CMA) in the United Kingdom. In March 2013, the authorities informed Merck KGaA, Darmstadt, Germany, of the assumption that a settlement agreement entered into in 2002 between Generics (UK) Ltd. and several GlaxoSmithKline companies in connection with the antidepressant drug paroxetine violates British and European competition law. Merck KGaA, Darmstadt, Germany, the then owner of Generics (UK) Ltd., was allegedly involved in the negotiations for the settlement agreement and is therefore liable. The investigations into Generics (UK) Ltd. started in 2011, without the Group being aware of this. It is considered likely that the CMA will impose a fine on Merck KGaA, Darmstadt, Germany. The Group has taken appropriate accounting measures. Given the lawsuit's potential substantial negative impact on the financial position, the company classifies this as a medium risk.

HUMAN RESOURCES RISKS

The Group's future growth is highly dependent on its innovativeness. Therefore, the expertise and engagement of employees in all sectors in which Merck KGaA, Darmstadt, Germany, operates are crucial to the success of the company.

The markets relevant to the Group are characterized by intensive competition for qualified specialists and by demographic challenges. Staff turnover risks specific to countries and industries have to be identified ahead of time and specifically addressed in order to keep the skills and expertise critical to success and business within the company.

Recruiting and retaining specialists and talent at the Group is therefore one of the key priorities for the company and is managed through the targeted use of, for instance, employer branding initiatives, global talent and succession management processes as well as competitive compensation packages. Nevertheless, employee-related risks that affect business activities are possible, even though their impact is difficult to assess. The Group rates this as a medium risk.

INFORMATION TECHNOLOGY RISKS

Merck KGaA, Darmstadt, Germany, uses a variety of IT systems and processes in order to optimally focus and adequately support its globalization. Trends in information technology offer various opportunities but also harbor risks for the Group.

Risks due to cybercrime and the failure of business-critical IT applications

Increasing international networking and the related possibility of IT system abuse are resulting in cybercrime risks for the Group, such as the failure of central IT systems, the disclosure of confidential research and business development data, the manipulation of IT systems in chemical process control, or an increased burden or adverse impact on IT systems as a result of virus attacks. The entire Group has global security guidelines and information protection management for IT and non-IT areas, each with organizational and technical standards for access rights as well as information and data protection, based on ISO 27001.

Additionally, IT applications used globally form the basis for the contractual delivery of products and solutions. The failure of business-critical IT applications could therefore have a direct influence on the company's ability to deliver; likewise this applies to the failure of a data center. To achieve the required service quality, the Group uses a quality management system certified to ISO 20000:2011. In addition, to reduce the risk of failure, the company operates several redundantly designed data centers.

Despite the mitigating measures taken and functional continuity plans, the effects of cybercrime or the failure of business-critical IT applications and their influence on the net assets, financial position and results of operations are considered a medium risk owing to potentially significant negative effects.

ENVIRONMENTAL AND SAFETY RISKS

As a company with global production operations, the Group is exposed to risks of possible damage to people, goods and its reputation. Audits, consulting and training on environmental protection and occupational health and safety minimize these risks to people and the environment. In order to ensure the continuity of plant and equipment, Merck KGaA, Darmstadt, Germany, monitors these risks both at its own sites as well as at suppliers and contract manufacturers. By adhering to high technical standards, our rules of conduct and all legal requirements in environmental protection and occupational health and safety, the Group ensures the preservation of goods and assets. Sufficient appropriate accounting measures have been taken for the environmental risks known to us. Nevertheless, the company classifies these as a high risk since a critical negative impact on the financial position cannot be ruled out.

ACQUISITION RISKS

Irrespective of the fact that Merck KGaA, Darmstadt, Germany, has successfully completed acquisitions made in the past, the risk of conducting the acquisition and integration exists for future transactions. This includes among other things the inability to meet sales volume targets and higher integration costs than expected, as well as the failure to meet synergy goals. In addition, the currently planned acquisition of Sigma-Aldrich is subject to antitrust clearance and if the acquisition is not conducted, fines could become payable to the acquisition target. Thanks to strong due diligence processes and closely managed integration processes, the Group rates the probability of occurrence of this risk as unlikely. However, owing to the amount of potential fines, the overall risk could have a critical negative effect on the net assets, financial position and results of operations and is therefore classified as a medium risk.

OVERALL VIEW OF THE RISK AND OPPORTUNITY SITUATION AND MANAGEMENT ASSESSMENT

Although the number of risks reported is higher than the identified specific opportunities, Merck KGaA, Darmstadt, Germany, considers the distribution of risks and opportunities to be balanced. A balanced overall view within the Group is also supported by the fact that total revenues and business success are built on a diversity of pharmaceutical and chemical products for a variety of industries. As the markets differ in their structure and economic cycles, this diversification helps to lower risk. This diversification will be strengthened by the takeover of AZ, which has already occurred, the planned acquisition of Sigma-Aldrich and the alliance with Pfizer. It is also an expression to further develop the Group as a leading company for innovative and top-quality high-tech products in healthcare, life science and performance materials.

The most significant individual risks in the divisions have been named in the report above, with business-related risks being the most significant to the Group alongside the legal risks.

The successful closing of the FDA warning letter and the settlement of patent litigation with Israel Bio-Engineering Project Limited Partnership (IBEP) had a positive effect on the risk situation of the Group. Above and beyond this, with respect to high and medium risks the company has determined only minor changes although the assessment of the individual risks has of course altered over the fiscal year as a result of changing external conditions. Thanks to the risk reduction measures taken – such as the consistent implementation of management action (organizational responsibility and process improvements), existing insurance coverage and accounting precautions – the Group's significant risks in particular have been further minimized in net terms.

The overall view of the risk situation of the Group, which is derived from the summary of the risks described on the basis of their impact and probability of occurrence, leads Merck KGaA, Darmstadt, Germany, to the assessment that the risks are not of a nature to threaten the existence of the Group as a going concern, either individually or collectively. The company is confident that it will continue to successfully master the challenges arising from the above risks in the future as well.

In terms of opportunities, Merck KGaA, Darmstadt, Germany, believes that the greatest potential lies in the business-related topics of the operational areas. Thanks in particular to the expansion of our business in Latin America, the Middle East and Africa as well as in Asia, the further intensification and focusing of research and development activities, for instance the collaboration with Pfizer Inc., Bionovis SA, Peer+ B.V. and Seiko Epson, and other activities as part of the "Fit for 2018" transformation and growth program, the Group has launched changes that hold significant opportunities in the medium to long term beyond the underlying forecast period.

The Group is pursuing the possibilities that are arising and takes the expected effects into account in the forecast development of its key performance indicators, namely sales, EBITDA pre one-time items and business free cash flow. Merck KGaA, Darmstadt, Germany, will actively seek opportunities above and beyond these and move ahead with their implementation. In the event that opportunities arise in addition to the forecast developments, or that these occur more quickly than anticipated, this could have correspondingly positive effects on the company's net assets, financial position and results of operations.

REPORT ON EXPECTED DEVELOPMENTS

The key financial performance indicators of the Group, namely sales, EBITDA pre one-time items and business free cash flow, remain unchanged. Based on these steering parameters, the following report provides a forecast for fiscal 2015 of the development of the Group and its three business sectors: Healthcare, Life Science and Performance Materials. Since the internal planning process for 2015 was already based on the new segmentation, the Report on Expected Developments also reflects this new structure. Key changes relate to the composition of the pharmaceutical business – consisting of the previous the Biopharmaceuticals and Consumer Health businesses – under the umbrella of the new Healthcare business sector as well as the renaming of the Life Science business to the Life Science business sector. Information on the segmentation, which took effect on January 1, 2015, can be found under "The Group" (pages 44 – 49) in this Annual Report.

In September 2014, Merck KGaA, Darmstadt, Germany, and the U.S. life science company Sigma-Aldrich entered into a merger agreement according to which the company would acquire Sigma-Aldrich. Sigma-Aldrich shareholders approved the merger with the Group at an extraordinary shareholders' meeting on December 5, 2014. From today's perspective, the acquisition is still expected to close by mid-2015. The successful completion of the transaction is subject to the required antitrust clearances.

The forecast for expected business developments in 2015 will initially be presented without taking the Sigma-Aldrich acquisition into account. Separate forecasts for the effect of the acquisition of Sigma-Aldrich have been prepared for the Group as well as the Life Science business sector of Merck KGaA, Darmstadt, Germany, to which the acquisition relates. They are based on a potential first-time consolidation of Sigma-Aldrich in mid-2015.

FORECAST FOR THE GROUP

GROUP →
FORECAST 2015

€ million	Actual results 2014	Forecast 2015	Key assumptions
Sales	11,291.5	– Slight organic growth – Slight portfolio effect – Moderately positive foreign exchange effect	– **Healthcare:** organic at the 2014 level; significant decline in Rebif® sales, compensated for by growth contribution from Emerging Markets and other key products by sales – **Life Science:** moderate organic growth – **Performance Materials:** slight organic increase compared with 2014; strong portfolio effect due to the inclusion of AZ Electronic Materials for a full fiscal year
EBITDA pre one-time items	3,387.7	Slight increase due to operating business developments and positive foreign exchange effects; at least at the 2014 level	– Targeted intensification of R&D programs and thus higher research and development costs for the Biopharmaceuticals business – Adverse impact due to the absence of Humira® royalty income and declining Rebif® sales for the Biopharmaceuticals business – Low double-digit percentage increase for Performance Materials due to the consolidation of the AZ acquisition for a full year and a moderate increase for Life Science – Low double-digit percentage increase in expenses for Corporate and Other due to the absence of currency hedging gains in 2014 as well as to the expected expenses for the "ONE Global Headquarters" project in 2015.
Business free cash flow	2,605.1	Slight increase	– Expected slight increase in EBITDA pre one-time items – Further improvement in working capital management

Sales

In 2015, a slight organic increase in sales in comparison with 2014 is expected for the Group. Moreover, due to the inclusion of AZ Electronic Materials for a full fiscal year, a slightly positive portfolio effect is expected. Regarding the most important foreign currencies for the Group, in 2015 it is assumed that on an annual average, the U.S. dollar, the Swiss franc and major Asian currencies will appreciate against the euro compared with the previous year. Furthermore, the value of Latin American currencies versus the euro is expected to decline. Overall, a moderately positive foreign exchange effect is expected to result for the Group.

Merck KGaA, Darmstadt, Germany, expects organic sales in the Healthcare business sector in 2015 to remain at the previous year's level. For Rebif®, the Biopharmaceuticals business' top-selling product, the Group assumes a sharp organic sales decline compared with 2014, as a result of continued high competitive pressure in North America and in Europe. However, this decrease in sales is likely to be compensated for by continued growth in Emerging Markets and by growth of the business sector's other key products by sales. Moderate organic sales growth in the Life Science business sector is assumed for 2015, which is likely to be driven especially by the Process Solutions and Lab Solutions business areas. For the Performance Materials business sector slight organic sales growth is expected. Furthermore, a noticeable portfolio effect is expected for this business sector, as 2015 will be the first year that AZ Electronic Materials has been consolidated for a full fiscal year.

EBITDA pre one-time items

Owing to the expected operating development and positive foreign exchange effects, a slight increase in EBITDA pre one-time items, the key financial indicator used to steer operating business, is expected for the Group in 2015 compared with 2014. At least EBITDA pre one-time items should reach the previous year's level. For the Healthcare business sector a slight decline in EBITDA pre one-time items can be assumed overall. The targeted intensification of the strategically important research and development programs, especially for the development of the anti-PD-L1 antibody and TH-302 at the Biopharmaceuticals business, will lead to higher expenses in 2015. Moreover, declining sales of Rebif® and the absence of Humira® royalty income will adversely affect EBITDA pre one-time items. For the Performance Materials business sector the Group assumes that the full consolidation of AZ Electronic Materials will lead to a low double-digit percentage increase in EBITDA pre one-time items. The Life Science business sector is forecast to see a moderate increase in EBITDA pre one-time items in 2015.

For EBITDA pre one-time items of Corporate and Other, the company expects a low double-digit percentage decline. In 2014, the expense was largely lowered due to positive effects from currency hedging transactions, which are no longer expected in 2015 owing to the significant decline in the value of the euro versus major foreign currencies. In addition, the company expects higher expenses in 2015 for the "ONE Global Headquarters" project at Group headquarters in Darmstadt.

Business free cash flow

Despite planned investments in growth projects, business free cash flow of the Group is forecast to increase slightly in 2015 in line with the forecast development of EBITDA pre one-time items.

Forecast taking into account the successful acquisition of Sigma-Aldrich

In the event of the successful acquisition of Sigma-Aldrich and the first-time consolidation in mid-2015, Merck KGaA, Darmstadt, Germany, expects double-digit growth rates for the sales of both the Group and the Life Science business sector in 2015 as compared with 2014. Very strong growth of EBITDA pre one-time items and business free cash flow is anticipated for the Group, while double-digit growth rates would be expected for the Life Science business sector.

FORECAST FOR THE HEALTHCARE BUSINESS SECTOR

HEALTHCARE →
FORECAST 2015

€ million	Actual figures for 2014[1]	Forecast for 2015	Key assumptions
Sales	6,549.4	– Organic at the previous year's level	– Sales growth in Emerging Markets and of other key products by sales will compensate for the significant organic decline in sales of Rebif® – Strong organic growth in the Consumer Health business
EBITDA pre one-time items	2,000.3	– Slight decline	– Increasing research and development costs due to the prioritization and intensification of the Biopharmaceuticals business research and development projects, especially in connection with the further development of the anti-PD-L1 antibody within the scope of the strategic alliance with Pfizer; offset to a significant extent by the upfront payment from Pfizer attributable to 2015 – Effect on earnings due to the expected decline in Rebif® sales – Absence of Humira® royalty income – Positive foreign exchange effects
Business free cash flow	1,701.2	– Slight decline	– Slight decline in EBITDA pre one-time items – Higher investments in property, plant and equipment within the scope of current strategic growth projects

[1] Information relating to the past for the Healthcare business sector refers to the former Biopharmaceuticals and Consumer Health businesses, which have been part of the newly created Healthcare business sector since January 1, 2015.

Sales

The Group expects organic sales of the Healthcare business sector in 2015 to remain at the 2014 level. For Rebif®, the top-selling product in Healthcare, the company assumes a sharp organic sales drop as a result of high competitive pressure in the United States and also in Europe. However, it is expected that this decline in sales will be compensated for by continued growth in Emerging Markets and by growth of the other key products. The Consumer Health business, for which the Group expects to see strong organic sales growth, will also help to offset the decline.

EBITDA pre one-time items

In 2014, Merck KGaA, Darmstadt, Germany, already resolutely prioritized its research and development activities in the Healthcare business sector and discontinued various projects. For 2015, the Group will drive strategically important projects forward, which will lead to increasing research and development costs. An important part of this will be the further development of the hypoxia-activated prodrug TH-302 and particularly the anti-PD-L1 antibody within the scope of the strategic alliance with Pfizer. The expenses incurred in this connection are likely to be offset to a large extent by the share of the upfront payment from Pfizer attributable to 2015. These developments, as well as the absence of royalty income for Humira® and the impact of the expected significant drop in sales of Rebif® on earnings, are likely to lead to a slight decline in EBITDA pre one-time items.

Business free cash flow

In particular, the Biopharmaceuticals business will be increasingly investing in the modernization and expansion as well as the new construction of production facilities in order to meet the increasing demand for the company's pharmaceuticals. Owing to these investment activities and the slight decline in EBITDA pre one-time items, the Group expects a slight decrease in business cash flow for the Healthcare business sector in 2015.

FORECAST FOR THE LIFE SCIENCE BUSINESS SECTOR

LIFE SCIENCE →
FORECAST 2015

€ million	Actual figures for 2014	Forecast for 2015	Key assumptions
Sales	2,682.5	– Moderate organic growth	– Growth will be driven especially by the Process Solutions and Lab Solutions business areas, as well as the Emerging Markets
EBITDA pre one-time items	658.6	– Moderate increase	– In line with the development of sales
Business free cash flow	419.0	– Strong increase	– Improvement in EBITDA pre one-time items – Significant reduction in inventories

Sales

Merck KGaA, Darmstadt, Germany, expects that continued increasing investments in research and development activities in the pharmaceutical and biotech industries will also have a positive impact on the Process Solutions business area in 2015. Process Solutions supplies consumables and services for pharmaceutical and biotech companies. It is anticipated that the Lab Solutions business area will benefit from the expected slight growth of the global laboratory product market. Development of the Bioscience business area is expected to remain subdued. It is therefore likely that the Process Solutions and Lab Solutions business areas will be the strongest drivers of growth in the Life Science business sector in 2015.

Overall, the Group expects moderate organic sales growth in the Life Science business sector in 2015 compared with the previous year. From a geographic perspective, a sharp increase particularly in Emerging Markets is anticipated in 2015.

EBITDA pre one-time items

In line with the forecast organic sales development and continuous efficiency improvements, EBITDA pre one-time items is expected to also increase moderately.

Business free cash flow

The Group expects a strong increase in the business free cash flow of the Life Science business sector. This increase will stem not only from the improvement in EBITDA pre one-time items, but also a significant reduction in inventories.

Forecast taking into account the successful acquisition of Sigma-Aldrich

In the event of the successful acquisition of Sigma-Aldrich and first-time consolidation in mid-2015, the company expects double-digit growth rates in the Life Science business sector for sales, EBITDA pre one-time items and business free cash flow in 2015 compared with 2014.

FORECAST FOR THE PERFORMANCE MATERIALS BUSINESS SECTOR

PERFORMANCE MATERIALS →
FORECAST 2015

€ million	Actual figures for 2014	Forecast for 2015	Key assumptions
Sales	2,059.6	– Slight organic increase – Strong portfolio effect	– Continued good volume increase in liquid crystals, amid the customary price decline for established products – Strong portfolio effect due to the inclusion of AZ Electronic Materials for a full fiscal year
EBITDA pre one-time items	894.8	– Low double-digit percentage increase	– Strong portfolio effect – Scheduled realization of synergies from the acquisition of AZ Electronic Materials – Positive foreign exchange effects
Business free cash flow	699.6	– Low double-digit percentage increase	– Increase in EBITDA pre one-time items – Considerable investments in future technologies

Sales

Merck KGaA, Darmstadt, Germany, expects low double-digit percentage growth in the Performance Materials business sector in 2015 compared with 2014. Slight organic sales growth is anticipated, supplemented by a strong portfolio effect due to the inclusion of AZ Electronic Materials for a full fiscal year. In the Liquid Crystals business, the Group assumes continued good volume growth amid the customary price decline for established products in this industry. This forecast is in line with the expectations of Display Search, a market research firm for the display sector, which continue to anticipate a strong increase in the surface area of global flat-panel displays produced in 2015.

The Group does not expect any significant new technologies or product launches in the liquid crystals field in 2015. The company anticipates moderate organic sales growth in Pigments & Functional Materials and Integrated Circuit Materials overall.

EBITDA pre one-time items

For 2015, the Group forecasts a low double-digit percentage increase in EBITDA pre one-time items compared with 2014, resulting from a strong portfolio effect, the planned realization of synergies from the acquisition of AZ Electronic Materials, and positive foreign exchange effects. The company is planning to maintain the profitability of liquid crystals at a high level.

Business free cash flow

In 2015, the Group expects a low double-digit percentage improvement in business free cash flow compared with 2014 as a result of the increase in EBITDA pre one-time items. This increase takes account of the fact that the company will make considerable investments in property, plant and equipment for future technologies in 2015.

SUMMARY

Slight organic sales growth of the Group is assumed for 2015, which is likely to be driven by the Life Science business sector in particular. In addition to this, the company expects a slight portfolio effect due to the first-time consolidation of AZ Electronic Materials for a full fiscal year.

Together with positive foreign exchange effects, the business development of the Group is likely to lead to a slight increase in EBITDA pre one-time items. However, it is expected that EBITDA pre one-time items will at least reach the previous year's level. A slight decline in EBITDA pre one-time items in the Healthcare business sector due to targeted investments in strategic research and development projects, a significant decline in sales of Rebif® and the absence of royalty income for Humira® should at least be offset by the other two business sectors. Low double-digit percentage growth of EBITDA pre one-time items for the Performance Materials business sector is likely, while a moderate increase is expected for the Life Science business sector. As a consequence of this development and despite investments in strategic growth projects, the Group anticipates a slight increase in business free cash flow in 2015 compared with 2014.

In the event of the successful acquisition of Sigma-Aldrich in mid-2015, Merck KGaA, Darmstadt, Germany, expects double-digit sales growth for the Group and the Life Science business sector in 2015, as compared with 2014. Very strong growth of EBITDA pre one-time items and business free cash flow for the Group is anticipated, while double-digit growth rates are expected for the Life Science business sector.

REPORT IN ACCORDANCE WITH SECTION 315 (4) OF THE GERMAN COMMERCIAL CODE (HGB)

The following information is provided in accordance with Section 315 (4) of the German Commercial Code and the explanatory report pursuant to Section 176 (1) sentence 1 of the German Stock Corporation Act (AktG).

As of the balance sheet date, the company's subscribed capital is divided into 129,242,251 no-par value bearer shares plus one registered share. Each share therefore corresponds to € 1.30 of the share capital. The holder of the registered share is E. Merck Beteiligungen KG, Darmstadt, Germany. It is entitled and obliged to appoint one-third of the members of the Supervisory Board representing the limited liability shareholders. If the holder of the registered share is a general partner, he or she has no such right of appointment. The transfer of the registered share requires the company's approval. The approval is granted at the sole discretion of the personally liable general partner with an equity interest, namely E. Merck KG, Darmstadt, Germany.

Pursuant to the information on voting rights submitted to us in accordance with the German Securities Trading Act (WpHG), on December 31, 2014 no shareholders owned direct or indirect investments exceeding more than 10 % of the voting rights.

According to the Articles of Association of Merck KGaA, Darmstadt, Germany, the general partners not holding an equity interest who form the Executive Board are admitted by E. Merck KG, Darmstadt, Germany, with the consent of a simple majority of the other general partners. A person may only be a general partner not holding an equity interest if he or she is also a general partner of E. Merck KG, Darmstadt, Germany. In addition, at the proposal of E. Merck KG, Darmstadt, Germany, and with the approval of all general partners not holding an equity interest, further persons who are not general partners not holding an equity interest may be appointed to the Executive Board.

The Articles of Association can be amended by a resolution by the Annual Meeting that requires the approval of the general partners. The resolutions of the General Meeting are, notwithstanding any statutory provisions to the contrary, adopted by a simple majority of the votes cast. Where the law requires a capital majority in addition to the voting majority, resolutions are adopted by a simple majority of the share capital represented in the vote. The Articles of Association of the company specify the authorized share capital. The Executive Board is authorized, with the approval of the Supervisory Board and of E. Merck KG, Darmstadt, Germany, to increase the share capital on one or several occasions until April 26, 2018 by up to a total of € 56,521,124.19 by issuing new shares against cash and/or contributions in kind (Authorized Capital). The Executive Board is authorized to exclude, with the approval of the Supervisory Board, the statutory subscription right of the limited liability shareholders in the case of capital increases against cash contributions if the issue price of the new shares is not significantly lower than the stock exchange price of already listed shares carrying the same rights, as defined in section 203 (1) and (2) and section 186 (3) sentence 4 of the German Stock Corporation Act (AktG), at the time when the Executive Board finally fixes the issue price, and if the proportion of the share capital represented by the new shares for which the subscription right is excluded does not exceed 10 % of the share capital available at the time of the resolution of the Annual General Meeting or – if this amount is lower – of the share capital available at the time of exercising this authorization. This upper limit shall be reduced by the prorated amount of shares that are sold during the term of the authorized capital under exclusion of shareholders' subscription rights pursuant to section 71 (1) no. 8 sentence 5 and section 186 (3) sentence 4 of the German Stock Corporation Act, as well as shares that must be issued to redeem option or convertible bonds, as long as the bonds have been issued during the term of this authorization under exclusion of subscription rights. In addition, with the approval of the Supervisory Board, the subscription right of the shareholders can be excluded in order to enable E. Merck KG, Darmstadt, Germany, to exercise its right pursuant to Article 32 (3) of the Articles of Association to participate in a capital increase by issuing shares or freely transferable share subscription rights and to enable E. Merck KG, Darmstadt, Germany, to exercise its right pursuant to Article 33 of the Articles of Association to convert its equity interest into share capital. Moreover, with the approval of the Supervisory Board, the subscription right of the shareholders can be excluded as far as this is necessary, in order to grant subscription rights for new shares to holders of warrants and convertible bonds issued by the company or its subsidiaries, to the extent to which they would be entitled after exercising their option and conversion rights or fulfilling their option and conversion obligations. Lastly, with the approval of the Supervisory Board, the subscription right of the shareholders can be excluded in order to exclude fractional amounts from the subscription right.

The Articles of Association also encompass contingent capital. The share capital is contingently increased by up to € 66,406,298.40 divided into 51,081,768 shares (Contingent Capital I). The contingent capital increase serves to grant exchange rights to E. Merck KG, Darmstadt, Germany, in accordance with Article 33 of the Articles of Association to enable the conversion of its equity interest. The shares carry dividend rights from the beginning of

the fiscal year following the year in which the conversion option is exercised.

Moreover, the share capital is contingently increased by up to € 16,801,491.20 composed of up to 12,924,224 no-par value bearer shares (Contingent Capital II). This increase in contingent capital is only to be implemented insofar as the bearers or creditors of option or conversion rights or the conversion obligations on warrant bonds, option participation certificates, option participation bonds, convertible bonds, convertible participation certificates or convertible participation bonds issued against contributions that are issued or guaranteed by the company or a subordinate Group company on the basis of the authorization resolution of the Annual General Meeting of May 9, 2014 to May 8, 2019, utilize their option or conversion rights or, to fulfill their conversion obligation insofar as they are obliged to fulfill their conversion obligation, or insofar as the company exercises an option, wholly or in part, of granting shares in the company instead of paying the sum of money due and to the extent that in each case a cash settlement is not granted, or own shares or other forms of fulfillment are used. Each issue of new shares shall take place at the determined option or conversion price, pursuant to the aforementioned authorization resolution. The new shares participate in the profit from the beginning of the fiscal year in which they are created; insofar as this is legally permissible, the Executive Board may, with the approval of the Supervisory Board, and in deviation from Section 60 (2) AktG, stipulate that the new shares also participate in the profit for a past fiscal year. The Executive Board is authorized, with the approval of the Supervisory Board and of E. Merck KG, Darmstadt, Germany, to stipulate the further details of the implementation of the increase in contingent capital.

The company is not authorized to acquire its own shares.

The company has not entered into any material agreements subject to a change of control pursuant to a takeover offer nor has it entered into any compensation agreements with the members of the Executive Board or employees in the event of a takeover offer.

SUBSEQUENT EVENTS

Subsequent to the balance sheet date, no events of special importance occurred that could have a material impact on the financial position and results of operations of the Group.

03
CORPORATE GOVERNANCE

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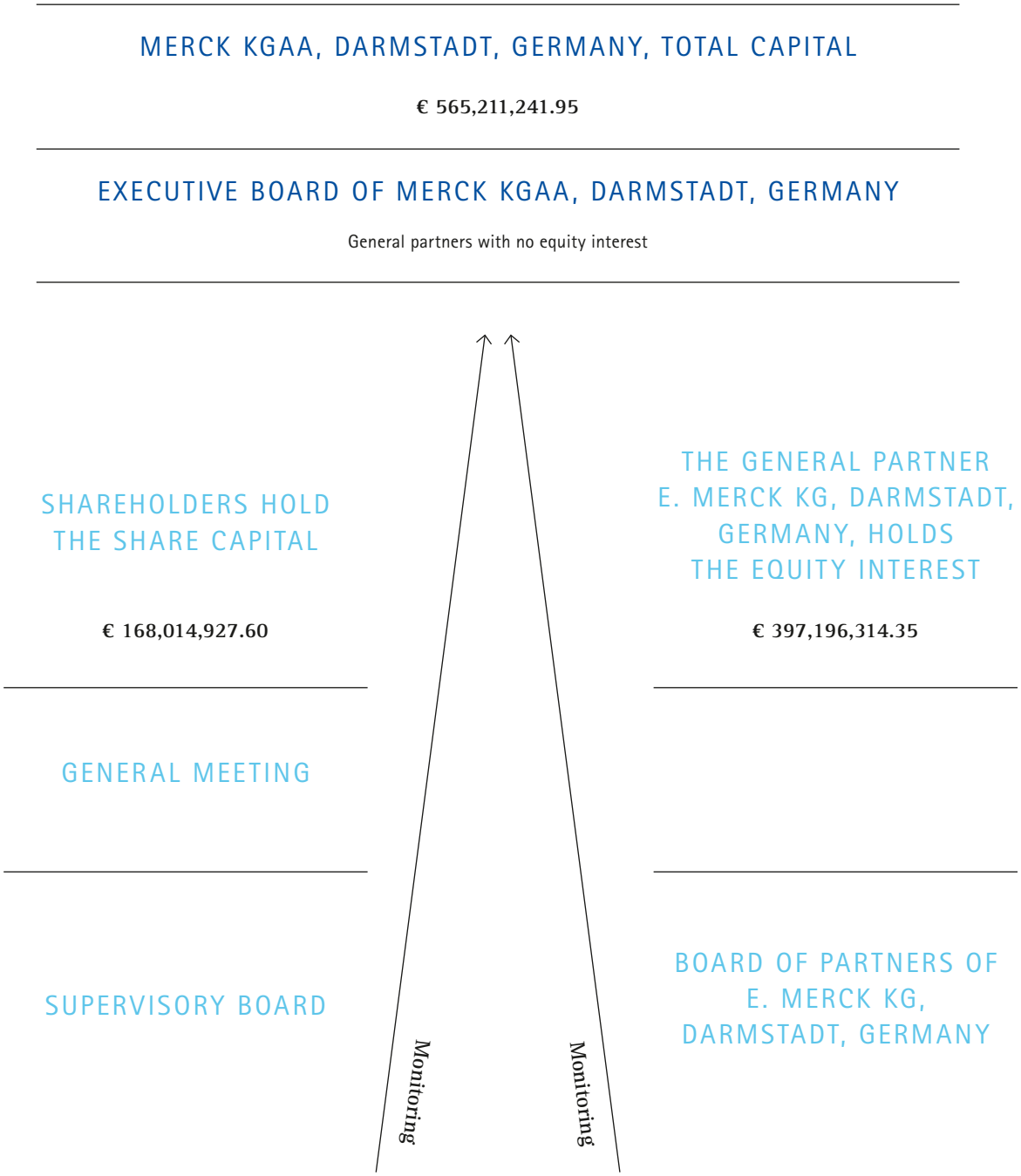
CAPITAL STRUCTURE AND CORPORATE BODIES OF MERCK KGAA, DARMSTADT, GERMANY



See "Merck KGaA, Darmstadt, Germany" (p. 145).

STATEMENT ON CORPORATE GOVERNANCE

The Statement on Corporate Governance contains the Statement of Compliance, relevant information on practices within the company as well as a description of the procedures of the corporate bodies.

JOINT REPORT OF THE EXECUTIVE BOARD AND THE SUPERVISORY BOARD ACCORDING TO SECTION 3.10 OF THE GERMAN CORPORATE GOVERNANCE CODE INCLUDING STATEMENT OF COMPLIANCE

The German Corporate Governance Code is geared toward the conditions found in a German stock corporation ("Aktiengesellschaft" or "AG") and does not take into consideration the special characteristics of a corporation with general partners ("Kommanditgesellschaft auf Aktien" or "KGaA") such as Merck KGaA, Darmstadt, Germany. Given the structural differences between an AG and a KGaA, several recommendations of the German Corporate Governance Code are to be applied to a KGaA only in a modified form. Major differences between the two legal forms exist in terms of liability and management. While, in the case of an AG, only the AG is liable as a legal entity, the general partners of a KGaA also have unlimited personal liability for the company's obligations (section 278 (1) of the German Stock Corporation Act – "AktG"). At Merck KGaA, Darmstadt, Germany, this pertains to both E. Merck KG, Darmstadt, Germany – which pursuant to Art. 8 (5) of the Articles of Association is excluded from management and representation – as well as to the managing general partners, who together make up the Executive Board of Merck KGaA, Darmstadt, Germany. The members of the Executive Board of Merck KGaA, Darmstadt, Germany, are therefore subject to unlimited personal liability. Unlike an AG, their executive authority is not conferred by the Supervisory Board, but rather by their status as general partners.

Consequently, in addition to other responsibilities typical of the supervisory board of an AG (see description of the procedures of the Supervisory Board on page 157 et seq.), the supervisory board of a KGaA does not have the authority to appoint the management board, draw up management board contracts or specify compensation of the management board. This legal form also involves special features with regard to the General Meeting. For example, in a KGaA, many of the resolutions made require the consent of the general partners (section 285 (2) AktG), particularly also the adoption of the annual financial statements (section 286 (1) AktG).

Merck KGaA, Darmstadt, Germany, applies the Code analogously where these regulations are compatible with the legal form of a KGaA. In order to enable shareholders to compare the situation at other companies more easily, to a broad extent we base corporate governance on the conduct recommendations made by the Government Commission of the German Corporate Governance Code and forego having our own, equally permissible, code. The recommendations of the Code in both of the last two versions dated May 13, 2013 and June 24, 2014, the intent and meaning of which are applied, were complied with in the period between the last Statement of Compliance issued on February 28, 2014 with three exceptions. In the future, the recommendations of the Code will again be adhered to with four exceptions. Further details can be found on page 146.

For a clearer understanding, the following gives a general explanation of the application of German company law at Merck KGaA, Darmstadt, Germany with additional references to the General Meeting and shareholder rights.

Merck KGaA, Darmstadt, Germany

The general partner E. Merck KG, Darmstadt, Germany, holds around 70 % of the total capital of Merck KGaA, Darmstadt, Germany (equity interest); the shareholders hold the remainder, which is divided into shares (share capital). E. Merck KG, Darmstadt, Germany, is excluded from the management of business activities. The general partners with no equity interest (Executive Board) manage the business activities. Nevertheless, due to its substantial capital investment and unlimited personal liability, E. Merck KG, Darmstadt, Germany, has a strong interest in the businesses of Merck KGaA, Darmstadt, Germany, operating efficiently in compliance with procedures, and exercises its influence accordingly. The participation of Merck KGaA's, Darmstadt, Germany, in the profit/loss of E. Merck KG, Darmstadt, Germany, in accordance with Articles 26 et seq. of the Articles of Association further harmonizes the interests of the shareholders and of E. Merck KG, Darmstadt, Germany. E. Merck KG, Darmstadt, Germany, appoints and dismisses the Executive Board. In addition, E. Merck KG, Darmstadt, Germany, has created bodies – complementing the expertise and activities of the Supervisory Board – to monitor and advise the Executive Board. This task applies primarily to the Board of Partners of E. Merck KG, Darmstadt, Germany. Based on the provisions of the German Stock Corporation Act, the Articles of Association of Merck KGaA, Darmstadt, Germany, and the rules of procedure of the various committees, Merck KGaA, Darmstadt, Germany, has a set of rules for the Executive Board and its supervision that meet the requirements of the Code. The investors, who bear the entrepreneurial risk, are protected as provided for by the Code.

The General Meeting of Merck KGaA, Darmstadt, Germany

The nineteenth General Meeting of Merck KGaA, Darmstadt, Germany, was held on May 9, 2014 in Frankfurt am Main, Germany. At 63.85%, the proportion of share capital represented at the meeting was slightly lower than in the previous year. In 2013, the proportion of share capital represented was 67.54%.

In particular, the Annual General Meeting passes resolutions concerning the approval of the annual financial statements, the appropriation of net retained profit, the approval of the actions of the Executive Board members and the Supervisory Board members, as well as the choice of the auditor. Changes to the Articles of Association likewise require the adoption of a resolution by the General Meeting.

The shareholders of Merck KGaA, Darmstadt, Germany, exercise their rights at the General Meeting. They may exercise their voting rights personally, through an authorized representative or through a proxy appointed by the company. The proxy is in attendance throughout the duration of the General Meeting. All the documents and information concerning upcoming General Meetings (including a summary explanation of shareholder rights) are posted on our website. Moreover, the General Meeting is webcast live on the Internet from its commencement until the end of the speech by the Chairman of the Executive Board. The introductory speeches by the Chairman of the Executive Board and the Chairman of the Supervisory Board are recorded in order to make them available to interested members of the public at any time after the meeting. In this way, we are satisfying the high transparency requirements of the Group.

Statement of Compliance

In accordance with section 161 AktG, applying the provisions of the German Corporate Governance Code correspondingly, the Executive Board and the Supervisory Board issued the following statement of compliance with the recommendations of the Government Commission of the German Corporate Governance Code:

"Declaration of the Executive Board and the Supervisory Board of Merck KGaA, Darmstadt, Germany, on the recommendations of the Government Commission of the German Corporate Governance Code pursuant to section 161 AktG.

Since the last statement of compliance on February 28, 2014, the Group has complied with the recommendations of the Government Commission of the German Corporate Governance Code in the versions dated May 13, 2013 and June 24, 2014 and published in the official section of the German Federal Gazette during its period of validity with the following exceptions:

Contrary to section 4.2.5 sentence 5 and sentence 6 of the German Corporate Governance Code, certain information on the compensation of Executive Board members has not been included, nor have the model tables provided for this purpose been utilized. It seems doubtful as to whether the largely repetitive provision of identical information in two additional tables contributes to the transparency or the understandability of the Compensation Report (see section 4.2.5 sentence 3 of the German Corporate Governance Code).

Contrary to section 5.3.2 of the German Corporate Governance Code, the Supervisory Board has not established an audit committee. However, an audit committee does exist in the form of the Finance Committee of the Board of Partners of E. Merck KG, Darmstadt, Germany, which to a large extent exercises the duties described in section 5.3.2 of the Code. Due to the relatively limited authority of the supervisory board of a KGaA in comparison with that of an AG, this therefore satisfies the requirements of the German Corporate Governance Code.

Contrary to section 5.4.1 para 2 sentence 1 of the German Corporate Governance Code, an age limit is not taken into account when proposing candidates for election to the Supervisory Board pursuant to the published objectives of the Supervisory Board. The age of Supervisory Board members is not a criterion for their qualifications and competence. Moreover, we do not wish to forego the many years of experience of Supervisory Board members.

Contrary to section 7.1.2 sentence 4 of the German Corporate Governance Code, owing to the way in which the German legal holidays fall in May 2015, in this isolated instance the interim report can only be made publicly accessible slightly after the allotted 45-day time limit from the end of the reporting period.

In view of future compliance with the current recommendations of the Government Commission of the German Corporate Governance Code, the Executive Board and the Supervisory Board declare the following: With the exception of the aforementioned deviations from section 4.2.5 sentences 5 and 6 (disclosure of compensation), section 5.3.2 (audit committee), section 5.4.1 para 2 sentence 1 (age limit), and section 7.1.2 sentence 4 (publication deadline), the company will comply with the recommendations of the Code in the version dated June 24, 2014."

Darmstadt, February 27, 2015

For the Executive Board	For the Supervisory Board
s. Karl-Ludwig Kley	**s. Wolfgang Büchele**

COMPENSATION REPORT

(The Compensation Report is part of the audited Notes to the Group accounts).

Compensation of members of the Executive Board of Merck KGaA, Darmstadt, Germany

Contrary to management board members of German stock corporations, the members of the Executive Board of Merck KGaA, Darmstadt, Germany, are not employed officers of the company. Rather, they are personally liable general partners of both Merck KGaA, Darmstadt, Germany, and the general partner E. Merck KG, Darmstadt, Germany, and in this capacity they receive profit-based compensation from E. Merck KG, Darmstadt, Germany. Given this context, the stipulations of the German Corporate Governance Code concerning the compensation of management board members of publicly listed German stock corporations as well as the individual disclosure thereof do not apply to the Executive Board members of Merck KGaA, Darmstadt, Germany. Nevertheless, Merck KGaA, Darmstadt, Germany, has decided to disclose the individual compensation of each Executive Board member in the following report.

Contrary to publicly listed German stock corporations, at Merck KGaA, Darmstadt, Germany, it is not the Supervisory Board, but the Board of Partners of E. Merck KG, Darmstadt, Germany, that decides on the amount and composition of compensation. E. Merck KG, Darmstadt, Germany, has transferred the execution of this right to its Personnel Committee. Among other things, the Personnel Committee is responsible for the following decisions: contents of contracts with Executive Board members, granting of loans and advance salary payments, approval for taking on honorary offices, board positions and other sideline activities, as well as the division of responsibilities within the Executive Board of Merck KGaA, Darmstadt, Germany. The compensation system defined by the Personnel Committee for Executive Board members takes into account various aspects relevant to compensation, including the responsibilities and duties of the individual Executive Board members and their status as personally liable partners, their individual performance, the economic situation, performance and prospects of the company, normal compensation levels (by way of peer comparison) and the rewards structure otherwise in place in the company. The relationship between Executive Board compensation and the compensation of top management and the workforce as a whole is also taken into account, also in a multi-year assessment. The Personnel Committee regularly commissions an independent compensation consultant to review the appropriateness of compensation.

Features of the compensation system

The compensation paid to the Executive Board members of Merck KGaA, Darmstadt, Germany, in fiscal 2014 comprises fixed components, variable compensation components and additions to pension provisions. Benefits in kind and other benefits are additionally granted.

Fixed compensation

Fixed compensation is paid in the form of 12 equivalent monthly installments. The table on page 149 provides an overview of the amount of the fixed compensation paid in 2013 and 2014.

Variable compensation

Variable compensation is based on the three-year rolling average of profit after tax of the Group formed by E. Merck KG, Darmstadt, Germany. The Personnel Committee of E. Merck KG, Darmstadt, Germany, decides at its own and equitable discretion on consideration of exceptional factors of certain importance. From the net income determined in this manner, the members of the Executive Board receive individually fixed per mille rates based on the net income of the Group formed by E. Merck KG, Darmstadt, Germany.

