

# 2016

## FOCUSING ON CREATING THE FUTURE

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Annual Report 2016  
H&R GmbH & Co. KGaA



# FOCUSING ON CREATING THE FUTURE

Company Brochure 2016/2017  
H&R GmbH & Co. KGaA



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↓ FOCUSING ON CREATING THE FUTURE | Business Model | Key performance indicators | History | Contact ↑

# ANNUAL REPORT 2016

H&R GmbH & Co. KGaA



# FOCUSING ON CREATING THE FUTURE

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Company Brochure 2016/2017  
H&R GmbH & Co. KGaA



# THERE ARE MANY PATHS...

...to success, but only one is suitable for us. With strong roots as an entrepreneur-driven company, we have been following the path of the specialist for almost 100 years. Our focus makes us good at what we do. And our thorough mastery of our business opens up a broad range of sales opportunities to our company.

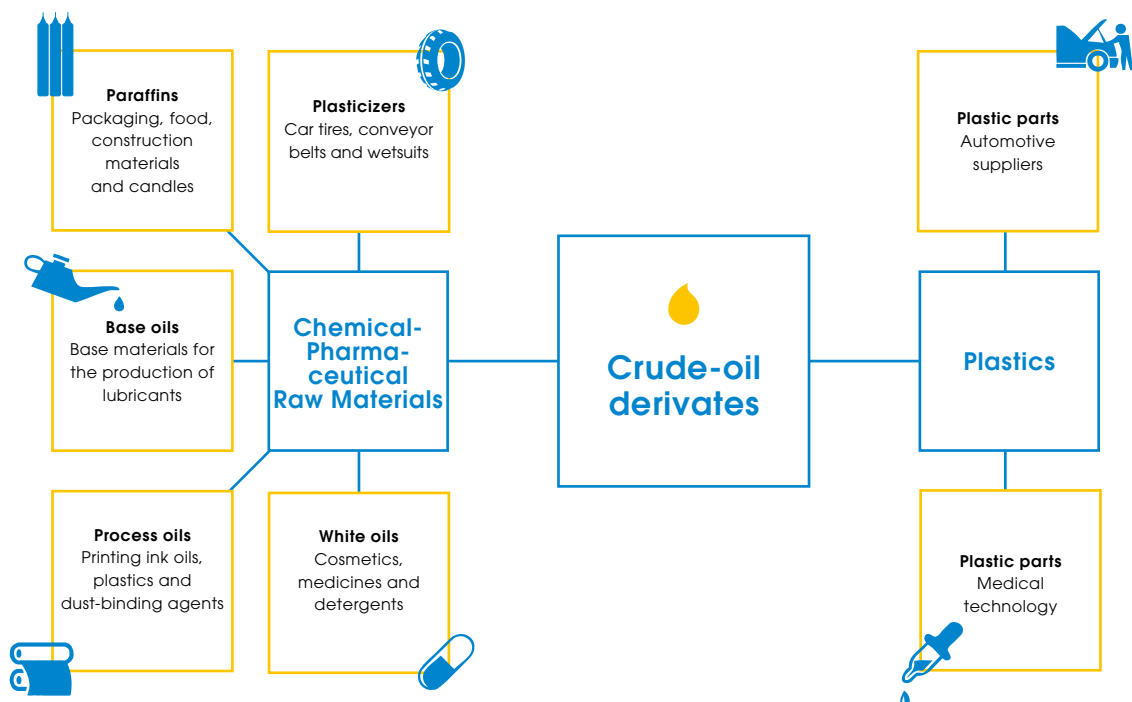
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We will continue along this path in the future – to the benefit of our customers, partners, and shareholders and in the interests of our company and our more than 1,600 employees.