Additionally, in exceptional cases the Personnel Committee of E. Merck KG, Darmstadt, Germany, which is responsible for the compensation of the Executive Board, may grant one-time payments voluntarily and at its own discretion.

Additional variable compensation (Long-Term Incentive Plan of Merck KGaA, Darmstadt, Germany)

In 2012, a long-term variable compensation component known as the Long-Term Incentive Plan of Merck KGaA Darmstadt, Germany, was added to the variable compensation of the members of the Executive Board. It aims to enhance the sustainability of the compensation system and to align it not only with target achievement based on key performance indicators, but above all with a sustainable performance of the shares of Merck KGaA, Darmstadt, Germany.

Subject to the resolution of the Personnel Committee each year, under the Long-Term Incentive Plan of Merck KGaA Darmstadt, Germany, the members of the Executive Board could be eligible to receive a certain number of virtual shares – Share Units of Merck KGaA, Darmstadt, Germany (MSUs) – at the end of a three-year performance cycle. The number of MSUs that could be received depends on the total value defined for the respective person and the average closing price of the shares of Merck KGaA, Darmstadt, Germany, in Xetra® trading during the last 60 trading days prior to January 1 of the respective fiscal year (reference price). In order to participate in the Plan, members of the Executive Board must personally own an investment in the shares of Merck KGaA, Darmstadt, Germany, equivalent to 10% of their respective fixed annual compensation, taking into account the equity interest held in E. Merck KG, Darmstadt, Germany, as a personally liable general partner. It is not permitted to sell these shares during the performance cycle. After termination of the three-year performance cycle, the number of MSUs to be granted then is determined based on the development of two key performance indicators (KPIs). These are:

a) the performance of the shares of Merck KGaA, Darmstadt, Germany, price compared to the DAX® with a weighting of 70%, and
b) the development of the EBITDA pre margin during the performance cycle as a proportion of a defined target value with a weighting of 30%.

Depending on the development of the KPIs, at the end of the respective performance cycle, the members of the Executive Board are granted between 0% and 150% of the MSUs they could be eligible to receive.

Based on the number of MSUs granted, the members of the Executive Board receive a cash payment at a defined point in time in the year following the expiration of the three-year performance cycle. The value of an MSU corresponds to the average closing price of the shares of Merck KGaA, Darmstadt, Germany, in Xetra® trading during the last 60 trading days prior to January 1 after the performance cycle. The payment amount is limited to three times the reference price. The members of the Executive Board invest 50% of the payment amount in the shares of Merck KGaA, Darmstadt, Germany. One-third of these shares may be sold at the earliest one year after termination of the performance cycle, another third after two years, and another third after three years.

In fiscal 2014, the following total values were specified for members of the Executive Board, which resulted in the respective number of MSUs they were eligible to receive based upon the definitive reference price of the shares of Merck KGaA, Darmstadt, Germany, (60 trading days preceding January 1, 2014) of € 122.84: Karl-Ludwig Kley € 1.5 million (12,211 MSUs), Stefan Oschmann € 1.0 million (8,141 MSUs), Kai Beckmann € 1.0 million (8,141 MSUs), Marcus Kuhnert € 0.4 million (3,392 MSUs), and Bernd Reckmann € 1.0 million (8,141 MSUs). For fiscal 2015, the Personnel Committee authorized the Chairman of the Personnel Committee to assign potential numbers of MSUs to the Executive Board members for a performance cycle from January 1, 2015 to December 31, 2017. The following total values were defined as the initial basis: Karl-Ludwig Kley € 1.5 million, Stefan Oschmann € 1.0 million, Kai Beckmann € 1.0 million, Belén Garijo Lopez € 1.0 million, Marcus Kuhnert € 1.0 million, and Bernd Reckmann € 1.0 million.

The following maximum compensation amounts for variable compensation components, which were applicable for the first time in 2014, have been agreed.

	One-time payment (€ thousand)	Variable compensation (€ thousand)	Long-Term Incentive Plan (times the respective total amount)	Total variable compensation components (€ thousand)
Karl-Ludwig Kley	2,000	8,000	4.5	9,800
Stefan Oschmann	1,500	6,000	4.5	8,000
Kai Beckmann	1,500	6,000	4.5	8,000
Marcus Kuhnert	1,500	6,000	4.5	8,000
Bernd Reckmann	1,500	6,000	4.5	8,000

Additional benefits

The members of the Executive Board also receive certain additional benefits, mainly contributions to insurance policies, personal security expenses, as well as a company car, which they are entitled to use privately. In 2014, personal security expenses were included for the first time. The amounts for the previous year have been adjusted accordingly. Overall, the value of other additional benefits totaled € 156 thousand in 2014 (2013: € 161 thousand). Of this amount, in 2014 € 53 thousand was attributable to Karl-Ludwig Kley (2013: € 52 thousand); € 21 thousand to Stefan Oschmann (2013: € 19 thousand); € 41 thousand to Kai Beckmann (2013: € 40 thousand); € 7 thousand to Marcus Kuhnert; € 28 thousand to Bernd Reckmann (2013: € 26 thousand); and € 6 thousand to Matthias Zachert (2013: € 24 thousand).

Total compensation

Accordingly, the following total compensation results for the members of the Executive Board of Merck KGaA, Darmstadt, Germany, broken down by performance-independent and performance-related components:

		Performance-independent components		Performance-related components			Total	Expense recorded in the period for share-based compensation[5]
				Without a long-term incentive effect	With a long-term incentive effect			
		Fixed compensation	Additional benefits[1]	Variable compensation[2]	Long-Term Incentive Plan			
		(€ thousand)	(€ thousand)	(€ thousand)	Number of MSUs[3] (units)	Fair value[4] (€ thousand)	(€ thousand)	(€ thousand)
Current members								
Karl-Ludwig Kley	2014	1,300	53	5,265	12,211	1,147	7,765	4,196
	2013	1,100	52	4,334	14,984	1,849	7,311	2,185
Stefan Oschmann	2014	1,200	21	4,799	8,141	765	6,785	2,797
	2013	1,000	19	3,534	9,990	1,233	5,786	1,457
Kai Beckmann	2014	1,000	41	3,049	8,141	765	4,855	2,797
	2013	800	40	2,895	9,990	1,233	4,951	1,457
Marcus Kuhnert (since August 1, 2014)	2014	333	7	882	3,392	462	1,684	107
	2013	–	–	–	–	–	–	–
Bernd Reckmann	2014	1,200	28	3,549	8,141	765	5,542	2,797
	2013	1,000	26	3,534	9,990	1,233	5,793	1,457
Matthias Zachert (until March 31, 2014)	2014	250	6	762	–	–	1,018	0
	2013	1,000	24	3,284	9,990	1,233[6]	5,541	1,457
Total	2014	5,283	156	18,306	40,026	3,904	27,649	12,694
	2013	4,900	161	17,581	54,944	6,780	29,382	8,012

[1] Personal security expenses were included for the first time in 2014. The amounts for the previous year have been adjusted accordingly.
[2] The one-time payments for 2013 granted to Karl-Ludwig Kley, Stefan Oschmann, Kai Beckmann, Bernd Reckmann and Matthias Zachert as well as the one-time payment for 2014 granted to Karl-Ludwig Kley and Stefan Oschmann are included in the variable compensation components for 2013 and/or 2014.
[3] Number of the potential MSUs subject to target achievement. For details see page 148. The actual number of MSUs to be granted after the expiration of the three-year performance cycle may deviate from this. The share split that took effect on June 30, 2014 does not affect the number of MSUs granted. The 1:2 stock split was compensated for by a doubling in the accounting value of an MSU.
[4] Fair value on the date of the grant (date of the legally binding entitlement). The amount of a potential payment is thus not predefined. Payment is subject to target achievement and is only made on a specified date after the expiration of a three-year performance cycle. The fair value was calculated using a Monte Carlo simulation based on the previously described KPIs. The expected volatilities are based on the implicit volatility of the shares of Merck KGaA, Darmstadt, Germany, and the DAX® index in accordance with the remaining term of the Long-Term Incentive Plan tranche. The dividend payments incorporated into the valuation model orient towards medium-term dividend expectations.
[5] In accordance with IFRS the expense recorded for 2013 includes the values for the 2012 and 2013 Long-Term Incentive Plan tranches. In accordance with IFRS, the expense recorded in 2014 includes the values for the Long-Term Incentive Plan tranches 2012, 2013 and 2014.
[6] The Personnel Committee of E. Merck KG, Darmstadt, Germany, decided on February 6, 2014 that Matthias Zachert will only receive payments under the LTIP for the 2012 tranche. The MSUs granted in 2013 (9,900 units) will not lead to a payment.

Pension provisions

The individual contractual pension obligations grant the members of the Executive Board entitlement to a lifelong old-age pension or surviving dependents' pension in the event of reaching the individual contractually agreed age limit, permanent disability or death. As an alternative to an old-age pension, upon reaching the age limit specified in their individual contracts, the members of the Executive Board have been offered the possibility to receive their pension entitlement in the form of a one-time lump-sum payment calculated in accordance with actuarial principles.
The amount of the old-age pension is determined by a percentage share of pensionable compensation defined by the Personnel Committee.

The individual values are presented in the following table:

	Pensionable compensation (€ thousand)	Percentage entitlement
Karl-Ludwig Kley	900	70
Stefan Oschmann	650	55
Kai Beckmann	400	47
Marcus Kuhnert	300	40
Bernd Reckmann	650	62

The percentage entitlement increases up until retirement by two percentage points per year of service up to 70% for Kai Beckmann and Bernd Reckmann as of 2016. Their pension entitlement was thus increased in 2014.
For Marcus Kuhnert, as of 2016 the percentage entitlement will increase up until retirement by 2 percentage points per year of service up to 70%.

The pension provisions and the service cost are presented in the following table.

€ thousand	Service cost 2014	Service cost 2013	Amount of pension provisions as of Dec. 31, 2014
Karl-Ludwig Kley	1,127	1,179	13,380
Stefan Oschmann	549	605	2,963
Kai Beckmann	108	115	5,460
Marcus Kuhnert	144	–	144
Bernd Reckmann	215	224	10,586
Matthias Zachert[1]	0	342	0
Total	2,143	2,465	32,533

[1] Due to Matthias Zachert's departure, he will no longer have any entitlement to pension payments.

The surviving dependents' pension grants the spouse a lifelong surviving dependents' pension amounting to 60% of the pension entitlement, and dependent children either a half-orphan's or an orphan's pension maximally until the age of 25.

Benefits in the event of termination of duties as an Executive Board member

The employment contracts of Karl-Ludwig Kley, Stefan Oschmann, Kai Beckmann and Bernd Reckmann each contain a post-contractual non-competition clause. An amount equal to 50% of the average contractual benefits paid to the respective Executive Board member within the past 12 months prior to leaving the company shall be provided as compensation for each year of the two-year non-competition period. During the period of the non-competition clause, other employment income and pension payments will be credited toward this compensation. Within certain time limits, E. Merck KG, Darmstadt, Germany, has the possibility to dispense with adherence to the non-competition clause with the consequence that the obligation to make the compensation payments shall cease to apply.

The contracts of the Executive Board members continue to provide for the continued payment of fixed compensation to surviving dependents for a limited period of time in the event of death. Above and beyond this and existing pension obligations, no further obligations exist in the event of the termination of the contractual relationships of the Executive Board members.

Miscellaneous

The members of the Executive Board do not receive additional compensation for serving on the boards of Group companies.

Should members of the Executive Board be held liable for financial losses while executing their duties, under certain circumstances this liability risk is covered by a D&O insurance policy from Merck KGaA, Darmstadt, Germany. The D&O insurance policy has a deductible in accordance with the legal requirements and recommendations of the German Corporate Governance Code.

Payments to former Executive Board members and their surviving dependents

Pension payments to former members of the Executive Board or their surviving dependents amounted to € 11,220 thousand in 2014 (2013: € 7,494 thousand). Pension provisions totaling € 120,674 thousand exist for the pension entitlements of this group of persons (2013: € 103,615 thousand).

Compensation of the Supervisory Board members of Merck KGaA, Darmstadt, Germany

The compensation of the Supervisory Board members is defined by Article 20 of the Articles of Association of Merck KGaA, Darmstadt, Germany. The members of the Supervisory Board receive fixed compensation of € 47,000 per year. The Chairman receives double this amount and the Vice Chairman receives one and a half times this amount. In addition, the members receive additional compensation of € 750 per meeting.

The individual values are presented in the following table:

in €	Fixed compensation 2014	Fixed compensation 2013	Variable compensation[3] 2014	Variable compensation[3] 2013 Until April 26, 2013	Compensation for meeting attendance 2014	Compensation for meeting attendance 2013 As of April 27, 2013	Total compensation 2014	Total compensation 2013
Wolfgang Büchele (Chairman since May 9, 2014)	77,517.81	34,287.67	–	11,725.22	3,750.00	3,000.00	81,267.81	49,012.89
Michael Fletterich (Vice Chairman since May 9, 2014)	62,258.90	34,287.67	–	11,725.22	3,750.00	3,000.00	66,008.90	49,012.89
Crocifissa Attardo	47,000.00	34,287.67	–	11,725.22	3,000.00	3,000.00	50,000.00	49,012.89
Mechthild Auge	47,000.00	34,287.67	–	11,725.22	3,750.00	3,000.00	50,750.00	49,012.89
Johannes Baillou[1]	16,610.96	34,287.67	–	11,725.22	750.00	3,000.00	17,360.96	49,012.89
Frank Binder[1]	16,610.96	34,287.67	–	11,725.22	750.00	3,000.00	17,360.96	49,012.89
Gabriele Eismann[2]	30,517.81	–	–	–	3,000.00	–	33,517.81	–
Jens Frank[1]	16,610.96	33,712.33	–	8,692.83	750.00	2,250.00	17,360.96	44,655.16
Edeltraud Glänzer	47,000.00	34,287.67	–	11,725.22	3,000.00	3,000.00	50,000.00	49,012.89
Jürgen Glaser[1]	16,610.96	34,287.67	–	11,725.22	750.00	3,000.00	17,360.96	49,012.89
Michaela Freifrau von Glenck	47,000.00	34,287.67	–	11,725.22	3,750.00	3,000.00	50,750.00	49,012.89
Siegfried Karjetta[2]	30,517.81	–	–	–	3,000.00	–	33,517.81	–
Rolf Krebs[1] (Chairman until May 9, 2014)	33,221.92	68,575.35	–	23,450.43	750.00	3,000.00	33,971.92	95,025.78
Hans-Jürgen Leuchs[1]	16,610.96	34,287.67	–	11,725.22	750.00	3,000.00	17,360.96	49,012.89
Albrecht Merck	47,000.00	34,287.67	–	11,725.22	3,750.00	3,000.00	50,750.00	49,012.89
Dietmar Oeter[2]	30,517.81	–	–	–	3,000.00	–	33,517.81	–
Alexander Putz[2]	30,517.81	–	–	–	3,000.00	–	33,517.81	–
Helga Rübsamen-Schaeff[2]	30,517.81	–	–	–	3,000.00	–	33,517.81	–
Karl-Heinz Scheider	47,000.00	34,287.67	–	11,725.22	3,750.00	2,250.00	50,750.00	48,262.89
Gregor Schulz[2]	30,517.81	–	–	–	3,000.00	–	33,517.81	–
Theo Siegert	47,000.00	34,287.67	–	11,725.22	3,750.00	2,250.00	50,750.00	48,262.89
Tobias Thelen[2]	30,517.81	–	–	–	3,000.00	–	33,517.81	–
Heiner Wilhelm[1] (Vice Chairman until May 9, 2014)	24,916.44	51,431.51	–	17,587.82	750.00	3,000.00	25,666.44	72,019.33
Total	823,594.54	599,458.90	–	202,158.94	58,500.00	45,750.00	882,094.54	847,367.84

[1] Until May 9, 2014.
[2] Since May 9, 2014.
[3] In 2013, variable compensation was replaced by compensation for meeting attendance.

As a member of corporate bodies of E. Merck KG, Darmstadt, Germany, Wolfgang Büchele received an additional payment of € 140,000 for performing this function in 2014 (2013: € 140,000).
As a member of corporate bodies of E. Merck KG, Darmstadt, Germany, Johannes Baillou received an additional payment of € 9,590 for performing this function in 2014 (2013: € 140,000).
As a member of corporate bodies of E. Merck KG, Darmstadt, Germany, Frank Binder received an additional payment of € 8,220 for performing this function in 2014 (2013: € 120,000).
As a member of corporate bodies of E. Merck KG, Darmstadt, Germany, Michaela Freifrau von Glenck received an additional payment of € 80,000 for performing this function in 2014 (2013: € 80,000).
As a member of corporate bodies of E. Merck KG, Darmstadt, Germany, Siegfried Karjetta received an additional payment of € 137,260 for performing this function in 2014 (2013: € 100,000).
As a member of corporate bodies of E. Merck KG, Darmstadt, Germany, Rolf Krebs received an additional payment of € 10,274 for performing this function in 2014 (2013: € 150,000).
As a member of corporate bodies of E. Merck KG, Darmstadt, Germany, Hans-Jürgen Leuchs received an additional payment of € 9,590 for performing this function in 2014 (2013: € 140,000).
As a member of corporate bodies of E. Merck KG, Darmstadt, Germany, Albrecht Merck received an additional payment of € 120,000 for performing this function in 2014 (2013: € 120,000).
As a member of corporate bodies of E. Merck KG, Darmstadt, Germany, Helga Rübsamen-Schaeff received an additional payment of € 139,727 for performing this function in 2014 (2013: € 0).
As a member of corporate bodies of E. Merck KG, Darmstadt, Germany, Gregor Schulz received an additional payment of € 130,411 for performing this function in 2014 (2013: € 0).
As a member of corporate bodies of E. Merck KG, Darmstadt, Germany, Theo Siegert received an additional payment of € 150,000 for performing this function in 2014 (2013: € 150,000).
As a member of corporate bodies of E. Merck KG, Darmstadt, Germany, Tobias Thelen received an additional payment of € 135,890 for performing this function in 2014 (2013: € 80,000).

Ownership, purchase or sale of shares in the company by members of the Executive Board and of the Supervisory Board

As of December 31, 2014, the members of the Executive Board and of the Supervisory Board either directly or indirectly held 25,997 shares of Merck KGaA, Darmstadt, Germany. Their total ownership represents less than 1% of the issued shares of Merck KGaA, Darmstadt, Germany. Transactions executed by members of the Executive Board and of the Supervisory Board are disclosed on the Group website at www.emdgroup.com/investors → Corporate Governance → Directors' Dealings.

INFORMATION ON CORPORATE GOVERNANCE PRACTICES

Reporting

It is the objective of Merck KGaA, Darmstadt, Germany, to provide the latest information to all shareholders, media, financial analysts and interested members of the public, while creating the greatest possible transparency. For this reason, the company uses a wide range of communication platforms to engage in a timely dialogue with all interested parties about the situation of the company and business changes. The Group's principles include providing factually correct, comprehensive and fair information.

Information subject to disclosure requirements, as well as information that is not, can be accessed worldwide on the website of Merck KGaA, Darmstadt, Germany (www.emdgroup.com), which is the company's most important publication platform. Apart from a detailed financial calendar, quarterly and half-year financial reports covering the past three years are available here in German and English. In addition, in line with the legal requirements, ad hoc announcements are published on the website. These contain information on circumstances that could impact the company's share price.

Regular press conferences, investor meetings on the occasion of investor conferences as well as road shows offer another platform for dialogue. The company presentations prepared for this purpose are also available on the website of Merck KGaA, Darmstadt, Germany. In addition, the Investor Relations team is always available to private and institutional investors who wish to receive further information.

To ensure the greatest possible transparency, all documents concerning the General Meeting are available on the company website. Additionally, some parts of the General Meeting are webcast live on the Internet.

Dealing with insider information

Dealing properly with insider information is very important to us. Our insider committee examines the existence of insider information, ensures compliance with legal obligations and prepares any necessary measures. The members of the insider committee are appointed by the Executive Board; at least two members work in Group Legal & Compliance. The insider committee meets at regular intervals, yet also meets when circumstances require. The Chief Financial Officer is vested with the authority to make the final decision on handling potential insider information.

In order to ensure a high level of protection for insider information, in 2011 the Executive Board issued an internal insider guideline applicable throughout the Group worldwide. This guideline informs employees about their responsibilities under insider trading laws and gives clear instructions for compliant behavior. In addition, it describes the function of the insider committee in detail. Moreover, our Code of Conduct, which is binding on all employees, also contains an explicit, detailed reference to the ban on using insider information. Within the scope of obligatory training courses on the Code of Conduct, all employees are instructed on the subject of insider trading.

Accounting and audits of financial statements

Merck KGaA, Darmstadt, Germany, prepares its consolidated financial statements and Group management report in accordance with International Financial Reporting Standards (IFRS), as applicable in the EU, as well as the supplementary rules applicable under section 315a (1) of the German Commercial Code (HGB) and as stipulated by our Articles of Association. The Group financial statements and the Group management report are prepared by the Executive Board and examined by an auditor, taking into account the generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (IDW).

The Supervisory Board commissioned KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin, to audit the Group financial statements and the Group management report for 2014. The auditor responsible for auditing the consolidated financial statements changes regularly in accordance with the statutory requirements. Manfred Jenal is currently leading the audit engagement and has been the auditor-in-charge of the engagement since fiscal 2008. Neither party identified any conflicts of interest. Moreover, the Supervisory Board agreed with KPMG AG that the auditor shall inform the Supervisory Board without delay of any grounds for bias or disqualification occurring during the audit if these cannot be immediately rectified. Additionally, the auditor must immediately report to the Supervisory Board any findings and issues which emerge during the audit that have a direct bearing upon the tasks of the Supervisory Board. The auditor shall inform the Supervisory Board or note in the audit report any circumstances determined during the audit that would render inaccurate the Statement of Compliance made by the Executive Board and the Supervisory Board. It has also been agreed with the auditor that in order to assess whether the Executive Board has fulfilled its obligations in accordance with section 91 (2) AktG, the audit will also cover the company's early warning risk identification system. Moreover, the auditor is required to examine and evaluate the accounting-relevant internal control system insofar as this is necessary and appropriate for assessing the accuracy of financial reporting.

Values and compliance

Based on a corporate culture that places the fundamental company values – courage, achievement, responsibility, respect, integrity and transparency – at the center of our entrepreneurial actions, the Code of Conduct helps those involved in the business process to implement the values when dealing with one another on a daily basis.

The company has created the Code of Conduct as a set of rules and regulations intended to help our employees to act responsibly and to make the right decisions in their daily work.

The Code of Conduct explains the principles for dealings with business associates, general partners, colleagues and employees, as well as the communities in which we operate. Thus, it supports all employees in acting ethically – not only in their dealings with one another, but also outside the company. The Code of Conduct is thus the main set of rules of our compliance program.

To the Group, compliance means observing legal and company-internal regulations and the basic ethical principles anchored in the company values. With the Code of Conduct and the various unit-specific ethical compliance rules, the values are integrated into daily work and business practice. The Code of Conduct is binding on all employees, both at headquarters and in the subsidiaries. The Compliance Office monitors observance of the Code of Conduct with support from corresponding auditing and training programs throughout the Group. All employees are called upon to report compliance violations to their supervisor, Legal, HR or other relevant departments. The company created the position of Group Compliance Officer (GCO) in 2002. This employee is responsible for setting up, maintaining and further developing our global compliance program. By taking appropriate measures, the GCO and his team, including regional and divisional compliance officers, help to lower the risk of serious legal violations of, for instance, antitrust law or anticorruption rules. A further focal area of the Compliance program is ensuring legally and ethically correct dealings with medical professionals and adhering to the transparency requirements. Since October 2013, the Group Compliance Officer has agreed extensive measures with the affected areas of the company in order to establish an internal framework of rules as well as the corresponding approval and documentation processes that ensure truthful publication. The role of the Group Compliance Officer is reflected in the subsidiaries, which ensure that compliance measures are implemented in the countries. By reorganizing the Compliance function, as of 2013 Compliance tasks in the regions are largely performed by full-time Compliance Officers. As a result, a higher level of compliance expertise is based locally and the increasing tasks, above all in the pharmaceutical sector, are taken into account. At the same time, the management structure was streamlined and the reporting lines for the countries were consolidated regionally. Regular regional and global compliance meetings are held to promote the exchange of information within the compliance organization. Newcomer training seminars were introduced in 2010 for newly appointed compliance officers. These seminars serve to build up compliance expertise and strengthen cooperation within the compliance organization. This Group-wide network is used to steer the global compliance program.

Within the scope of this program, a high degree of importance is attached to regular compliance seminars of the Compliance Training Plan of Merck KGaA, Darmstadt, Germany, which are conducted as Web-based training courses and on-site events. By presenting various training topics, particularly on the Code of Conduct, corruption, antitrust and competition law as well as health care compliance, they serve to sensitize employees and management to the consequences of compliance violations and to show ways of avoiding them. Since the company set up a central SpeakUp line, employees have been able to report compliance violations by telephone or via a Web-based application in their respective national language. The SpeakUp line is available 24 hours a day, free of charge. Case numbers enable anonymous, two-way communication. The reports received are individually reviewed. If a compliance violation exists, corresponding corrective action is taken based on concrete action plans. If necessary, disciplinary measures are taken. These can range from a simple warning up to the dismissal of the employee who violated a compliance rule. In 2010, the company set up a compliance committee to guide these processes. The Compliance Committee consists of members from various Group functions; they are involved in reviewing compliance violations and introducing countermeasures. The joint work in the Compliance Committee enables processes between the various Group functions to be optimized. Further significant elements of the Compliance program include requirements on locally identifying and assessing risks and reporting these, both within the subsidiary abroad and to the Group functions. Group Compliance regularly reviews and assesses the implementation status of the Compliance program at the subsidiaries abroad. In cooperation with Group Internal Auditing, the Compliance Office regularly reviews the implementation of Group-wide compliance measures at the subsidiaries abroad. The audits regularly focus on the local compliance structure, the compliance measures taken, as well as the existence of corresponding compliance guidelines and processes.

The Compliance department reports regularly to the Executive Board, informing it of the status of compliance activities (including training status), compliance risks and serious compliance violations.

The Executive Board informs the supervisory bodies at least once a year about the key compliance issues.

Risk and opportunity management

The Executive Board, the Supervisory Board and the Finance Committee are regularly informed about the current risk portfolio of the Group and the individual companies. More detailed information can be found in the Report on Risks and Opportunities on page 122.

Avoidance of conflicts of interest

Within the framework of their work, all Executive Board and Supervisory Board members of Merck KGaA, Darmstadt, Germany, are exclusively committed to the interests of the company and neither pursue personal interests nor grant unjustified advantages to third parties.

Before an Executive Board member takes on honorary offices, board positions or other sideline activities, this must be approved by the Personnel Committee of the Board of Partners of E. Merck KG, Darmstadt, Germany. The Chairman of the Executive Board, Karl-Ludwig Kley, and the Chief Financial Officer, Marcus Kuhnert[1], are both members of the Executive Board of E. Merck KG, Darmstadt, Germany. This does not, however, lead to conflicts of interest.

In its report to the General Meeting, the Supervisory Board discloses any conflicts of interest involving its members and how they were dealt with. Consultancy agreements as well other service and work contracts of a Supervisory Board member with Merck KGaA, Darmstadt, Germany, require the approval of the Supervisory Board. In fiscal 2014, there were neither conflicts of interest nor consultancy agreements or other service or work contracts with Merck KGaA, Darmstadt, Germany, involving Supervisory Board members.

Adherence to environmental and safety standards

At the company, closed-loop thinking guides the way in which we address environmental concerns and environmental protection issues. To this end, we integrate precautionary measures into our planning processes. Our Environment, Health and Safety Policy with its principles and strategies implements the guidelines formulated by the national and international associations of the chemical industry in the Responsible Care guidelines. The Responsible Care Global Charter developed by the International Council of Chemical Associations (ICCA) in 2006 puts even more emphasis than before on overall responsibility for products, supply chains and the community. The company signed this expanded version of Responsible Care for the entire Group in February 2007. In addition, Merck KGaA, Darmstadt, Germany, was one of the first companies in 2014 to sign the new version of the Responsible Care Global Charter, which is currently being rolled out internationally. We report our ecological, economic and social performance transparently in accordance with the internationally recognized principles of the Global Reporting Initiative (GRI), taking into account the requirements of the German Sustainability Code and the principles of the UN Global Compact.

One of our major climate protection objectives is to achieve a 20% reduction in our greenhouse gas emissions by 2020 measured against the 2006 baseline.

Many guidelines specify how the sites and employees of the Group are to observe the principles in their daily work. The Group function Environment, Health, Safety, Security & Quality steers these global activities and ensures compliance with regulatory requirements, standards and business needs throughout the entire Group. In this way, Group-wide risks are minimized and continuous improvement is promoted in the areas of Environment, Health, Safety, Security and Quality. Corporate Responsibility reports are also published at regular intervals.

[1] Mr. Kuhnert has been a member of the Executive Board of E. Merck KG, Darmstadt, Germany, since August 1, 2014. Mr. Zachert left the Executive Board of E. Merck KG, Darmstadt, Germany, on March 31, 2014.

PROCEDURES OF THE EXECUTIVE BOARD, SUPERVISORY BOARD, BOARD OF PARTNERS AND ITS COMMITTEES

Members of the Executive Board of Merck KGaA, Darmstadt, Germany

Notes on memberships of statutory supervisory boards and comparable German and foreign supervisory bodies (section 285 No. 10 HGB in conjunction with section 125 (1) sentence 5 AktG).

Member	Memberships of (a) statutory supervisory boards and (b) comparable German and foreign supervisory bodies of corporations
Karl-Ludwig Kley Darmstadt, Chairman	(a) – Bertelsmann SE & Co. KGaA, Gütersloh – Bertelsmann Management SE, Gütersloh – BMW AG, Munich (Vice Chairman) – Deutsche Lufthansa AG, Cologne
Stefan Oschmann Munich, Vice Chairman (since Jan. 1, 2015), responsible for the Biopharma and Consumer Health divisions as well as for the Allergopharma and Biosimilars business units (until Dec. 31, 2014)	no board positions
Kai Beckmann Darmstadt, Head of Group Human Resources	no board positions
Belén Garijo Lopez Frankfurt am Main, responsible for the Healthcare business sector of Merck KGaA, Darmstadt, Germany (since Jan. 1, 2015)	(b) – Banco Bilbao Vizcaya Argentaria S.A., Bilbao, Spain – L'Oréal S.A., Clichy, France
Marcus Kuhnert[1] Haan, Chief Financial Officer (since August 1, 2014)	no board positions
Bernd Reckmann Seeheim-Jugenheim, responsible for the Performance Materials and Life Science business sectors of Merck KGaA, Darmstadt, Germany	no board positions
Matthias Zachert Bonn, Chief Financial Officer (until March 31, 2014)	no board positions

[1] Mr. Kuhnert has been a member of the Executive Board of E. Merck KG, Darmstadt, Germany, since August 1, 2014. Mr. Zachert left the Executive Board of E. Merck KG, Darmstadt, Germany, on March 31, 2014.

The general partners with no equity interest (Executive Board) manage the business activities in accordance with the laws, the Articles of Association and the rules of procedure. They are appointed by E. Merck KG, Darmstadt, Germany, in accordance with the consent of a simple majority of the other general partners. The members of the Executive Board are jointly responsible for the entire management of the company. Certain tasks are assigned to individual Executive Board members based on a responsibility distribution plan. Each Executive Board member promptly informs the other members of any important actions or operations in his respective business area. The Executive Board is responsible for preparing the annual financial statements of Merck KGaA, Darmstadt, Germany, and of the Group as well as for approving the quarterly and half-year financial statements of the Group. In addition, the Executive Board ensures that all legal provisions, official regulations and the company's internal policies are abided by, and works to achieve compliance with them by all the companies of the Group. A Group-wide guideline defines in detail which transactions require prior Executive Board approval.

The Executive Board provides the Supervisory Board with regular, up-to-date and comprehensive reports about all company-relevant issues concerning strategy, planning, business developments, the risk situation, risk management and compliance. The rules of procedure of the Executive Board and of the Supervisory Board as well as a Supervisory Board resolution regulate further details on the information and reporting duties of the Executive Board vis-à-vis the Supervisory Board.

The Executive Board informs the Board of Partners and the Supervisory Board at least quarterly of the progress of business and the situation of the company. In addition, the Executive Board

informs the aforementioned boards at least annually of the company's annual plans and strategic considerations.

The Executive Board passes its resolutions in meetings that are normally held twice a month.

Supervisory Board

Member	Memberships of (a) other statutory supervisory boards and (b) comparable German and foreign supervisory bodies of corporations
Wolfgang Büchele Römerberg, Chairman of the Executive Board of Linde AG, Munich, Chairman (since May 9, 2014)	(b) – E. Merck KG, Darmstadt, Germany, Darmstadt[1] – Kemira Oyj, Helsinki, Finland
Michael Fletterich Gernsheim, Full-time member of the Works Council of Merck KGaA, Darmstadt, Germany, Darmstadt / Gernsheim Vice Chairman (since May 9, 2014)	no board positions
Crocifissa Attardo Darmstadt, Full-time member of the Works Council of Merck KGaA, Darmstadt, Germany, Darmstadt / Gernsheim	(b) – BKK of Merck KGaA, Darmstadt, Germany
Mechthild Auge Wehrheim, Full-time member of the Works Council of Merck KGaA, Darmstadt, Germany, Darmstadt / Gernsheim	no board positions
Johannes Baillou (until May 9, 2014) Vienna, Managing Partner of Bondi Immobilien-Consulting GmbH, Vienna, Austria	(b) – E. Merck KG, Darmstadt, Germany, Darmstadt[1] (Chairman)
Frank Binder (until May 9, 2014) Zurich, Chief Executive Officer of Lloyd Yachts SAM, Monaco	(a) – Landbell AG für Rückhol-Systeme, Mainz (Chairman) (b) – E. Merck KG, Darmstadt, Germany, Darmstadt[1] (until Jan. 26, 2014)
Gabriele Eismann (since May 9, 2014) Seeheim-Jugenheim, Senior Product Manager	no board positions
Jens Frank (until May 9, 2014) Rossdorf, Full-time member of the Works Council of Merck KGaA, Darmstadt, Germany, Darmstadt / Gernsheim	no board positions
Edeltraud Glänzer Hannover, Vice Chairman of the Managing Board of the IG BCE	(a) – B. Braun Melsungen AG, Melsungen – Solvay Deutschland GmbH, Hannover (Vice Chairman)
Jürgen Glaser (until May 9, 2014) Bingen, Regional Director of the IG BCE Darmstadt	(b) – BKK of Merck KGaA, Darmstadt, Germany
Michaela Freifrau von Glenck Zurich, Teacher	no board positions
Siegfried Karjetta[2] (since May 9, 2014) Darmstadt, Physician	(b) – E. Merck KG, Darmstadt, Germany, Darmstadt[1]
Rolf Krebs (until May 9, 2014) Mainz, Physician, Chairman (until May 9, 2014)	(a) – Ganymed Pharmaceuticals AG, Mainz (Chairman) – Merz GmbH & Co. KGaA, Frankfurt / Main (until June 30, 2014) – Merz Pharmaceuticals GmbH, Frankfurt / Main (until June 30, 2014) (b) – E. Merck KG, Darmstadt, Germany, Darmstadt[1] (until Jan. 26, 2014)
Hans-Jürgen Leuchs (until May 9, 2014) Ingelheim, Graduate chemist	(b) – E. Merck KG, Darmstadt, Germany, Darmstadt[1] (until Jan. 26, 2014) – Zeton B.V., Enschede, Netherlands – Zeton International Inc., Burlington, ONT, Canada
Albrecht Merck Schriesheim, Commercial Director of the Castel Peter Winery, Bad Dürkheim	(b) – E. Merck KG, Darmstadt, Germany, Darmstadt[1]
Dietmar Oeter (since May 9, 2014) Seeheim-Jugenheim, Head of Corporate Quality Assurance	no board positions
Alexander Putz (since May 9, 2014) Michelstadt, Full-time member of the Works Council of Merck KGaA, Darmstadt, Germany, Darmstadt / Gernsheim	no board positions

Member	Memberships of (a) other statutory supervisory boards and (b) comparable German and foreign supervisory bodies of corporations
Helga Rübsamen-Schaeff (since May 9, 2014) Langenburg, Managing Director of AiCuris GmbH & Co. KG, Wuppertal	(a) – 4SC AG, Martinsried (since Jan. 2, 2015) (b) – E. Merck KG, Darmstadt, Germany, Darmstadt[1]
Karl-Heinz Scheider Gross-Zimmern, Specialist Life Science business Operations Strategy	no board positions
Gregor Schulz (since May 9, 2014) Umkirch, Pediatrician	(b) – E. Merck KG, Darmstadt, Germany, Darmstadt[1] – Biotest US Corporation, Boca Raton FL, USA (until Dec. 31, 2014) – Biotest Pharmaceuticals Corporation, Boca Raton FL, USA (until Dec. 31, 2014) – Biotest (UK) Ltd., Solihull, United Kingdom (until Dec. 31, 2014) – Biotest Seralc NV, Evere, Belgium (until Dec. 31, 2014)
Theo Siegert Düsseldorf, Managing Partner of de Haen Carstanjen & Söhne, Düsseldorf	(a) – E.ON SE, Düsseldorf – Henkel AG & Co KGaA, Düsseldorf (b) – E. Merck KG, Darmstadt, Germany, Darmstadt[1] – DKSH Holding Ltd., Zurich, Switzerland
Tobias Thelen[2] (since May 9, 2014) Munich, Managing Partner of Altmann Analytik GmbH & Co. KG, Munich	(b) – E. Merck KG, Darmstadt, Germany, Darmstadt[1]
Heiner Wilhelm (until May 9, 2014) Reinheim, Chairman of the Works Council of the Darmstadt site, Senior Manager Industrial Relations, Vice Chairman (until May 9, 2014)	no board positions

[1]Internal board position.
[2]Members appointed according to Article 6 (5) of the Articles of Association.

The Supervisory Board performs a monitoring function. It supervises the management of the company by the Executive Board. In comparison with the supervisory board of a German stock corporation, the role of the supervisory board of a corporation with general partners (KGaA) is limited. This is due to the fact that the members of the Executive Board are personally liable partners and therefore are themselves responsible for the management of the company. In particular, the Supervisory Board is not responsible for appointing and dismissing general partners or for regulating the terms and conditions of their contracts. This is the responsibility of E. Merck KG, Darmstadt, Germany. Nor does the Supervisory Board have the authority to issue rules of procedure for the Executive Board or a catalogue of business transactions requiring approval. This authority likewise belongs to E. Merck KG, Darmstadt, Germany (Article 13 (3) sentence 1 and (4) sentence 1 of the Articles of Association). However, the fact that the Supervisory Board has no possibilities to directly influence the Executive Board restricts neither its information rights nor audit duties. The Supervisory Board must monitor the Executive Board in terms of legality, regularity, usefulness, and economic efficiency. In particular, the Supervisory Board has the duty to examine the reports provided by the Executive Board. This includes regular reports on the intended business policy, as well as other fundamental issues pertaining to corporate planning, especially financial, investment and HR planning; the profitability of the Group; the progress of business; the risk situation; risk management (including compliance); and the internal auditing system. In addition, by means of consultation with the Executive Board, it creates the basis for supervision of the management of the company by the Supervisory Board according to section 111 (1) of the German Stock Corporation Act (AktG).

The Supervisory Board examines the annual financial statements and management report of Merck KGaA, Darmstadt, Germany, as well as the Group financial statements and the Group management report, taking into account in each case the reports of the auditor. Moreover, the Supervisory Board discusses the quarterly reports and the half-year financial report, taking into account in the latter case the report of the auditor on the audit review of the abridged financial statements and the interim management report of the Group. The adoption of the annual financial statements is not the responsibility of the Supervisory Board, but of the General Meeting. The Supervisory Board normally meets four times a year. Further meetings may be convened if requested by a member of either the Supervisory Board or the Executive Board. As a rule, resolutions of the Supervisory Board are passed at meetings. At the instruction of the chairman, in exceptional cases a resolution may be passed by other means, details of which are given in the rules of procedure.

The members of the Board of Partners of E. Merck KG, Darmstadt, Germany, and of the Supervisory Board may be convened to a joint meeting if so agreed by the chairmen of the two boards.

The rules of procedure prescribe that the Supervisory Board may form committees as and when necessary. The Supervisory Board has formed a Nomination Committee comprising three shareholder representatives. Its members are Albrecht Merck, Wolfgang Büchele and Theo Siegert. The Nomination Committee is responsible for proposing to the Supervisory Board suitable candidates for its proposal to the Annual General Meeting. Apart from legal requirements and the recommendations of the German Corporate Governance Code, the "Objectives of the Supervisory Board with respect to its composition" are to be taken into consideration as well. Owing to the aforementioned limited authority, and since a corresponding need has not yet arisen, the Supervisory Board currently has no further committees.

The German Stock Corporation Act prescribes that the Supervisory Board of a publicly listed company must have at least one independent member on its Supervisory Board who has professional expertise in accounting or auditing. Theo Siegert satisfies these requirements and is furthermore the Chairman of the Finance Committee of the Board of Partners of E. Merck KG, Darmstadt, Germany.

Board of Partners of E. Merck KG, Darmstadt, Germany

Some of the responsibilities that lie with the supervisory board of a German stock corporation are fulfilled at the company by E. Merck KG, Darmstadt, Germany. This applies primarily to the Board of Partners of E. Merck KG, Darmstadt, Germany. Therefore, the Board of Partners and the composition and procedures of its committees are described in the following.

The Board of Partners has nine members. Up until January 26, 2014, the Board of Partners was composed as follows:

Member	Memberships of (a) other statutory supervisory boards and (b) comparable German and foreign supervisory bodies of corporations
Frank Stangenberg-Haverkamp Darmstadt, Vice Chairman of the Executive Board and General Partner of E. Merck KG, Darmstadt, Germany, Chairman	(a) – Fortas AG, Rösrath (Chairman) (b) – Oras Invest Ltd, Helsinki, Finland – Travel Asset Group Ltd., London, United Kingdom (Chairman)
Johannes Baillou Vienna, Austria, Managing Partner of Bondi Immobilien-Consulting GmbH, Vienna, Austria	(a) – Merck KGaA, Darmstadt, Germany
Jon Baumhauer Munich, Chairman of the Executive Board and General Partner of E. Merck KG, Darmstadt, Germany	no board positions
Frank Binder Monaco, Managing Director of Lloyd Yachts SAM, Monaco	(a) – Merck KGaA, Darmstadt, Germany – Landbell AG für Rückhol-Systeme, Mainz (Chairman)
Wolfgang Büchele Römerberg, Chief Executive Officer of Kemira Oyj, Helsinki, Finland	(a) – Merck KGaA, Darmstadt, Germany
Rolf Krebs Mainz, Physician	(a) – Merck KGaA, Darmstadt, Germany – Ganymed Pharmaceuticals AG, Mainz (Chairman) – Merz GmbH & Co. KGaA, Frankfurt/Main – Merz Pharmaceuticals GmbH, Frankfurt/Main
Hans-Jürgen Leuchs Ingelheim, Graduate chemist	(a) – Merck KGaA, Darmstadt, Germany (b) – Zeton B.V., Enschede, Netherlands – Zeton International Inc., Burlington, ONT, Canada
Albrecht Merck Schriesheim, Commercial Director of the Castel Peter Winery, Bad Dürkheim	(a) – Merck KGaA, Darmstadt, Germany
Theo Siegert Düsseldorf, Managing Partner of de Haen Carstanjen & Söhne, Düsseldorf	(a) – Merck KGaA, Darmstadt, Germany – E.ON SE, Düsseldorf – Henkel AG & Co KGaA, Düsseldorf (b) – DKSH Holding Ltd., Zurich, Switzerland

On January 26, 2014 a new election of the Board of Partners was held. The Board of Partners now consists of the following members:

Member	Memberships of (a) other statutory supervisory boards and (b) comparable German and foreign supervisory bodies of corporations
Johannes Baillou Vienna, Austria, Vice Chairman of the Executive Board and General Partner of E. Merck KG, Darmstadt, Germany, Chairman	(a) – Merck KGaA, Darmstadt, Germany (until May 9, 2014)
Frank Stangenberg-Haverkamp Darmstadt, Chairman of the Executive Board and General Partner of E. Merck KG, Darmstadt, Germany	(a) – Fortas AG, Rösrath (Chairman) (b) – Oras Invest Ltd, Helsinki, Finland – Travel Asset Group Ltd., London, United Kingdom (Chairman)
Wolfgang Büchele Römerberg, Chairman of the Executive Board of Linde AG, Munich	(a) – Merck KGaA, Darmstadt, Germany (b) – Kemira Oyi, Helsinki, Finland
Siegfried Karjetta Darmstadt, Physician	(a) – Merck KGaA, Darmstadt, Germany (since May 9, 2014)
Albrecht Merck Schriesheim, Commercial Director of the Castel Peter Winery, Bad Dürkheim	(a) – Merck KGaA, Darmstadt, Germany
Helga Rübsamen-Schaeff Langenburg, Managing Director of AiCuris GmbH & Co. KG, Wuppertal	(a) – Merck KGaA, Darmstadt, Germany (since May 9, 2014) – 4SC AG, Martinsried (since January 2, 2015)
Gregor Schulz Umkirch, Pediatrician	(a) – Merck KGaA, Darmstadt, Germany (since May 9, 2014) (b) – Biotest US Corporation, Boca Raton, FL, USA (until December 31, 2014) – Biotest Pharmaceuticals Corporation, Boca Raton, FL, USA (until December 31, 2014) – Biotest (UK) Ltd., Solihull, United Kingdom (until December 31, 2014) – Biotest Seralc NV, Evere, Belgium (until December 31, 2014)
Theo Siegert Düsseldorf, Managing Partner of de Haen Carstanjen & Söhne, Düsseldorf	(a) – Merck KGaA, Darmstadt, Germany – E.ON SE, Düsseldorf – Henkel AG & Co KGaA, Düsseldorf (b) – DKSH Holding Ltd., Zurich, Switzerland
Tobias Thelen Munich, Managing Partner of Altmann Analytik GmbH & Co. KG, Munich	(a) – Merck KGaA, Darmstadt, Germany (since May 9, 2014)

The Board of Partners supervises the Executive Board in its management of the company. It informs itself about the business matters of Merck KGaA, Darmstadt, Germany, and may inspect and examine the company's accounts and other business documents, and the assets for this purpose. According to Article 13 (4) of the Articles of Association of Merck KGaA, Darmstadt, Germany, the Executive Board requires the approval of E. Merck KG, Darmstadt, Germany, for transactions that are beyond the scope of the Group's ordinary business activities. For such transactions to be approved, approval must first be obtained from the Board of Partners of E. Merck KG, Darmstadt, Germany. The Board of Partners convenes as and when necessary; however, it meets at least four times a year. The members of the Executive Board of Merck KGaA, Darmstadt, Germany, are invited to all meetings of the Board of Partners, unless the Board of Partners resolves otherwise in individual cases. The members of the Board of Partners may convene a joint meeting with the Supervisory Board of Merck KGaA, Darmstadt, Germany, if so agreed by the chairmen of the two boards.

The Board of Partners may confer the responsibility for individual duties to committees. Currently the Board of Partners has three committees in place: the Personnel Committee, the Finance Committee, and the Research and Development Committee.

Personnel Committee

The Personnel Committee has four members. Up until January 26, 2014 these were: Frank Stangenberg-Haverkamp (Chairman), Jon Baumhauer, Rolf Krebs and Theo Siegert. Since January 26, 2014, the Personnel Committee comprises Frank Stangenberg-Haverkamp (Chairman), Johannes Baillou, Wolfgang Büchele and Theo Siegert.

The Personnel Committee meets at least twice a year. Further meetings are convened as and when necessary. Meetings of the Personnel Committee are attended by the Chairman of the Executive Board of Merck KGaA, Darmstadt, Germany, unless the Committee decides otherwise.

The Personnel Committee is responsible for, among other things, the following decisions concerning members and former members of the Executive Board: contents of and entry into employment contracts and pension contracts, granting of loans and advance payments, changes to the compensation structure and adaptation of compensation, approval for taking on honorary offices, board positions and other sideline activities, as well as division of responsibilities within the Executive Board of Merck KGaA, Darmstadt, Germany. The Personnel Committee passes its resolutions by a simple majority – in matters concerning the Chairman of the Executive Board unanimity is required. The Chairman of the Committee regularly informs the Board of Partners of its activities.

Finance Committee

The Finance Committee has four members. Up until January 26, 2014, these were: Theo Siegert (Chairman), Johannes Baillou, Wolfgang Büchele and Frank Stangenberg-Haverkamp. Since January 26, 2014, the Finance Committee comprises Theo Siegert (Chairman), Johannes Baillou, Wolfgang Büchele and Tobias Thelen.

The Finance Committee holds at least four meetings a year, at least one of which is a joint meeting with the auditor of Merck KGaA, Darmstadt, Germany. Further meetings are convened as and when necessary. Meetings of the Finance Committee are attended by the Chief Financial Officer of Merck KGaA, Darmstadt, Germany. Other members of the Executive Board of Merck KGaA, Darmstadt, Germany, may attend the meetings upon request by the Committee. These meetings regularly include the Chairman of the Executive Board. The Finance Committee is responsible for, among other things, analyzing and discussing the annual financial statements and the respective report of the auditor of the annual financial statements and management report, as well as the half-year financial report (including the report of the auditors for the audit review of the abridged financial statements and interim management report contained in the half-year report) and the quarterly reports. Furthermore, the Finance Committee recommends to the Chairman of the Supervisory Board annual audit focuses for the auditors. It also recommends an auditor for the annual financial statements and management report as well as auditors for the audit review of the abridged financial statements and interim management report contained in the half-year financial report for the Board's corresponding suggestion to the General Meeting. In addition, the Finance Committee is concerned with the financial position, results of operations and liquidity of the company, as well as accounting, internal auditing, risk management and compliance issues. Upon request of the Board of Partners, the Finance Committee examines investment projects that must be approved by the Board of Partners and provides recommendations pertaining thereto.

Research and Development Committee

Up until January 26, 2014, the Research and Development Committee had three members: Rolf Krebs (Chairman), Hans-Jürgen Leuchs and Frank Stangenberg-Haverkamp. Since January 26, 2014, the Research and Development Committee has consisted of four people, namely Helga Rübsamen-Schaeff (Chairperson), Johannes Baillou, Siegfried Karjetta, and Gregor Schulz.

The Research and Development Committee is convened as and when necessary, but holds meetings at least twice a year. Meetings of the Research and Development Committee are attended by members of the Executive Board of Merck KGaA, Darmstadt, Germany, upon request of the Committee. These meetings regularly include the Chairman of the Executive Board as well as the members of the Executive Board responsible for Pharmaceuticals and Chemicals. The Chairperson of the Research and Development Committee is responsible, among other things, for reviewing and discussing the research activities of Pharmaceuticals and Chemicals. The Chairperson of the Committee reports to the Board of Partners on the insights gained from the meetings held.

REPORT OF THE SUPERVISORY BOARD

The Supervisory Board again properly executed its duties in 2014 in accordance with the law as well as the company's Articles of Association and rules of procedure. In particular, the Supervisory Board monitored the work of the Executive Board diligently and regularly.

Cooperation with the Executive Board

The cooperation with the Executive Board was characterized by intensive, trustworthy exchange. During fiscal 2014, the Executive Board provided the Supervisory Board with regular written and verbal reports on the business development of Merck KGaA, Darmstadt, Germany, and the Group. In particular, the Supervisory Board was informed about the market and sales situation of the company against the background of macroeconomic development, the financial position of the company and its subsidiaries, along with their earnings development, as well as corporate planning. Within the scope of quarterly reporting, the sales and operating results were presented for the Group as a whole, and broken down by division. Aside from the Supervisory Board meetings, the Chairman of the Supervisory Board also maintained and continues to maintain a regular exchange of information with the Chairman of the Executive Board.

Key topics of the Supervisory Board meetings

Five Supervisory Board meetings were held in fiscal 2014. Four of the meetings were ordinary Supervisory Board meetings while the one on May 9, 2014 was an inaugural meeting. At these meetings, the Supervisory Board discussed the reports of the Executive Board in detail and discussed company developments and strategic issues together with the Executive Board.

At the meeting held on February 28, 2014, the Executive Board first reported on business performance during 2013. In addition, the Supervisory Board intensively addressed the annual financial statements and consolidated financial statements for 2013 and the corresponding management reports. The auditor explained the audit report. The Executive Board reported on the financial statements. Furthermore, the Supervisory Board resolved upon the Statement of Compliance with the German Corporate Governance Code as well as the Statement on Corporate Governance, which simultaneously includes the joint report of the Executive Board and Supervisory Board. The Supervisory Board also approved the proposals to be made to the Annual General Meeting. Lastly, the Executive Board presented the plans for fiscal 2014.

Following the Annual General Meeting on May 9, 2014, at which the elections of the new shareholder representatives on the Supervisory Board were held, an inaugural meeting took place at which Mr. Wolfgang Büchele was elected the new Chairman of the Supervisory Board and Mr. Michael Fletterich was elected Vice Chairman.

The meeting held on May 13, 2014 focused on current business developments in the first quarter of 2014. The report of the Research and Development Committee of the Board of Partners of E. Merck KG, Darmstadt, Germany, was a further focus of the meeting. The Supervisory Board also dealt with the report of the Group Compliance Officer and the report of the Group Data Privacy Officer.

At its meeting on July 31, 2014, the Supervisory Board focused intensively on the report of the Executive Board on business performance in the second quarter of 2014. In addition, KPMG explained the report on the first half of 2014. Risk management within the company was a further topic. The Head of Risk Management presented the status report for the first half of 2014. No risks that threaten the continued existence of the company were identified.

At its fifth meeting on November 11, 2014, the Supervisory Board elected a new Nomination Committee. Furthermore, the Supervisory Board dealt with the report of the Executive Board on the third quarter of 2014. The 2014 status reports of Internal Auditing as well as on compliance and data protection were additional topics of focus. The report of the Research and Development Committee, Chemicals was also discussed. Furthermore, the company's strategic direction was reported on and discussed.

Annual financial statements

The annual financial statements of Merck KGaA, Darmstadt, Germany, the consolidated financial statements of the Group, and the management reports for Merck KGaA, Darmstadt, Germany, and the Group including the accounts, were audited by KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin. The auditors issued an unqualified audit opinion on the annual financial statements and management report for Merck KGaA, Darmstadt, Germany, in accordance with German Auditing Standards. For the consolidated financial statements prepared in accordance with International Financial Reporting Standards, the auditors issued the auditor's report, reproduced in the Annual Report of the Group. In addition, the auditors audited the calculation of the participation of Merck KGaA, Darmstadt, Germany, in the profits of E. Merck KG, Darm-

stadt, Germany, in accordance with Art. 27 (2) of the Articles of Association. The annual financial statements of Merck KGaA, Darmstadt, Germany, the consolidated financial statements of the Group, the management reports for Merck KGaA, Darmstadt, Germany, and the Group, and the proposal by the Executive Board for the appropriation of the net retained profit were presented and distributed to the Supervisory Board, together with the auditor's reports.

In accordance with Art. 14 (2) of the Articles of Association, the Supervisory Board also examined the annual financial statements of Merck KGaA, Darmstadt, Germany, and the management report for Merck KGaA, Darmstadt, Germany, the proposal for the appropriation of net retained profit and the auditor's report presented in accordance with Article 27 (2) of the Articles of Association. It also examined the consolidated financial statements of the Group as well as the management report for the Group, and took note of the auditor's report of KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin.

The discussion of the relevant agenda item at the Supervisory Board's meeting on February 27, 2015 to approve the financial statements was also attended by the auditors who sign the audit opinion on the annual financial statements of Merck KGaA, Darmstadt, Germany, and the consolidated financial statements of the Group. These auditors furthermore reported on their audit at this meeting.

The Supervisory Board took note of and approved the results of the audit. On completion of its examination, the Supervisory Board raised no objections and thus approved the annual financial statements and management report for Merck KGaA, Darmstadt, Germany, the consolidated financial statements of the Group and the management report for the Group prepared by the Executive Board, as well as the report presented by the auditors in accordance with Article 27 (2) of the Articles of Association. Following its own examination of the situation, the Supervisory Board gave its consent to the proposal of the Executive Board for the appropriation of net retained profit.

Corporate governance and Statement of Compliance

Corporate governance is a topic of high priority for the Supervisory Board. In its own estimation, the Supervisory Board has an adequate number of independent members. There were no conflicts of interest, as defined by the German Corporate Governance Code, involving Supervisory Board members during 2014. After addressing corporate governance topics in detail, the Executive Board and Supervisory Board resolved to adopt and issue the updated Statement of Compliance on February 18, 2015 (Executive Board) and on February 27, 2015 (Supervisory Board) and jointly issued it on February 27, 2015 in accordance with section 161 of the German Stock Corporation Act. The statement is permanently available on the website of Merck KGaA, Darmstadt, Germany (www.emdgroup.com Investors → Corporate Governance). More information about corporate governance at Merck KGaA, Darmstadt, Germany, including the compensation of the Executive Board and Supervisory Board, is given in the Statement of Compliance on pages 145 et seq. of the Annual Report.

Committees

Apart from the Nomination Committee, the Supervisory Board of Merck KGaA, Darmstadt, Germany, currently has no further committees on account of the special features that apply to the Supervisory Board of a corporation with general partners (KGaA) under German company law and because a corresponding need for this has not emerged to date. The members of the Nomination Committee held a meeting on February 6, 2014. In order to prepare for the election of the shareholder representative members of the Supervisory Board by the Annual General Meeting on May 9, 2014, they spoke with one another about the professional and personal qualifications of suitable candidates for the Supervisory Board. The Supervisory Board elected a new Nomination Committee on November 11, 2014. No report is given on the work of further committees.

Personnel matters

With the exception of Crocifissa Attardo and Edeltraud Glänzer, who were absent from the meeting on November 11, 2014, all the Supervisory Board members attended all the ordinary Supervisory Board meetings. The following changes in the composition of the Supervisory Board took place in 2014: Wolfgang Büchele, Michaela Freifrau von Glenck, Albrecht Merck, Helga Rübsamen-Schaeff, Gregor Schulz and Theo Siegert were elected as shareholder representatives to the Supervisory Board by the Annual General Meeting on May 9, 2014. In addition, Siegfried Karjetta and Tobias Thelen were appointed to the Supervisory Board. Moreover, on April 1, 2014 the delegates' assembly elected Crocifissa Attardo, Mechthild Auge, Gabriele Eismann, Michael Fletterich, Edeltraud Glänzer, Dietmar Oeter, Alexander Putz, and Karl-Heinz Scheider as employee representatives with effect from the conclusion of the Annual General Meeting on May 9, 2014.

Darmstadt, February 27, 2015

The Supervisory Board of Merck KGaA, Darmstadt, Germany

Wolfgang Büchele
Chairman

OBJECTIVES OF THE SUPERVISORY BOARD WITH RESPECT TO ITS COMPOSITION

Initial situation

According to section 5.4.1 (2) and (3) of the German Corporate Governance Code, the Supervisory Board shall specify concrete objectives regarding its composition which, while considering the specifics of the enterprise, take into account the international activities of the enterprise, potential conflicts of interest, the number of independent Supervisory Board members, an age limit to be specified for the members of the Supervisory Board, and diversity.

General notes on the composition of the Supervisory Board

The Supervisory Board of Merck KGaA, Darmstadt, Germany, currently consists of 16 members, eight of whom represent the shareholders and a further eight who represent the employees. The eight employee representative members are elected by employee delegates pursuant to the provisions of the German Co-determination Act (Mitbestimmungsgesetz "MitbestG"). These consist of six company employees, including a senior executive, as well as two union representatives. The Supervisory Board has no statutory proposal right with respect to electing the delegates or employee representatives. Owing to a delegation right of E. Merck Beteiligungen KG, Darmstadt, Germany, two of the eight shareholder representatives are specified. The Supervisory Board likewise has no statutory proposal right with respect to exercising this delegation right. The remaining six shareholder representatives are elected by the General Meeting. In accordance with section 124 (3) sentence 1 AktG, the Supervisory Board shall propose to the General Meeting Supervisory Board members for election. These proposals require a majority of the votes of the shareholder representative members of the Supervisory Board. The next scheduled election to the Supervisory Board shall take place at the 2019 General Meeting. The General Meeting is not required to follow the election proposals. The appointment objectives that the Supervisory Board sets forth below therefore do not represent requirements to be met by those eligible to elect or to delegate members. Instead, they are intended to express the objectives pursued by the Supervisory Board in office with regard to its advisory and monitoring functions.

Objectives of the Supervisory Board with respect to its composition

In accordance with section 5.4.1 (2) of the German Corporate Governance Code, the Supervisory Board has specified the following objectives with respect to its composition and reports on the status of their implementation below.

Expertise and diversity

Professional qualifications and personal expertise are the two most important prerequisites for appointments to seats on the Supervisory Board. When proposing Supervisory Board candidates for election or delegation, the Supervisory Board will always give top priority to these prerequisites, which are essential for fulfilling its legal duties.

Overall, the Supervisory Board's policy is to optimally meet its monitoring and advisory duties by having a diversity of members. Diversity includes, in particular, internationality as well as different experience backgrounds and career paths. The proportion of women on the Supervisory Board is also considered to be an aspect of diversity. When preparing proposals for election or delegation, due consideration shall be given in individual cases to the extent to which different, yet complementary professional profiles, career and life experiences, as well as appropriate representation of both genders can benefit the work of the Supervisory Board. Additionally, the Supervisory Board shall support the Executive Board in its efforts to increase diversity within the company.

In-depth knowledge of the fields relevant to the company

The Supervisory Board shall have at least four members with in-depth knowledge and experience of fields that are important to the company, including at least one expert in pharmaceuticals and one in chemicals.

The company is currently meeting this objective for the composition of the Supervisory Board. At present, the Supervisory Board has more than four members who have in-depth knowledge and experience of the pharmaceutical and chemical industries. More than four Supervisory Board members also have executive experience in companies that operate specifically in the pharmaceutical and/or chemical sectors.

Management experience

The Supervisory Board shall have at least three members who have experience in managing or supervising a medium or large-sized company.

The Supervisory Board has more than three members who have the corresponding experience. This includes both Supervisory Board members who were or still are management board members or directors in such companies, as well as Supervisory Board members who have gained experience in supervisory bodies of German and/or foreign companies of this size.

Family company

The Supervisory Board shall have at least one member who has experience in managing medium- or large-sized family-owned companies.

The Supervisory Board currently has multiple members who have the appropriate management experience in family-owned companies of this size.

Internationality

The Supervisory Board shall have at least three members with business experience in the main sales markets of Merck KGaA, Darmstadt, Germany. Currently, the main sales markets of Merck KGaA, Darmstadt, Germany, are Europe, North and Latin America, and Asia-Pacific.

The present composition of the Supervisory Board satisfies this objective. More than three Supervisory Board members have entrepreneurial experience in Europe, covering a wide range of countries. More than three Supervisory Board members have experience in management positions in companies that operate globally.

Women on the Supervisory Board

Six women are currently members of the Supervisory Board of Merck KGaA, Darmstadt, Germany. This corresponds to 37.5% of the Supervisory Board. When nominating candidates for election to the Supervisory Board or making proposals for delegation, the Supervisory Board shall examine whether the percentage of women can be increased by suitable candidates.

The Supervisory Board currently consists of 37.5% women, which it considers a satisfactory percentage. This is based on both the percentage of women in management positions at the company, as well as the fact that the supervisory boards of other companies have a comparable percentage of women.

Number of independent members/no material conflicts of interest

The Supervisory Board is to have an adequate number of independent members. Assuming that the status of being an employee representative per se does not justify doubts with respect to the independence criteria within the meaning of section 5.4.2 of the German Corporate Governance Code, normally all employee representatives should be independent within the meaning of the Code. In any case, at least four of the shareholder representatives on the Supervisory Board should be independent. According to the Articles of Association of Merck KGaA, Darmstadt, Germany, six members representing the shareholders are to be elected by the General Meeting and two members are to be delegated. Taking this into account, the Supervisory Board considers four shareholder representatives to be an appropriate number of independent members. In the Supervisory Board's estimation, the objectives concerning independent members are currently met. In particular, the Supervisory Board does not believe that membership of the Board of Partners of E. Merck KG, Darmstadt, Germany, conflicts with independence. The Board of Partners exists complementary to the competencies and the activities of the Supervisory Board. It is not to be expected that this will lead to material and not merely temporary conflicts of interest. It should also be taken into account that due to its substantial capital investment and unlimited personal liability, E. Merck KG, Darmstadt, Germany, has a strong interest in the businesses of Merck KGaA, Darmstadt, Germany, operating efficiently and in compliance with procedures, counteracting from the outset conflicts of interest between E. Merck KG, Darmstadt, Germany, and Merck KGaA, Darmstadt, Germany, and thus also corresponding conflicts of interest between the members of the respective corporate bodies.

Moreover, no one shall be proposed for election to the Supervisory Board who simultaneously serves on a body of or advises a major competitor of the company, or owing to another function, e.g. advisor to major contract partners of the company, could potentially become involved in a conflict of interest. No Supervisory Board member serves on a body of or advises a major competitor, or provides consultancy services thereto. No Supervisory Board member performs a function that could lead to a lasting conflict of interest.

No age limit

An age limit for Supervisory Board members is not specified since age is not a criterion for qualifications and expertise. Moreover, we do not wish to forego the many years of experience of Supervisory Board members.

The achievement of the aforementioned objectives shall be pursued initially until 2015, taking into account applicable law within the scope of elections and reelections, delegations as well as court appointments of replacement members if these become necessary. All Supervisory Board members will correspondingly influence those eligible to elect or delegate. Taking into consideration the aforementioned criteria and in accordance with its duties under German stock corporation law, the Supervisory Board proposes to the General Meeting the candidates it believes to be best suited in each case and will continue to do so in the future.

Every year, the Supervisory Board will provide information in the Annual Report on the status of implementing its objectives.

04 CONSOLIDATED FINANCIAL STATEMENTS

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CONSOLIDATED INCOME STATEMENT

€ million	Note	2014	2013
Sales	→ 23	**11,291.5**	**10,700.1**
Royalty, license and commission income	→ 24	209.3	395.0
Total revenues		**11,500.8**	**11,095.1**
Cost of sales[1]	→ 25	– 3,526.4	– 3,041.7
(of which: amortization of intangible assets)[1]		*(– 94.0)*	*(– 49.2)*
Gross profit[1]		**7,974.4**	**8,053.4**
Marketing and selling expenses[1]	→ 26	– 3,104.9	– 3,088.5
(of which: amortization of intangible assets)[1]		*(– 719.0)*	*(– 762.0)*
Royalty, license and commission expenses	→ 27	– 537.5	– 567.0
Administration expenses	→ 28	– 608.6	– 562.4
Research and development costs[1]	→ 29	–1,703.7	–1,506.6
(of which: amortization of intangible assets)[1]		*(– 3.8)*	*(– 2.3)*
Other operating expenses and income	→ 30	– 257.7	– 718.1
Operating result (EBIT)		**1,762.0**	**1,610.8**
Financial result	→ 31	– 205.0	– 222.2
Profit before income tax		**1,557.0**	**1,388.6**
Income tax	→ 32	– 392.2	–179.5
Profit after tax		**1,164.8**	**1,209.1**
of which attributable to Merck KGaA, Darmstadt, Germany, shareholders (net income)		1,157.3	1,202.2
of which attributable to non-controlling interests	→ 33	7.5	6.9
Earnings per share (in €)	→ 34		
basic[2]		2.66	2.77
diluted[2]		2.66	2.77

[1] The disclosure of amortization of intangible assets (excluding software) has been changed. See Note "Accounting and measurement principles".
[2] Taking into account the share split; previous year's figures have been adjusted accordingly. See Note "Earnings per share".

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

€ million	Note	2014	2013
Profit after tax		**1,164.8**	**1,209.1**
Items of other comprehensive income that will not be reclassified to profit or loss in subsequent periods:			
Remeasurement of the net defined benefit liability			
Changes in remeasurement	→ 49	– 861.5	98.8
Tax effect	→ 32	149.2	– 16.3
Changes recognized in equity		**– 712.3**	**82.5**
		– 712.3	**82.5**
Items of other comprehensive income that may be reclassified to profit or loss in subsequent periods:			
Available-for-sale financial assets			
Fair value adjustments		– 1.4	1.8
Reclassification to profit or loss		– 0.1	– 1.6
Tax effect	→ 32	0.4	– 0.4
Changes recognized in equity		**– 1.1**	**– 0.2**
Derivative financial instruments			
Fair value adjustments		411.7	125.5
Reclassification to profit or loss		– 43.0	– 26.5
Reclassification to assets		–	–
Tax effect	→ 32	– 20.2	– 25.3
Changes recognized in equity		**348.5**	**73.7**
Exchange differences on translating foreign operations			
Changes taken directly to equity		682.4	– 204.9
Reclassification to profit or loss		0.1	– 8.9
Changes recognized in equity		**682.5**	**– 213.8**
		1,029.9	**– 140.3**
Other comprehensive income		**317.6**	**– 57.8**
Comprehensive income		**1,482.4**	**1,151.3**
of which attributable to Merck KGaA, Darmstadt, Germany, shareholders		1,469.1	1,154.6
of which attributable to non-controlling interests	→ 33	13.3	– 3.3

CONSOLIDATED BALANCE SHEET

€ million	Note	Dec. 31, 2014	Dec. 31, 2013
Current assets			
Cash and cash equivalents	→ 35	2,878.5	980.8
Current financial assets	→ 36	2,199.4	2,410.5
Trade accounts receivable	→ 37	2,235.6	2,021.4
Inventories	→ 38	1,659.7	1,474.2
Other current assets	→ 39	1,210.2	360.7
Income tax receivables	→ 40	297.0	109.8
Assets held for sale	→ 4	–	27.1
		10,480.4	**7,384.5**
Non-current assets			
Intangible assets	→ 41	11,395.5	9,867.2
Property, plant and equipment	→ 42	2,990.4	2,647.2
Non-current financial assets	→ 43	94.4	77.8
Other non-current assets	→ 39	56.5	105.5
Deferred tax assets	→ 32	992.9	736.4
		15,529.7	**13,434.1**
Total assets		**26,010.1**	**20,818.6**
Current liabilities			
Current financial liabilities	→ 44	2,075.9	440.4
Trade accounts payable	→ 45	1,539.4	1,364.1
Other current liabilities	→ 46	1,574.6	1,134.5
Income tax liabilities	→ 47	849.8	465.1
Current provisions	→ 48	561.7	494.7
Liabilities directly related to assets held for sale		–	–
		6,601.4	**3,898.8**
Non-current liabilities			
Non-current financial liabilities	→ 44	3,561.1	3,257.5
Other non-current liabilities	→ 46	782.0	5.6
Non-current provisions	→ 48	626.1	1,011.1
Provisions for pensions and other post-employment benefits	→ 49	1,820.1	910.9
Deferred tax liabilities	→ 32	818.4	665.5
		7,607.7	**5,850.6**
Equity	→ 50		
Equity capital		565.2	565.2
Reserves		9,038.9	9,341.1
Gains / losses recognized immediately in equity		2,137.5	1,113.7
Equity attributable to Merck KGaA, Darmstadt, Germany, shareholders		**11,741.6**	**11,020.0**
Non-controlling interests		59.4	49.2
		11,801.0	**11,069.2**
Total liabilities and equity		**26,010.1**	**20,818.6**

CONSOLIDATED CASH FLOW STATEMENT

€ million	Note	2014	2013
Profit after tax		**1,164.8**	**1,209.1**
Depreciation / amortization / impairment losses / reversals of impairments		1,360.9	1,458.4
Changes in inventories		20.9	– 58.4
Changes in trade accounts receivable		– 33.0	– 45.0
Changes in trade accounts payable		52.8	128.2
Changes in provisions		– 341.6	– 203.0
Changes in other assets and liabilities		471.3	– 260.4
Neutralization of gains / losses on disposal of assets		– 9.3	– 27.5
Other non-cash income and expenses		18.7	24.1
Net cash flows from operating activities	→ 53	**2,705.5**	**2,225.5**
Payments for investments in intangible assets		–143.3	–109.6
Payments from the disposal of intangible assets[1]		2.1	0.3
Payments for investments in property, plant and equipment		– 480.9	– 407.0
Payments from the disposal of property, plant and equipment[1]		14.0	260.0
Payments for investments in financial assets[1]		– 3,143.3	– 975.2
Payments for the obtainment of control over AZ Electronic Materials S.A. less acquired cash and cash equivalents		–1,419.3	–
Payments for other acquisitions		–	–15.1
Payments from the disposal of other financial assets[1]		3,508.6	372.1
Payments from the divestment of the Discovery and Development Solutions business field		20.9	–
Net cash flows from investing activities	→ 54	**–1,641.2**	**– 874.5**
Dividend payments to Merck KGaA, Darmstadt, Germany, shareholders		–122.8	–109.9
Dividend payments to non-controlling interests		– 3.1	– 3.7
Dividend payments to E. Merck KG, Darmstadt, Germany		– 382.7	– 304.5
Payments from new borrowings of financial liabilities from E. Merck KG, Darmstadt, Germany		139.4	128.8
Payments from transactions with no change of control		– 351.3	– 0.3
Repayment of bonds		–	– 750.0
Payments from the issuance of bonds		1,482.9	–
Payments from new borrowings of other current and non-current financial liabilities		322.6	64.6
Repayments of other current and non-current financial debt liabilities		– 324.5	– 97.7
Net cash flows from financing activities		**760.5**	**–1,072.7**
Changes in cash and cash equivalents		**1,824.8**	**278.3**
Changes in cash and cash equivalents due to currency translation		72.9	– 27.2
Cash and cash equivalents as of January 1		980.8	729.7
Cash and cash equivalents as of December 31		2,878.5	980.8
Plus cash and cash equivalents included in assets held for sale		–	–
Cash and cash equivalents as of December 31 (consolidated balance sheet)	→ 35	**2,878.5**	**980.8**

[1] Previous year's figures have been adjusted, see "Notes to the consolidated cash flow statement".

CONSOLIDATED STATEMENT OF CHANGES IN NET EQUITY

For details see Note [50]

	Equity capital			Retained earnings	
€ million	General partner's equity Merck KGaA, Darmstadt, Germany	Subscribed capital Merck KGaA, Darmstadt, Germany	Capital reserves (share premium) Merck KGaA, Darmstadt, Germany	Retained earnings / Net retained profit	Remeasurement of defined benefit plans
Balance as of January 1, 2013	**397.2**	**168.0**	**3,813.7**	**5,383.9**	**– 645.3**
Profit after tax	–	–	–	1,202.2	–
Other comprehensive income	–	–	–	–	82.6
Comprehensive income	**–**	**–**	**–**	**1,202.2**	**82.6**
Dividend payments	–	–	–	– 109.9	–
Profit transfer to / from E. Merck KG, Darmstadt, Germany, including changes in reserves	–	–	–	– 383.0	–
Transactions with no change of control	–	–	–	– 3.1	–
Changes in scope of consolidation / Other	–	–	–	–	–
Balance as of December 31, 2013	**397.2**	**168.0**	**3,813.7**	**6,090.1**	**– 562.7**
Balance as of January 1, 2014	**397.2**	**168.0**	**3,813.7**	**6,090.1**	**– 562.7**
Profit after tax	–	–	–	1,157.3	–
Other comprehensive income	–	–	–	–	– 712.0
Comprehensive income	**–**	**–**	**–**	**1,157.3**	**– 712.0**
Dividend payments	–	–	–	– 122.8	–
Profit transfer to / from E. Merck KG, Darmstadt, Germany, including changes in reserves	–	–	–	– 435.0	–
Transactions with no change of control	–	–	–	– 189.4	–
Changes in scope of consolidation / Other	–	–	–	– 0.3	–
Balance as of December 31, 2014	**397.2**	**168.0**	**3,813.7**	**6,499.9**	**– 1,274.7**

Gains/losses recognized in equity					
Available-for-sale financial assets	Derivative financial instruments	Currency translation difference	Equity attributable to Merck KGaA, Darmstadt, Germany, shareholders	Non-controlling interests	Total equity
1.2	**–29.5**	**1,272.2**	**10,361.4**	**53.4**	**10,414.8**
–	–	–	1,202.2	6.9	1,209.1
–0.2	73.7	–203.7	–47.6	–10.2	–57.8
–0.2	**73.7**	**–203.7**	**1,154.6**	**–3.3**	**1,151.3**
–	–	–	–109.9	–3.7	–113.6
–	–	–	–383.0	–	–383.0
–	–	–	–3.1	2.8	–0.3
–	–	–	–	–	–
1.0	**44.2**	**1,068.5**	**11,020.0**	**49.2**	**11,069.2**
1.0	**44.2**	**1,068.5**	**11,020.0**	**49.2**	**11,069.2**
–	–	–	1,157.3	7.5	1,164.8
–1.1	348.5	676.4	311.8	5.8	317.6
–1.1	**348.5**	**676.4**	**1,469.1**	**13.3**	**1,482.4**
–	–	–	–122.8	–3.1	–125.9
–	–	–	–435.0	–	–435.0
–	–	–	–189.4	–161.9	–351.3
–	–	–	–0.3	161.9	161.6
–0.1	**392.7**	**1,744.9**	**11,741.6**	**59.4**	**11,801.0**

NOTES TO THE GROUP ACCOUNTS
GENERAL

(1) COMPANY INFORMATION

The accompanying consolidated financial statements as at December 31, 2014 have been prepared with Merck KGaA, Frankfurter Strasse 250, 64293 Darmstadt, Germany which manages the operations of the Group, as parent company. In accordance with the provisions of the German financial reporting disclosure law (Publizitätsgesetz), consolidated financial statements are also prepared for E. Merck KG, Darmstadt, Germany, the ultimate parent company and general partner of Merck KGaA, Darmstadt, Germany with an equity interest of 70.27 % as of December 31, 2014. These consolidated financial statements include Merck KGaA, Darmstadt, Germany, and its subsidiaries. The authoritative German versions of these financial statements are filed with the German Federal Gazette (Bundesanzeiger) and can be accessed at www.bundesanzeiger.de.

(2) REPORTING PRINCIPLES

The consolidated financial statements of the Group have been prepared in accordance with consistent accounting policies and in euros, the reporting currency. Pursuant to section 315a of the German Commercial Code (HGB), the International Financial Reporting Standards in force on the reporting date and adopted by the European Union as issued by the International Accounting Standards Board and the IFRS Interpretations Committee (IFRS and IAS, as well as IFRIC and SIC) have been applied. The figures reported in the consolidated financial statements have been rounded, which may lead to individual values not adding up to the totals presented.

The following rules take effect as of fiscal 2014:
→ IFRS 10 “Consolidated Financial Statements”
→ IFRS 11 “Joint Arrangements”
→ IFRS 12 “Disclosure of Interests in Other Entities”
→ Amendments to IAS 27 “Separate Financial Statements”
→ Amendment to IAS 28 “Investments in Associates and Joint Ventures”
→ Amendment to IAS 32 “Financial Instruments: Presentation”
→ Amendment to IAS 36 “Impairment of Assets”
→ Amendment to IAS 39 “Financial Instruments: Recognition and Measurement”
→ Amendments to IFRS 10 “Consolidated Financial Statements”
→ Amendment to IFRS 11 “Joint Arrangements”
→ Amendments to IFRS 12 “Disclosure of Interests in Other Entities”

The Group applied the amendment to IAS 36 “Impairment of Assets” in advance in 2013.

None of the other new standards had a material effect on the consolidated financial statements. In particular, the rules contained in IFRS 10 to IFRS 12 did not lead to any changes based on the current equity holding structures. In regard to the strategic alliance with Pfizer Inc., USA, to develop and commercialize active ingredients in immuno-oncology as well as other alliances, more information can be found in Note [5].

The following standards take effect as of fiscal 2015:
→ Annual Improvements to IFRSs 2011 – 2013 Cycle
→ IFRIC 21 “Levies”
The company currently does not expect the new rules to have any material effects on the consolidated financial statements.

As of the balance sheet date, the following standards were published by the International Accounting Standards Board and the IFRS Interpretations Committee, but not yet adopted by the European Union:
→ IFRS 9 “Financial Instruments”
→ IFRS 14 “Regulatory Deferral Accounts”
→ IFRS 15 “Revenue from Contracts with Customers”
→ Amendment to IAS 1 “Presentation of Financial Statements”
→ Amendments to IAS 16 “Property, Plant and Equipment”
→ Amendment to IAS 19 “Employee Benefits”
→ Amendment to IAS 27 “Separate Financial Statements”
→ Amendments to IAS 28 “Investments in Associates and Joint Ventures”
→ Amendment to IAS 38 “Intangible Assets”
→ Amendment to IAS 41 “Agriculture”
→ Amendments to IFRS 10 “Consolidated Financial Statements”
→ Amendment to IFRS 11 “Joint Arrangements “
→ Amendment to IFRS 12 “Disclosure of Interests in Other Entities”
→ Annual Improvements to IFRSs 2010 – 2012 Cycle
→ Annual Improvements to IFRSs 2012 – 2014 Cycle
The impact of IFRS 15, which will become effective as of 2017 at the earliest, and of IFRS 9, which will become effective as of 2018 at the earliest, on the consolidated financial statements is currently being examined. From today’s perspective, the other new rules will not have any material effects on the consolidated financial statements.

SCOPE OF CONSOLIDATION

(3) CHANGES IN THE SCOPE OF CONSOLIDATION

Including the parent company Merck KGaA, Darmstadt, Germany, 218 (2013: 191) companies were fully consolidated in the annual financial statements of the Group. 189 (2013: 165) are located abroad. No companies were consolidated using the equity method as of the balance sheet date. Four newly established companies, 27 companies of the acquired AZ Electronic Materials S.A. Group, as well as four further companies, which were previously not consolidated due to immateriality, were included in the consolidated financial statements for the first time. A total of eight companies were deconsolidated as a result of liquidation, mergers or disposals.

Due to secondary importance, 28 (2013: 22) subsidiaries were not consolidated. Overall, the impact of these subsidiaries on sales, profit after tax, assets and equity was less than 1% relative to the entire Group. The interests in subsidiaries not consolidated due to secondary importance were classified as available-for-sale financial assets and presented under non-current financial assets. The list of shareholdings presents all of the companies included in the consolidated financial statements as well as all of the shareholdings of Merck KGaA, Darmstadt, Germany (see Note [70]).

(4) ACQUISITIONS AND DIVESTMENTS AS WELL AS ASSETS HELD FOR SALE AND DISPOSAL GROUPS

Acquisition of AZ Electronic Materials S.A.