# H&R ESSENTIALS

## OUR BUSINESS MODEL

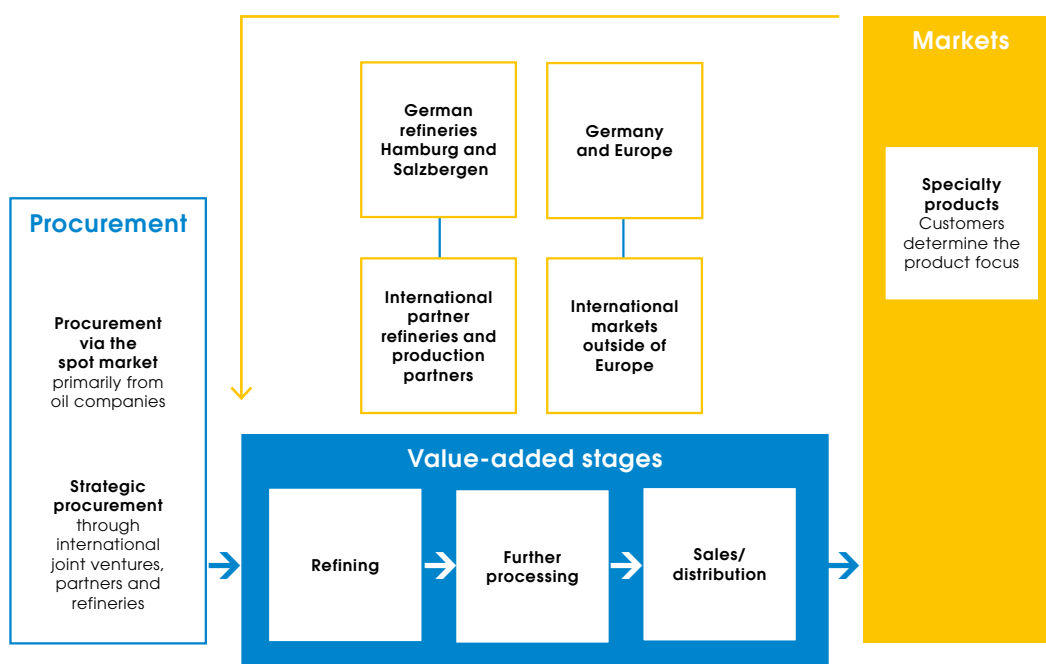
With the help of modern refineries and smart processes, we extract from crude-oil derivatives more than 800 high-grade chemical-pharmaceutical specialty products such as plasticizers, white oils and paraffins. High-precision plastic parts complete our product portfolio. In this segment, we are now a leading international specialist for high-precision, industry-specific plastics solutions. And our products are an important component in the processes and products of numerous industries. Our customer base ranges from the automotive industry through the cosmetic and food industries to medical technology. Today, we manufacture and sell our products worldwide through our organically developed network.



## OUR COMPETITIVE STRENGTHS IN THE GLOBAL MARKETPLACE

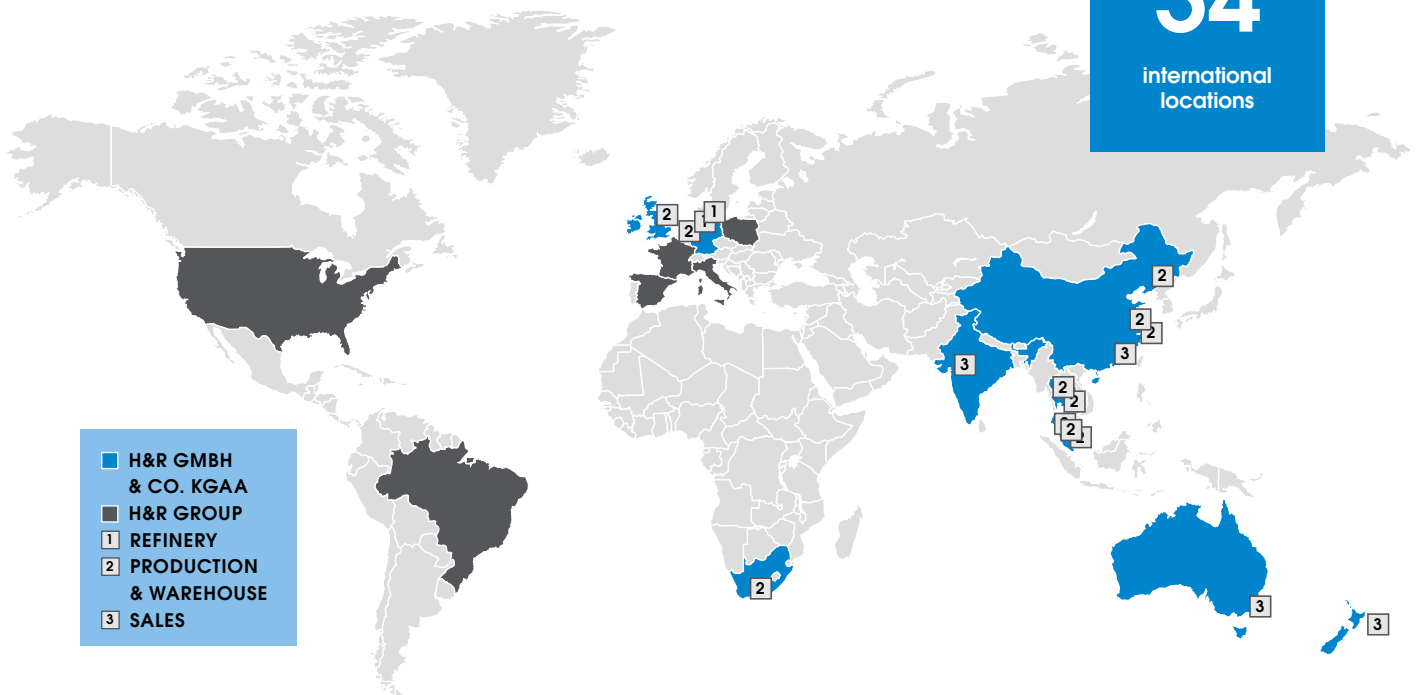
We intend to continue on our path as a **global specialist in specialty chemicals**. A series of strengths allow us to be successful:

- We are a **global player** that is backed by a worldwide network of refineries and, to some extent, an exclusive global sales/distribution network.
- With our broad, innovative product range, we occupy a **leading market position** in this competitive environment.
- We benefit from a broad **base of customers** from different industries that was developed over many years.
- We use an integrated and **efficient valued-added process** centered on two refineries that feature best-in-class technologies.



## OUR LOCATIONS

**34**  
international locations



- H&R GMBH & CO. KGAA
- H&R GROUP
- 1 REFINERY
- 2 PRODUCTION & WAREHOUSE
- 3 SALES

### ■ H&R GMBH & CO. KGAA

- 1 Germany (Hamburg, Salzbergen)
- 2 China (Ningbo, Daxie, Fushun), Malaysia (Batu Caves, Port Klang), The Netherlands (Nuth), Singapore, South Africa (Durban), Thailand (Sri Racha, Bangkok), United Kingdom (Tipton)

### ■ H&R GROUP

- 2 Germany (Hamburg)
- 3 Australia (Laverton), China (Hong Kong), India (Mumbai), New Zealand (Auckland)
- 2 France (Lyon), Poland (Cracow), Spain (Madrid), USA (Houston), Brazil (São Paulo)



## OUR KEY PERFORMANCE INDICATORS FOR 2016

During the financial year, we generated decent sales revenues of €0.94 billion. At the same time, our operating income was significantly higher than in past years. Overall, the company showed in 2016 that it is well placed in the market and has a stable international position with positive contributions to earnings from all divisions.

### THE H&R GROUP IN FIGURES

IN € MILLION	2016	2015 <sup>1)</sup>	Change in absolute terms
Sales revenues	942.7	982.9	-40.2
Operating result (EBITDA)	101.4	85.4	16.0
EBIT	64.2	48.7	15.5
Earnings before taxes	54.2	34.2	20.0
Consolidated earnings (after minority interests)	38.4	26.9	11.5
Consolidated earnings per share (undiluted, in €)	1.07	0.75	0.32
Operating cash flow	75.5	56.4	19.1
Equity ratio (%; diff. in basic points)	49.0	45.4	3.6
Employees as of 31 December (absolute)	1,628	1,568	60