Obtainment of control following the public offer

Within the scope of a public takeover offer, on May 2, 2014 the Group had received valid acceptances of the offer in respect of 81.3% of the share capital and thus obtained control of the publicly listed company AZ Electronic Materials S.A., Luxembourg (AZ). The payments for the obtainment of control were as follows:

	Acquired shareholding (in %)	€ million
Purchase price for the obtainment of control	81.3	1,523.4
Acquired cash and cash equivalents		–104.1
Payments for the obtainment of control less acquired cash and cash equivalents	**81.3**	**1,419.3**

By June 27, 2014, the Group's shareholding in AZ had increased to 99.8% and was then able to initiate a squeeze-out, which was completed on July 2, 2014 with the acquisition of the remaining shareholding of 0.2%. The acquisition of non-controlling interests after May 2, 2014 was recognized in equity as a transaction without a change of control. Above and beyond the purchase price to obtain control, the following purchase price was paid in order to increase the shareholding:

	Acquired shareholding (in %)	€ million
Purchase price for the obtainment of control	81.3	1,523.4
Purchase price / Payments for the acquisition of further shares after obtainment of control	18.7	351.3
Total purchase price before the deduction of acquired cash and cash equivalents	**100.0**	**1,874.7**

Business activities as well as sales and earnings contribution of AZ

AZ is a leading global producer of specialty chemical materials that generated sales of US$ 730.3 million (2012: US$ 793.9 million) and profit after tax of US$ 57.3 million (2012: US$ 83.3 million) in 2013. Around 67.5% of sales were attributable to the IC Materials division, which supplies process chemicals used to manufacture integrated circuits in the highly differentiated premium segment. The Optronics division accounted for approximately 32.5% of sales in 2013. This division's portfolio includes light-sensitive processing materials, or photoresists, for the manufacture of flat panel displays, as well as silicon-chemistry-based products for optoelectronics. As of the end of 2013, AZ had a total of 1,131 employees.

After May 2, 2014, the Group began to integrate AZ into the Performance Materials division. The aim of the acquisition was to further strengthen the Group's materials and specialty chemicals business by joining forces with one of the leading suppliers of high-tech materials for the electronics industry.

The impact of the consolidation of AZ on sales as well as net income after taxes between May 2, 2014 and December 31, 2014 amounted to € 374.7 million and € –52.5 million, respectively. This result takes into account higher cost of sales owing to the step-up of the acquired inventories to fair values.

Assuming the first-time consolidation of AZ had already taken place as of January 1, 2014, sales of the Group for the period from January 1 to December 31, 2014 would have amounted to € 11,471.3 million (compared with reported sales of € 11,291.5 million) and net income after taxes would have been € 1,155.5 million (compared with reported net income of € 1,164.8 million). The determination of these figures assumed that the adjustments of the book values as a result of the purchase price allocation would have been identical.

Purchase price allocation

The acquired assets and liabilities were recognized at the following fair values on the date of the first-time consolidation. The possibility of measuring non-controlling interests at fair values on the acquisition date (full goodwill method) was not applied. The purchase price allocation was completed as of the reporting date.

€ million	Fair values on the acquisition date
Current assets	
Cash and cash equivalents	104.1
Inventories	119.5
Receivables	130.3
Other current assets	7.1
	361.0
Non-current assets	
Intangible assets (excluding goodwill)	1,051.1
Property, plant and equipment	185.7
Other non-current assets	65.4
	1,302.2
Assets	**1,663.2**
Current liabilities	
Current financial liabilities	144.1
Other current liabilities and provisions	184.5
	328.6
Non-current liabilities	
Non-current financial liabilities	122.7
Other non-current liabilities and provisions	24.0
Deferred tax liabilities	321.0
	467.7
Liabilities	**796.3**
Net assets	**866.9**
Non-controlling interests on the acquisition date (18.7 %)	–161.9
Net assets acquired	**705.0**
Purchase price for the acquisition of shares (81.3 %)	**1,523.4**
Positive difference (goodwill)	**818.4**

The positive difference of € 818.4 million was recognized as goodwill. This results in particular from intangible assets that are not recognizable, for example the ability of AZ to develop new solutions and products in its technologically innovative industry as well as from anticipated synergy effects expected from the integration of AZ into the Group.

The development of goodwill during the period from first-time recognition and December 31, 2014 was as follows:

€ million	Development of goodwill
Goodwill on May 2, 2014	818.4
Exchange rate effects	111.6
Goodwill on December 31, 2014	**930.0**

Within the scope of the acquisition, no contingent consideration was agreed upon which the Group would possibly have to pay in the future. The selling shareholders did not contractually indemnify the Group for the outcome of a contingency or uncertainty related to the acquired assets or liabilities. Costs of € 7.7 million directly related to the acquisition of the company were recorded under other operating expenses in 2014.

The most significant impact of the purchase price allocation resulted from the remeasurement of intangible assets, property, plant and equipment, as well as work in progress and finished goods included in inventories at fair value. Since work in progress and finished goods were sold within 2014, this led to additional cost of sales offset by the sales achieved. As a result, the sale of these inventories did not generate any additional income. The intangible assets identified during the purchase price allocation and recognized on the date of first-time consolidation were to the largest extent attributable to technology-related intangible assets and brand rights. The multi-period excess earnings method was used for the valuation of technology-related intangible assets. The relief from royalty method was used for the valuation of the brand rights.

No contingent liabilities were identified in the course of the purchase price allocation. The gross amounts of the acquired receivables on the acquisition date were € 130.3 million. The best possible estimate of the irrecoverable receivables amounted to less than € 0.1 million.

Planned acquisition of the Sigma-Aldrich Corporation

Merck KGaA, Darmstadt, Germany, and the Sigma-Aldrich Corporation, a life science and high-tech enterprise headquartered in St. Louis, (USA) (Sigma-Aldrich), announced on September 22, 2014 that they had entered into a merger agreement under which the Group will acquire Sigma-Aldrich for a total purchase price of approximately US$ 17.0 billion or approximately € 13.1 billion (based on the exchange rate on September 22, 2014). Sigma-Aldrich shareholders approved the acquisition at an extraordinary shareholders' meeting on December 5, 2014.

The Group received antitrust clearance of the planned acquisition from the U.S. Federal Trade Commission (FTC) on December 23, 2014. U.S. antitrust clearance satisfies a condition to closing the transaction, which remains subject to certain other closing conditions, including regulatory approval in other jurisdictions. Merck KGaA, Darmstadt, Germany, expects the transaction to close by mid-2015.

The purchase price will be financed through a combination of cash on the Group's balance sheet, bank loans and bonds. The vast majority of the currency risk stemming from the payment of the purchase price in U.S. dollars has been hedged using standard derivatives (forward exchange transactions and currency options) in line with the requirements for cash flow hedge accounting.

Divestment of the Discovery and Development Solutions business field

Effective March 31, 2014, the Discovery and Development Solutions business field of the Life Science division was sold to Eurofins Scientific S.A., Luxembourg. The assets sold were reported as a disposal group in the consolidated financial statements as of December 31, 2013 and included property, plant and equipment, inventories, and goodwill allocated to the business field. The selling price was € 22.6 million. In accordance with the contractual agreement, € 20.9 million of this amount was received as of the end of the reporting period.

(5) JOINT ARRANGEMENTS OF MATERIAL SIGNIFICANCE

Strategic alliance with Pfizer Inc., USA, to co-develop and co-commercialize active ingredients in immuno-oncology

On November 17, 2014 the Group announced that it had entered into a global strategic alliance with Pfizer Inc., USA, (Pfizer) to develop and commercialize the anti-PD-L1 antibody avelumab (also known as MSB0010718C). This antibody is currently in clinical development by the Biopharmaceuticals division in a Phase I trial as a potential treatment for various tumor types. A Phase II study in patients with Merkel cell carcinoma was initiated in July 2014. The compound will be developed as a single agent as well as in various combinations with Pfizer's and the Group's broad portfolio of approved and investigational pipeline candidates. As part of the strategic alliance, the two companies will also combine resources and expertise to advance Pfizer's anti-PD-1 antibody into Phase I trials with the potential to co-develop and co-commercialize this asset in the future. The overriding objective of the strategic alliance is to share the risks of development and to accelerate the two companies' presence in immuno-oncology.

According to the collaboration agreement, during the development period the two partners will equally share the development expenses. In a potentially later commercialization phase, the Group will recognize the vast majority of sales from the anti-PD-L1 antibody while the net result of the sales and certain defined expense components will be shared equally among Pfizer and the Group.

The implementation of the collaboration agreement will not be structured through a separate vehicle. This means that the assets, and obligations for the liabilities attributable to the contractual arrangement are owned by the two contracting companies. Decisions about the relevant activities require unanimous consent in accordance with the collaboration agreement. Therefore, the accounting rules governing joint operations pursuant to IFRS 11 are applied and the Group records the assets, liabilities, revenues and expenses attributable to the collaboration in accordance with the respectively valid IFRS.

Under the terms of the agreement, Pfizer made an upfront cash payment of US$ 850 million (€ 678.3 million) to the Group after the closing. Pfizer also committed to make development and commercial milestone payments of up to US$ 2 billion to the Group. Based on the collaboration agreement, the Group and Pfizer will also co-promote Xalkori® (crizotinib), a drug for the treatment of non small cell lung cancer in the United States and certain other major markets, over a multi-year period. During co-promotion of the product, the Group will receive from Pfizer cost reimbursements and a share of the profits. The fair value of the right was determined by an independent external appraiser by applying the multi-period excess earnings method (MEEM) and amounts to US$ 369 million (€ 294.4 million). The entitlement to the right was capitalized on the date it was granted and will be amortized over the term of the agreement.

On the date of the closing of the collaboration agreement, both the upfront payment received and the value of the right to co-promote Xalkori® were recognized in the balance sheet as deferred income within other liabilities. Both amounts will be recognized as income over the expected period in which the Group is to meet certain obligations during the development phase and will be disclosed under royalty, license and commission income. More information on the exercise of management judgments and estimation uncertainties can be found in Note [7].

Apart from the aforementioned accounting impact, the agreement had no material effect on the net assets, financial position and results of operations in the reporting period.

Agreement with Threshold Pharmaceuticals Inc., USA, to co-develop and commercialize evofosfamide

In February 2012, the Biopharmaceuticals division entered into a global agreement with Threshold Pharmaceuticals, Inc., USA, (Threshold) to co-develop and commercialize evofosfamide (also known as TH-302), a chemical molecule for use in oncology. Evofosfamide is currently being investigated in two Phase III clinical trials in patients with advanced unresectable or metastatic soft issue sarcoma and advanced pancreatic cancer.

Under the terms of the agreement, the Group received co-development rights as well as exclusive global commercialization rights. Threshold has an option to co-commercialize the compound in the United States. In fiscal 2012, the Group made an upfront payment in the amount of € 18.7 million and since then has made additional milestone payments for development activities in the amount of € 64.0 million. The Group bears 70% of worldwide development costs for evofosfamide. The assets, liabilities, income and expenses in connection with the agreement are recognized by the Group in accordance with the relevant IFRSs.

Agreement with Eli Lilly and Company, USA, and Bristol-Myers Squibb Company, USA, on the co-commercialization of Erbitux® in Japan

In October 2007, the Biopharmaceuticals division entered into an agreement with ImClone Systems Inc., USA (which has now merged into Eli Lilly and Company, USA) and Bristol-Myers Squibb Company, USA (BMS) on the co-development and co-commercialization of Erbitux® (cetuximab), a drug indicated for the treatment of metastatic colorectal cancer, as well as for other cancers, in Japan. Pursuant to the agreement, the Biopharmaceuticals division distributes the product and books the sales for the collaboration. The Group receives 50% of the profit or loss from sales of Erbitux® in Japan, while Eli Lilly and BMS each receive 25%. In addition, Eli Lilly receives a royalty equal to 4.75% of total net sales of Erbitux® in Japan from the Group. The Group records the assets, liabilities, revenues and expenses related to the agreement in accordance with the respectively valid IFRS. In 2014, the Group received sales of € 113.2 million from the commercialization of Erbitux® in Japan (2013: € 115.1 million). On February 13, 2015, Merck KGaA, Darmstadt, Germany, announced that full promotional responsibiltiy for Erbitux® in Japan will be transferred to the Group as of May 1, 2015.

Agreement with Bristol-Myers Squibb Company, USA, for the co-commercialization of Glucophage® in China

In March 2013, the Biopharmaceuticals division entered into an agreement with Bristol-Myers Squibb, USA, on the co-commercialization of the antidiabetic agent Glucophage® (active ingredient: metformin hydrochloride) for the treatment of type 2 diabetes in China. The Group records the assets, liabilities, revenues and expenses related to the agreement in accordance with the respectively valid IFRS. In 2014, the Group received commission income of € 58.4 million for the co-commercialization of Glucophage® (2013: € 12.8 million).

ACCOUNTING POLICIES

(6) ACCOUNTING AND MEASUREMENT PRINCIPLES

With the exception of the two changes described in the following, the accounting and measurement principles have remained unchanged in comparison with the previous year.

Effective January 1, 2014, two product groups, Neurobion® (a vitamin B-based analgesic) and Floratil® (a probiotic anti-diarrheal), were transferred from the Biopharmaceuticals division to the Consumer Health division. A detailed presentation of the associated disclosure changes in Segment Reporting can be found in Note [52].

Amortization of intangible assets (excluding software), which was previously disclosed in a separate line in the income statement, was allocated to the corresponding functional costs in 2014. This has been done in particular to ensure improved comparability of the income statement of the Group with other companies. The amortization relates mainly to intangible assets recognized within the scope of the purchase price allocations for the acquisitions of Serono SA, the Millipore Corporation as well as AZ Electronic Materials S.A. Amortization of software was already allocated to the functional costs in the past. The accounting policy change has led to an increase in marketing and selling expenses, cost of sales as well as research and development costs. The previous year's figures have been adjusted accordingly and are presented in the following table:

	2013		
€ million	reported	adjustment	adjusted
Sales	**10,700.1**	**–**	**10,700.1**
Royalty, license and commission income	395.0	–	395.0
Total revenues	**11,095.1**	**–**	**11,095.1**
Cost of sales	– 2,992.5	– 49.2	– 3,041.7
Gross margin	**8,102.6**	**– 49.2**	**8,053.4**
Marketing and selling expenses	– 2,326.5	– 762.0	– 3,088.5
Royalty, license and commission expenses	– 567.0	–	– 567.0
Administration expenses	– 562.4	–	– 562.4
Research and development costs	– 1,504.3	– 2.3	– 1,506.6
Other operating expenses and income	– 718.1	–	– 718.1
Amortization of intangible assets	– 813.5	813.5	–
Operating result (EBIT)	**1,610.8**	**–**	**1,610.8**

The main assets and liabilities disclosed in the consolidated balance sheet are measured as follows:

Balance sheet items	Measurement principle
ASSETS	
Cash and cash equivalents	Nominal value
Financial assets (current / non-current)	
Held to maturity investments	Amortized cost
Available-for-sale financial assets	Fair value
Loans and receivables	Amortized cost
Assets from derivatives (financial transactions)	Fair value
Trade accounts receivable	Amortized cost
Inventories	Lower of cost and net realizable value
Other assets (current / non-current)	
Assets from derivatives (operating business)	Fair value
Receivables from non-income-related taxes	Amortized cost
Other receivables	Amortized cost
Income tax receivables	Expected tax refunds based on tax rates that have been enacted or substantively enacted by the end of the reporting period
Assets held for sale	Lower of carrying amount and fair value less costs to sell
Intangible assets	
With finite useful lives	Amortized cost
With indefinite useful lives	Amortized cost (subsequent measurement impairment-only approach)
Property, plant and equipment	Amortized cost
Deferred tax assets	Undiscounted measurement based on tax rates that are expected to apply to the period when the asset is realized or the liability is settled
EQUITY AND LIABILITIES	
Financial liabilities (current / non-current)	
Bonds	Amortized cost
Liabilities to related parties	Amortized cost
Bank loans and overdrafts	Amortized cost
Liabilities from derivatives (financial transactions)	Fair value
Finance lease liabilities	Amortized cost
Trade accounts payable	Amortized cost
Other liabilities (current / non-current)	
Liabilities from derivatives (operating business)	Fair value
Liabilities from non-income-related taxes	Settlement amount
Other liabilities	Settlement amount
Income tax liabilities	Expected tax payments based on tax rates that have been enacted or substantively enacted by the end of the reporting period
Liabilities in connection with assets held for sale	Fair value less costs to sell
Provisions (current / non-current)	Present value of the expenditures expected to be required to settle the obligation
Provisions for pensions and other post-employment benefits	Projected unit credit method
Deferred tax liabilities	Undiscounted measurement based on tax rates that are expected to apply to the period when the asset is realized or the liability is settled

(7) MANAGEMENT JUDGMENTS AND SOURCES OF ESTIMATION UNCERTAINTY

The preparation of the consolidated financial statements requires management to make judgments and assumptions as well as estimates to a certain extent. This affects the amount of assets and liabilities, disclosures on contingent assets and liabilities, as well as reported income and expenses. Actual values may differ from the estimates made and assumptions and judgments may subsequently prove inaccurate. This is of fundamental importance for the understanding of these consolidated financial statements and the assessment of the underlying risks. The relevant assumptions and estimates for the preparation of the consolidated financial statements are reviewed on an ongoing basis. Changes in estimates are considered in the period of the change and in subsequent periods if the change relates to both the reporting period and also future periods. Judgments, forward-looking assumptions and sources of estimation uncertainty with the greatest potential effects on these consolidated financial statements are presented below.

Recognition and measurement of assets, liabilities and contingent liabilities acquired in the context of business combinations

The measurement of assets, liabilities and contingent liabilities at fair value as part of purchase price allocations is subject to estimates which are prepared using the services of external valuation experts. The fair values of the assets and liabilities recognized as part of the purchase price allocation of AZ Electronic Materials S.A. and further information on this acquisition, which closed in the reporting period, can be found in Note [4].

Sales deductions

The Group grants its customers various kinds of rebates and discounts. In addition, expected product returns, state compulsory charges and rebates from health plans and programs are also deducted from sales.

The most significant portion of these deductions from sales is attributable to the Biopharmaceuticals division. The most complex and most substantial rebates in this division relate to government rebate programs in North America such as the U.S. Federal Medicare Program and the U.S. Medicaid Drug Rebate Program. Other significant sales deductions in the division result from compulsory government rebate programs in certain European countries.

Insofar as sales deductions were not already made on payments received, the Group determines the level of sales deductions on the basis of current experience and recognizes them as a liability. The sales deductions reduce gross sales revenues. Adjustments of liabilities can lead to increases or reductions of sales in later periods.

Impairment tests of goodwill and other intangible assets with indefinite useful lives

The goodwill (carrying amount as of December 31, 2014: € 5,693.9 million / 2013: € 4,583.2 million) and other intangible assets with indefinite useful lives (carrying amount as of December 31, 2014: € 168.7 million / 2013: € 214.9 million) reported in the consolidated financial statements are tested for impairment when a triggering event arises or at least once a year. Impairment losses for goodwill were not required to be recognized in the year under review. In contrast, impairment losses of other intangible assets with indefinite useful lives were recorded in the amount of € 84.8 million (2013: € 1.3 million); these were mainly attributable to the termination of development projects.

Goodwill and intangible assets with indefinite useful lives that do not generate any independent cash flows are allocated to cash-generating units within the scope of the impairment test. A cash-generating unit is a division as presented in the Segment Reporting.

When testing for potential impairments, the Group determines the recoverable amount by discounting expected cash flows and therefore uses the value-in-use method. Reference is made to the latest forecasts approved by the company management that cover a period of five years. Cash flows for periods in excess of this are included using an individualized long-term growth rate for the specific cash-generating unit.

The impairment tests include assumptions and estimates of the amount of future cash flows and the discount rate. Among other things, market observations, and – if available – market data, target-actual deviations, detailed plans as well as past experience form the basis for the estimates of future cash flows. Assumptions and estimates relate in particular to future customers, saleable quantities, achievable prices, corresponding cost developments, the long-term growth rate and the weighted average cost of capital (WACC) used for discounting. All of these assumptions are considered a source of estimation uncertainty due to their inherent uncertainty. The following long-term growth rates and discount rates were used to conduct the goodwill impairment tests of the cash-generating units:

€ million / % *2014*	Goodwill as of Dec. 31, 2014	Long-term growth rate	Weighted average cost of capital after tax	Weighted average cost of capital before tax
Biopharmaceuticals	1,601.5	0.0	7.2	9.3
Consumer Health	243.1	2.0	6.9	8.4
Life Science	2,911.1	2.0	6.8	7.8
Performance Materials	938.2	1.0	6.3	7.8

€ million / % *2013*	Goodwill as of Dec. 31, 2013	Long-term growth rate	Weighted average cost of capital after tax	Weighted average cost of capital before tax
Biopharmaceuticals	1,680.0	0.0	6.5	8.1
Consumer Health	164.1	2.5	7.2	8.8
Life Science	2,730.9	2.8	7.6	8.8
Performance Materials	8.2	1.0	6.4	8.3

The amount of the value in use is primarily affected by the terminal value, which is particularly sensitive to changes in the long-term growth rate and the discount rate. Even if the actual future cash flows were one percentage point lower than the expected cash flows, there would be no need to record impairment losses for goodwill. Likewise, there would be no need to record impairment losses if future cash flows were discounted by a weighted average cost of capital after tax that was one percentage point higher.

Determination of the level of amortization of intangible assets with finite useful lives

In addition to goodwill and other intangible assets with indefinite useful lives, the Group has a significant amount of intangible assets with finite useful lives (carrying amount as of December 31, 2014: € 5,496.1 million / 2013: € 5,026.8 million). Substantial assumptions and estimates are required to determine the appropriate level of amortization of these intangible assets. This relates in particular to the determination of the underlying remaining useful life. The parameter is reviewed by the Group and adjusted if necessary at least at the end of every fiscal year. In these estimates, the Group considers factors including the typical product life cycles for each asset and publicly available information about the estimated useful lives of similar assets. Despite these analyses, the assumed useful lives can prove false at a later date because of the high degree of uncertainty.

If the amortization of intangible assets from market authorizations, patents, licenses and similar rights, capitalized brand names and trademarks had been 10 % higher, for example due to shortened remaining useful lives, profit before income tax would have been € 84.2 million lower in fiscal 2014 (2013: reduction of € 81.4 million). In fiscal 2014, a reduction of the useful lives of the intangible assets reported in connection with the drug Rebif® by one year would have lowered profit before income tax by € 73.6 million (2013: € 61.4 million).

Research and development collaborations as well as in- and out-licensing of intangible assets

The Group is regularly a partner of research and development collaborations with research institutions, biotechnology companies and other contract partners. These collaborations are aimed at developing marketable products. The Group also enters into in-licensing agreements regarding intellectual property of contract partners. Such agreements typically involve making upfront payments and payments for the achievement of certain milestones related to development and marketing progress. In this context, the Group has to judge to what extent up-front or milestone payments represent remuneration for services provided (ongoing research and development expense) or whether such payments result in an in-licensing of an intangible asset that has to be capitalized. This assessment is normally subject to judgment.

The Group also receives upfront and milestone payments as part of research and development collaborations or out-licensing agreements. In this context, income may only be recognized if the Group has transferred any material risks and rewards of an intangible asset to the acquirer, has no interest in the remaining business activities and has no other continuing commitment. If these criteria are not deemed to be met, the received payments are deferred and recognized over the period in which the Group is expected to fulfill its performance obligations. Both the assessment of the revenue recognition criteria and the determination of the appropriate period during which revenue is recognized are subject to judgment. If the upfront payment, which was agreed as part of the strategic alliance with Pfizer Inc., USA, entered into during the reporting period and which was received in cash and deferred as a liability, had been deferred and recognized in the income statement over a shorter period reduced by one year, profit before income tax for fiscal year 2014 would have increased by € 2.7 million.

Identification of impairment of non-financial assets

Judgments are required in the identification of existing indications of impairment of intangible assets and property, plant and equipment. As of December 31, 2014, the carrying amounts of these assets amounted to € 14,385.9 million (2013: € 12,514.4 million). The Group uses external and internal information to identify indications of impairment. For example, the approval of a competing product in the Biopharmaceuticals division or the closure of a location can be an indicator of impairment. Nevertheless, the Group's analysis of indications of impairment can prove too optimistic, too pessimistic or incorrect in hindsight due to the high degree of uncertainty. This would result in impairment tests being carried out too late, too early or erroneously not carried out at all.

Impairment of financial assets

On every reporting date, the Group reviews whether there is any objective evidence that a financial asset is impaired and, if this is the case, carries out the impairment to the extent estimated as necessary. Particularly important in this context are impairment losses on trade receivables whose carrying amount was € 2,235.6 million in 2014 (2013: € 2,021.4).

Significant indicators for the identification of impaired receivables and the subsequent impairment tests are in particular payment default or delay in the payment of interest or principal, negative changes in economic or regional economic framework conditions as well as considerable financial difficulties of a debtor. These estimates are discretionary and can later prove to be incorrect.

Other provisions

As a global Group for high-tech products in the pharmaceutical and chemical industries, the Group is exposed to a multitude of litigation risks. In particular, these include risks from product liability, competition and antitrust law, pharmaceutical law, patent law, tax law and environmental protection. The Group is engaged in legal proceedings and official investigations, the outcomes of which are uncertain. A detailed description of the most important legal matters as of the balance sheet date can be found in Note [48]. The provisions recognized for legal disputes mainly relate to the Biopharmaceuticals division and amounted to € 393.1 million as of the reporting date (2013: € 772.3 million). To assess the existence of a reporting obligation and to quantify pending outflows of resources, the Group draws on the knowledge of the legal department as well as any other outside counsel.

In spite of this, both the assessment of the existence of a present obligation and the estimate of the probability of a future outflow of resources are highly subject to uncertainty. Equally, the evaluation of a possible payment obligation is to be considered a major source of estimation uncertainty.

To a certain extent, the Group is obliged to take measures to protect the environment and reported provisions for environmental protection of € 123.7 million as of December 31, 2014 (2013: € 111.2 million). The underlying obligations were located mainly in Germany and the United States. Provisions were recognized primarily for obligations from soil remediation and groundwater protection in connection with the discontinued crop protection business.

The calculation of the present value of the future settlement amount requires, among other things, estimates of the future settlement date, the actual severity of the identified contamination, the applicable remediation methods and the associated future costs. The measurement is carried out regularly in consultation with independent experts. In spite of this, the determination of the future settlement amount of the provisions for environmental protection measures is subject to a considerable degree of uncertainty.

In the event of the discontinuation of clinical development projects, the Group is regularly required to bear unavoidable subsequent costs for a certain future period of time. The measurement of these provisions requires estimates regarding the length of time and the amount of the subsequent costs.

Provisions for pensions and other post-employment benefits

The Group maintains several defined benefit pension plans, particularly in Germany, Switzerland and the United Kingdom. The determination of the present value of the obligation from these defined benefit pension plans primarily requires estimates of the discount rate, future salary increases, future pension increases and future cost increases for medical care.

Detailed information on the existing pension obligations and a sensitivity analysis of the parameters named above are provided in Notes [22] and [49]. As of the reporting date, the amount recorded on the balance sheet for provisions for pensions and other post-employment benefits was € 1,820.1 million (2013: € 910.9 million). The present value of the defined benefit pension obligation was € 3,812.7 million as of December 31, 2014 (2013: € 2,736.8 million).

Income taxes

The calculation of the reported assets and liabilities from deferred and current income taxes requires extensive discretionary judgments, assumptions and estimates. Income tax liabilities were € 849.8 million as of December 31, 2014 (2013: € 465.1 million). The carrying amounts of deferred tax assets and liabilities amounted to € 992.9 million and € 818.4 million, respectively, as of the reporting date (2013: € 736.4 million and € 665.5 million, respectively).

The recognized income tax liabilities and provisions are partially based on estimates and interpretations of tax laws and ordinances in different jurisdictions.

With regard to deferred tax items, there is a high degree of uncertainty concerning the date on which an asset is realized or a liability settled and concerning the tax rate applicable on this date. This particularly relates to deferred tax liabilities recognized in the context of the acquisitions of Serono SA, the Millipore Corporation and AZ Electronic Materials S.A. The recognition of deferred tax assets from loss carryforwards requires an estimate of the probability of the future realizability of loss carryforwards. Factors considered in this estimate are results history, results planning and any tax planning strategy of the respective Group company.

Other judgments, assumptions and sources of estimation uncertainty

The Group makes other judgments, assumptions and estimates in the following areas:

→ Classification of financial assets and financial liabilities
→ Hedge accounting for cash flows from highly probable forecast transactions and firm purchase commitments
→ Determination of the fair value of financial instruments classified as available-for-sale and of derivative financial instruments
→ Determination of the fair value of the liability for share-based compensation
→ Determination of the fair value of plan assets

(8) CONSOLIDATION METHODS

The consolidated financial statements are based on the single-entity financial statements of the consolidated companies as of the balance sheet date, which were prepared applying consistent accounting policies in accordance with IFRS.

Acquisitions are accounted for using the purchase method in accordance with IFRS 3. Subsidiaries acquired and consolidated for the first time were measured at the carrying values at the time of acquisition on the basis of financial statements prepared for this purpose. Differences resulting in this connection are recognized as assets and liabilities to the extent that their fair values differ from the values actually carried in the financial statements. Any remaining – and usually positive – difference is recognized as goodwill within intangible assets, and is subjected to an impairment test if there are indications of impairment, or at least once a year.

In cases where a company was not acquired in full, non-controlling interests are measured using the fair value of the proportionate share of net assets. The option to measure non-controlling interests at fair value (full goodwill method) was not utilized.

When additional shares in a non-controlling interest are acquired, the purchase price amount that exceeds the carrying amount of this interest is recognized immediately in equity.

IFRS 11, which has been applicable since 2014, is applied for joint arrangements. A joint arrangement exists when, on the basis of a contractual arrangement, the Group and third parties jointly control business activities. Joint control means that decisions about the relevant activities require unanimous consent. Joint arrangements are either joint operations or joint ventures. Revenues and expenses as well as assets and liabilities from joint operations are included in the consolidated financial statements on a pro rata basis in accordance with the Group's rights and obligations. By contrast, interests in joint ventures as well as in material associates over which the Group has significant influence are included in accordance with IAS 28 using the equity method of accounting.

Intragroup sales, expenses and income, as well as all receivables and payables between the consolidated companies, were eliminated. The effects of intragroup deliveries reported under non-current assets and inventories were adjusted by eliminating any intragroup profits. In accordance with IAS 12, deferred taxes are applied to these consolidation measures.

(9) CURRENCY TRANSLATION

The functional currency concept applies to the translation of financial statements of consolidated companies prepared in foreign currencies. The subsidiaries of the Group generally conduct their operations independently. The functional currency of these companies is normally the respective local currency. Assets and liabilities are measured at the closing rate, and income and expenses are measured at weighted average annual rates in euros, the reporting currency. Any currency translation differences arising during consolidation of Group companies are taken directly to equity. If Group companies are deconsolidated, existing currency differences are reversed and reclassified to profit or loss. The local currency is not the functional currency at only a few subsidiaries.

When the financial statements of consolidated companies are prepared, business transactions that are conducted in currencies other than the functional currency are recorded using the current exchange rate on the date of the transaction. Foreign currency monetary items (cash and cash equivalents, receivables and payables) in the year-end financial statements of the consolidated companies prepared in the functional currency are translated at the respective closing rates. Exchange differences from the translation of monetary items are recognized in the income statement with the exception of net investments in a foreign operation. Hedged items are likewise carried at the closing rate. The resulting gains or losses are eliminated in the income statement against offsetting amounts from the fair value measurement of derivatives.

Currency translation was based on the following key exchange rates:

	Average annual rate		Closing rate	
€ 1 =	2014	2013	Dec. 31, 2014	Dec. 31, 2013
British pound (GBP)	0.805	0.848	0.781	0.834
Chinese renminbi (CNY)	8.167	8.178	7.534	8.345
Japanese yen (JPY)	140.594	129.016	145.392	144.729
Swiss franc (CHF)	1.214	1.228	1.203	1.227
Taiwan dollar (TWD)	40.172	39.471	38.448	41.128
U.S. dollar (USD)	1.325	1.330	1.215	1.379

(10) RECOGNITION OF SALES AND REVENUES

Sales are recognized net of sales-related taxes as well as sales deductions. They are recognized once the goods have been delivered or the services have been rendered, the significant risks and rewards of ownership have been transferred to the purchaser, the amount of revenue can be measured reliably, and it is probable that the economic benefits will flow to the entity. When sales are recognized, estimated amounts are taken into account for expected sales deductions, for example rebates, discounts and returns.

In addition to revenue from the sale of goods, sales also include revenue from services, but the volume involved is insignificant. Long-term, customer-specific manufacturing contracts do not exist.

Depending on the substance of the relevant agreements, royalty, license and commission income is recognized either immediately or is recognized when the contractual obligation is fulfilled.

Dividend income is recognized when the shareholders' right to receive the dividend is established. This is normally the date of the dividend resolution. Interest income is recognized in the period in which it is earned.

(11) RESEARCH AND DEVELOPMENT COSTS

Research and development costs comprise the costs of research departments and process development, the expenses incurred as a result of research and development collaborations as well as the costs of clinical trials (both before and after approval is granted).

The costs of research cannot be capitalized and are expensed in full in the period in which they are incurred. As internally generated intangible assets, it is necessary to capitalize development expenses if the cost of the internally generated intangible asset can be reliably determined and the asset can be expected to lead to future economic benefits. The condition for this is that the necessary resources are available for the development of the asset, technical feasibility of the asset is given, its completion and use are intended, and marketability is given. Owing to the high risks up to the time that pharmaceutical products are approved, these criteria are not met in the pharmaceutical business. Costs incurred after regulatory approval are usually insignificant and are therefore not recognized as intangible assets. Owing to the risks existing up until market launch, development expenses in the Performance Materials and the Life Science divisions can likewise not be capitalized.

Reimbursements for R&D are offset against research and development costs.

(12) FINANCIAL INSTRUMENTS: PRINCIPLES

A financial instrument is any contract that gives rise to both a financial asset of one entity and a financial liability or equity instrument of another entity. A distinction is made between non-derivative and derivative financial instruments.

Derivatives can be embedded in other financial instruments or in non-financial instruments. Under IFRS, an embedded derivative must be separated from the host contract and accounted for separately at fair value if the economic characteristics of the embedded derivative are not closely related to the economic characteristics of the host contract. Issued compound financial instruments with both an equity and a liability component must be recognized separately depending on their characteristics. The Group was not a party to hybrid or compound financial instruments during the fiscal year.

As a rule, the Group accounts for regular way purchases or sales of financial instruments at the settlement date and of derivatives at the trade date.

Financial assets and financial liabilities are generally measured at fair value on initial recognition, if necessary including transaction costs.

Financial assets are derecognized in part or in full if the contractual rights to the cash flows from the financial asset have expired or if control and substantially all the risks and rewards of ownership of the financial asset have been transferred to a third party. Financial liabilities are derecognized if the contractual obligations have been discharged, cancelled, or expired. Cash and cash equivalents are carried at nominal value.

(13) FINANCIAL INSTRUMENTS: CATEGORIES AND CLASSES OF FINANCIAL INSTRUMENTS

Financial assets and liabilities are classified into the following IAS 39 measurement categories and IFRS 7 classes. The classes required to be disclosed in accordance with IFRS 7 consist of the measurement categories set out here. Additionally, cash and cash equivalents with an original maturity of up to 90 days, finance lease liabilities, and derivatives designated as hedging instruments are also classes in accordance with IFRS 7. There were no reclassifications between the aforementioned measurement categories during the fiscal year.

Financial assets and financial liabilities at fair value through profit or loss

"Financial assets and financial liabilities at fair value through profit or loss" can be both non-derivative and derivative financial instruments. Financial instruments in this category are subsequently measured at fair value. Gains and losses on financial instruments in this measurement category are recognized directly in the income statement. This measurement category includes an option to designate non-derivative financial instruments as "at fair value through profit or loss" on initial recognition (fair value option) or as "financial instruments held for trading". The fair value option was not applied during the fiscal year. The Group only assigns derivatives to the "held for trading" measurement category. Special accounting rules apply to derivatives that are designated as hedging instruments in a hedging relationship.

Held to maturity investments

"Held to maturity investments" are non-derivative financial assets with fixed or determinable payments and a fixed maturity that are quoted in an active market. To be able to assign a financial asset to this measurement category, the entity must have the positive intention and ability to hold it to maturity. These investments are subsequently measured at amortized cost. If there is objective evidence that such an asset is impaired, an impairment loss is recognized in profit or loss. Subsequent reversals of impairment losses are also recognized in profit or loss up to the amount of the original cost of the asset. Within in the Group this measurement category is used for current and non-current financial assets.

Loans and receivables

"Loans and receivables" are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are subsequently measured at amortized cost. If there is objective evidence that such assets are impaired, an impairment loss is recognized in profit or loss. Subsequent reversals of impairment losses are also recognized in profit or loss up to the amount of the original cost of the asset. Long-term non-interest-bearing and low-interest receivables are measured at their present value. The Group primarily assigns trade receivables, loans, and miscellaneous other current and non-current receivables to this measurement category. The Group always uses a separate allowance account for impairment losses on trade and other receivables. Amounts from the allowance account are recognized in the carrying amount of the corresponding receivable as soon as this is settled or derecognized due to irrecoverability.

Available-for-sale financial assets

"Available-for-sale financial assets" are those non-derivative financial assets that are not assigned to the measurement categories "financial assets and financial liabilities at fair value through profit or loss", "held-to-maturity investments" or "loans and receivables". Financial assets in this category are subsequently measured at fair value. Changes in fair value are recognized immediately in equity and are only transferred to the income statement when the financial asset is derecognized. If there is objective evidence that such an asset is impaired, an impairment loss is recognized immediately in the income statement, including any amounts already recognized in equity. Reversals of impairment losses on previously impaired equity instruments are recognized immediately in equity. Reversals of impairment losses on previously impaired debt instruments are recognized in profit or loss up to the amount of the impairment loss. Any amount in excess of this is recognized directly in equity. In the Group this measurement category is used in particular for securities and financial assets, as well as interests in subsidiaries that are not consolidated due to secondary importance (affiliates). Financial assets in this category for which no fair value is available or fair value cannot be reliably determined are measured at cost less any cumulative impairment losses. Impairment losses on financial assets carried at cost may not be reversed.

Other liabilities

Other liabilities are non-derivative financial liabilities that are subsequently measured at amortized cost. Differences between the amount received and the amount to be repaid are amortized to profit or loss over the maturity of the instrument. The Group primarily assigns financial liabilities, trade payables, and miscellaneous other non-derivative current and non-current liabilities to this category.

(14) FINANCIAL INSTRUMENTS: DERIVATIVES AND HEDGE ACCOUNTING

The Group uses derivatives solely to economically hedge recognized assets or liabilities and forecast transactions. The hedge accounting rules in accordance with IFRS are applied to some of these hedges. A distinction is made between fair value hedge accounting and cash flow hedge accounting. Designation of a hedging relationship requires a hedged item and a hedging instrument. In the Group all hedges relate to recognized or highly probable hedged items. The Group currently only uses derivatives as hedging instruments.

The hedging relationship must be effective at all times, i.e. the change in fair value of the hedging instrument fully offsets changes in the fair value of the hedged item. The Group uses the dollar offset method as well as regression analyses to measure hedge effectiveness. Derivatives that do not or no longer meet the documentation or effectiveness requirements for hedge accounting, whose hedged item no longer exists, or for which hedge accounting rules are not applied are reported as "financial assets and liabilities at fair value through profit or loss". Changes in fair value are then recognized in profit or loss.

As a rule, the purpose of a fair value hedge is to offset the exposure to changes in the fair value of recognized hedged items (financial assets or financial liabilities) through offsetting changes in the fair value of a hedging instrument. Gains and losses on the hedging instrument resulting from changes in fair value are recognized in profit or loss, net of deferred taxes. Offsetting gains and losses on the hedged item that are attributable to the hedged risk are also recognized in profit or loss, irrespective of the item's allocation to a measurement category.

In the Group cash flow hedges normally relate to highly probable forecast transactions in foreign currency and to future interest payments. In cash flow hedges, the effective portion of the gains and losses on the hedging instrument is recognized in equity until the hedged expected cash flows affect profit or loss. This is also the case if the hedging instrument expires, is sold, or is terminated before the hedged transaction occurs and the occurrence of the hedged item remains likely. The ineffective portion of a cash flow hedge is recognized directly in profit or loss.

(15) OTHER NON-FINANCIAL ASSETS AND LIABILITIES

Other non-financial assets are carried at amortized cost. Allowances are recognized for any credit risks. Long-term non-interest-bearing and low-interest receivables are carried at their present value. Other non-financial liabilities are carried at the amount to be repaid.

(16) INVENTORIES

Inventories are carried at the lower of cost or net realizable value. When determining cost, the "first-in, first-out" (FIFO) and weighted average cost formulas are used. In addition to directly attributable unit costs, manufacturing costs also include overheads attributable to the production process, which are determined on the basis of normal capacity utilization of the production facilities.

Inventories are written down if the net realizable value is lower than the acquisition or manufacturing cost carried in the balance sheet.

Since the products are not manufactured within the scope of long-term production processes, the manufacturing cost does not include any borrowing cost.

Inventory prepayments are recorded under other current assets.

(17) INTANGIBLE ASSETS

Acquired intangible assets are recognized at cost and are classified as assets with finite and indefinite useful lives. Self-developed intangible assets are only capitalized if the requirements specified by IAS 38 have been met. Intangible assets acquired in the course of business combinations are recognized at fair value on the acquisition date.

Intangible assets with indefinite useful lives

Intangible assets with indefinite useful lives are not amortized; however they are tested for impairment when a triggering event arises or at least once a year. Here, the respective carrying amounts are compared with the recoverable amount of the cash-generating unit and impairments are recognized as required. Impairment losses recognized on indefinite-life intangible assets other than goodwill are reversed if the original reasons for impairment no longer apply.

Goodwill is allocated to cash-generating units and tested for impairment either annually or if there are indications of impairment. A cash-generating unit is a division as presented in the Segment Reporting. The carrying amounts of the cash-generating units are compared with their recoverable amounts and impairment losses are recognized where the recoverable amount is lower than the carrying amount. The recoverable amount of a cash-generating unit is determined as the higher of fair value less costs to sell and value in use estimated using the discounted cash flow method. When testing for potential goodwill impairments, the Group determines the recoverable amount by discounting expected cash flows and therefore uses the value-in-use method.

Intangible assets with finite useful lives

Intangible assets with a finite useful life are amortized using the straight-line method. The useful lives of marketing authorizations, acquired patents, licenses and similar rights, brand names, trademarks and software are between 3 and 19 years. Amortization of intangible assets and software is allocated to the functional costs in the income statement. An impairment test is performed if there are indications of impairment. Impairment losses are determined using the same methodology as for indefinite-life intangible assets. Impairment losses are reversed if the original reasons for impairment no longer apply.

(18) PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment is measured at cost less depreciation and impairments plus reversals of impairments. The component approach is applied here in accordance with IAS 16. Subsequent costs are only capitalized if it is probable that future economic benefits will arise for the Group and the cost of the asset can be measured reliably. The cost of self-constructed property, plant and equipment is calculated on the basis of the directly attributable unit costs and an appropriate share of overheads. If the construction of property, plant and equipment takes a substantial period of time, the directly attributable borrowing costs incurred up until completion are capitalized as part of the costs. In accordance with IAS 20, costs are reduced by the amount of government grants in those cases where government grants or subsidies have been paid for the acquisition or manufacture of assets (grants related to assets). Grants related to expenses which no longer offset future expenses are recognized in profit or loss. Property, plant and equipment is depreciated by the straight-line method over the useful life of the asset concerned. Depreciation of property, plant and equipment is based on the following useful lives:

USEFUL LIFE OF PROPERTY, PLANT AND EQUIPMENT

	Useful life
Production buildings	maximum of 33 years
Administration buildings	maximum of 40 years
Plant and machinery	6 to 25 years
Operating and office equipment; other facilities	3 to 10 years

The useful lives of the assets are reviewed regularly and adjusted if necessary. If indications of a decline in value exist, an impairment test is performed. The determination of the possible need to recognize impairments proceeds in the same way as for intangible assets. If the reasons for an impairment loss no longer exist, a reversal of the impairment loss recognized in prior periods is recorded.

(19) LEASING

Where non-current assets are leased and economic ownership lies with the Group (finance lease), the asset is recognized at the present value of the minimum lease payments or the lower fair value in accordance with IAS 17 and depreciated over their useful life. The corresponding payment obligations from future lease payments are recorded as liabilities. If an operating lease is concerned, the associated expenses are recognized in the period in which they are incurred.

(20) DEFERRED TAXES

Deferred tax assets and liabilities result from temporary differences between the carrying amount of an asset or liability in the IFRS and tax balance sheets of consolidated companies as well as from consolidation activities, insofar as the reversal of these differences will occur in the future. In addition, deferred tax assets are recorded in particular for tax loss carryforwards if and insofar as their utilization is probable in the foreseeable future. In accordance with the liability method, the tax rates enacted and published as of the balance sheet date are used.

Deferred tax assets and liabilities are only offset on the balance sheet date if they meet the requirements of IAS 12.

(21) PROVISIONS

Provisions are recognized in the balance sheet if it is more likely than not that a cash outflow will be required to settle the obligation and the amount of the obligation can be measured reliably. The carrying amount of provisions takes into account the amounts required to cover future payment obligations, recognizable risks and uncertain obligations of the Group to third parties.

Measurement is based on the settlement amount with the highest probability or, if the probabilities are equivalent and a high number of similar cases exist, it is based on the expected value of the settlement amounts. Long-term provisions are discounted and carried at their present value as of the balance sheet date. To the extent that reimbursement claims exist as defined in IAS 37, they are recognized separately as an asset if their realization is virtually certain and the asset recognition criteria has been met.

(22) PROVISIONS FOR PENSIONS AND OTHER POST-EMPLOYMENT BENEFITS

Provisions for pensions and other post-employment benefits are recorded in the balance sheet in accordance with IAS 19. The obligations under defined benefit plans are measured using the projected unit credit method. Under the projected unit credit method, dynamic parameters are taken into account in calculating the expected benefit payments after an insured event occurs; these payments are spread over the entire period of service of the participating employees. Annual actuarial opinions are prepared for this purpose. The actuarial assumptions for discount rates, salary and pension trends, staff turnover as well as health care cost increases, which were used to calculate the benefit obligation, were determined on a country-by-country basis in line with the economic conditions prevailing in each country; the latest country-specific actuarial mortality table was used in each case. The respective discount rates are generally determined on the basis of the returns on high-quality corporate bonds issued with adequate maturities and currencies. For euro-denominated obligations, bonds with ratings of at least “AA” from one of the three major rating agencies (Standard & Poor’s, Moody’s or Fitch), and a euro swap rate of adequate duration served as the basis for the data. Actuarial gains and losses resulting from changes in actuarial assumptions and/or experience adjustments (the effects of differences between the previous actuarial assumptions and what has actually occurred) are recognized immediately in equity as soon as they are incurred, taking deferred taxes into account. Consequently, the balance sheet discloses – after deduction of the plan assets – the full scope of the obligations while avoiding the fluctuations in expenses that can result especially when the calculation parameters change. The actuarial gains and losses recorded in the respective reporting period are presented separately in the Statement of Comprehensive Income.

NOTES TO THE CONSOLIDATED INCOME STATEMENT

(23) SALES

Sales were generated primarily from the sale of goods and to a limited degree also included revenues from services rendered. Group sales totaled € 11,291.5 million in 2014 (2013: € 10,700.1 million), which represented an increase of 5.5% compared to 2013 (decrease of –0.4% in 2013). Sales are presented by division and region in the Segment Reporting (see Note [51]).

(24) ROYALTY, LICENSE AND COMMISSION INCOME

In 2014, royalty and license income totaled € 138.0 million (2013: € 359.8 million) and mainly included royalty and license income from the products Humira® (AbbVie Inc.), Viibryd® (Actavis, formerly Forest Laboratories Inc.) and Puregon® (Merck & Co. Inc.) as well as income from the active pharmaceutical ingredients bisoprolol and metformin. The change compared to 2013 resulted primarily from the expiration of the patents for Avonex® (Biogen Idec Inc.) and Enbrel® (Amgen Inc.). An out-of-court settlement was reached with AbbVie Inc. for patent disputes regarding Humira®. Based on this settlement, the Group recorded no further license income for this product as of the second half of 2014.

Revenue from the strategic alliance with Pfizer Inc., USA, in immuno-oncology was recognized for the first time in 2014. More details on the agreement can be found in Note [5].

In 2014, commission income totaled € 71.3 million (2013: € 35.2 million). This primarily consisted of proceeds from cooperation and distribution agreements.

The breakdown of royalty, license and commission income by division is presented in the Segment Reporting (see Note [51]).

(25) COST OF SALES

Cost of sales primarily included the cost of manufactured products sold as well as merchandise sold. Cost comprises overheads and, if necessary, inventory write-downs, in addition to directly attributable costs, such as the cost of materials, personnel and energy, as well as depreciation/amortization.

The breakdown of cost of sales by division is presented in the Segment Reporting (Note [51]).

(26) MARKETING AND SELLING EXPENSES

Marketing and selling expenses comprised the following:

€ million	2014	2013
Sales force	– 809.3	– 789.8
Internal sales services	– 613.6	– 598.7
Sales promotion	– 469.4	– 458.4
Logistics	– 412.6	– 390.7
Amortization of intangible assets[1]	– 719.0	– 762.0
Other marketing and selling expenses	– 81.0	– 88.9
Marketing and selling expenses[1]	**– 3,104.9**	**– 3,088.5**

[1] The disclosure of amortization of intangible assets (excluding software) has been changed. See Note "Accounting and measurement principles".

Amortization of intangible assets was attributable to marketing approvals, patents, licenses and similar rights, brands, trademarks and other, which could be functionally allocated to Marketing and Selling.

The breakdown of marketing and selling expenses by division is presented in the Segment Reporting (see Note [51]).

(27) ROYALTY, LICENSE AND COMMISSION EXPENSES

In 2014, royalty and license expenses amounted to € 160.5 million (2013: € 212.8 million) and commission expenses totaled € 377.0 million (2013: € 354.2 million).

The sales-dependent royalty payments represented selling expenses and were expensed in the period in which they were incurred. Of significance here are the marketing rights to Erbitux® outside the United States and Canada, for which expenses totaling € 84.7 million (2013: € 80.9 million) were incurred in 2014.

Co-marketing agreements lead to sales-dependent commission payments that are expensed in the period in which they are incurred. The commission expenses incurred related mainly to the marketing of Rebif® in the United States, for which expenses of € 314.6 million were incurred in 2014 (2013: € 302.4 million). These also represented exclusively selling expenses.

The breakdown of royalty, license and commission expenses by division is presented in the Segment Reporting (see Note [51]).

(28) ADMINISTRATION EXPENSES

Personnel costs and material expenses of management and administrative functions were recorded under this item unless charged to other functional costs as internal services.

The breakdown of administration expenses by division is presented in the Segment Reporting (see Note [51]).

(29) RESEARCH AND DEVELOPMENT COSTS

Research and development costs increased in 2014 to € 1,703.7 million (2013: € 1,506.6 million). Amortization of intangible assets (excluding software) that had been attributable to research and development costs was allocated to this functional area for the first time in 2014.

Reimbursements for research and development amounting to € 18.4 million (2013: € 15.0 million) were offset against research and development costs. This figure also included government subsidies of € 5.9 million (2013: € 8.9 million).

The breakdown of research and development costs by division and region is presented in the Segment Reporting (see Note [51]).

(30) OTHER OPERATING EXPENSES AND INCOME

Other operating expenses and income were as follows:

€ million	2014	2013
Impairment losses[1]	–100.2	–225.6
Litigation[1]	– 95.5	– 205.2
Integration costs / IT costs	– 87.2	– 49.0
Restructuring costs	– 83.9	– 130.5
Premiums, fees and contributions	– 55.2	– 54.3
Allowances for receivables	– 41.9	– 47.1
Non-income related taxes	– 35.5	– 37.4
Acquisition costs	– 24.5	–
Expenses for miscellaneous services	– 21.8	– 23.9
Losses on the divestment of businesses	– 8.8	– 2.3
Project costs	– 4.4	– 6.5
Other operating expenses[1]	–125.2	–131.0
Total other operating expenses[1]	**– 684.1**	**– 912.8**
Gains from the release of provisions for litigation	260.3	50.4
Exchange rate differences from operating activities	53.3	26.0
Release of allowances for receivables	41.8	42.1
Income from miscellaneous services	26.4	25.1
Gains on disposal of assets	3.7	7.5
Income from investments	1.5	1.5
Other operating income[1]	39.4	42.1
Total other operating income[1]	**426.4**	**194.7**
Total other operating expenses and income	**– 257.7**	**– 718.1**

[1] Previous year's figures have been adjusted, see explanations below.

In fiscal 2014, income from the release of provisions for litigation was disclosed separately and not offset against litigation expenses. The previous year's figure has been correspondingly adjusted.

The net expenses previously disclosed under one-time items were reclassified to other operating income and expenses based on their nature.

The impairments totaled € 100.2 million (2013: € 225.6 million) and related in the amount of € 84.9 million (2013: € 10.5 million) to assets which were assigned to research and development, in the amount of € 5.1 million (2013: € 12.6 million) to production plants, in the amount of € 0.1 million (2013: € 156.2 million) to sales-related assets, and in the amount of € 5.7 million (2013: € 23.5 million) to administration. In addition, impairments were recognized in the amount of € 4.4 million (2013: € 5.5 million) for non-consolidated investments and other financial instruments which were classified to the category "available-for-sale". In 2013, impairments were recorded in the amount of € 17.3 million for capitalized goodwill in connection with the sale of the Discovery and Development Solutions business field of the Life Science division. Further information on impairments can be found under Intangible Assets (see Note [41]).

Integration and IT costs of € 87.2 million (2013: € 49.0 million) were incurred primarily for the global harmonization of the IT landscape and in connection with the integration of acquired and existing businesses.

The restructuring charges incurred in fiscal 2014 amounting to € 83.9 million (2013: € 130.5 million) arose in connection with the "Fit for 2018" transformation and growth program in the amount of € 79.5 million (2013: € 130.5 million). As in the previous year, these charges largely related to personnel measures, for instance

the elimination of positions in order to create a leaner and more efficient organization. Of the recognized asset impairments, an amount of € 4.5 million (2013: € 35.7 million) was attributable to the program, which resulted in total expenses of € 84.0 million (2013: € 166.2 million) for the "Fit for 2018" program.

Acquisition costs amounting to € 24.5 million (2013: € 0.0 million) were incurred for the acquisition of AZ Electronic Materials S.A., Luxembourg, as well as for the proposed acquisition of the Sigma-Aldrich Corporation, USA.

Other operating expenses also include special environmental protection costs as well as personnel expenses not allocable to the functional areas, for example costs of the works council.

Income from the release of provisions for litigation in fiscal 2014 amounted to € 260.3 million (2013: € 50.4 million) and was mainly attributable to the settlement of the legal dispute with Israel Bio-Engineering Project Limited Partnership (IBEP).

The breakdown of other operating expenses and income by division is presented in the Segment Reporting (see Note [51]).

(31) FINANCIAL RESULT

€ million	2014	2013
Interest income and similar income	30.6	30.1
Interest expenses and similar expenses	–162.4	–176.6
Interest component from currency hedging transactions	– 5.1	–17.2
Interest result	**–136.9**	**–163.7**
Interest component of the additions to pension provisions and other non-current provisions	– 55.2	– 54.2
Currency differences from financing activities	–13.0	– 4.3
Result from financial investments	0.1	–
	– 205.0	**– 222.2**

The financial result improved year-on-year mainly as a result of lower interest expenses and a reduced interest component from currency hedging transactions. The higher interest expenses in 2013 included expenses for a bond that was repaid in September 2013.

These lower interest expenses were partially offset by financing costs in connection with the proposed acquisition of the Sigma-Aldrich Corporation, USA. The interest component from currency hedging transactions compared to the previous year was mainly due to savings resulting from the establishment of a U.S. dollar in-house bank as this led to a significant decline in the nominal value of existing currency hedging transactions.

Currency differences from financial investments were mainly the result of expenses for premiums on options entered into to hedge intragroup transactions in foreign currency.

(32) INCOME TAX

€ million	2014	2013
Current taxes in the period	– 592.4	– 496.9
Taxes for previous periods	– 21.9	– 41.6
Deferred taxes in the period	222.1	359.0
	– 392.2	**–179.5**

The following table presents the tax reconciliation from theoretical tax expense to tax expense according to the income statement. The theoretical tax expense is determined by applying the statutory tax rate of 30.7 % of a corporation headquartered in Darmstadt.

€ million	2014	2013
Profit before income tax	1,557.0	1,388.6
Tax rate	30.7 %	30.7 %
Theoretical tax expense	– 478.0	– 426.3
Tax rate differences	100.8	109.7
Tax effect of companies with a negative contribution to consolidated profit	–15.8	–14.6
Tax for other periods	– 21.9	– 41.6
Tax credits	23.2	225.8
Tax effect on tax loss carryforwards	18.5	0.4
Tax effect of non-deductible expenses / tax-free income / Other tax effects	–19.0	– 32.9
Tax expense according to income statement	**– 392.2**	**–179.5**
Tax ratio according to income statement	25.2 %	12.9 %

The tax expense consisted of corporation and trade taxes for the companies domiciled in Germany as well as comparable income taxes for foreign companies.

The higher tax credits in 2013 arose primarily in the United States due to the consideration of dividend income from high-tax countries.

The reconciliation between deferred taxes in the balance sheet and deferred taxes in the income statement is presented in the following table:

€ million	2014	2013
Change in deferred tax assets (balance sheet)	256.5	–210.2
Change in deferred tax liabilities (balance sheet)	–152.9	526.5
Deferred taxes credited / debited to equity	–177.4	42.0
Changes in scope of consolidation / currency translation / other changes	295.9	0.7
Deferred taxes (income statement)	**222.1**	**359.0**

Tax loss carryforwards were structured as follows:

	Dec. 31, 2014			Dec. 31, 2013		
€ million	Germany	Abroad	Total	Germany	Abroad	Total
Tax loss carryforwards	8.0	948.4	956.4	3.4	437.4	440.8
thereof: Including deferred tax asset	3.1	292.5	295.6	0.8	102.5	103.3
Deferred tax asset	0.5	71.5	72.0	0.2	20.6	20.8
thereof: Excluding deferred tax asset	4.9	655.9	660.8	2.6	334.9	337.5
Theoretical deferred tax asset	0.8	106.5	107.3	0.4	77.5	77.9

The increase in non-German tax loss carryforwards and the higher deferred tax assets compared to 2013 was mainly the result of the acquisition of AZ Electronic Materials S.A., Luxembourg.

Deferred tax assets are recognized for tax loss and interest carryforwards only if for tax loss carryforwards of less than € 5.0 million realization of the related tax benefits is probable within one year, and for tax loss carryforwards of more than € 5.0 million realization of the related tax benefits is probable within the next three years.

The vast majority of the tax loss carryforwards either has no expiry date or can be carried forward for up to 20 years.

The tax loss carryforwards accumulated in Germany for corporation and trade tax amounted to € 8.0 million (2013: € 3.4 million).

The additional theoretically possible deferred tax assets amounted to € 107.3 million (2013: € 77.9 million).

In 2014, the income tax expense was reduced by € 18.5 million (2013: € 0.4 million) due to the utilization of tax loss carryforwards from prior years for which no deferred tax asset had been recognized in prior periods.

Deferred tax assets and liabilities correspond to the following balance sheet items:

€ million	Dec. 31, 2014		Dec. 31, 2013	
	Assets	Liabilities	Assets	Liabilities
Intangible assets	72.2	1,047.5	39.5	801.2
Property, plant and equipment	16.1	69.8	14.8	58.3
Current and non-current financial assets	0.1	3.6	0.1	3.9
Inventories	507.6	10.2	442.1	4.6
Current and non-current receivables / Other assets	57.5	7.4	39.1	23.4
Provisions for pensions and other post-employment benefits	338.0	47.2	149.6	47.2
Current and non-current other provisions	308.1	72.5	311.8	69.0
Current and non-current liabilities	120.0	36.0	41.6	4.9
Tax loss carryforwards	72.0	–	20.8	–
Tax refund claims / Other	18.7	41.6	42.2	18.2
Offset deferred tax assets and liabilities	– 517.4	– 517.4	– 365.2	– 365.2
Deferred taxes (balance sheet)	**992.9**	**818.4**	**736.4**	**665.5**

In addition to deferred tax assets on tax loss carryforwards amounting to € 72.0 million (2013: € 20.8 million), deferred tax assets of € 920.9 million were recognized for temporary differences (2013: € 715.6 million).

As of the balance sheet date, deferred tax liabilities for temporary differences for interests in subsidiaries as regards planned dividend payments amounted to € 31.0 million (2013: € 12.9 million). No deferred tax liabilities were recognized for other temporary differences relating to interests in subsidiaries since the reversal of these differences was not foreseeable. Temporary differences relating to the retained earnings of subsidiaries amounted to € 5,194.3 million (2013: € 4,894.6 million).

(33) NON-CONTROLLING INTERESTS

Non-controlling interests in net profit were primarily composed of the minority interests in the listed companies Merck Ltd., India, a subsidiary of Merck KGaA, Darmstadt, Germany, and P.T. Merck Tbk., Indonesia, a subsidiary of Merck KGaA, Darmstadt, Germany, as well as in the companies Merck (Pvt.) Ltd., Pakistan, a subsidiary of Merck KGaA, Darmstadt, Germany, and Merck Ltd., Thailand, a subsidiary of Merck KGaA, Darmstadt, Germany.

(34) EARNINGS PER SHARE

Basic earnings per share are calculated by dividing the profit after tax attributable to the shareholders of Merck KGaA, Darmstadt, Germany, by the weighted average number of theoretical shares outstanding. The use of a theoretical number of shares takes into account the fact that the general partner's capital is not represented by shares.

Following the resolution by the Annual General Meeting of the company on May 9, 2014 to conduct a 1:2 share split, the no-par value shares with a pro rata amount of the share capital of € 2.60 a piece were each divided into two shares with a pro rata amount of the share capital of € 1.30 a piece. The share capital of € 168.0 million was newly divided into 129,242,252 shares. Accordingly, the general partner's capital of € 397.2 million was divided into 305,535,626 theoretical shares. Overall, the total capital thus amounted to € 565.2 million or 434,777,878 theoretical shares outstanding. Taking into account the share split, the weighted average number of shares in 2014 was likewise 434,777,878 in 2014.

As of December 31, 2014 there were no potentially dilutive shares. Diluted earnings per share were equivalent to basic earnings per share.

The calculation of basic and diluted earnings per share was adjusted for all the reporting periods presented owing to the share split that took effect on June 30, 2014.

NOTES TO THE CONSOLIDATED BALANCE SHEET

(35) CASH AND CASH EQUIVALENTS

This item comprised:

€ million	Dec. 31, 2014	Dec. 31, 2013
Cash, bank balances and cheques	546.7	332.0
Short-term cash investments (up to 3 months)	2,331.8	648.8
	2,878.5	**980.8**

Changes in cash and cash equivalents as defined by IAS 7 are presented in the cash flow statement.

The maximum default risk is equivalent to the carrying value of the cash and cash equivalents.

(36) CURRENT FINANCIAL ASSETS

€ million	Dec. 31, 2014	Dec. 31, 2013
Held to maturity investments	21.7	53.4
Available-for-sale financial assets	2,135.0	2,312.1
Loans and receivables	2.9	27.3
Derivative assets (financial transactions)	39.8	17.7
	2,199.4	**2,410.5**

The development of current financial assets resulted mainly from the decrease in available-for-sale financial assets to € 2,135.0 million (2013: € 2,312.1 million). As of December 31, 2014, this item mainly included bonds amounting to € 1,178.6 million (2013: € 1,251.7 million) as well as commercial paper amounting to € 956.4 million (2013: € 915.7 million).

Moreover, fair value adjustments of € –2.0 million, which were recognized in equity, were made on available-for-sale financial assets (2013: € 0.6 million). The loans and receivables contained in current financial assets are neither past due nor impaired.

(37) TRADE ACCOUNTS RECEIVABLE

Trade accounts receivable amounting to € 2,235.6 million (2013: 2,021.4 million) exclusively existed vis-à-vis third parties.
Trade accounts receivable past due were as follows:

€ million	Dec. 31, 2014	Dec. 31, 2013
Neither past due nor impaired	1,808.8	1,542.1
Past due, but not impaired		
up to 3 months	143.3	127.5
up to 6 months	13.5	6.5
up to 12 months	5.8	2.8
up to 24 months	5.1	3.4
over 2 years	0.5	0.4
Impaired	258.6	338.7
Carrying amount	**2,235.6**	**2,021.4**

The corresponding allowances developed as follows:

€ million	2014	2013
January 1	**–136.8**	**–154.8**
Additions	– 41.5	– 46.5
Reversals	41.8	42.1
Utilizations	9.7	20.1
Currency translation and other changes	0.6	2.3
December 31	**–126.2**	**–136.8**

Due to the broad range of products of the Group, trade accounts receivable exist vis-à-vis a large number of customers. This diversification helps to reduce risk with respect to potential defaults on receivables. In addition, established credit management processes that take individual customer risks into account are used to assess the recoverability of receivables. If there are indications that individual trade accounts receivable are partly or fully impaired, corresponding allowances are recognized.

In the period from January 1 to December 31, 2014 trade receivables in Italy with a nominal value of € 104.9 million were sold for € 102.0 million. Previous impairments in this context amounting to € 5.2 million were reversed and disclosed under other operating income. The sold receivables do not involve any further rights of recovery against the company.

(38) INVENTORIES

This item comprised:

€ million	Dec. 31, 2014	Dec. 31, 2013
Raw materials and supplies	377.3	294.9
Work in progress	496.6	523.0
Finished goods	726.9	580.2
Goods for resale	58.9	76.1
	1,659.7	**1,474.2**

Write-downs of inventories in 2014 amounted to € 99.5 million (2013: € 94.1 million). In 2014, reversals of inventory write-downs of € 45.3 million were recorded (2013: € 24.4 million). As of the balance sheet date, no inventories were pledged as security for liabilities.

(39) OTHER ASSETS

Other assets comprised:

€ million	current	non-current	Dec. 31, 2014	current	non-current	Dec. 31, 2013
Other receivables	147.0	5.4	152.4	113.8	1.6	115.4
Derivative assets (operative)	468.5	2.9	471.4	72.7	53.9	126.6
Financial items	**615.5**	**8.3**	**623.8**	**186.5**	**55.5**	**242.0**
Receivables from non-income related taxes	199.8	24.5	224.3	99.0	30.4	129.4
Prepaid expenses	53.8	17.1	70.9	34.9	12.2	47.1
Assets from defined benefit plans	1.8	–	1.8	3.8	–	3.8
Other assets	339.3	6.6	345.9	36.5	7.4	43.9
Non-financial items	**594.7**	**48.2**	**642.9**	**174.2**	**50.0**	**224.2**
	1,210.2	**56.5**	**1,266.7**	**360.7**	**105.5**	**466.2**

Other receivables included current receivables from related parties amounting to € 76.5 million (2013: € 32.5 million) as well as current receivables from affiliates amounting to € 0.9 million (2013: € 0.6 million). Interest receivables amounted to € 12.5 million (2013: € 30.6 million). In addition, other prepayments were reported under this item. Other assets comprise the entitlement to the joint marketing right for Xalkori® (crizotinib) with Pfizer Inc., USA, in the amount of € 294.4 million (see Note [5]).

Other receivables from third parties past due were as follows:

€ million	Dec. 31, 2014	Dec. 31, 2013
Neither past due nor impaired	149.1	109.8
Past due, but not impaired		
up to 3 months	2.2	3.3
up to 6 months	–	0.3
up to 12 months	–	0.7
up to 24 months	0.9	0.7
over 2 years	0.2	0.2
Impaired	–	0.4
Carrying amount	**152.4**	**115.4**

In 2014, allowances for other receivables from third parties amounting to € 0.4 million (2013: € 0.6 million) were necessary. There were no reversals of allowances in this connection in 2014 or in 2013.

(40) TAX RECEIVABLES

Tax receivables amounted to € 297.0 million (2013: € 109.8 million) and resulted from tax prepayments that exceeded the actual amount of tax payable for 2014 and prior fiscal years, and from refund claims for prior years as well as withholding tax credits.

(41) INTANGIBLE ASSETS

€ million	Marketing authorizations, patents, licenses and similar rights, brands, trademarks and other – Finite useful life	Marketing authorizations, patents, licenses and similar rights, brands, trademarks and other – Indefinite useful life	Goodwill	Software	Advance payments	Total
Cost at January 1, 2013	**11,070.9**	**594.1**	**4,695.7**	**288.1**	**35.4**	**16,684.2**
Changes in scope of consolidation	–	–	–	–	–	–
Additions	7.0	64.5	–	1.8	36.3	109.6
Disposals	–13.5	–1.5	–30.1	–11.2	–0.1	–56.4
Transfers	1.0	–0.8	–	36.3	–29.2	7.3
Classification as held for sale or transfer to a disposal group	–46.6	–	–16.5	–	–	–63.1
Currency translation	–86.1	–0.3	–65.9	–10.7	–0.1	–163.1
December 31, 2013	**10,932.7**	**656.0**	**4,583.2**	**304.3**	**42.3**	**16,518.5**
Accumulated amortization and impairment losses January 1, 2013	**–5,113.1**	**–437.5**	**–**	**–189.1**	**–**	**–5,739.7**
Changes in scope of consolidation	–	–	–	–	–	–
Amortization	–813.5	–	–	–42.5	–	–856.0
Impairment losses	–155.5	–1.3	–17.3	–4.3	–	–178.4
Disposals	13.4	1.5	17.3	11.2	–	43.4
Transfers	4.2	–4.1	–	–1.7	–	–1.6
Reversals of impairment losses	–	–	–	–	–	–
Classification as held for sale or transfer to a disposal group	41.0	–	–	–	–	41.0
Currency translation	30.9	0.3	–	8.8	–	40.0
December 31, 2013	**–5,992.6**	**–441.1**	**–**	**–217.6**	**–**	**–6,651.3**
Net carrying amount as of December 31, 2013	**4,940.1**	**214.9**	**4,583.2**	**86.7**	**42.3**	**9,867.2**
Cost at January 1, 2014	**10,932.7**	**656.0**	**4,583.2**	**304.3**	**42.3**	**16,518.5**
Changes in scope of consolidation	1,049.5	–	818.4	1.6	–	1,869.5
Additions	62.1	38.6	–	2.2	40.4	143.3
Disposals	–4.8	–61.5	–	–11.9	–0.2	–78.4
Transfers	0.2	–	–	47.0	–45.5	1.7
Classification as held for sale or transfer to a disposal group	–	–	–	–	–	–
Currency translation	285.3	0.6	292.3	10.8	–	589.0
December 31, 2014	**12,325.0**	**633.7**	**5,693.9**	**354.0**	**37.0**	**19,043.6**
Accumulated amortization and impairment losses January 1, 2014	**–5,992.6**	**–441.1**	**–**	**–217.6**	**–**	**–6,651.3**
Changes in scope of consolidation	–	–	–	–	–	–
Amortization	–841.6	–	–	–35.6	–	–877.2
Impairment losses	–	–84.8	–	–5.1	–0.2	–90.1
Disposals	4.7	61.5	–	10.1	–	76.3
Transfers	–	–	–	–	–	–
Reversals of impairment losses	–	–	–	–	–	–
Classification as held for sale or transfer to a disposal group	–	–	–	–	–	–
Currency translation	–96.6	–0.6	–	–8.6	–	–105.8
December 31, 2014	**–6,926.1**	**–465.0**	**–**	**–256.8**	**–0.2**	**–7,648.1**
Net carrying amount as of December 31, 2014	**5,398.9**	**168.7**	**5,693.9**	**97.2**	**36.8**	**11,395.5**

Marketing authorizations, patents, licenses and similar rights, brands, trademarks and other

The changes in the scope of consolidation comprise additions to intangible assets resulting from the acquisition of AZ Electronic Materials S.A., Luxembourg. A detailed presentation of this acquisition can be found in Note [4].

The net carrying amount of "Marketing authorizations, patents, licenses and similar rights, brands, trademarks and other" with finite useful lives amounting to € 5,398.9 million (2013: € 4,940.1 million) mainly included the identified and capitalized assets from the purchase price allocations for the acquisition of AZ Electronic Materials S.A., the Millipore Corporation and Serono SA. The vast majority was attributable to marketing authorizations of active pharmaceutical ingredients and technologies. The remaining useful lives of these assets ranged between 0.5 and 19.3 years.

The additions to intangible assets with finite useful lives amounted to € 62.1 million in 2014 (2013: € 7.0 million). The Biopharmaceuticals division accounted for € 59.0 million of this figure. Most of this amount was attributable to the license agreement with Auxogyn regarding the Eeva test, to a cooperation agreement with Sutro Biopharma, USA, to develop antibody active ingredient conjugates in oncology, and to marketing rights for Glucophage® and Euthyrox® in Russia, for Rovatitan® in Korea and for Cetrotide® in Japan.

The item "Marketing authorizations, patents, licenses and similar rights, brand names, trademarks and other" with indefinite useful lives primarily related to rights that the Group had acquired for active ingredients, products or technologies that were still in the research and development stage. Owing to the uncertainty as to the extent to which these projects will ultimately lead to marketable products, the period for which the resulting capitalized assets would generate an economic benefit for the Group could not yet be determined. Amortization will only begin once the products receive marketing approval and is carried out on a straight-line basis over the shorter period of the patent or contract term or the expected useful life.

In 2014, additions to intangible assets with indefinite useful lives amounted to € 38.6 million (2013: € 64.5 million) and were exclusively attributable to the Biopharmaceuticals division. The amounts related to further milestone payments to Symphogen A/S, Denmark, for the acquisition of a license to an oncological compound. Additionally, the Group entered into two new licensing agreements with Mersana Therapeutics Inc., USA, and Sutro Biopharma, USA, in oncology.

Goodwill

Goodwill was incurred mainly in connection with the acquisition of AZ Electronic Materials S.A., the Millipore Corporation and Serono SA. The changes in goodwill caused by foreign exchange rates resulted almost exclusively from translating the goodwill of AZ Electronic Materials S.A. and the Millipore Corporation, part of which is carried in U.S. dollars, into the reporting currency.

In connection with the sale of the Discovery and Development Solutions business field of the Life Science division to Eurofins Scientific S.A., Luxembourg, in 2013 goodwill allocated to the business field in the amount of € 16.5 million was reclassified to "assets held for sale" and disposed of after the closing in the first quarter of 2014.

The carrying amounts of "Marketing authorizations, patents, licenses and similar rights, brands, trademarks and other" as well as goodwill were attributable to the divisions as follows:

€ million	Remaining useful life in years	Biopharma-ceuticals	Consumer Health	Performance Materials	Life Science	Total Dec. 31, 2014	Total Dec. 31, 2013
Marketing authorizations, patents, licenses and similar rights, brands, trademarks and other							
Finite useful life	**–**	**2,565.4**	**9.9**	**1,071.1**	**1,752.5**	**5,398.9**	**4,940.1**
Rebif®	5.0	1,841.0	–	–	–	1,841.0	2,209.0
Gonal-f®	4.0	379.8	–	–	–	379.8	474.7
Saizen®	5.0	153.7	–	–	–	153.7	184.4
Humira®	–	–	–	–	–	–	19.1
Puregon®	–	–	–	–	–	–	11.5
Technologies	0.5 – 18.3	152.8	0.1	1,054.3	408.4	1,615.6	619.4
Brands	0.5 – 9.5	–	8.8	12.0	248.9	269.7	255.5
Customer relationships	0.5 – 12.5	0.6	1.0	0.2	1,095.2	1,097.0	1,166.5
Other	3.0 – 19.3	37.5	–	4.6	–	42.1	–
Indefinite useful life	**–**	**166.8**	**–**	**1.9**	**–**	**168.7**	**214.9**
Goodwill	**–**	**1,601.5**	**243.1**	**938.2**	**2,911.1**	**5,693.9**	**4,583.2**

Information on impairment tests of intangible assets with indefinite useful lives

Since goodwill and other intangible assets with indefinite useful lives are not amortized, these are subjected to an impairment test if there are indications of impairment, or at least once a year.

In 2014, goodwill was not impaired. The assumptions used in the goodwill impairment test are presented in Note [7].

For intangible assets with indefinite useful lives there was an impairment loss in 2014 in the amount of € 84.8 million (2013: € 1.3 million). An impairment of € 37.5 million related to the asset from the licensing agreement with Symphogen A/S, Denmark. The discontinuation of the Phase III development program for tecemotide, an investigational antigen-specific cancer immunotherapy, led to an impairment loss of the relevant intangible asset amounting to € 18.5 million.

A further amount of € 14.0 million was due to the discontinuation of the development activities for ceralifimod (ONO-4641) for the treatment of multiple sclerosis. All items were disclosed in the income statement of the Biopharmaceuticals division as impairment losses under other operating expenses.

In fiscal 2014, software impairments of € 5.1 million (2013: € 4.3 million) were recognized in the income statement under other operating expenses.

In 2014, no intangible assets were pledged as security for liabilities.

(42) PROPERTY, PLANT AND EQUIPMENT

€ million	Land, land rights and buildings, including buildings on third-party land	Plant and machinery	Other facilities, operating and office equipment	Construction in progress and advance payments to vendors and contractors	Total
Cost at January 1, 2013	**2,651.5**	**3,044.4**	**906.7**	**429.1**	**7,031.7**
Changes in the scope of consolidation	–	–	–	–	–
Additions	8.0	15.1	25.0	360.4	408.5
Disposals	– 376.2	– 63.5	– 46.6	– 10.3	– 496.6
Transfers	186.9	253.0	63.0	– 512.1	– 9.2
Classification as held for sale or transfer to a disposal group	– 0.8	– 4.4	– 2.7	–	– 7.9
Currency translation	– 56.9	– 43.8	– 20.4	– 3.6	– 124.7
December 31, 2013	**2,412.5**	**3,200.8**	**925.0**	**263.5**	**6,801.8**
Accumulated depreciation and impairment losses January 1, 2013	**– 1,051.6**	**– 2,164.6**	**– 685.1**	**– 176.8**	**– 4,078.1**
Changes in the scope of consolidation	–	–	–	–	–
Depreciation	– 108.9	– 187.8	– 85.2	–	– 381.9
Impairment losses	– 29.5	– 11.0	– 0.8	– 0.4	– 41.7
Disposals	148.6	62.1	44.7	9.7	265.1
Transfers	– 54.2	– 108.4	– 0.4	166.6	3.6
Reversals of impairment losses	4.7	0.4	–	–	5.1
Classification as held for sale or transfer to a disposal group	0.4	1.8	1.9	–	4.1
Currency translation	20.7	33.0	15.5	–	69.2
December 31, 2013	**– 1,069.8**	**– 2,374.5**	**– 709.4**	**– 0.9**	**– 4,154.6**
Net carrying amount as of December 31, 2013	**1,342.7**	**826.3**	**215.6**	**262.6**	**2,647.2**
Cost at January 1, 2014	**2,412.5**	**3,200.8**	**925.0**	**263.5**	**6,801.8**
Changes in the scope of consolidation	89.8	58.9	33.5	3.6	185.8
Additions	20.5	23.9	30.9	410.9	486.2
Disposals	– 14.3	– 49.2	– 46.8	– 2.9	– 113.2
Transfers	69.6	132.9	58.4	– 253.2	7.7
Classification as held for sale or transfer to a disposal group	–	–	–	–	–
Currency translation	57.3	42.4	16.5	8.6	124.8
December 31, 2014	**2,635.4**	**3,409.7**	**1,017.5**	**430.5**	**7,493.1**
Accumulated depreciation and impairment losses January 1, 2014	**– 1,069.8**	**– 2,374.5**	**– 709.4**	**– 0.9**	**– 4,154.6**
Changes in the scope of consolidation	–	–	–	–	–
Depreciation	– 104.3	– 189.8	– 90.4	–	– 384.5
Impairment losses	– 0.4	– 4.7	– 0.6	–	– 5.7
Disposals	10.7	46.1	44.9	0.1	101.8
Transfers	– 4.1	– 0.1	0.1	–	– 4.1
Reversals of impairment losses	0.1	0.4	0.2	–	0.7
Classification as held for sale or transfer to a disposal group	–	–	–	–	–
Currency translation	– 19.0	– 25.6	– 11.6	– 0.1	– 56.3
December 31, 2014	**– 1,186.8**	**– 2,548.2**	**– 766.8**	**– 0.9**	**– 4,502.7**
Net carrying amount as of December 31, 2014	**1,448.6**	**861.5**	**250.7**	**429.6**	**2,990.4**

Changes in the scope of consolidation included the additions to property, plant and equipment from the acquisition of AZ Electronic Materials S.A., Luxembourg. A detailed presentation of the AZ acquisition can be found in Note [4].

Material additions to construction in progress are attributable to the expansion of global headquarters and the construction of two new energy stations at the Darmstadt site. Transfers relating to construction in progress mainly include a new liquid crystal mixing plant in Shanghai, China, which was completed and commissioned in the first quarter of 2014.

In fiscal 2014, impairment losses in the amount of € 5.7 million (2013: € 41.7 million) were recognized, of which a major part related to the Performance Materials division.

The total amount of property, plant and equipment used to secure financial liabilities was immaterial. Total government grants and subsidies in connection with investments in property, plant and equipment during the fiscal year amounted to €3.7 million (2013: €2.9 million).

Directly allocable borrowing costs on qualified assets in the amount of € 3.2 million (2013: € 0.4 million) were capitalized.

Property, plant and equipment also included assets that were leased. The total value of capitalized leased assets amounted to € 9.4 million (2013: € 9.3 million) and the corresponding obligations amounted to € 6.5 million (2013: € 7.7 million), (see Note [60]).

The carrying amounts of assets classified as finance leases were as follows:

€ million	Dec. 31, 2014	Dec. 31, 2013
Land and buildings	6.8	7.1
Vehicles	1.1	1.4
Other property, plant and equipment	1.5	0.8
	9.4	**9.3**

(43) NON-CURRENT FINANCIAL ASSETS

€ million	Dec. 31, 2014	Dec. 31, 2013
Investments	21.5	19.2
Investments in associates and other companies	57.9	34.3
Securities – Available-for-sale financial assets	1.3	3.8
Assets from derivatives (financial transactions)	–	4.7
Loans and other non-current financial assets	13.7	15.8
	94.4	**77.8**

Unconsolidated investments and the investments in associates and other companies were classified as “available-for-sale”. Thereof investments with a carrying amount of € 66.9 million (2013: € 52.3 million) were subsequently measured at cost since their market value could not be determined. The increase in investments in associates and other companies resulted mainly from the investment in InfraServ GmbH & Co. Wiesbaden KG, amounting to € 10.8 million, which were acquired in the course of the acquisition of AZ Electronic Materials S.A.

In 2014, impairment losses were recognized for unconsolidated investments and for other available-for-sale non-current financial assets in a total amount of € 4.4 million (2013: € 5.5 million). These were recorded in the income statement under other operating expenses.

Moreover, fair value adjustments of € 0.6 million (2013: € 1.2 million) were made on available-for-sale non-current financial assets and recognized in equity.