<sup>1)</sup> Prior-year figures adjusted

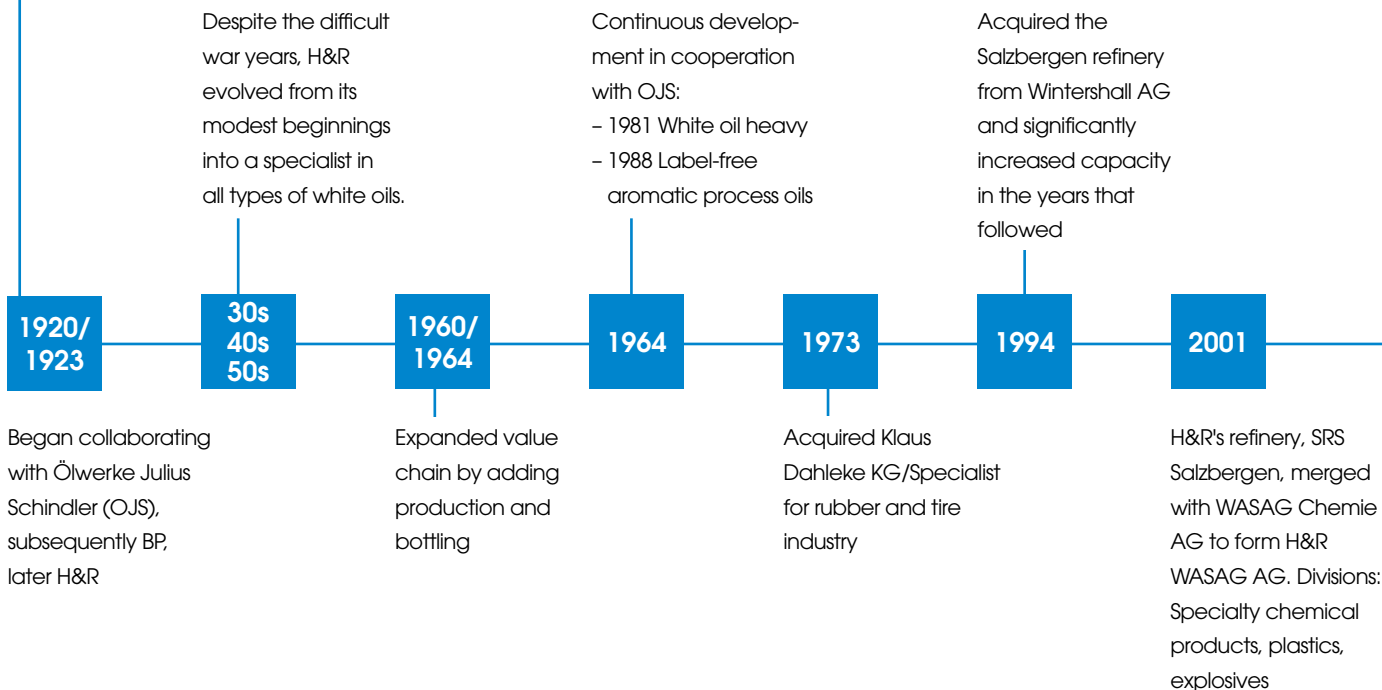
### THE SEGMENTS IN FIGURES

IN € MILLION	Revenue 2016	Revenue 2015	EBITDA 2016	EBITDA 2015
<b>Chemical and Pharmaceutical Raw Materials Refining</b> The ChemPharm Refining Segment produces speciality products from crude oil in the two domestic refineries in Hamburg and Salzbergen.	567.2	614.3	64.5	52.7
<b>Chemical and Pharmaceutical Raw Materials Sales</b> Our ChemPharm Sales Segment comprises the production sites abroad and our international sales activities.	328.0	320.2	39.4	35.1
<b>Plastics</b> Our Plastics Segment manufactures high-precision plastic parts along with the associated tools and moulds.	56.5	60.1	2.6	-0.8