(44) FINANCIAL LIABILITIES

€ million *December 31, 2014*	< 1 year	1 – 5 years	> 5 years	Total
Loans and commercial paper	1,449.7	347.5	2,827.0	4,624.2
Liabilities to banks	67.4	200.0	–	267.4
Liabilities to related parties	501.4	–	–	501.4
Loans from third parties and other financial liabilities	18.6	61.6	4.3	84.5
Liabilities from derivatives (financial transactions)	36.0	19.9	97.1	153.0
Finance lease liabilities	2.8	3.7	–	6.5
	2,075.9	**632.7**	**2,928.4**	**5,637.0**

€ million *December 31, 2013*	< 1 year	1 – 5 years	> 5 years	Total
Loans and commercial paper	–	1,730.6	1,412.1	3,142.7
Liabilities to banks	42.2	–	–	42.2
Liabilities to related parties	361.9	–	–	361.9
Loans from third parties and other financial liabilities	24.0	56.0	4.0	84.0
Liabilities from derivatives (financial transactions)	10.0	14.1	35.3	59.4
Finance lease liabilities	2.3	5.0	0.4	7.7
	440.4	**1,805.7**	**1,451.8**	**3,697.9**

The liabilities of the Group to banks were denominated in the following currencies:

in %	Dec. 31, 2014	Dec. 31, 2013
Euro	88.1	14.4
Turkish lira	4.5	6.9
Chinese renminbi	3.9	20.5
Argentine peso	2.4	39.2
Other currencies	1.1	19.0
	100.0	**100.0**

On the balance sheet date, the bank financing commitments vis-à-vis the Group were as follows:

€ million	Financing commitments from banks	Utilization as of December 31, 2014	Interest	Maturity
Syndicated loan 2013	2,000.0	0.0	variable	2019
Bilateral credit agreement with banks	3.2	3.2	fixed / variable	2015
Bilateral credit agreement with banks	200.0	200.0	variable	2019
Various bank credit lines	11,544.8	64.2	fixed / variable	> 2 years
	13,748.0	**267.4**		

The Group has a € 2 billion multi-currency revolving credit facility, which was renewed in fiscal 2014 ("Syndicated Loan 2013"). The credit line was underwritten by an international group of banks and has a remaining term until March 2019, with an extension option of one year that the Group can exercise at its own discretion. This credit line had not been utilized as of the reporting date.

On September 22, 2014 the Group arranged credit lines amounting to US$ 15.6 billion with a banking consortium to secure the expected purchase price payment for the planned acquisition of the Sigma-Aldrich Corporation, USA (Sigma-Aldrich). As of the balance sheet date, the nominal volume of these credit lines was US$ 13.1 billion since a portion of the original nominal amount had already been replaced by other financial resources. A significant portion of the credit line is to be replaced by other capital market instruments by the time the acquisition closes. As of December 31, 2014, the described credit lines for financing the planned acquisition represent the vast majority of the existing bank lines amounting to € 11,544.8 million (2013: € 245.0 million).

Furthermore, the Group had access to a commercial paper program with a volume of € 2 billion to meet short-term capital requirements, which had not been utilized as of the reporting date.

In October 2014, the Group renewed its debt issuance program with a volume of € 15 billion. The debt issuance program forms a flexible contractual basis for issuing bonds.

In December 2014, the Group issued a subordinate hybrid bond with a two-tranche structure. This issuance is part of the financing of the proposed acquisition of Sigma-Aldrich. Both tranches have a maturity of 60 years. The first tranche with a nominal volume of € 1.0 billion pays a coupon of 2.625 % and contains an early bond redemption option for Merck KGaA, Darmstadt, Germany, after 6.5 years. The second tranche, with a nominal volume of € 500 million and carrying coupon of 3.375 %, includes an early redemption right for the Group after ten years. The two rating agencies Standard & Poor's and Moody's have given equity credit treatment to half of the issuance, thus making the issuance more favorable to the Group's credit rating than a classic bond issue. The bond is recognized in full as a financial liability in the balance sheet.

The following bonds issued by the Group are currently outstanding:

Issuer	Nominal value	Maturity	Nominal interest rate	Issue price
Merck Financial Services GmbH, Germany, a subsidiary of Merck KGaA, Darmstadt, Germany	€ 1,350 million	March 2010 – March 2015	3.375 %	99.769
Merck Financial Services GmbH, Germany, a subsidiary of Merck KGaA, Darmstadt, Germany	€ 100 million	December 2009 – December 2015	3.615 %[1]	100.000
EMD Millipore Corporation, USA	€ 250 million	June 2006 – June 2016	5.875 %	99.611
Merck Financial Services GmbH, Germany, a subsidiary of Merck KGaA, Darmstadt, Germany	€ 60 million	November 2009 – November 2016	4.000 %	100.000
Merck Financial Services GmbH, Germany, a subsidiary of Merck KGaA, Darmstadt, Germany	€ 70 million	December 2009 – December 2019	4.250 %	97.788
Merck Financial Services GmbH, Germany, a subsidiary of Merck KGaA, Darmstadt, Germany	€ 1,350 million	March 2010 – March 2020	4.500 %	99.582
Merck KGaA, Darmstadt, Germany	€ 1,000 million	December 2014 – December 2074[2]	2.625 %[2]	99.274
Merck KGaA, Darmstadt, Germany	€ 500 million	December 2014 – December 2074[3]	3.375 %[3]	100.000

[1] Fixed by interest rate swaps.
[2] Merck KGaA, Darmstadt, Germany, has the right to prematurely repay this tranche of the hybrid bond issued in December 2014 for the first time in June 2021. The nominal interest rate is fixed until that date.
[3] Merck KGaA, Darmstadt, Germany, has the right to prematurely repay this tranche of the hybrid bond issued in December 2014 for the first time in December 2024. The nominal interest rate is fixed until that date.

The financial liabilities of the Group are not secured by liens or similar forms of collateral. The loan agreements do not contain any financial covenants. The Group's average borrowing cost as of the balance sheet date was 3.3 % (2013: 3.9 %).

Finance lease liabilities represented the present value of future payments arising from finance leases. This item primarily related to liabilities from finance leases for land and buildings.

Information on liabilities to related parties can be found in Note [66].

(45) TRADE ACCOUNTS PAYABLE

Trade accounts payable consisted of the following:

€ million	Dec. 31, 2014	Dec. 31, 2013
Liabilities to third parties	1,539.3	1,363.9
Liabilities to investments	0.1	0.2
	1,539.4	**1,364.1**

Trade accounts payable included accrued amounts of € 831.0 million (2013: € 778.0 million) for outstanding invoices and reductions in sales revenues.

(46) OTHER LIABILITIES

This item comprised:

€ million	current	non-current	Dec. 31, 2014	current	non-current	Dec. 31, 2013
Other financial liabilities	692.9	3.2	696.1	578.9	2.2	581.1
Liabilities from derivatives (operational)	29.0	6.4	35.4	1.5	0.6	2.1
Financial items	**721.9**	**9.6**	**731.5**	**580.4**	**2.8**	**583.2**
Accruals for personnel expenses	474.3	–	474.3	439.9	–	439.9
Deferred income	220.9	768.6	989.5	31.6	2.3	33.9
Advance payments received from customers	15.0	–	15.0	16.0	–	16.0
Liabilities from non-income related taxes	142.5	3.8	146.3	66.6	0.5	67.1
Non-financial items	**852.7**	**772.4**	**1,625.1**	**554.1**	**2.8**	**556.9**
	1,574.6	**782.0**	**2,356.6**	**1,134.5**	**5.6**	**1,140.1**

As of December 31, 2014, other financial liabilities included liabilities to related companies amounting to € 425.6 million (2013: € 373.1 million). These are mainly profit entitlements of E. Merck KG, Darmstadt, Germany. Moreover, this item contained liabilities to investments amounting to € 3.1 million (2013: € 1.6 million), interest accruals of € 85.9 million (2013: € 83.3 million) as well as payroll liabilities of € 65.9 million (2013: € 63.6 million). The remaining amount of € 115.6 million (2013: € 59.5 million) recorded under other financial liabilities included among other things liabilities to insurers as well as contractually agreed payment obligations vis-à-vis other companies.

The increase in deferred income results from the collaboration agreement with Pfizer Inc., USA (see Note [5]).

(47) TAX LIABILITIES

Tax liabilities and provisions for tax liabilities resulted in total income tax liabilities of € 849.8 million as of December 31, 2014 (2013: € 465.1 million). The increase in tax liabilities is primarily due to higher income tax expenses in fiscal 2014 (see Note [32]) as well as provisions for potential tax obligations.

(48) PROVISIONS

Provisions developed as follows:

€ million	Litigation	Restructuring	Personnel	Environmental protection	Other	Total
January 1, 2014	**772.3**	**202.8**	**201.6**	**111.2**	**217.9**	**1,505.8**
Additions	125.1	44.1	130.8	9.9	167.3	477.2
Utilizations	– 332.3	–104.2	– 58.2	–12.1	– 36.4	– 543.2
Release	– 260.3	– 8.3	– 24.4	– 3.4	– 25.1	– 321.5
Interest portion	5.0	–	1.5	17.3	–	23.8
Currency translation	22.5	2.1	14.2	0.8	4.5	44.1
Changes in scope of consolidation / Other	60.8	–	1.3	–	– 60.5	1.6
December 31, 2014	**393.1**	**136.5**	**266.8**	**123.7**	**267.7**	**1,187.8**
thereof current	140.5	65.5	120.0	11.3	224.4	561.7
thereof non-current	252.6	71.0	146.8	112.4	43.3	626.1

Litigation

As of December 31, 2014, the provisions for legal disputes amounted to € 393.1 million (2013: € 772.3 million). Many of the legal disputes and official proceedings currently pending relate to the Biopharmaceuticals division. The legal matters described below represent the most significant legal risks.

Product-related and patent disputes

The litigation risk with Israel Bio-Engineering Project Limited Partnership (IBEP) was eliminated as of the end of 2014. IBEP asserted claims for property rights and the payment of license fees for the past and the future. These legal disputes were connected to the financing of medical research projects in the early 1980s. The Group had taken appropriate accounting measures for these legal disputes in the past. As of year-end, the Group achieved a written settlement with IBEP according to which the legal disputes were settled in exchange for a sum of money. The provision recognized in previous years was partly used and the remainder was released.

Rebif®: The Group is involved in a patent dispute with Biogen Idec Inc., USA, (Biogen) in the United States. Biogen claims that the sale of Rebif® in the United States infringes on a Biogen patent. The disputed patent was granted to Biogen in 2009 in the United States. Subsequently, Biogen sued the Group and other pharmaceutical companies for infringement of this patent. The Group defended itself against all allegations and brought a countersuit claiming that the patent was invalid and not infringed on by the Group's actions. A Markman hearing was held in January 2012; a decision has not yet been announced. The parties are currently engaged in court-ordered mediation proceedings that have not yet officially ended. It is currently not clear when a first-instance decision will be made. The Group has taken appropriate accounting measures.

In the Performance Materials division, the Group is in negotiations with a competitor regarding potential patent infringements. The Group maintains that the competitor's patent infringement assertion is invalid owing to relevant prior art. The competitor has threatened to file patent infringement lawsuits. The Group has taken appropriate accounting measures for this issue.

Antitrust proceedings

Raptiva®: In December 2011, the Brazilian federal state of São Paulo sued the Group for damages because of alleged collusion between various pharmaceutical companies and an association of patients suffering from psoriasis and vitiligo. The collusion is alleged to have aimed at an increase in the sales of the involved companies' drugs to the detriment of patients and state coffers. Moreover, in connection with the product Raptiva®, patients have filed suit to receive compensatory damages. The Group has taken appropriate accounting measures for these legal disputes in the financial statements.

Drug pricing by the divested Generics Group

Paroxetine: In connection with the divested generics business, the Group is subject to antitrust investigations by the British Competition and Market Authority ("CMA") in the United Kingdom. In March 2013, the CMA informed the Group of the assumption that a settlement agreement entered into in 2002 between Generics (UK) Ltd. and several GlaxoSmithKline companies in connection with the antidepressant drug paroxetine violates British and European competition law. As the owner of Generics (UK) Ltd. at the time, the company was allegedly involved in the settlement negotiations and is therefore liable. The investigations into Generics (UK) Ltd. started in 2011, without the Group being aware of this. It is considered probable that the CMA will impose a fine on the Group. The Group has recognized appropriate provisions in this connection.

Foreign exchange transfer restrictions

In one jurisdiction, the Group and other companies are subject to a government investigation regarding compliance with foreign exchange transfer restrictions. In this connection, the responsible authorities are investigating whether import prices led to impermissibly high foreign exchange transfers. Appropriate accounting measures have been taken for repayments and fines that are estimated to be probable due to the uncertain legal situation in the affected country. The provision recognized in 2013 under other provisions was reclassified to provisions for litigation.

In addition to provisions for the mentioned litigation, provisions existed as of the balance sheet date for various smaller pending legal disputes.

Restructuring

Provisions for restructuring mainly include commitments to employees in connection with restructuring projects and provisions for onerous contracts. These were recognized once detailed restructuring plans had been prepared and communicated.

In 2012, the "Fit for 2018" transformation and growth program was established. The aim of this program is to secure the competitiveness and the growth of the Group over the long term. The noncurrent provisions of € 71.0 million (2013: € 74.7 million) recorded in this connection mainly consist of commitments to employees from partial and early retirement arrangements. In addition, current provisions of € 65.5 million (2013: € 128.1 million) reflect future commitments for severance payments and commitments arising from site closures. The payments made in 2014 in the amount of € 104.3 million are primarily due to severance payments to employees. Cash flows owing to provisions for restructuring are for the most part expected within a period of up to 2019.

Provisions for employee benefits / Share-based payment

Provisions for employee benefits include obligations from long-term variable compensation programs. Payments from the long-term variable compensation plan in place until 2011 were made for the last time in 2014. The long-term variable compensation plan valid since 2012 is aligned not only with target achievement based on key performance indicators, but above all with the long-term performance of the shares of Merck KGaA, Darmstadt, Germany. Certain executives and employees could be eligible to receive a certain number of virtual shares – Share Units of Merck KGaA, Darmstadt, Germany, (MSUs) – at the end of a three-year performance cycle. The number of MSUs that could be received depends on the total value defined for the respective person and the average closing price of the shares of Merck KGaA, Darmstadt, Germany, in Xetra® trading during the last 60 trading days prior to January 1 of the respective fiscal year (reference price). In order for members of top management to receive payment, they must personally own an investment in the company's shares dependent on their respective fixed annual compensation. When the three-year performance cycle ends, the number of MSUs to then be granted is determined based on the development of two key performance indicators (KPIs). These are on the one hand the performance of the company's share price compared to the performance of the DAX® with a weighting of 70 % and on the other hand the development of the EBITDA pre margin during the performance cycle as a proportion of a defined target value with a weighting of 30 %. Depending on the development of the KPIs, at the end of the respective performance cycle the eligible participants are granted between 0 % and 150 % of the MSUs they could be eligible to receive.

Based on the MSUs granted, the eligible participants receive a cash payment at a specified point in time in the year after the three-year performance cycle has ended. The value of a granted MSU, which is relevant for payment, corresponds to the average closing price of the company shares in Xetra trading during the last 60 trading days prior to January 1 after the performance cycle. The payment amount is limited to three times the reference price.

	2012 tranche	2013 tranche	2014 tranche
Performance cycle	Jan. 1, 2012 to Dec. 31, 2014	Jan. 1, 2013 to Dec. 31, 2015	Jan. 1, 2014 to Dec. 31, 2016
Term	3 years	3 years	3 years
Reference price of shares in € (60-day average share price prior to the start of the performance cycle)	69.57	100.11	122.84
DAX® value (60-day average of the DAX® prior to the start of the performance cycle)	5,883.35	7,350.64	9,065.08
Potential number of MSUs			
Potential number offered for the first time in 2012	538,235	–	–
Expired	30,685	–	–
Status on Dec. 31, 2012	507,550	–	–
Potential number offered for the first time in 2013	–	389,658	–
Expired	28,101	11,938	–
Status on Dec. 31, 2013	479,449	377,720	–
Potential number offered for the first time in 2014	–	–	355,164
Expired	42,215	38,179	21,247
MSUs granted to employees of the AZ Electronic Materials Group on May 2, 2014	–	–	22,865
Status on Dec. 31, 2014	437,234	339,541	356,782

The fair value of the obligations is recalculated on each balance sheet date using a Monte Carlo simulation based on the previously described KPIs. The expected volatilities are based on the implicit volatility of the company shares and the DAX® in accordance with the remaining term of the LTIP tranche. The dividend payments incorporated into the valuation model orient towards medium-term dividend expectations. The value of the provision for the vesting period already completed was € 144.8 million as of December 31, 2014 (2013: € 63.5 million). The net expense for fiscal 2014 was € 81.3 million (2013: € 45.7 million).

The Executive Board members have their own Long-Term Incentive Plan, the conditions of which largely correspond to the Long-Term Incentive Plan described here. A description of the plan for the Executive Board can be found in the compensation report, which is part of the Statement on Corporate Governance.

Provisions for employee benefits also include obligations for the partial retirement program and other severance pay that were not set up in connection with the "Fit for 2018" transformation and growth program as well as obligations in connection with long-term working hour accounts and anniversary bonuses.

With respect to provisions for defined-benefit pensions and other post-employment benefits, see Note [49].

Environmental protection

Provisions for environmental protection mainly existed in Germany and the United States and were set up particularly for obligations from soil remediation and groundwater protection in connection with the discontinued crop protection business.

Other provisions

Other provisions mainly include provisions for purchase commitments, subsequent contract costs stemming from discontinued research projects, other guarantees, and provisions for uncertain commitments from contributions, duties and fees.

In 2014, the clinical development program for tecemotide, an investigational antigen-specific cancer immunotherapy for the treatment of non-small cell lung cancer, and the development of plovamer acetate, an active ingredient for the treatment of multiple sclerosis, terminated. In addition, the license rights to the active ingredient ceraliflimod were returned to Ono Pharmaceutical Co., Ltd., Japan, since the compound does not meet the criteria for further investment. Furthermore, the Biopharmaceuticals division decided to return the rights to the compound Sym004 to Symphogen A/S Denmark.

Provisions for subsequent costs that are likely to be incurred for the aforementioned and other discontinued research projects were recognized during the reporting period.

(49) PROVISIONS FOR PENSIONS AND OTHER POST-EMPLOYMENT BENEFITS

Depending on the legal, economic and fiscal circumstances prevailing in each country, different retirement benefit systems are provided for the employees of the Group. Generally these systems are based on the years of service and salaries of the employees. Pension obligations of the Group include both defined benefit and defined contribution plans and comprise both obligations from current pensions and accrued benefits for pensions payable in the future. In the Group, defined benefit plans are funded and unfunded. Provisions also contain other post-employment benefits, such as accrued future health care costs for retirees in the United States.

In order to limit the risks of changing capital market conditions and demographic developments, for many years now the Group has been offering only defined contribution plans to newly hired employees.

The value recognized in the balance sheet for pensions and other post-employment benefits was derived as follows:

€ million	Dec. 31, 2014	Dec. 31, 2013
Present value of all defined benefit obligations	**3,812.7**	**2,736.8**
Fair value of the plan assets	–1,994.4	–1,840.2
Funded status	**1,818.3**	**896.6**
Effects of asset ceilings	–	10.5
Net defined benefit liability recognized in the balance sheet	**1,818.3**	**907.1**
Assets from defined benefit plans	1.8	3.8
Provisions for pensions and other post-employment benefits	**1,820.1**	**910.9**

The calculation of the defined benefit obligations as well as the relevant plan assets was based on the following actuarial parameters:

	Germany		Switzerland		United Kingdom		Other countries	
in %	2014	2013	2014	2013	2014	2013	2014	2013
Discount rate	2.00	3.75	1.00	2.30	3.66	4.57	4.16	4.76
Future salary increases	2.52	2.51	1.96	1.73	2.10	3.89	4.53	4.03
Future pension increases	1.75	1.75	–	0.01	3.06	3.38	1.58	2.34
Future cost increases for health care benefits	–	–	–	–	–	–	5.10	5.10

These are average values weighted by the present value of the respective benefit obligation.

The defined benefit obligations of the Group were based on the following types of benefits provided by the respective plan:

Present value of defined benefit obligations in € million	Germany Dec. 31, 2014	Other countries Dec. 31, 2014	Group Dec. 31, 2014
Benefit based on final salary			
Annuity	2,542.3	462.5	3,004.8
Lump sum	–	98.0	98.0
Installments	1.2	–	1.2
Benefit not based on final salary			
Annuity	141.9	506.9	648.8
Lump sum	7.1	40.1	47.2
Medical plan	–	12.7	12.7
	2,692.5	**1,120.2**	**3,812.7**

The main benefit rules are as follows:
Merck KGaA, Darmstadt, Germany, and AB Allgemeine Pensions GmbH & Co. KG accounted for € 2,434.0 million (2013: € 1,670.6 million) of the defined benefit obligations and € 1,098.1 million (2013: € 1,052.6 million) of the plan assets. The benefits comprise old-age, disability and surviving dependent pensions. On the one hand, these obligations are based on benefit rules comprising benefit commitments dependent upon years of service and final salary from which newly hired employees have been excluded. On the other hand, the benefit rules applicable to employees newly hired since January 1, 2005 comprise a direct commitment in the form of a defined contribution pension plan. The benefit entitlement results from the cumulative total of annually determined pension components that are calculated on the basis of a defined benefit expense and an age-dependent annuity table. Statutory minimum funding obligations do not exist.

The Biopharmaceuticals division's pension fund in Switzerland accounted for € 402.6 million (2013: € 314.8 million) of the defined benefit obligations and € 363.5 million (2013: € 324.9 million) of the plan assets. Of this amount, € 10.5 million could not be recognized in 2013 due to effects of the asset ceiling according to IAS 19.64. These obligations are based on the granting of old-age, disability and surviving dependents benefits, which include the legally required benefits. Both employer and employee contributions are paid into the pension fund. Statutory minimum funding obligations exist.

The Pension Scheme of the Group in the United Kingdom accounted for € 376.5 million (2013: € 320.1 million) of the defined benefit obligations and € 343.6 million (2013: € 293.1 million) of the plan assets. These obligations result from a benefit plan which is based on years of service and final salary and was closed to newly hired employees in 2006. The agreed benefits comprise old-age, disability and surviving dependent benefits. The employer and the employees make contributions to the plan. Statutory minimum funding obligations also exist in the United Kingdom.

In the reporting period, the following items were recognized in income:

€ million	2014	2013
Current service cost	83.5	82.7
Past service cost	– 2.5	2.6
Gains (–) or losses (+) on settlement	– 4.3	– 2.8
Other effects recognized in income	1.8	1.0
Interest expense	101.9	92.9
Interest income	– 67.2	– 52.1
Total amount recognized in income	**113.2**	**124.3**

With the exception of the net balance of interest expense on the defined benefit obligations and interest income from the plan assets, which is recorded under the financial result, the relevant expenses for defined benefit and defined contribution pension systems are allocated to the individual functional areas.

During the reporting period, the present value of the defined pension obligations changed as follows:

€ million	Funded benefit obligations	Benefit obligations funded by provisions	2014	Funded benefit obligations	Benefit obligations funded by provisions	2013
Present value of the defined benefit obligations on January 1	2,533.0	203.8	2,736.8	2,615.7	214.4	2,830.1
Currency translation differences	39.2	3.1	42.3	– 27.2	– 3.5	– 30.7
Current service cost	73.0	10.5	83.5	72.5	10.2	82.7
Past service cost	– 2.0	– 0.5	– 2.5	2.6	–	2.6
Gains (–) or losses (+) on settlement	– 3.2	–1.1	– 4.3	– 2.2	– 0.6	– 2.8
Interest expense	92.6	9.0	101.6	85.4	7.5	92.9
Actuarial gains (–)/losses (+)	849.2	73.8	923.0	– 49.5	–10.8	– 60.3
Contributions by plan participants	7.2	–	7.2	7.0	–	7.0
Pension payments	– 94.0	– 5.9	– 99.9	–178.5	– 7.3	–185.8
Changes in the scope of consolidation	8.3	17.4	25.7	–	–	–
Other effects recognized in income	–	0.1	0.1	– 0.3	– 0.5	– 0.8
Other changes	0.3	–1.1	– 0.8	7.5	– 5.6	1.9
Fair value of the plan assets on December 31	**3,503.6**	**309.1**	**3,812.7**	**2,533.0**	**203.8**	**2,736.8**

The following overview shows how the present value of all defined benefit obligations would have been influenced by changes to definitive actuarial assumptions. To determine the sensitivities, in principle each of the observed parameters was varied while keeping the measurement assumptions otherwise constant. Insofar as its development of social security is comparable to salary trends, the amounts for social security vary together with the salary trend.

€ million	Dec. 31, 2014
Present value of all defined benefit obligations if	
the discount rate is 50 basis points higher	3,463.7
the discount rate is 50 basis points lower	4,218.1
the expected rate of future salary increases is 50 basis points higher	3,947.7
the expected rate of future salary increases is 50 basis points lower	3,690.7
the expected rate of future pension increases is 50 basis points higher	4,028.0
the expected rate of future pension increases is 50 basis points lower	3,633.7
the medical cost trend rate is 50 basis points higher	3,813.7
the medical cost trend rate is 50 basis points lower	3,811.8

The fair value of the plan assets changed in the reporting period as follows:

€ million	2014	2013
Fair value of the plan assets on January 1	1,840.2	1,633.6
Currency translation differences	33.7	– 22.1
Interest income from plan assets	67.2	52.1
Actuarial gains (+) / losses (–) arising from experience adjustments	50.7	49.0
Funding CTA	–	200.0
Employer contributions	27.2	39.9
Employee contributions	7.2	7.0
Pension payments from plan assets	– 32.8	– 119.1
Changes in the scope of consolidation	3.0	–
Plan administration costs paid from the plan assets recognized in income	– 1.9	– 1.7
Other effects recognized in income	0.2	– 0.1
Other changes	– 0.3	1.6
Fair value of the plan assets on December 31	**1,994.4**	**1,840.2**

The actual return on plan assets amounted to € 117.9 million in 2014 (2013: income of € 101.1 million). Changes in the effects of the asset ceilings in accordance with IAS 19.64 were recognized in the amount of € 10.8 million as actuarial gains (2013: € 10.5 million in actuarial losses) and € 0.3 million as interest expenses (2013: € 0.0 million). The effects of the asset ceilings as of the balance sheet date amounted to € 0.0 million (2013: € 10.5 million).

The development of cumulative actuarial gains (+) and losses (–) was as follows:

€ million	2014	2013
Cumulative actuarial gains (+)/losses (–) recognized in equity on January 1	– 694.8	– 795.6
Currency translation differences	– 12.1	2.0
Remeasurements of defined benefit obligations		
Actuarial gains (+)/losses (–) arising from changes in demographic assumptions	19.1	– 1.1
Actuarial gains (+)/losses (–) arising from changes in financial assumptions	– 915.2	88.6
Actuarial gains (+)/losses (–) arising from experience adjustments	– 26.9	– 27.2
Remeasurements of plan assets		
Actuarial gains (+)/losses (–) arising from experience adjustments	50.7	49.0
Effects of the asset ceilings		
Actuarial gains (+)/losses (–)	10.8	– 10.5
Reclassification within retained earnings	–	–
Cumulative actuarial gains (+)/losses (–) recognized in equity on December 31	**– 1,568.4**	**– 694.8**

Plan assets for funded defined benefit obligations primarily comprised fixed-income securities, stocks, and investment funds. They did not include financial instruments issued by Group companies or real estate used by Group companies.

The plan assets serve exclusively to meet the defined benefit obligations. Covering the benefit obligations with financial assets represents a means of providing for future cash outflows, which occur in some countries (e.g. Switzerland and the United Kingdom) on the basis of legal requirements and in other countries (e.g. Germany) on a voluntary basis.

The ratio of the fair value of the plan assets to the present value of the defined benefit obligations is referred to as the degree of pension plan funding. If the benefit obligations exceed the plan assets, this represents underfunding of the pension fund.

It should be noted, however, that both the benefit obligations as well as the plan assets fluctuate over time. This could lead to an increase in underfunding. Depending on the statutory regulations, it could become necessary in some countries for the Group to reduce underfunding through additions of liquid assets. The reasons for such fluctuations could include changes in market interest rates and thus the discount rate as well as adjustments to other actuarial assumptions (e.g. life expectancy, inflation rates).

In order to minimize such fluctuations, in managing its plan assets, the Group also pays attention to potential fluctuations in liabilities. In the ideal case, assets and liabilities develop in opposite directions when exposed to exogenous factors, creating a natural defense against these factors. In order to achieve this effect, the corresponding use of financial instruments is considered in respect of individual pension plans.

The fair value of the plan assets can be allocated to the following categories:

	Dec. 31, 2014			Dec. 31, 2013		
€ million	Quoted market price in an active market	No quoted market price in an active market	Total	Quoted market price in an active market	No quoted market price in an active market	Total
Cash and cash equivalents	167.0	–	167.0	522.8	0.1	522.9
Equity instruments	544.9	–	544.9	433.8	0.9	434.7
Debt instruments	662.5	–	662.5	589.2	0.5	589.7
Direct investments in real estate	–	84.7	84.7	–	79.1	79.1
Investment funds	371.3	–	371.3	136.7	–	136.7
Insurance contracts	–	74.9	74.9	–	71.4	71.4
Other	88.2	0.9	89.1	5.7	–	5.7
Fair value of the plan assets	**1,833.9**	**160.5**	**1,994.4**	**1,688.2**	**152.0**	**1,840.2**

Employer contributions to plan assets and direct payments to beneficiaries will probably amount to around € 93.3 million in 2015. The weighted duration amounted to 20 years.

The cost of ongoing contributions for defined contribution plans that are financed exclusively by external funds and for which the companies of the Group are only obliged to pay the contributions amounted to € 38.7 million (2013: € 19.3 million). In addition, employer contributions amounting to € 57.2 million (2013: € 55.5 million) were transferred to the German statutory pension insurance system and € 28.5 million (2013: € 29.7 million) to statutory pension insurance systems abroad.

(50) EQUITY

Equity capital

The total capital of the company consists of the share capital composed of shares and the equity interest held by the general partner E. Merck KG, Darmstadt, Germany. As of the balance sheet date, the company's share capital amounting to € 168.0 million was divided into 129,242,251 no-par value bearer shares plus one registered share and is disclosed as subscribed capital. The number of shares doubled compared to the previous year, after the Annual General Meeting of Merck KGaA, Darmstadt, Germany, resolved a 1:2 stock split, which was implemented as of June 30, 2014.

The amount resulting from the issue of shares by Merck KGaA, Darmstadt, Germany, exceeding the nominal amount was recognized in the capital reserves. The equity interest held by the general partner amounted to € 397.2 million.

Share of net profit of E. Merck KG, Darmstadt, Germany

E. Merck KG, Darmstadt, Germany, and Merck KGaA, Darmstadt, Germany, engage in reciprocal net profit transfers. This makes it possible for E. Merck KG, Darmstadt, Germany, the general partner of Merck KGaA, Darmstadt, Germany, and the shareholders to participate in the net profit / loss of Merck KGaA, Darmstadt, Germany, in accordance with the ratio of the general partner's equity interest and the share capital (70.274 % or 29.726 % of the total capital).

The allocation of net profit / loss is based on the net income of E. Merck KG, Darmstadt, Germany, determined in accordance with the provisions of the German Commercial Code as well as the income / loss from ordinary activities and the extraordinary result of Merck KGaA, Darmstadt, Germany. These results are adjusted for trade tax and create the basis for the allocation of net profit / loss.

The reciprocal net profit/loss transfer between E. Merck KG, Darmstadt, Germany, and Merck KGaA, Darmstadt, Germany, as stipulated by the Articles of Association was as follows:

€ million		2014		2013	
		E. Merck KG, Darmstadt, Germany	Merck KGaA, Darmstadt, Germany	E. Merck KG, Darmstadt, Germany	Merck KGaA, Darmstadt, Germany
Result of E. Merck KG, Darmstadt, Germany		–17.9	–	–9.2	–
Result of ordinary activities of Merck KGaA, Darmstadt, Germany		–	651.2	–	534.9
Extraordinary result		–	–	–	–
Adjustment for trade tax in accordance with Art. 27 (1) Articles of Association of Merck KGaA, Darmstadt, Germany		–3.1	–	–	–
Trade tax in accordance with Art. 30 (1) Articles of Association of Merck KGaA, Darmstadt, Germany		–	–54.2	–	–34.6
Basis for appropriation of profits	**(100%)**	**–21.0**	**597.0**	**–9.2**	**500.3**
Profit transfer to E. Merck KG, Darmstadt, Germany Ratio of general partner's capital to total capital	(70.274%)	419.5	–419.5	351.6	–351.6
Profit transfer from E. Merck KG, Darmstadt, Germany Ratio of share capital to total capital	(29.726%)	6.3	–6.3	2.7	–2.7
Trade tax		3.1	–	–	–
Corporation tax		–	–22.8	–	–12.0
Net income		**407.9**	**148.4**	**345.1**	**134.0**

The result of E. Merck KG, Darmstadt, Germany, on which the appropriation of profits adjusted for trade tax is based amounted to € –21.0 million (2013: € –9.2 million). This led to a result transfer to the company of € –6.3 million (2013: € –2.7 million). Result from ordinary activities of Merck KGaA, Darmstadt, Germany, adjusted for trade tax and extraordinary result, on which the appropriation of its profit is based, amounted to € 597.0 million (2013: € 500.3 million). Merck KGaA, Darmstadt, Germany, transferred € 419.5 million of its profit to E. Merck KG, Darmstadt, Germany (2013: € 351.6 million). In addition, an expense from corporation tax charges amounting to € 22.8 million resulted (2013: expense of € 12.0 million). Corporation tax is only calculated on the income received by shareholders. Its equivalent is the income tax applicable to E. Merck KG, Darmstadt, Germany. However, this must be paid by the partners of E. Merck KG, Darmstadt, Germany, directly and is not disclosed in the annual financial statements.

Appropriation of profits

The profit distribution to be resolved upon by shareholders also defines the amount of that portion of net profit/loss freely available to E. Merck KG, Darmstadt, Germany. If the shareholders resolve to carry forward or to allocate to retained earnings a portion of the net retained profit of Merck KGaA, Darmstadt, Germany, to which they are entitled, then E. Merck KG, Darmstadt, Germany, is obligated to allocate to the profit brought forward/retained earnings of Merck KGaA, Darmstadt, Germany, a comparable sum determined in accordance with the ratio of share capital to general partner's capital. This ensures that the retained earnings and the profit carried forward of Merck KGaA, Darmstadt, Germany, correspond to the ownership ratios of the shareholders on the one hand and E. Merck KG, Darmstadt, Germany, on the other hand. Consequently, for distributions to E. Merck KG, Darmstadt, Germany, only the amount is available that results after netting the profit transfer of the company with the amount either allocated or withdrawn by E. Merck KG, Darmstadt, Germany, from retained earnings/profit carried forward. This amount corresponds to the amount that is paid as a dividend to the shareholders, and reflects their pro rata shareholding in the company.

€ million	2014		2013	
	E. Merck KG, Darmstadt, Germany	Merck KGaA, Darmstadt, Germany	E. Merck KG, Darmstadt, Germany	Merck KGaA, Darmstadt, Germany
Net income	407.9	148.4	345.1	134.0
Profit carried forward from previous year	26.3	11.2	–	–
Withdrawal from revenue reserves	–	–	–	–
Transfer to revenue reserves	–	–	–	–
Retained earnings Merck KGaA, Darmstadt, Germany		**159.6**		**134.0**
Withdrawal by E. Merck KG, Darmstadt, Germany	– 362.3		– 318.8	
Dividend proposal		–129.2		–122.8
Profit carried forward	**71.9**	**30.4**	**26.3**	**11.2**

For 2013, a dividend of € 1.90 per share was distributed. The dividend proposal for fiscal 2014 will be € 1.00 per share, taking into account the doubling of the number of shares since June 2014. The proposed payment to shareholders amounts to € 129.2 million (2013: € 122.8 million). The amount withdrawn by E. Merck KG, Darmstadt, Germany, would amount to € 362.3 million (2013: € 318.8 million).

Changes in reserves

For 2014 the profit transfer to E. Merck KG, Darmstadt, Germany, including changes in reserves amounted to € 435.0 million. This consists of the profit transfer to E. Merck KG, Darmstadt, Germany (€ – 419.5 million), the result transfer from E. Merck KG, Darmstadt, Germany, to Merck KGaA, Darmstadt, Germany (€ – 6.3 million), the change in the profit carried forward of E. Merck KG, Darmstadt, Germany (€ 45.6 million) as well as the profit transfer from Merck & Cie, a subsidiary of Merck KGaA, Darmstadt, Germany, to E. Merck KG, Darmstadt, Germany (€ – 54.8 million). Merck & Cie is a partnership under Swiss law that is controlled by Merck KGaA, Darmstadt, Germany, but distributes its operating result directly to E. Merck KG, Darmstadt, Germany. This distribution is a payment to shareholders, which is why it is likewise presented under changes in equity.

Non-controlling interests

The disclosure of non-controlling interests was based on the stated equity of the subsidiaries concerned after any adjustment required to ensure compliance with the accounting policies of the Group, as well as pro rata consolidation entries.

The net equity attributable to non-controlling interests mainly related to the minority interests in the publicly traded companies Merck Ltd., India, a subsidiary of Merck KGaA, Darmstadt, Germany, and P.T. Merck Tbk, Indonesia, a subsidiary of Merck KGaA, Darmstadt, Germany, as well as Merck Ltd. Thailand, a subsidiary of Merck KGaA, Darmstadt, Germany, and Merck (Pvt.) Ltd., Pakistan, a subsidiary of Merck KGaA, Darmstadt, Germany.

For an interim period, non-controlling interests of € 161.9 million existed in the course of the acquisition of AZ Electronic Materials S.A. The acquisition of these interests after May 2, 2014 was recognized in equity as a transaction without a change of control. This lowered retained earnings by € 189.4 million, corresponding to the difference between the purchase price of € 351.3 million paid for the remaining shares and the disposal of non-controlling interests in the amount of € 161.9 million.

SEGMENT REPORTING

(51) INFORMATION BY DIVISION/COUNTRY AND REGION

INFORMATION BY DIVISION

	Biopharmaceuticals[1]		Consumer Health[1]	
€ million	2014	2013	2014	2013
Sales	5,783.3	5,688.4	766.1	742.1
Royalty, license and commission income	191.7	372.0	2.7	2.9
Total revenues	**5,975.0**	**6,060.4**	**768.8**	**745.0**
Cost of sales[2]	–1,119.7	–1,024.4	–250.7	–243.0
(of which: amortization of intangible assets)[2]	*(–)*	*(–)*	*(–)*	*(–)*
Gross profit[2]	**4,855.3**	**5,036.0**	**518.1**	**502.0**
Marketing and selling expenses[2]	–1,780.2	–1,813.6	–303.1	–287.2
(of which: amortization of intangible assets)[2]	*(–552.8)*	*(–596.7)*	*(–2.7)*	*(–2.4)*
Royalty, license and commission expenses	–518.3	–547.3	–2.6	–2.4
Administration expenses	–219.7	–202.5	–27.2	–26.9
Research and development costs[2]	–1,343.7	–1,178.1	–22.3	–21.8
(of which: amortization of intangible assets)[2]	*(–1.0)*	*(–)*	*(–)*	*(–)*
Other operating expenses and income	–36.9	–501.4	–13.0	–1.5
Operating result (EBIT)	**956.5**	**793.1**	**149.9**	**162.1**
Depreciation and amortization	739.2	797.4	10.0	8.6
Impairment losses	90.3	196.4	0.5	0.3
Reversals of impairment losses	–	–0.3	–	–
EBITDA	**1,786.0**	**1,786.6**	**160.4**	**171.0**
One-time items	44.9	68.5	9.0	1.4
EBITDA pre one-time items (segment result)	**1,830.9**	**1,855.1**	**169.4**	**172.4**
EBITDA margin pre one-time items (in % of sales)	31.7	32.6	22.1	23.2
Net operating assets	5,623.6	6,811.9	417.4	414.3
Segment liabilities	–2,394.4	–1,358.0	–113.5	–74.5
Investments in property, plant and equipment[3]	215.0	151.3	10.2	3.7
Investments in intangible assets[3]	111.5	80.6	2.6	0.4
Net cash flows from operating activities	2,120.3	1,739.8	167.0	146.2
Business free cash flow	1,577.2	1,787.1	124.0	172.5

[1] Previous year's figures have been adjusted, see Note "Information on Segment Reporting".
[2] The disclosure of amortization of intangible assets (excluding software) has been changed. See Note "Accounting and measurement principles".
[3] According to the consolidated cash flow statement.

Performance Materials		Life Science		Corporate and Other		Group	
2014	2013	2014	2013	2014	2013	2014	2013
2,059.6	1,642.1	2,682.5	2,627.5	–	–	11,291.5	10,700.1
0.9	2.3	14.0	17.8	–	–	209.3	395.0
2,060.5	**1,644.4**	**2,696.5**	**2,645.3**	**–**	**–**	**11,500.8**	**11,095.1**
–983.2	–617.1	–1,168.7	–1,152.3	–4.1	–4.9	–3,526.4	–3,041.7
(–46.4)	*(–1.2)*	*(–47.6)*	*(–48.0)*	*(–)*	*(–)*	*(–94.0)*	*(–49.2)*
1,077.3	**1,027.3**	**1,527.8**	**1,493.0**	**–4.1**	**–4.9**	**7,974.4**	**8,053.4**
–177.8	–151.6	–844.1	–835.2	0.3	–1.0	–3,104.9	–3,088.5
(–11.7)	*(–11.1)*	*(–151.8)*	*(–151.9)*	*(–)*	*(–)*	*(–719.0)*	*(–762.0)*
–1.1	–1.3	–15.6	–16.1	0.1	0.1	–537.5	–567.0
–56.1	–27.8	–110.4	–99.2	–195.2	–206.0	–608.6	–562.4
–170.6	–145.4	–162.6	–159.8	–4.5	–1.6	–1,703.7	–1,506.6
(–2.8)	*(–2.3)*	*(–)*	*(–)*	*(–)*	*(–)*	*(–3.8)*	*(–2.3)*
–60.2	–47.9	–105.9	–120.7	–41.7	–46.6	–257.7	–718.1
611.5	**653.3**	**289.2**	**262.0**	**–245.1**	**–259.7**	**1,762.0**	**1,610.8**
190.0	107.7	308.1	309.2	14.3	15.0	1,261.6	1,237.9
2.7	9.3	1.6	18.8	5.1	0.8	100.2	225.6
–0.6	–4.5	–	–0.2	–0.3	–0.1	–0.9	–5.1
803.6	**765.8**	**598.9**	**589.8**	**–226.0**	**–244.0**	**3,122.9**	**3,069.2**
91.2	13.9	59.7	53.0	60.0	47.3	264.8	184.1
894.8	**779.7**	**658.6**	**642.8**	**–166.0**	**–196.7**	**3,387.7**	**3,253.3**
43.4	47.5	24.6	24.5	–	–	30.0	30.4
3,348.6	1,044.7	6,196.3	5,987.1	126.1	36.0	15,712.0	14,294.0
–355.4	–155.9	–434.6	–391.9	–56.5	–64.8	–3,354.4	–2,045.1
91.5	66.5	130.6	112.6	33.6	72.9	480.9	407.0
7.5	6.7	6.5	10.3	15.2	11.6	143.3	109.6
900.4	828.4	580.0	557.5	–1,062.2	–1,046.4	2,705.5	2,225.5
699.6	787.8	419.0	493.8	–214.7	–281.2	2,605.1	2,960.0

INFORMATION BY COUNTRY AND REGION

€ million	Europe 2014	Europe 2013	thereof Germany 2014	thereof Germany 2013	thereof France 2014	thereof France 2013	thereof Switzerland 2014	thereof Switzerland 2013
Sales by customer location	4,014.6	3,984.6	845.2	825.4	648.3	677.0	149.3	159.0
Sales by company location	4,520.1	4,457.5	1,592.0	1,570.8	779.1	790.8	182.5	188.6
Total revenues	4,674.1	4,686.6	1,618.0	1,596.8	840.1	812.5	247.5	364.5
Intangible assets	7,966.3	7,572.4	448.9	398.0	269.2	278.0	4,151.4	4,692.3
Property, plant and equipment	2,163.1	2,075.2	1,032.8	997.5	205.4	183.6	498.2	508.0
Research and development costs[1]	–1,550.7	–1,359.7	–816.0	–851.3	–56.9	–56.4	–604.8	–411.4
Number of employees	20,537	20,013	11,191	10,868	2,943	2,946	1,347	1,232

[1] The disclosure of amortization of intangible assets (excluding software) has been changed. See Note "Accounting and measurement principles".

(52) INFORMATION ON SEGMENT REPORTING

Segmentation was performed in accordance with the organizational and reporting structure of the Group that applied during 2014.

The Biopharmaceuticals division focuses on specialist therapeutic areas and markets innovative prescription drugs of chemical and biotechnological origin. The Consumer Health division comprises the Group's business with high-quality over-the-counter products for preventive health care and self-treatment of minor ailments. The Performance Materials division consists of the Liquid Crystals, Pigments & Cosmetics and Advanced Technologies business units as well as the businesses of the AZ Electronic Materials Group, which were added in 2014. The Life Science division offers solutions to research and analytical laboratories in the pharmaceutical / biotechnology industry or in academic institutions, and customers manufacturing large- and small-molecule drugs. The fields of activity of the individual divisions are described in detail in the sections about the divisions in the Group management report.

Corporate and Other includes assets and liabilities as well as income and expenses that are largely allocable to Group functions and thus cannot be directly allocated to the reportable segments presented; it serves the reconciliation to the Group numbers. The cash flows attributable to the financial result and income taxes are also presented under Corporate and Other.

Apart from sales, the success of a segment is mainly determined by EBITDA pre one-time items (segment result) and business free cash flow. EBITDA pre one-time items and business free cash flow are performance indicators not defined by International Financial Reporting Standards. However, they represent important variables used to steer the Group. To permit a better understanding of operational performance, EBITDA pre one-time items excludes depreciation and amortization in addition to specific income and expenses of a one-time nature presented in the following. Among other things, business free cash flow is also used for internal target agreements and individual incentive plans.

Transfer prices for intragroup sales are determined on an arm's-length basis.

The Emerging Markets region comprises Latin America and Asia with the exception of Japan. The Rest of World region comprises Japan, Africa and Australia / Oceania.

Neither in 2014 nor in 2013 did any single customer account for more than 10 % of Group sales.

North America		thereof USA		Emerging Markets		Rest of World		Group	
2014	2013	2014	2013	2014	2013	2014	2013	2014	2013
2,152.2	2,078.0	2,009.9	1,916.8	4,250.2	3,795.6	874.5	841.9	11,291.5	10,700.1
2,142.3	2,072.7	2,022.3	1,933.1	3,909.9	3,467.1	719.2	702.8	11,291.5	10,700.1
2,142.9	2,077.1	2,022.9	1,937.5	3,957.0	3,622.3	726.8	709.1	11,500.8	11,095.1
2,522.5	2,214.8	2,522.3	2,214.5	745.7	46.5	161.0	33.5	11,395.5	9,867.2
416.2	341.6	415.1	340.4	295.4	169.3	115.7	61.1	2,990.4	2,647.2
–90.4	–92.5	–88.7	–94.7	–47.2	–36.6	–15.4	–17.8	–1,703.7	–1,506.6
5,092	4,911	4,939	4,754	12,176	11,688	1,834	1,542	39,639	38,154

The following table presents the reconciliation of EBITDA pre one-time items of all operating businesses to the profit before income tax of the Group:

€ million	2014	2013
Total EBITDA pre one-time items of the operating businesses	**3,553.7**	**3,450.0**
Corporate and Other	–166.0	–196.7
EBITDA pre one-time items of the Group	**3,387.7**	**3,253.3**
Depreciation and amortization / impairment losses / reversals of impairments	–1,360.9	–1,458.4
One-time items	–264.8	–184.1
Operating result (EBIT)	**1,762.0**	**1,610.8**
Financial result	–205.0	–222.2
Profit before income tax	**1,557.0**	**1,388.6**

EBITDA pre one-time items of all operating businesses totaled € 3,553.7 million (2013: € 3,450.0 million). Taking into account the expenses and income of € –166.0 million (2013: € –196.7 million) not allocable to the operating businesses which were reported under Corporate and Other, EBITDA pre one-time items of the Group amounted to € 3,387.7 million (2013: € 3,253.3 million). This figure did not include depreciation, amortization, impairments and reversals of impairments or one-time items (excluding impairments and reversals of impairments). Consequently, the total operating result (EBIT) of the Group amounted to € 1,762.0 million (2013: € 1,610.8 million).

One-time items comprised the following:

€ million	2014	2013
Integration costs / IT costs	– 87.2	– 49.0
Acquisition-related one-time items	– 85.0	–
Restructuring costs	– 83.9	–130.5
Gains / losses on the divestment of businesses	1.9	– 2.3
Other one-time items	–10.6	– 2.3
One-time items	**– 264.8**	**–184.1**
Impairment losses	– 9.8	– 207.2
Reversals of impairments	–	4.5
One-time items (total)	**– 274.6**	**– 386.8**

Of the acquisition-related one-time items of € 85.0 million (2013: € 0.0 million), € 60.5 million related to the step-up of the acquired inventories of AZ Electronic Materials S.A. (AZ).

Additionally, this figure included acquisition costs of € 24.5 million for the acquisition of AZ and the planned acquisition of the Sigma-Aldrich Corporation, USA.

Business free cash flow was determined as follows:

€ million	2014	2013
EBITDA pre one-time items	**3,387.7**	**3,253.3**
Less investments in property, plant and equipment, software as well as advance payments for intangible assets	– 527.5	– 446.2
Changes in inventories as reported in the balance sheet	–185.5	59.7
Changes in trade accounts receivable as reported in the balance sheet	– 214.2	93.2
Adjustment first-time consolidation of AZ Electronic Materials S.A.	144.6	–
Business free cash flow	**2,605.1**	**2,960.0**

The reconciliation of operating assets presented in the Segment Reporting to the total assets of the Group was as follows:

€ million	Dec. 31, 2014	Dec. 31, 2013
Assets	26,010.1	20,818.6
Monetary assets (cash and cash equivalents, current financial assets, loans and securities)	– 5,563.1	– 3,539.3
Non-operating receivables, income tax receivables, deferred taxes and net defined benefit assets	– 1,380.6	– 913.1
Assets held for sale	–	– 27.1
Operating assets (gross)	**19,066.4**	**16,339.1**
Trade accounts payable	– 1,539.4	– 1,364.1
Other operating liabilities	– 1,815.0	– 681.0
Segment liabilities	**– 3,354.4**	**– 2,045.1**
Operating assets (net)	**15,712.0**	**14,294.0**

The operating assets (gross) of the Group are determined by adjusting all assets totaling € 26,010.1 million (2013: € 20,818.6 million) for monetary assets totaling € 5,563.1 million (2013: € 3,539.3 million) as well as all other non-operating assets totaling € 1,380.6 million (2013: € 913.1 million). Furthermore, in 2013 assets held for sale of € 27.1 million were not included in operating assets. After deducting the reported segment liabilities which represented the operating liabilities totaling € 3,354.3 million (2013: € 2,045.1 million), the operating assets (net) of the Group amounted to € 15,712.0 million (2013: € 14,294.0 million).

As of January 1, 2014, the two product groups Neurobion® (vitamin B-based analgesic) and Floratil® (a probiotic antidiarrheal) were transferred from the Biopharmaceuticals division to the Consumer Health division. This involved a transfer of goodwill in the amount of € 78.8 million, which had been allocated previously to the Biopharmaceuticals division. The transfer of the product groups resulted in the following adjustments of prior-year figures, taking into account the adjusted disclosure of amortization of intangible assets:

	Biopharmaceuticals			
€ million	2013 reported	Product group transfer adjustments	Disclosure change[1]	2013 adjusted
Sales	5,953.6	– 265.2	–	5,688.4
Royalty, license and commission income	372.2	– 0.2	–	372.0
Total revenues	**6,325.8**	**– 265.4**	**–**	**6,060.4**
Cost of sales[1]	–1,106.1	81.7	–	–1,024.4
(of which: amortization of intangible assets)[1]	*(–)*	*(–)*	*(–)*	*(–)*
Gross profit[1]	**5,219.7**	**–183.7**	**–**	**5,036.0**
Marketing and selling expenses[1]	–1,288.7	71.8	– 596.7	–1,813.6
(of which: amortization of intangible assets)[1]	*(–)*	*(–)*	*(– 596.7)*	*(– 596.7)*
Royalty, license and commission expenses	– 547.7	0.4	–	– 547.3
Administration expenses	– 211.3	8.8	–	– 202.5
Research and development costs[1]	–1,182.8	4.7	–	–1,178.1
(of which: amortization of intangible assets)[1]	*(–)*	*(–)*	*(–)*	*(–)*
Other operating expenses and income	– 499.4	– 2.0	–	– 501.4
Operating result (EBIT)	**893.0**	**– 99.9**	**–**	**793.1**
Depreciation and amortization	797.4	–	–	797.4
Impairment losses	196.4	–	–	196.4
Reversals of impairment losses	– 0.3	–	–	– 0.3
EBITDA	**1,886.5**	**– 99.9**	**–**	**1,786.6**
One-time items	68.5	–	–	68.5
EBITDA pre one-time items (Segment result)	**1,955.0**	**– 99.9**	**–**	**1,855.1**
EBITDA margin pre one-time items (% of sales)	32.8	– 0.2	–	32.6
Net operating assets	6,968.0	–156.1	–	6,811.9
Segment liabilities	–1,358.0	–	–	–1,358.0
Investments in property, plant and equipment[2]	151.3	–	–	151.3
Investments in intangible assets[2]	80.6	–	–	80.6
Net cash flows from operating activities	1,818.9	– 79.1	–	1,739.8
Business free cash flow	1,875.7	– 88.6	–	1,787.1

[1] The disclosure of amortization of intangible assets (excluding software) has been changed. See Note "Accounting and measurement principles".
[2] According to the consolidated cash flow statement.

€ million	Consumer Health			
	2013 reported	Product group transfer adjustments	Disclosure change[1]	2013 adjusted
Sales	476.9	265.2	–	742.1
Royalty, license and commission income	2.7	0.2	–	2.9
Total revenues	**479.6**	**265.4**	**–**	**745.0**
Cost of sales[1]	–161.3	–81.7	–	–243.0
(of which: amortization of intangible assets)[1]	*(–)*	*(–)*	*(–)*	*(–)*
Gross profit[1]	**318.3**	**183.7**	**–**	**502.0**
Marketing and selling expenses[1]	–213.0	–71.8	–2.4	–287.2
(of which: amortization of intangible assets)[1]	*(–)*	*(–)*	*(–2.4)*	*(–2.4)*
Royalty, license and commission expenses	–2.0	–0.4	–	–2.4
Administration expenses	–18.1	–8.8	–	–26.9
Research and development costs[1]	–17.1	–4.7	–	–21.8
(of which: amortization of intangible assets)[1]	*(–)*	*(–)*	*(–)*	*(–)*
Other operating expenses and income	–3.5	2.0	–	–1.5
Operating result (EBIT)	**62.2**	**99.9**	**–**	**162.1**
Depreciation and amortization	8.6	–	–	8.6
Impairment losses	0.3	–	–	0.3
Reversals of impairment losses	–	–	–	–
EBITDA	**71.1**	**99.9**	**–**	**171.0**
One-time items	1.4	–	–	1.4
EBITDA pre one-time items (Segment result)	**72.5**	**99.9**	**–**	**172.4**
EBITDA margin pre one-time items (% of sales)	15.2	8.0	–	23.2
Net operating assets	258.2	156.1	–	414.3
Segment liabilities	–74.5	–	–	–74.5
Investments in property, plant and equipment[2]	3.7	–	–	3.7
Investments in intangible assets[2]	0.4	–	–	0.4
Net cash flows from operating activities	67.1	79.1	–	146.2
Business free cash flow	83.9	88.6	–	172.5

[1] The disclosure of amortization of intangible assets (excluding software) has been changed. See Note "Accounting and measurement principles".
[2] According to the consolidated cash flow statement.

NOTES TO THE CONSOLIDATED CASH FLOW STATEMENT

The cash flow statement has been prepared in accordance with IAS 7 "Statement of Cash Flows". It presents the changes in cash and cash equivalents as a result of cash inflows and outflows in the year under review. Further information on cash flows can be found in the explanation of cash and cash equivalents (see Note [35]). The amount of undrawn borrowing facilities that could be tapped for future operating activities and to meet obligations is disclosed in Note [44].

The cash flows reported by Group companies in non-functional currencies are translated at average exchange rates. Cash and cash equivalents are translated at the closing rates. The impact of foreign exchange rate changes is disclosed separately under changes in cash and cash equivalents.

Within the cash flows from investing activities reclassifications were made with the aim of a clearer and more understandable presentation. The 2013 figures were correspondingly adjusted.

(53) NET CASH FLOWS FROM OPERATING ACTIVITIES

In 2014, tax payments totaled € 667.8 million (2013: € 491.4 million). Tax refunds totaled € 54.9 million (2013: €85.9 million). Interest paid totaled € 191.1 million (2013: € 248.3 million). Interest received amounted to € 89.4 million (2013: € 89.5 million). Within the scope of a Contractual Trust Arrangement in Germany, € 200.0 million was transferred to Merck Pensionstreuhand e. V., Darmstadt, (trustee) in 2013. This led to a corresponding decline in pension provisions and to a decrease in cash flows from operating activities. No transfers were made in 2014.

The changes in provisions during the reporting period were affected by the written settlement reached with Israel Bio-Engineering Limited Partnership (IBEP). The changes in other assets and liabilities included the upfront payment in the amount of US$ 850 million (€ 678.3 million) paid in cash by Pfizer Inc., USA, after the agreement had been entered into (see Note [5]).

Net cash flows from operating activities broken down by the segments of the Group are disclosed in Note [51].

(54) NET CASH FLOWS FROM INVESTING ACTIVITIES

A total of € 4,562.6 million was used for acquisitions and investments in financial assets (2013: € 990.3 million). Of this amount, € 1,419.3 million was attributable to the acquisition of AZ Electronic Materials S.A., Luxembourg. Net cash outflows from investments in current and non-current assets amounting to € 3,143.3 million (2013: € 975.2 million) mainly resulted from the purchase of current financial assets.

In 2014, cash inflows from disposals of other current financial assets amounted to € 3,508.6 (2013: € 372.1 million). In 2013, cash inflows of € 251.1 million were attributable to the sale of the Biopharmaceuticals division's site in Geneva, Switzerland.

OTHER DISCLOSURES

(55) DERIVATIVE FINANCIAL INSTRUMENTS

The Group uses derivative financial instruments (hereinafter "derivatives") exclusively to hedge and reduce risks from currency and interest rate positions. The Group uses marketable forward exchange contracts, options and interest rate swaps as hedging instruments. Depending on the nature of the hedged item, changes in the fair values of derivatives are recorded in the income statement either in the operating result or in the financial result. The strategy to hedge interest rate and foreign exchange rate fluctuations arising from forecast transactions and transactions already recognized in the balance sheet is set by a Group risk committee, which meets on a regular basis. Extensive guidelines regulate the use of derivatives. There is a ban on speculation. Derivative transactions are subject to continuous risk management procedures. Trading, settlement and control functions are strictly separated. Derivatives are only entered into with banks that have a good credit rating. Related default risks are continuously monitored.

The following derivatives were held as of the balance sheet date:

	Nominal volume		Fair value	
€ million	Dec. 31, 2014	Dec. 31, 2013	Dec. 31, 2014	Dec. 31, 2013
Cash flow hedge	10,041.8	4,073.5	313.4	82.2
Interest	650.0	650.0	– 99.9	– 39.9
Currency	9,391.8	3,423.5	413.3	122.1
Fair value hedge	–	–	–	–
Interest	–	–	–	–
Currency	–	–	–	–
No hedge accounting	3,682.6	2,042.5	9.4	5.3
Interest	–	–	–	–
Currency	3,682.6	2,042.5	9.4	5.3
	13,724.4	**6,116.0**	**322.8**	**87.5**

The nominal volume corresponds to the total of all nominal values of currency hedges (translated at the closing rate into euros) as well as all the nominal values of interest rate hedges. The fair value results from the actuarial valuation of the derivatives on the basis of quoted prices or current market data as of the balance sheet date provided by a recognized information service and the application of a discount for own credit risk or counterparty credit risk. Any offsetting effects from hedged items are not taken into account in the derivatives' fair value. The maturities of the derivatives (nominal volume) were as follows as of the balance sheet date:

€ million	Remaining maturity less than 1 year	Remaining maturity more than 1 year	Total Dec. 31, 2014	Remaining maturity less than 1 year	Remaining maturity more than 1 year	Total Dec. 31, 2013
Foreign exchange contracts	11,942.6	433.9	12,376.5	3,763.2	1,244.9	5,008.1
Currency options	653.1	44.8	697.9	297.2	160.7	457.9
Interest rate swaps	100.0	550.0	650.0	–	650.0	650.0
	12,695.7	**1,028.7**	**13,724.4**	**4,060.4**	**2,055.6**	**6,116.0**

Currency hedging serves to economically protect the Group from the foreign exchange risks of the following types of transaction:

→ Forecast transactions in non-functional currency, the expected probability of which within the next 36 months is very high,
→ Off-balance sheet firm purchase commitments of the next 36 months in non-functional currency,
→ Intragroup financing in non-functional currency as well as
→ Receivables and liabilities in non-functional currency

Exchange rate fluctuations of mainly the following currencies against the euro were hedged:

Nominal volume € million	Dec. 31, 2014	Dec. 31, 2013
USD	10,233.5	3,219.9
JPY	920.8	465.2
CHF	431.2	603.4
GBP	383.6	347.3
TWD	255.5	215.3

Forecast transactions and firm purchase commitments in non-functional currency are hedged using forward exchange transactions and currency options which are due within the next 36 months. Overall, forecast transactions and firm purchase commitments in non-functional currency were hedged in the amount of € 9,044.6 million (2013: € 1,318.2 million). One of the major components is the hedge entered into in 2014 in relation to the expected U.S. dollar-denominated purchase price payment for the proposed acquisition of the Sigma-Aldrich Corporation, USA.

All hedging transactions for forecast transactions and firm purchase commitments in non-functional currency represent cash flow hedges.

Intragroup financing as well as receivables and payables in non-functional currency are hedged exclusively and fully using forward exchange contracts. Overall, balance sheet items amounting to € 4,029.8 million (2013: € 4,147.9 million) were hedged. In this context, the hedging transactions are largely purely economic hedges for which hedge accounting is not applied.

Interest hedges serve to economically protect the Group from the interest rate risks from the forecast and highly probable refinancing of a bond maturing in 2015 as well as from an existing variable interest private placement.

The planned refinancing was hedged to fix the interest rate level using forward started payer interest rate swaps with a nominal volume of € 550.0 million and interest payments from 2015 to 2022. The existing variable interest private placement was hedged using a payer interest rate swap with a nominal volume of € 100.0 million and interest payments until 2015. All interest hedging relationships represented cash flow hedges.

Overall, income of € 411.7 million (2013: € 125.5 million) from the fair value measurement of derivatives designated as cash flow hedges was recognized in equity in 2014. € 43.0 million was transferred from equity and recognized as income (2013: € 26.5 million recognized as income). In 2014, no ineffectiveness resulted from hedge accounting.

(56) MANAGEMENT OF FINANCIAL RISKS

Market fluctuations with respect to foreign exchange and interest rates represent significant profit and cash flow risks for the Group. The Group aggregates these Group-wide risks and steers them centrally also by using derivatives. The Group uses scenario analyses to estimate existing risks of foreign exchange and interest rate fluctuations. The Group is not subject to any material risk concentration from financial transactions. The Report on Risks and Opportunities included in the Group Management Report provides further information on the management of financial risks.

Foreign exchange risks

Owing to its international business focus, the Group is exposed to foreign exchange-related transaction risks within the scope of both ordinary business and financing activities. Different strategies are used to limit or eliminate these risks. Foreign exchange risks from recognized transactions are eliminated as far as possible through the use of forward exchange contracts. Foreign exchange risks arising from forecast transactions are analyzed regularly and reduced if necessary through forward exchange contracts or currency options by applying the hedge accounting rules.

The following table presents the net exposure of the Group in relation to exchange rate fluctuations of the major currencies against the euro:

€ million	CHF	CNY	JPY	TWD	USD
Net exposure Dec. 31, 2014	– 246.6	355.8	121.6	260.0	753.0
Net exposure Dec. 31, 2013	– 233.0	251.4	107.9	169.0	690.4

Net exposure per currency consists of the following components:

→ Balance sheet items in the respective currency, unless such currency corresponds to the functional currency of a company;

→ forecast cash flows for the next twelve months in the respective currency; and

→ derivatives used to hedge the abovementioned balance sheet items and forecast cash flows for the next twelve months.

The following table presents the effect of exchange rate fluctuations in the key currencies versus the euro on net income and Group equity:

€ million *Dec. 31, 2014*		CHF	CNY	JPY	TWD	USD
Exchange rate +10 % (Appreciation vs. EUR)	Consolidated income statement	0.0	0.0	0.1	0.0	0.0
	Total equity	0.0	0.0	–14.2	–10.8	844.1
Exchange rate –10 % (Depreciation vs. EUR)	Consolidated income statement	0.0	0.0	32.1	0.0	0.0
	Total equity	0.0	0.0	9.2	9.1	– 681.7

€ million *Dec. 31, 2013*		CHF	CNY	JPY	TWD	USD
Exchange rate +10 % (Appreciation vs. EUR)	Consolidated income statement	0.0	0.0	0.0	0.0	0.0
	Total equity	0.0	0.0	– 26.3	– 9.8	– 94.4
Exchange rate –10 % (Depreciation vs. EUR)	Consolidated income statement	0.0	0.0	0.0	0.0	0.0
	Total equity	0.0	0.0	19.0	6.7	69.8

In addition to the previously described transaction risks, Merck KGaA, Darmstadt, Germany, is also exposed to currency translation risks since many Group companies are located outside the eurozone. The financial statements of these companies are translated into euros. Exchange rate differences in the assets and liabilities of these companies resulting from currency translation are recognized directly in Group equity.

Interest rate risks

The Group's exposure to interest rate changes comprises the following:

€ million	2014	2013
Short-term or variable interest rate monetary deposits	5,131.9	3,236.3
Short-term or variable interest rate monetary borrowings	– 2,169.0	– 403.3
Net interest rate exposure	**2,962.9**	**2,833.0**

The effects of a parallel shift in the yield curve by +100 or –100 basis points on the income statement as well as on equity relative to all variable interest rate balance sheet items, all available-for-sale securities as well as all derivatives with a hedging relationship are presented in the following table:

€ million	2014		2013	
Change in market interest rate	+100 basis points	–100 basis points	+100 basis points	–100 basis points
thereof in the consolidated income statement	21.3	–1.3	11.6	– 2.4
thereof recognized in equity	40.5	– 22.9	33.4	– 38.9

The scenario calculations assumed that the interest rate cannot fall below 0 %.

Share price risks

The shares in publicly listed companies amounting to € 1.3 million (2013: € 5.0 million) are generally exposed to a market value risk. A 10 % change in the value of the stock market would impact equity by € 0.1 million (2013: € 0.5 million). This change in value would be recognized in profit or loss at the time of disposal.

Liquidity risks

The liquidity risk, meaning the risk that the Group cannot meet its payment obligations resulting from financial liabilities, is limited by establishing the required financial flexibility and by effective cash management. Apart from cash and cash equivalents of € 5,077.9 million (2013 € 3,391.3 million), the Group had at its disposal a multi-currency revolving credit facility of € 2 billion with a term running until 2019 and one extension option of one year as well as bilateral credit facilities and various bank credit lines of € 11,748.0 million (2013: € 267.2 million), mainly intended for the expected purchase price payment for the proposed acquisition of the Sigma-Aldrich Corporation, USA. There were no indications that the availability of credit facilities already extended was restricted. Moreover, a commercial paper program with a volume of € 2 billion and a debt issuance program with a volume of € 15 billion were available. Information on bonds issued by the Group can be found in Note [44].

Liquidity risks are monitored and reported to management on a regular basis. No liens or similar forms of collateral are provided for financial liabilities of the Group. The loan agreements do not contain any financial covenants.

Trade payables amounting to € 1,539.4 million (2013: € 1,364.1 million) had a remaining term of less than one year. With respect to liabilities from operating derivatives amounting to € 35.4 million (2013: € 2.1 million), € 29.0 million (2013: € 1.5 million) was short-term. Out of other financial liabilities amounting to € 696.1 million (2013: € 581.1 million), € 692.9 million (2013: € 578.9 million) was due within one year.

The following tables present the contractual cash flows such as repayments and interest on financial liabilities and derivative financial instruments with a negative fair value:

€ million as of Dec. 31, 2014	Carrying amount	Cash flows < one year		Cash flows 1–5 years		Cash flows > 5 years	
		Interest	Repayment	Interest	Repayment	Interest	Repayment
Bonds and commercial paper	4,624.2	170.9	1,450.0	442.3	342.1	197.6	2,850.0
Liabilities to banks	267.4	5.1	67.4	2.8	200.0	–	–
Liabilities to related parties	501.4	1.6	501.4	–	–	–	–
Loans from third parties and other financial liabilities	84.5	5.8	18.6	11.8	61.6	–	4.3
Liabilities from derivatives (financial transactions)	153.0	2.5	36.0	63.7	17.3	40.7	–
Financing leasing liabilities	6.5	0.2	2.8	0.2	3.7	–	–
	5,637.0	**186.1**	**2,076.2**	**520.8**	**624.7**	**238.3**	**2,854.3**

€ million as of Dec. 31, 2013	Carrying amount	Cash flows < one year		Cash flows 1–5 years		Cash flows > 5 years	
		Interest	Repayment	Interest	Repayment	Interest	Repayment
Bonds and commercial paper	3,142.7	127.8	–	333.8	1,722.1	124.5	1,420.0
Liabilities to banks	42.2	4.7	42.2	–	–	–	–
Liabilities to related parties	361.9	0.2	361.9	–	–	–	–
Loans from third parties and other financial liabilities	84.0	6.0	24.0	11.1	56.0	–	4.0
Liabilities from derivatives (financial transactions)	59.4	2.4	10.0	27.6	9.5	14.7	–
Financing leasing liabilities	7.7	0.4	2.3	0.1	5.0	–	0.4
	3,697.9	**141.5**	**440.4**	**372.6**	**1,792.6**	**139.2**	**1,424.4**

Credit risks

The Group is only subject to a relatively low credit risk, meaning the unexpected loss of payment funds or income. On the one hand, financial contracts are only entered into with banks and industrial companies with good credit ratings and on the other hand, due to the broad-based business structure of the Group, there is no particularly high concentration of credit risks with respect to either customers or individual countries. The credit risk from financial contracts is monitored daily on the basis of rating information as well as market information on credit default swap rates. In the case of derivative transactions, credit risk is taken into account in the fair value determination by means of a discount (so-called credit valuation adjustments and debit valuation adjustments).

The credit risk with customers is continuously monitored by analyzing the age structure of trade accounts receivable. The Group continuously reviews and monitors open positions vis-à-vis all trading partners in the affected countries and takes risk-mitigating measures and accounts for impairments as necessary. On the reporting date, the theoretically maximum default risk corresponded to the carrying amounts.

(57) OTHER DISCLOSURES ON FINANCIAL INSTRUMENTS

The following table presents the reconciliation of the balance sheet items to categories of financial instruments pursuant to the disclosures required by IFRS 7 and provides information on the measurement of fair value:

		Subsequent measurement according to IAS 39				
€ million	Carrying amount Dec. 31, 2014	Amortized cost	At cost	Fair value	Carrying amount according to IAS 17	Non-financial items
Assets						
Cash and cash equivalents	2,878.5	2,878.5	–	–	–	–
Current financial assets	2,199.4	24.6	–	2,174.8	–	–
Held for trading (non-derivatives)	–	–	–	–	–	–
Derivatives not in a hedging relationship	39.8	–	–	39.8	–	–
Held to maturity	21.7	21.7	–	–	–	–
Loans and receivables	2.9	2.9	–	–	–	–
Available-for-sale	2,135.0	–	–	2,135.0	–	–
Derivatives in a hedging relationship	–	–	–	–	–	–
Trade receivables	2,235.6	2,235.6	–	–	–	–
Loans and receivables	2,235.6	2,235.6	–	–	–	–
Current and non-current other assets	1,266.7	152.4	–	471.4	–	642.9
Derivatives not in a hedging relationship	0.7	–	–	0.7	–	–
Loans and receivables	152.4	152.4	–	–	–	–
Derivatives in a hedging relationship	470.7	–	–	470.7	–	–
Non-financial items	642.9	–	–	–	–	642.9
Non-current financial assets	94.4	13.7	66.9	13.8	–	–
Derivatives not in a hedging relationship	–	–	–	–	–	–
Held to maturity	–	–	–	–	–	–
Loans and receivables	13.7	13.7	–	–	–	–
Available-for-sale	80.7	–	66.9	13.8	–	–
Derivatives in a hedging relationship	–	–	–	–	–	–
Liabilities						
Current and non-current financial liabilities	5,637.0	5,477.5	–	153.0	6.5	–
Derivatives not in a hedging relationship	25.4	–	–	25.4	–	–
Other liabilities	5,477.5	5,477.5	–	–	–	–
Derivatives in a hedging relationship	127.6	–	–	127.6	–	–
Finance lease liabilities	6.5	–	–	–	6.5	–
Trade payables	1,539.4	1,539.4	–	–	–	–
Other liabilities	1,539.4	1,539.4	–	–	–	–
Other current and non-current liabilities	2,356.6	696.1	–	35.4	–	1,625.1
Derivatives not in a hedging relationship	5.7	–	–	5.7	–	–
Other liabilities	696.1	696.1	–	–	–	–
Derivatives in a hedging relationship	29.7	–	–	29.7	–	–
Non-financial items	1,625.1	–	–	–	–	1,625.1

	Subsequent measurement according to IAS 39						
Fair value, Dec. 31, 2014	Carrying amount Dec. 31, 2013	Amortized cost	At cost	Fair value	Carrying amount according to IAS 17	Non-financial items	Fair value Dec. 31, 2013
2,878.5	980.8	980.8	–	–	–	–	980.8
	2,410.5	80.7	–	2,329.8	–	–	
–	–	–	–	–	–	–	–
39.8	6.8	–	–	6.8	–	–	6.8
21.7	53.4	53.4	–	–	–	–	53.4
2.9	27.3	27.3	–	–	–	–	27.3
2,135.0	2,312.1	–	–	2,312.1	–	–	2,312.1
–	10.9	–	–	10.9	–	–	10.9
	2,021.4	2,021.4	–	–	–	–	
2,235.6	2,021.4	2,021.4	–	–	–	–	2,021.4
	466.2	115.4	–	126.6	–	224.2	
0.7	2.9	–	–	2.9	–	–	2.9
152.4	115.4	115.4	–	–	–	–	115.4
470.7	123.7	–	–	123.7	–	–	123.7
	224.2	–	–	–	–	224.2	
	77.8	15.8	52.3	9.7	–	–	
–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–
13.7	15.8	15.8	–	–	–	–	15.8
80.7	57.3	–	52.3	5.0	–	–	57.3
–	4.7	–	–	4.7	–	–	4.7
	3,697.9	3,630.8	–	59.4	7.7	–	
25.4	4.0	–	–	4.0	–	–	4.0
5,835.6	3,630.8	3,630.8	–	–	–	–	3,916.6
127.6	55.4	–	–	55.4	–	–	55.4
6.5	7.7	–	–	–	7.7	–	7.7
	1,364.1	1,364.1	–	–	–	–	
1,539.4	1,364.1	1,364.1	–	–	–	–	1,364.1
	1,140.1	581.1	–	2.1	–	556.9	
5.7	0.4	–	–	0.4	–	–	0.4
696.1	581.1	581.1	–	–	–	–	581.1
29.7	1.7	–	–	1.7	–	–	1.7
	556.9	–	–	–	–	556.9	

Net gains and losses on financial instruments mainly include measurement results from currency translation, fair value adjustments, impairments and reversals of impairments as well as the recognition of premiums and discounts. Dividends and interest are not recognized in the net gains and losses on financial instruments, except for dividends and interest in the category "held for trading". The category "held for trading" only includes derivatives not in a hedging relationship.

The net gains and losses on financial instruments by category on the reporting date were as follows:

€ million *2014*	Interest	Net gains or losses			
		Impairments	Reversals of impairment	Fair value adjustments	Disposal gains/losses
Financial instrument of the category					
Held for trading	–	–	–	– 90.8	–
Held to maturity	1.4	–	–	–	–
Loans and receivables	18.2	– 41.9	41.8	–	–
Available-for-sale	10.0	– 4.4	–	–	0.2
Other liabilities	–141.4	–	–	–	–

€ million *2013*	Interest	Net gains or losses			
		Impairments	Reversals of impairment	Fair value adjustments	Disposal gains/losses
Financial instrument of the category					
Held for trading	–	–	–	131.7	–
Held to maturity	2.5	–	–	–	–
Loans and receivables	10.3	– 47.2	42.1	–	–
Available-for-sale	15.1	– 4.1	–	–	1.6
Other liabilities	–163.3	–	–	–	–

In 2014, foreign exchange gains of € 53.3 million resulting from receivables and payables in operating business, their economic hedging, as well as hedging of forecast transactions in operating business were recorded (2013: gains of € 26.0 million). Foreign exchange losses of € –13.0 million resulting from financial balance sheet items, their economic hedging as well as fair value fluctuations of option contracts to hedge forecast transactions were recorded (2013: losses of € – 4.3 million).

The fair value of financial assets and liabilities is based on the official market prices and market values quoted on the balance sheet date (Level 1 assets and liabilities) as well as mathematical calculation models with inputs observable in the market on the balance sheet date (Level 2 assets and liabilities). Level 1 assets comprise stocks and bonds and are classified as "available-for-sale", Level 1 liabilities comprise issued bonds and are classified as "other liabilities". Level 2 assets and liabilities are primarily liabilities to banks classified as "other liabilities", interest-bearing securities classified as "available-for-sale" as well as derivatives with and without hedging relationships. The fair value of interest-bearing securities is determined by discounting future cash flows using market interest rates. The fair value measurement of forward exchange contracts and currency options uses spot and forward rates as well as foreign exchange volatilities applying recognized mathematical principles. The fair value of interest rate swaps is determined with standard market valuation models using interest rate curves available in the market.

Level 3 assets comprise investments in equity instruments classified as available-for-sale. These include interests in InfraServ GmbH & Co. Wiesbaden KG, Germany, which were acquired in the context of the acquisition of AZ Electronics Materials S.A. The fair values of these interests were determined using a discounted cash flow method where expected future cash flows from dividends are taken into account.

Counterparty credit risk is taken into consideration for all valuations. In the case of non-derivative financial instruments, such as other liabilities or interest-bearing securities, this is reflected using risk-adequate premiums on the discount rate, while discounts on market value (so-called credit valuation adjustments and debit valuation adjustments) are used for derivatives.

The fair value of available-for-sale investments in equity instruments with a carrying amount of € 66.9 million (2013: € 52.3 million) could not be reliably determined. They were measured at cost. There is no intention to sell these financial instruments.

The fair values of the financial instruments disclosed in the balance sheet and the fair values deviating substantially from the carrying amount were determined as follows:

€ million *as of Dec. 31, 2014*	Assets	Liabilities
Fair value determined by official prices and quoted market values (Level 1)	**1,178.6**	**4,970.2**
thereof available-for-sale	1,178.6	–
thereof other liabilities	–	4,970.2
Fair value determined using inputs observable in the market (Level 2)	**1,470.1**	**1,053.8**
thereof available-for-sale	958.9	–
thereof derivatives with a hedging relationship	470.7	157.3
thereof derivatives without a hedging relationship	40.5	31.1
thereof other liabilities	–	865.4
Fair value determined using inputs unobservable in the market (Level 3)	**11.3**	**–**
thereof available-for-sale	11.3	–

€ million *as of Dec. 31, 2013*	Assets	Liabilities
Fair value determined by official prices and quoted market values (Level 1)	**1,396.5**	**3,414.3**
thereof available-for-sale	1,396.5	–
thereof other liabilities	–	3,414.3
Fair value determined using inputs observable in the market (Level 2)	**1,069.6**	**563.8**
thereof available-for-sale	920.6	–
thereof derivatives with a hedging relationship	139.3	57.1
thereof derivatives without a hedging relationship	9.7	4.4
thereof other liabilities	–	502.3
Fair value determined using inputs unobservable in the market (Level 3)	**–**	**–**

The changes of financial assets allocated to Level 3 and measured at fair value were as follows:

€ million	2014	2013
Net book value as of January 1	**–**	**–**
Additions due to the acquisition of AZ Electronic Materials S.A.	10.8	–
Transfers into Level 3 out of Level 1/Level 2	–	–
Fair value changes		
Gains (+)/losses (–) recognized in profit or loss	–	–
Gains (+)/losses (–) recognized in other comprehensive income	0.5	–
Sales	–	–
Transfers out of Level 3 into Level 1/Level 2	–	–
Net book value as of December 31	**11.3**	**–**

Gains and losses from Level 3 assets are reported in other comprehensive income in the consolidated statement of comprehensive income under the item "fair value adjustments" related to available-for-sale financial assets. If the discount factor used for fair value determination was higher by one percentage point, other comprehensive income would decrease by € 2.1 million.

Balance sheet netting is not possible. From an economic perspective, netting is only possible with derivatives. This possibility results from the framework agreements on derivatives trading which the Group enters into with commercial banks. The Group does not offset financial assets and financial liabilities in its balance sheet.

The following table presents the potential netting volume of the reported derivative financial assets and liabilities:

				Potential netting volume		
€ million as of Dec. 31, 2014	Gross presentation	Netting	Net presentation	Due to master netting agreements	Due to financial collateral	Potential net amount
Derivative financial assets	511.2	–	511.2	70.5	–	440.7
Derivative financial liabilities	–188.4	–	–188.4	–70.5	–	–117.9

				Potential netting volume		
€ million as of Dec. 31, 2013	Gross presentation	Netting	Net presentation	Due to master netting agreements	Due to financial collateral	Potential net amount
Derivative financial assets	149.0	–	149.0	45.9	–	103.1
Derivative financial liabilities	–61.5	–	–61.5	–45.9	–	–15.6

(58) CAPITAL MANAGEMENT

The objective of capital management is to secure the financial flexibility in order to maintain long-term business operations and to realize strategic options. Maintaining a stable investment grade rating, ensuring liquidity, limiting financial risks as well as optimizing the costs of capital are the objectives of our financial policy and set important framework conditions for capital management. Traditionally, the capital market represents a major source of financing for the Group for instance via bond issues. In addition, the Group has both a commercial paper program for short-term financing on the capital market as well as a multi-currency working capital credit facility of € 2 billion with a term running until 2019 and one extension option for one year.

The responsible committees decide on the capital structure of the balance sheet, the appropriation of net retained profit and the dividend level. In this context, net financial debt is one of the leading capital management indicators. It was as follows:

€ million	Dec. 31, 2014	Dec. 31, 2013	Change
Financial liabilities	5,637.0	3,697.9	1,939.1
less:			
Cash and cash equivalents	2,878.5	980.8	1,897.7
Current financial assets	2,199.4	2,410.5	– 211.1
Net financial debt	**559.1**	**306.6**	**252.5**

(59) CONTINGENT LIABILITIES

€ million	Dec. 31, 2014	thereof affiliates	Dec. 31, 2013	thereof affiliates
Guarantees	17.1	–	2.5	–
Warranties	0.5	–	0.9	–
Other contingent liabilities	**54.3**	**–**	**32.9**	**–**

Other contingent liabilities included, among other things, potential obligations from legal disputes, for which the probability of an outflow of resources did not suffice to recognize a provision as of the balance sheet date.

(60) OTHER FINANCIAL OBLIGATIONS

Other financial obligations comprised the following:

€ million	Dec. 31, 2014	thereof affiliates	Dec. 31, 2013	thereof affiliates
Obligation to purchase the entire share capital of Sigma-Aldrich Corporation	13,975.0	–	–	–
Obligation to purchase the entire share capital of AZ Electronic Materials S.A.	–	–	1,876.5	–
Obligations to acquire intangible assets	1,494.8	–	2,000.2	–
Obligations to acquire property, plant and equipment	55.3	–	44.7	–
Future operating lease payments	199.7	–	172.0	–
Long-term purchase commitments	138.4	–	151.5	–
Other financial obligations	30.8	–	29.0	–
	15,894.0	**–**	**4,273.9**	**–**

In connection with the offer to acquire Sigma-Aldrich Corporation, USA, which was announced by the Group, on September 22, 2014, there is a contingent financial obligation in the amount of € 13,975.0 million (US$ 16,985.2 million; €/US$ exchange rate on December 31, 2014: 1.2154) to acquire the entire share capital of Sigma-Aldrich for a cash consideration.

If the merger agreement with Sigma-Aldrich is terminated, the Group will be obligated to pay Sigma-Aldrich a termination fee of € 768.8 million (US$ 934.4. million, €/US$ exchange rate on December 31, 2014: 1.2154).

Obligations to acquire intangible assets existed in particular within the scope of research and development collaborations. Here the Group has obligations to make milestone payments when its partner achieves certain objectives.

In the unlikely event that all contract partners achieve all milestones, the Group would be obligated to pay up to € 1,494.8 million (2013: € 2,000.2 million) for the acquisition of intangible assets.

Our expectations regarding the potential maturities of these obligations were as follows:

€ million	Dec. 31, 2014	Dec. 31, 2013
Obligations to acquire intangible assets		
within one year	61.2	56.8
in 1–5 years	390.2	508.4
more than 5 years	1,043.4	1,435.0
	1,494.8	**2,000.2**

Other financial obligations were recognized at nominal value.

The maturities of liabilities from lease agreements were as follows:

€ million *Dec. 31, 2014*	within 1 year	1 – 5 years	more than 5 years	Total
Present value of future payments from finance leases	2.8	3.7	–	6.5
Interest component of finance leases	0.2	0.2	–	0.4
Future finance lease payments	**3.0**	**3.9**	**–**	**6.9**
Future operating lease payments	**83.7**	**108.7**	**7.3**	**199.7**

€ million *Dec. 31, 2013*	within 1 year	1 – 5 years	more than 5 years	Total
Present value of future payments from finance leases	2.3	5.0	0.4	7.7
Interest component of finance leases	0.4	0.1	0.1	0.6
Future finance lease payments	**2.7**	**5.1**	**0.5**	**8.3**
Future operating lease payments	**64.9**	**103.0**	**4.1**	**172.0**

Operating lease agreements related mainly to customary leasing arrangements to lease operating and office equipment. The payments resulting from operating lease agreements amounted to € 91.8 million (2013: € 104.0 million) and were recorded as an expense in the reporting period.

(61) PERSONNEL EXPENSES/HEADCOUNT

Personnel expenses comprised the following:

€ million	2014	2013
Wages and salaries	2,630.9	2,611.8
Compulsory social security contributions and special financial assistance	376.6	368.0
Pension expenses	157.4	146.6
	3,164.9	**3,126.4**

As of December 31, 2014, the Group had 39,639 employees (2013: 38,154). The average number of employees during the year was 38,930 (2013: 38,282).
The breakdown of personnel by function was as follows:

Average number of employees	2014	2013
Production	10,176	9,985
Logistics	2,207	1,779
Marketing and Sales	12,113	12,214
Administration	6,342	5,106
Research and Development	4,738	4,433
Infrastructure and Other	3,354	4,765
	38,930	**38,282**

In 2013 and 2014, the Group substantially increased transparency by assigning all positions to a standardized job profile. In this way, positions that were previously not assigned to specific functional areas were assigned according to function.

(62) MATERIAL COSTS

Material costs in 2014 amounted to € 1,516.8 million (2013: € 1,473.2 million) and were reported under cost of sales.

(63) AUDITORS' FEES

The costs of the auditors (KPMG) of the financial statements of the Group consisted of the following:

€ million	2014 Group	2014 thereof KPMG Germany	2013 Group	2013 thereof KPMG Germany
Audits of financial statements	5.4	1.6	5.2	1.5
Other audit-related services	0.6	0.5	0.4	0.2
Tax consultancy services	0.6	0.3	0.8	0.7
Other services	0.3	0.2	0.4	0.3
	6.9	**2.6**	**6.8**	**2.7**

(64) CORPORATE GOVERNANCE

The Statement of Compliance in accordance with section 161 of the German Stock Corporation Act (Aktiengesetz) was published in the corporate governance section of our website www.emdgroup.com/investors/corporate governance in March 2014 and thus made permanently available.

(65) COMPANIES OPTING FOR EXEMPTION UNDER SECTION 264 (3) HGB OR SECTION 264 HGB

The following companies, which have been consolidated in these financial statements, have opted for exemption:
Allergopharma GmbH & Co. KG, Reinbek, Germany
Allergopharma Verwaltungs GmbH, Darmstadt, Germany
Biochrom GmbH, Berlin, Germany
Chemische Fabrik Lehrte Dr. Andreas Kossel GmbH, Lehrte, Germany
Chemitra GmbH, Darmstadt, Germany
heipha Dr. Müller GmbH, Eppelheim, Germany
Litec-LLL GmbH, Greifswald, Germany
Merck Accounting Solutions & Services Europe GmbH, Darmstadt, Germany, a subsidiary of Merck KGaA, Darmstadt, Germany
Merck Chemicals GmbH, Schwalbach, Germany, a subsidiary of Merck KGaA, Darmstadt, Germany
Merck Consumer Health Holding GmbH, Darmstadt, Germany, a subsidiary of Merck KGaA, Darmstadt, Germany
Merck Export GmbH, Darmstadt, Germany, a subsidiary of Merck KGaA, Darmstadt, Germany
Merck Selbstmedikation GmbH, Darmstadt, Germany, a subsidiary of Merck KGaA, Darmstadt, Germany
Merck Serono GmbH, Darmstadt, Germany, a subsidiary of Merck KGaA, Darmstadt, Germany
Merck Versicherungsvermittlung GmbH, Darmstadt, Germany, a subsidiary of Merck KGaA, Darmstadt, Germany

(66) RELATED-PARTY DISCLOSURES

Related parties in respect of the Group are E. Merck KG, Darmstadt, Germany, as well as Emanuel-Merck-Vermögens-KG, Darmstadt, Germany, and E. Merck Beteiligungen KG, Darmstadt, Germany. In principle, direct or indirect subsidiaries of Merck KGaA, Darmstadt, Germany, associates of the Group, jointly controlled companies where the Group is involved, as well as pension funds that are classified as funded defined benefit plans in accordance with IAS 19 are also related parties within the meaning of IAS 24. Members of the Executive Board and the Supervisory Board of Merck KGaA, Darmstadt, Germany, the Executive Board and the Board of Partners of E. Merck KG, Darmstadt, Germany, as well as close members of their families are also related parties.

As of December 31, 2014, there were liabilities by Merck Financial Services GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany, Merck KGaA, Darmstadt, Germany, and Merck & Cie, Altdorf, Switzerland, a subsidiary of Merck KGaA, Darmstadt, Germany, to E. Merck KG, Darmstadt, Germany, in the amount of € 926.9 million (2013: € 734.7 million) as well as by Merck Financial Services GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany, to Merck Capital Asset Management, Malta, which is part of the Contractual Trust Arrangement of Merck KGaA, Darmstadt, Germany, and other companies of the Group and Merck Capital Asset Management Holding, Malta, which is part of the Contractual Trust Arrangement of Merck KGaA, Darmstadt, Germany, and other companies of the Group amounting to € 0.1 million (2013: € 0.2 million) and € 0.0 million (2013: € 0.1 million), respectively. In addition, as of December 31, 2014, the company had receivables from E. Merck Beteiligungen KG, Darmstadt, Germany, in the amount of € 76.5 million (2013: € 32.5 million). The balances result mainly from the profit transfers by Merck & Cie, Altdorf, Switzerland, a subsidiary of Merck KGaA, Darmstadt, Germany, to E. Merck KG, Darmstadt, Germany, as well as the reciprocal profit transfers between Merck KGaA, Darmstadt, Germany, and E. Merck KG, Darmstadt, Germany. They included financial payables of € 501.4 million (2013: € 361.9 million) which were subject to standard market interest rates. Neither collateral nor guarantees existed for any of the balances either in favor or to the disadvantage of the Group.

From January to December 2014, Merck KGaA, Darmstadt, Germany, performed services for E. Merck KG, Darmstadt, Germany, with a value of € 1.2 million (2013: € 1.2 million), for Emanuel-Merck-Vermögens-KG, Darmstadt, Germany, with a value of € 0.3 million (2013: € 0.4 million) and for E. Merck Beteiligungen KG, Darmstadt, Germany, with a value of € 0.3 million (2013: € 0.3 million). During the same period, E. Merck KG, Darmstadt, Germany, performed services for Merck KGaA, Darmstadt, Germany, with a value of € 0.5 million (2013: € 0.5 million).

Business transactions with major subsidiaries were eliminated during consolidation. Information on pension funds that are classified as funded defined benefit plans in accordance with IAS 19 can be found under Note [49]. There were no further material transactions with these pension funds.

From January to December 2014, there were no transactions between companies of the Group and associates, as was the case in 2013. As in the previous year, companies of the Group had no receivables or liabilities vis-à-vis associates as of December 31, 2014.

There were no material transactions such as, for example, the provision of services or the granting of loans, between companies of the Group and members of the Executive Board or the Supervisory Board of Merck KGaA, Darmstadt, Germany, the Executive Board or the Board of Partners of E. Merck KG, Darmstadt, Germany, or members of their immediate families.

(67) EXECUTIVE BOARD AND SUPERVISORY BOARD COMPENSATION

The compensation of the Executive Board of Merck KGaA, Darmstadt, Germany, is paid by the general partner, E. Merck KG, Darmstadt, Germany, and recorded as an expense in its income statement. For the period from January to December 2014 fixed salaries of € 5.3 million (2013: € 4.9 million), variable compensation of € 18.3 million (2013: € 17.6 million), and additional benefits of € 0.2 million (2013: € 0.2 million) were recorded for members of the Executive Board of Merck KGaA, Darmstadt, Germany. Furthermore, additions to the provisions of E. Merck KG, Darmstadt, Germany, for the Long-Term Incentive Plan totaled € 12.7 million (2013: € 8.0 million), and additions to the pension provisions of E. Merck KG, Darmstadt, Germany, include current service costs of € 2.1 million (2013: € 2.5 million) for members of the Executive Board of Merck KGaA, Darmstadt, Germany.

The compensation of the Supervisory Board amounting to € 882.1 thousand (2013: € 847.4 thousand) consisted of a fixed portion of € 823.6 thousand (2013: € 599.5 thousand), meeting attendance compensation of € 58.5 thousand (2013: € 45.7 thousand), as well as a variable portion of € 0.0 thousand (2013: € 202.2 thousand).

Further individualized information and details can be found in the Compensation Report on pages 147 et seq.

(68) INFORMATION ON PREPARATION AND APPROVAL

The Executive Board of Merck KGaA, Darmstadt, Germany, prepared the consolidated financial statements on February 18, 2015 and approved them for forwarding to the Supervisory Board. The Supervisory Board has the responsibility to examine the consolidated financial statements and to declare whether it approves them.

(69) SUBSEQUENT EVENTS

Subsequent to the balance sheet date, no events of special importance occurred that could have a material impact on the financial position and results of operations of the Group.

(70) LIST OF SHAREHOLDINGS

The shareholdings of Merck KGaA, Darmstadt, Germany, as of December 31, 2014 are presented in the following table.

Country	Company	Registered office	Equity interest (%)	thereof Merck KGaA, Darmstadt, Germany (%)
I. Fully consolidated companies				
Germany				
Germany	Merck KGaA, Darmstadt, Germany	Darmstadt	Parent company	
Germany	AB Allgemeine Pensions GmbH & Co. KG	Zossen	100.00	100.00
Germany	Allergopharma GmbH & Co. KG	Reinbek	100.00	
Germany	Allergopharma Verwaltungs GmbH	Darmstadt	100.00	100.00
Germany	AZ Electronic Materials (Germany) GmbH	Wiesbaden	100.00	
Germany	Biochrom GmbH	Berlin	100.00	
Germany	Chemische Fabrik Lehrte Dr. Andreas Kossel GmbH	Lehrte	100.00	100.00
Germany	Chemitra GmbH	Darmstadt	100.00	100.00
Germany	Emedia Export Company mbH	Gernsheim	100.00	
Germany	heipha Dr. Müller GmbH	Eppelheim	100.00	100.00
Germany	IHS - Intelligent Healthcare Solutions GmbH	Frankfurt / Main	100.00	
Germany	Litec-LLL GmbH	Greifswald	100.00	100.00
Germany	Merck 12. Allgemeine Beteiligungs-GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	100.00
Germany	Merck 13. Allgemeine Beteiligungs-GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	
Germany	Merck 15. Allgemeine Beteiligungs-GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	
Germany	Merck Accounting Solutions & Services Europe GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	100.00
Germany	Merck Chemicals GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Schwalbach	100.00	
Germany	Merck China Chemicals Holding GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	
Germany	Merck Consumer Health Holding GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	100.00
Germany	Merck Export GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	100.00

Country	Company	Registered office	Equity interest (%)	thereof Merck KGaA, Darmstadt, Germany (%)
Germany	Merck Financial Services GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	100.00
Germany	Merck Financial Trading GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Gernsheim	100.00	100.00
Germany	Merck Holding GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Gernsheim	100.00	100.00
Germany	Merck International GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	100.00
Germany	Merck Internationale Beteiligungen GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	
Germany	Merck Schuchardt OHG, a subsidiary of Merck KGaA, Darmstadt, Germany	Hohenbrunn	100.00	100.00
Germany	Merck Selbstmedikation GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	
Germany	Merck Serono GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	100.00
Germany	Merck Versicherungsvermittlung GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	100.00
Germany	Merck Vierte Allgemeine Beteiligungsgesellschaft mbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Gernsheim	100.00	
Other European countries				
Austria	Allergopharma Vertriebsgesellschaft m.b.H.	Vienna	100.00	
Austria	Merck Chemicals and Life Science GesmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Vienna	100.00	
Austria	Merck Gesellschaft mbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Vienna	100.00	
Austria	Merck KGaA & Co. Werk Spittal, a subsidiary of Merck KGaA, Darmstadt, Germany	Spittal	100.00	99.00
Belgium	Merck Chemicals N.V./S.A., a subsidiary of Merck KGaA, Darmstadt, Germany	Overijse	100.00	
Belgium	Merck Consumer Healthcare N.V.-S.A., a subsidiary of Merck KGaA, Darmstadt, Germany	Overijse	100.00	
Belgium	Merck N.V.-S.A., a subsidiary of Merck KGaA, Darmstadt, Germany	Overijse	100.00	
Bulgaria	Merck Bulgaria EAD, a subsidiary of Merck KGaA, Darmstadt, Germany	Sofia	100.00	
Croatia	Merck d.o.o., a subsidiary of Merck KGaA, Darmstadt, Germany	Zagreb	100.00	
Czech Republic	Merck spol.s.r.o., a subsidiary of Merck KGaA, Darmstadt, Germany	Prague	100.00	
Denmark	Merck A/S, a subsidiary of Merck KGaA, Darmstadt, Germany	Hellerup	100.00	
Denmark	Merck Life Science A/S, a subsidiary of Merck KGaA, Darmstadt, Germany	Hellerup	100.00	
Denmark	Survac ApS	Frederiksberg	100.00	100.00

Country	Company	Registered office	Equity interest (%)	thereof Merck KGaA, Darmstadt, Germany (%)
Estonia	Merck Serono OÜ, a subsidiary of Merck KGaA, Darmstadt, Germany	Tallinn	100.00	
Finland	Merck OY, a subsidiary of Merck KGaA, Darmstadt, Germany	Espoo	100.00	
Finland	Millipore OY	Espoo	100.00	
France	AZ Electronic Materials France S.A.S.	Trosly-Breuil	100.00	
France	Laboratoire Médiflor S.A.S.	Lyon	100.00	
France	Merck Biodevelopment S.A.S., a subsidiary of Merck KGaA, Darmstadt, Germany	Lyon	100.00	
France	Merck Chimie S.A.S., a subsidiary of Merck KGaA, Darmstadt, Germany	Fontenay s/Bois	100.00	
France	Merck Médication Familiale S.A.S., a subsidiary of Merck KGaA, Darmstadt, Germany	Lyon	100.00	
France	Merck S.A., a subsidiary of Merck KGaA, Darmstadt, Germany	Lyon	99.83	
France	Merck Santé S.A.S., a subsidiary of Merck KGaA, Darmstadt, Germany	Lyon	100.00	
France	Merck Serono S.A.S., a subsidiary of Merck KGaA, Darmstadt, Germany	Lyon	100.00	
France	Millipore S.A.S.	Molsheim	100.00	
Greece	Merck A.E., a subsidiary of Merck KGaA, Darmstadt, Germany	Maroussi, Athens	100.00	
Hungary	Merck Kft., a subsidiary of Merck KGaA, Darmstadt, Germany	Budapest	100.00	
Ireland	Merck Millipore Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Carrigtwohill	100.00	
Ireland	Merck Serono (Ireland) Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Dublin	100.00	
Ireland	Millipore Cork	Carrigtwohill	100.00	
Ireland	Millipore Dublin International Finance Company	Dublin	100.00	
Italy	Allergopharma S.p.A.	Rome	100.00	
Italy	Istituto di Ricerche Biomediche Antoine Marxer RBM S.p.A.	Colleretto Giacosa	100.00	
Italy	Merck S.p.A., a subsidiary of Merck KGaA, Darmstadt, Germany	Vimodrone	100.00	
Italy	Merck Serono S.p.A., a subsidiary of Merck KGaA, Darmstadt, Germany	Rome	99.74	
Latvia	Merck Serono SIA, a subsidiary of Merck KGaA, Darmstadt, Germany	Riga	100.00	
Lithuania	Merck Serono, UAB, a subsidiary of Merck KGaA, Darmstadt, Germany	Vilnius	100.00	
Luxembourg	AZ Electronic Materials (Luxembourg) S.a.r.l.	Luxembourg	100.00	
Luxembourg	AZ Electronic Materials Group S.a.r.l.	Luxembourg	100.00	
Luxembourg	AZ Electronic Materials S.A.	Luxembourg	100.00	
Luxembourg	AZ Electronic Materials TopCo S.a.r.l.	Luxembourg	100.00	
Luxembourg	Merck Chemicals Holding S.a.r.l., a subsidiary of Merck KGaA, Darmstadt, Germany	Luxembourg	100.00	
Luxembourg	Merck Finance S.a.r.l., a subsidiary of Merck KGaA, Darmstadt, Germany	Luxembourg	100.00	

Country	Company	Registered office	Equity interest (%)	thereof Merck KGaA, Darmstadt, Germany (%)
Luxembourg	Merck Holding S.a.r.l., a subsidiary of Merck KGaA, Darmstadt, Germany	Luxembourg	100.00	
Luxembourg	Merck Re S.A., a subsidiary of Merck KGaA, Darmstadt, Germany	Luxembourg	100.00	
Luxembourg	Merck-Finanz AG, a subsidiary of Merck KGaA, Darmstadt, Germany	Luxembourg	100.00	100.00
Luxembourg	Millilux S.a.r.l.	Luxembourg	100.00	
Luxembourg	Millipart S.a.r.l.	Luxembourg	100.00	
Luxembourg	Millipore International Holdings, S.a.r.l.	Luxembourg	100.00	
Luxembourg	Ridgefield Acquisition S.a.r.l.	Luxembourg	100.00	
Luxembourg	Ridgefield Holdco S.a.r.l.	Luxembourg	100.00	
Malta	Merck Capital Holding Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Pietà	100.00	
Malta	Merck Capital Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Pietà	100.00	
Netherlands	Merck B.V., a subsidiary of Merck KGaA, Darmstadt, Germany	Schiphol-Rijk	100.00	
Netherlands	Merck Chemicals B.V., a subsidiary of Merck KGaA, Darmstadt, Germany	Amsterdam Zuidoost	100.00	
Netherlands	Serono Tri Holdings B.V.	Schiphol-Rijk	100.00	
Norway	Merck Life Science AS, a subsidiary of Merck KGaA, Darmstadt, Germany	Oslo	100.00	
Poland	Merck Sp.z o.o., a subsidiary of Merck KGaA, Darmstadt, Germany	Warsaw	100.00	
Portugal	Merck, S.A., a subsidiary of Merck KGaA, Darmstadt, Germany	Algés	100.00	
Romania	Merck Romania S.R.L., a subsidiary of Merck KGaA, Darmstadt, Germany	Bucharest	100.00	
Russia	Merck LLC, a subsidiary of Merck KGaA, Darmstadt, Germany	Moscow	100.00	
Slovakia	Merck spol.s.r.o., a subsidiary of Merck KGaA, Darmstadt, Germany	Bratislava	100.00	
Slovenia	Merck d.o.o., a subsidiary of Merck KGaA, Darmstadt, Germany	Ljubljana	100.00	
Serbia	Merck d.o.o. Beograd, a subsidiary of Merck KGaA, Darmstadt, Germany	Belgrade	100.00	
Spain	Merck Chemicals and Life Science S.A., a subsidiary of Merck KGaA, Darmstadt, Germany	Madrid	100.00	
Spain	Merck, S.L., a subsidiary of Merck KGaA, Darmstadt, Germany	Madrid	100.00	
Sweden	Merck AB, a subsidiary of Merck KGaA, Darmstadt, Germany	Solna	100.00	
Sweden	Merck Chemicals and Life Science AB, a subsidiary of Merck KGaA, Darmstadt, Germany	Solna	100.00	
Switzerland	Allergopharma AG	Therwil	100.00	
Switzerland	Ares Trading SA	Aubonne	100.00	
Switzerland	AZ Electronic Materials (Schweiz) AG	Zurich	100.00	

Country	Company	Registered office	Equity interest (%)	thereof Merck KGaA, Darmstadt, Germany (%)
Switzerland	Merck & Cie, a subsidiary of Merck KGaA, Darmstadt, Germany	Altdorf	51.63	51.63
Switzerland	Merck (Schweiz) AG, a subsidiary of Merck KGaA, Darmstadt, Germany	Zug	100.00	
Switzerland	Merck Biosciences AG, a subsidiary of Merck KGaA, Darmstadt, Germany	Läufelfingen	100.00	
Switzerland	Merck Serono SA, a subsidiary of Merck KGaA, Darmstadt, Germany	Coinsins	100.00	
Switzerland	Millipore AG	Zug	100.00	
Switzerland	SeroMer Holding SA	Chéserex	100.00	
Turkey	Merck Ilac Ecza ve Kimya Ticaret AS, a subsidiary of Merck KGaA, Darmstadt, Germany	Istanbul	100.00	
United Kingdom	AZ Electronic Materials (UK) Ltd.	Stockley Park	100.00	
United Kingdom	AZ Electronic Materials Services Ltd.	Stockley Park	100.00	
United Kingdom	Lamberts Healthcare Ltd.	Tunbridge Wells	100.00	
United Kingdom	Merck Chemicals Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Nottingham	100.00	
United Kingdom	Merck Consumer Health Care Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Hull	100.00	
United Kingdom	Merck Cross Border Trustees Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Hull	100.00	
United Kingdom	Merck Holding Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Feltham	100.00	
United Kingdom	Merck Investments Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Hull	100.00	
United Kingdom	Merck Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Hull	100.00	
United Kingdom	Merck Pension Trustees Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Hull	100.00	
United Kingdom	Merck Serono Europe Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	London	100.00	
United Kingdom	Merck Serono Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Feltham	100.00	
United Kingdom	Millipore (U.K.) Ltd.	Feltham	100.00	
United Kingdom	Millipore UK Holdings LLP	London	100.00	
United Kingdom	Seven Seas Limited	Hull	100.00	
North America				
Canada	EMD Chemicals Canada Inc.	Toronto	100.00	
Canada	EMD Crop BioScience Canada Inc.	Toronto	100.00	
Canada	EMD Inc.	Mississauga	100.00	
Canada	Millipore (Canada) Ltd.	Toronto	100.00	
United States	Amnis Corp.	Seattle	100.00	
United States	AZ Electronic Materials Holdings U.S. Inc.	Wilmington	100.00	
United States	AZ Electronic Materials USA Corp.	Wilmington	100.00	
United States	EMD Accounting Solutions & Services America, Inc.	Quincy	100.00	

Country	Company	Registered office	Equity interest (%)	thereof Merck KGaA, Darmstadt, Germany (%)
United States	EMD Holding Corp.	Rockland	100.00	
United States	EMD Millipore Corporation	Billerica	100.00	
United States	EMD Serono Holding Inc.	Rockland	100.00	
United States	EMD Serono Research & Development Institute, Inc.	Billerica	100.00	
United States	EMD Serono, Inc.	Rockland	100.00	
United States	Mario Finance Corp.	Wilmington	100.00	
United States	Millipore Asia Ltd.	Wilmington	100.00	
United States	Millipore Pacific Ltd.	Wilmington	100.00	
United States	Millipore UK Holdings I, LLC	Wilmington	100.00	
United States	Millipore UK Holdings II, LLC	Wilmington	100.00	
United States	Serono Laboratories Inc.	Rockland	100.00	
Emerging Markets				
Argentina	Merck Quimica Argentina S.A.I.C., a subsidiary of Merck KGaA, Darmstadt, Germany	Buenos Aires	100.00	
Brazil	Merck S.A., a subsidiary of Merck KGaA, Darmstadt, Germany	Rio de Janeiro	100.00	
Chile	Merck S.A., a subsidiary of Merck KGaA, Darmstadt, Germany	Santiago de Chile	100.00	
China	AZ Electronic Materials (Hong Kong) Finance Ltd.	Hong Kong	100.00	
China	AZ Electronic Materials (Suzhou) Ltd.	Suzhou	100.00	
China	Beijing Skywing Technology Co., Ltd.	Beijing	100.00	
China	Merck Chemicals (Shanghai) Co., Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Shanghai	100.00	
China	Merck Display Materials (Shanghai) Co., Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Shanghai	100.00	
China	Merck Holding (China) Co., Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Shanghai	100.00	
China	Merck Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Hong Kong	100.00	
China	Merck Millipore Lab Equipment (Shanghai) Co., Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Shanghai	100.00	
China	Merck Performance Materials Hong Kong Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Hong Kong	100.00	
China	Merck Performance Materials Hong Kong Services Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Hong Kong	100.00	
China	Merck Pharmaceutical (HK) Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Hong Kong	100.00	
China	Merck Pharmaceutical Manufacturing (Jiangsu) Co., Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Nantong	100.00	
China	Merck Serono (Beijing) Pharmaceutical Distribution Co., Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Beijing	100.00	
China	Merck Serono (Beijing) Pharmaceutical R&D Co., Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Beijing	100.00	
China	Merck Serono Co., Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Beijing	100.00	

Country	Company	Registered office	Equity interest (%)	thereof Merck KGaA, Darmstadt, Germany (%)
China	Millipore (Shanghai) Trading Co., Ltd.	Shanghai	100.00	
China	Millipore China Ltd.	Hong Kong	100.00	
China	Suzhou Taizhu Technology Development Co., Ltd.	Taicang	100.00	
Colombia	Merck S.A., a subsidiary of Merck KGaA, Darmstadt, Germany	Bogotá	100.00	
Ecuador	Merck C.A., a subsidiary of Merck KGaA, Darmstadt, Germany	Quito	100.00	
Guatemala	Merck, S.A., a subsidiary of Merck KGaA, Darmstadt, Germany	Guatemala City	100.00	
India	Chemtreat Composites India Pvt. Ltd.	Sanpada New Mumbai	100.00	
India	Merck Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Mumbai	51.80	
India	Merck Specialities Pvt. Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Mumbai	100.00	
India	Millipore India Pvt. Ltd.	Bangalore	100.00	
Indonesia	P.T. Merck Chemicals and Life Sciences, a subsidiary of Merck KGaA, Darmstadt, Germany	Jakarta	100.00	
Indonesia	P.T. Merck Tbk., a subsidiary of Merck KGaA, Darmstadt, Germany	Jakarta	86.65	
Israel	Inter-Lab Ltd.	Yavne	100.00	
Israel	InterPharm Industries Ltd.	Yavne	100.00	
Israel	InterPharm Laboratories Ltd.	Yavne	100.00	
Israel	Merck Serono Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Herzliya Pituach	100.00	
Malaysia	Merck Sdn Bhd, a subsidiary of Merck KGaA, Darmstadt, Germany	Petaling Jaya	100.00	
Mexico	Merck, S.A. de C.V., a subsidiary of Merck KGaA, Darmstadt, Germany	Mexico City	100.00	
Pakistan	Merck (Pvt.) Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Karachi	75.00	26.00
Pakistan	Merck Pharmaceuticals (Pvt.) Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Karachi	75.00	
Pakistan	Merck Specialities (Pvt.) Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Karachi	100.00	
Panama	Mesofarma Corporation	Panama City	100.00	
Peru	Merck Peruana S.A., a subsidiary of Merck KGaA, Darmstadt, Germany	Lima	100.00	
Philippines	Merck Inc., a subsidiary of Merck KGaA, Darmstadt, Germany	Makati City	100.00	
Singapore	AZ Electronic Materials (Singapore) Pte. Ltd.	Singapore	100.00	
Singapore	Merck Pte. Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Singapore	100.00	
South Korea	AZ Chem Korea Ltd.	Seoul	100.00	
South Korea	AZ Electronic Materials (Korea) Ltd.	Seoul	100.00	
South Korea	Merck Advanced Technologies Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Pyeongtaek-si	100.00	

Country	Company	Registered office	Equity interest (%)	thereof Merck KGaA, Darmstadt, Germany (%)
South Korea	Merck Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Seoul	100.00	
Taiwan	AZ Electronic Materials Taiwan Co. Ltd.	Taipei	100.00	100.00
Taiwan	AZ EM Taiwan Holding Co. Ltd.	Taipei	100.00	
Taiwan	Merck Display Technologies Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Taipei	100.00	
Taiwan	Merck Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Taipei	100.00	
Thailand	Merck Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Bangkok	45.11	
United Arab Emirates	Merck Serono Middle East FZ-LLC, a subsidiary of Merck KGaA, Darmstadt, Germany	Dubai	100.00	
Uruguay	ARES Trading Uruguay S.A.	Montevideo	100.00	
Venezuela	Merck S.A., a subsidiary of Merck KGaA, Darmstadt, Germany	Caracas	100.00	
Venezuela	Representaciones MEPRO S.A.	Caracas	100.00	
Vietnam	Merck Vietnam Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Ho Chi Minh City	100.00	
Rest of the World				
Australia	Merck Pty. Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Bayswater	100.00	
Australia	Merck Serono Australia Pty. Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Sydney	100.00	
Egypt	Merck Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Cairo	100.00	
Japan	AZ Electronic Materials IP (Japan) KK	Tokyo	100.00	
Japan	AZ Electronic Materials Manufacturing (Japan) KK	Tokyo	100.00	
Japan	Merck Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Tokyo	100.00	15.89
Japan	Merck Performance Materials G.K., a subsidiary of Merck KGaA, Darmstadt, Germany	Tokyo	100.00	
Japan	Merck Serono Co., Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Tokyo	100.00	
Mauritius	Millipore Mauritius Ltd.	CyberCity	100.00	
New Zealand	Merck Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Palmerston North	100.00	
South Africa	Merck (Pty) Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Halfway House	100.00	
South Africa	Merck Pharmaceutical Manufacturing (Pty) Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Wadeville	100.00	
Tunisia	Merck Promotion SARL, a subsidiary of Merck KGaA, Darmstadt, Germany	Tunis	100.00	
Tunisia	Merck SARL, a subsidiary of Merck KGaA, Darmstadt, Germany	Tunis	100.00	

Country	Company	Registered office	Equity interest (%)	thereof Merck KGaA, Darmstadt, Germany (%)
II. Companies not consolidated due to secondary importance				
Germany				
Germany	AB Pensionsverwaltung GmbH	Zossen	100.00	100.00
Germany	Merck 14. Allgemeine Beteiligungs-GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	
Germany	Merck 16. Allgemeine Beteiligungs-GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	100.00
Germany	Merck 17. Allgemeine Beteiligungs-GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	100.00
Germany	Merck 18. Allgemeine Beteiligungs-GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	100.00
Germany	Merck 19. Allgemeine Beteiligungs-GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	100.00
Germany	Merck 20. Allgemeine Beteiligungs-GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	100.00
Germany	Merck 21. Allgemeine Beteiligungs-GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	100.00
Germany	Merck Patent GmbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	
Germany	Merck Wohnungs- und Grundstücksverwaltungsgesellschaft mbH, a subsidiary of Merck KGaA, Darmstadt, Germany	Darmstadt	100.00	100.00
Other European countries				
France	Gonnon S.A.S.	Lyon	100.00	
Netherlands	Merck Finance B.V., a subsidiary of Merck KGaA, Darmstadt, Germany	Schiphol-Rijk	100.00	100.00
Netherlands	Merck Holding Netherlands B.V., a subsidiary of Merck KGaA, Darmstadt, Germany	Schiphol-Rijk	100.00	100.00
Netherlands	Peer+ B.V.	Eindhoven	100.00	100.00
Portugal	Laquifa Laboratorios S.A.	Algés	100.00	
Switzerland	Asceneuron SA	Lausanne	80.00	
Switzerland	Calypso Biotech SA	Plan-les-Ouates	75.00	
Switzerland	Prexton Therapeutics SA	Plan-les-Ouates	55.00	
United Kingdom	Nature´s Best Health Products Ltd.	Tunbridge Wells	100.00	
North America				
United States	EMD Finance LLC	Wilmington	100.00	
United States	Mario II Finance Corp.	Wilmington	100.00	
United States	TocopheRx, Inc.	Groton	65.78	
Emerging Markets				
Dominican Republic	Merck Dominicana, S.R.L., a subsidiary of Merck KGaA, Darmstadt, Germany	Santo Domingo	100.00	

Country	Company	Registered office	Equity interest (%)	thereof Merck KGaA, Darmstadt, Germany (%)
Rest of the World				
Australia	Biochrom Australia Pty. Ltd.	Bayswater	100.00	
Morocco	Merck Maroc S.A.R.L., a subsidiary of Merck KGaA, Darmstadt, Germany	Casablanca	100.00	
Nigeria	Merck Pharmaceutical and Life Sciences Ltd., a subsidiary of Merck KGaA, Darmstadt, Germany	Lagos	100.00	
South Africa	Serono South Africa Ltd.	Johannesburg	100.00	
III. Associates not included at equity due to secondary importance				
Other European countries				
Switzerland	Vaximm AG	Basel	24.66	
Emerging Markets				
Israel	Neviah Genomics Ltd.	Yavne	69.00	7.75
Israel	QLight Nanotech Ltd.	Jerusalem	47.73	

Darmstadt, February 18, 2015

KARL-LUDWIG KLEY

KAI BECKMANN

BELÉN GARIJO LOPEZ

MARCUS KUHNERT

STEFAN OSCHMANN

BERND RECKMANN

RESPONSIBILITY STATEMENT

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements of Merck KGaA, Darmstadt, Germany, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the Group management report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the material opportunities and risks associated with the expected development of the Group.

Darmstadt, February 18, 2015

KARL-LUDWIG KLEY

KAI BECKMANN

BELÉN GARIJO LOPEZ

MARCUS KUHNERT

STEFAN OSCHMANN

BERND RECKMANN

AUDITOR'S REPORT

We have audited the consolidated financial statements prepared by Merck Kommanditgesellschaft auf Aktien, Darmstadt, Germany, comprising the Consolidated Income Statement, the Consolidated Statement of Comprehensive Income, the Consolidated Balance Sheet, the Consolidated Cash Flow Statement, the Consolidated Statement of Changes in Net Equity, and the Notes to the Group accounts, together with the Group Management Report for the business year from January 1 to December 31, 2014. The preparation of the consolidated financial statements and the Group Management Report in accordance with IFRSs, as adopted by the EU, and the additional requirements of German commercial law pursuant to § 315a (1) HGB [Handelsgesetzbuch "German Commercial Code"] and supplementary provisions of the articles of association are the responsibility of the parent company`s management. Our responsibility is to express an opinion on the consolidated financial statements and on the Group Management Report based on our audit.

We conducted our audit of the consolidated financial statements in accordance with § 317 HGB [Handelsgesetzbuch „German Commercial Code"] and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the consolidated financial statements in accordance with the applicable financial reporting framework and in the Group Management Report are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of the Group and expectations as to possible misstatements are taken into account in the determination of audit procedures. The effectiveness of the accounting-related internal control system and the evidence supporting the disclosures in the consolidated financial statements and the Group Management Report are examined primarily on a test basis within the framework of the audit. The audit includes assessing the annual financial statements of those entities included in consolidation, the determination of entities to be included in consolidation, the accounting and consolidation principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements and Group Management Report. We believe that our audit provides a reasonable basis for our opinion.

Our audit has not led to any reservations.

In our opinion, based on the findings of our audit, the consolidated financial statements comply with IFRSs, as adopted by the EU, the additional requirements of German commercial law pursuant to § 315a (1) HGB and supplementary provisions of the articles of association and give a true and fair view of the net assets, financial position and results of operations of the Group in accordance with these requirements. The Group Management Report is consistent with the consolidated financial statements and as a whole provides a suitable view of the Group's position and suitably presents the opportunities and risks of future development.

Frankfurt / Main, February 19, 2015

KPMG AG
Wirtschaftsprüfungsgesellschaft

Original German version signed by

KARL BRAUN
Wirtschaftsprüfer

MANFRED JENAL
Wirtschaftsprüfer

INFORMATION AND SERVICE

The Annual Report for 2014 was published in German and English. A fully navigable online version of the report along with the consolidated financial statements is available on the Web at ar2014.emdgroup.com. It has been optimized for mobile devices.

More information about our company can be found on the Web at www.emdgroup.com.

You can order all publications from Group Communications, Merck KGaA, 64271 Darmstadt, Germany, comms@emdgroup.com.

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BUSINESS DEVELOPMENT 2010 – 2014

This overview may include historically adjusted values in order to ensure comparability with 2014.

€ million

Earnings performance	
Total revenues	
Sales	
Operating result (EBIT)	
Margin (% of sales)	
EBITDA	
Margin (% of sales)	
One-time items	
EBITDA pre one-time items	
Margin (% of sales)	
Profit before income tax	
Profit after tax	
Earnings per share (in €)[1]	
Assets and liabilities	
Total assets	
Non-current assets	
– thereof intangible assets (incl. goodwill)	
– thereof property, plant and equipment	
Current assets	
– thereof cash and cash equivalents	
– thereof trade accounts receivable	
– thereof inventories	
Financial liabilities	
– thereof current	
– thereof non-current	
Net equity	
Liquidity	
Capital expenditure on intangible assets[2]	
Capital expenditure on property, plant and equipment[2]	
Business free cash flow	
Net financial debt	
Other key data	
Equity ratio (in %)	
Research and development[3]	
Dividend per share (in €)	
Employees (number as of December 31)	

[1] Taking into account the share split; previous year's figures have been adjusted accordingly.
[2] According to the Consolidated Cash Flow Statement.
[3] Fiscal 2013 has been adjusted, see "Accounting and measurement principles" in the Notes to the Consolidated Financial Statements.
[4] The proposal on the appropriation of profits for 2014 takes into account the share split.

2010	2011	2012	2013	2014	Change in %
9,291	10,276	11,173	11,095	11,501	3.7
8,929	9,906	10,741	10,700	11,291	5.5
1,113	1,132	964	1,611	1,762	9.4
12.5	11.4	9.0	15.1	15.6	
2,457	2,731	2,360	3,069	3,123	1.7
27.5	27.6	22.0	28.7	27.7	
– 88	7	– 605	–184	– 265	43.9
2,545	2,724	2,965	3,253	3,388	4.1
28.5	27.5	27.6	30.4	30.0	
861	839	709	1,389	1,557	12.1
642	618	579	1,209	1,165	– 3.7
1.45	1.39	1.30	2.77	2.66	– 4.0
22,388	22,122	21,643	20,819	26,010	24.9
16,724	15,723	15,017	13,434	15,530	15.6
12,484	11,764	10,945	9,867	11,396	15.5
3,241	3,113	2,954	2,647	2,990	13.0
5,664	6,399	6,626	7,385	10,480	41.9
944	938	730	981	2,879	193.5
2,296	2,328	2,115	2,021	2,236	10.6
1,674	1,691	1,534	1,474	1,660	12.6
5,484	5,539	4,454	3,698	5,637	52.4
356	1,394	1,091	440	2,076	–
5,127	4,145	3,362	3,257	3,561	9.3
10,372	10,494	10,415	11,069	11,801	6.6
104	80	144	110	143	30.8
396	366	329	407	481	18.1
1,275	2,262	2,969	2,960	2,605	–12.0
4,484	3,484	1,926	307	559	82.3
46.3	47.4	48.1	53.2	45.4	
1,397	1,514	1,511	1,507	1,704	13.1
1.25	1.50	1.70	1.90	1.00[4]	–
40,562	40,676	38,847	38,154	39,639	3.9

FINANCIAL CALENDAR FOR 2015

MARCH →

TUESDAY, MARCH 3, 2015
ANNUAL PRESS CONFERENCE

APRIL →

FRIDAY, APRIL 17, 2015
ANNUAL GENERAL MEETING

MAY →

TUESDAY, MAY 19, 2015
REPORT ON THE FIRST QUARTER

AUGUST →

THURSDAY, AUGUST 6, 2015
REPORT ON THE SECOND QUARTER

NOVEMBER →

THURSDAY, NOVEMBER 12, 2015
REPORT ON THE THIRD QUARTER

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