## FROM FAMILY-OWNED COMPANY TO GLOBAL COMPANY

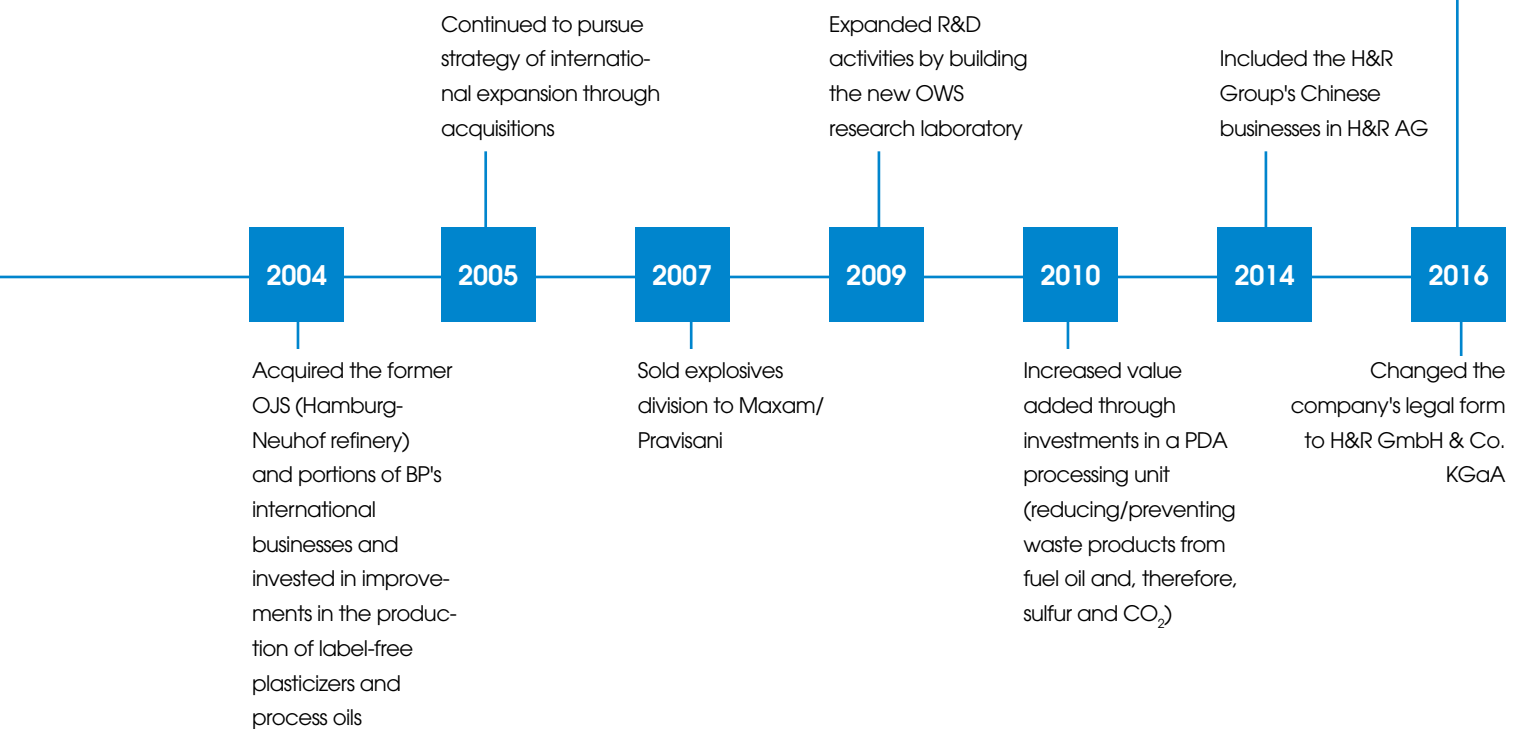


**1919** Heinrich Hansen and Emil Rosenthal founded the Hansen & Rosenthal Company in Hamburg. The company's original business was the purchase and sales of white oils and vaselines (petrolatum).





**2017** Continued the strategy of targeted international expansion





# STARTING WHERE OTHERS STOP

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At the very beginning of our work process is a raw material for which conventional refineries have no further use: “atmospheric residue”, a by-product of crude-oil distillation. But for us, as a specialty refinery, this substance has an almost inexhaustible potential.

## Quality

At our main facilities in northern Germany, 100,000 tons of crude-oil derivatives are used in the treatment process each week. We are fully aware of the composition of our feedstock at all times.

t

## SMART PROCESS CONTROL FROM THE VERY BEGINNING

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**Every year, around 25 ships dock at our “home port” of Hamburg to deliver atmospheric residue to our refineries. The raw material comes from the world's major crude-oil-producing regions. The three biggest suppliers for our raw material are currently Great Britain, Europe and northern Africa.**



**It is important to us to provide in-house training to our young employees; as a result, we have received multiple certifications as a company that offers training.**

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We aim to keep the percentage of profitable primary products we obtain from processing as high as possible and the percentage of inevitable by-products as low as possible. To achieve this, we are very selective, beginning with procurement. We take samples of each delivery to ensure we have a clear picture of the quality of the raw material. This determines what kind of refining will be required.

Once the refining process has been defined, the crude-oil derivative is further refined in a sophisticated joint-production process and/or is refined into a large number of base materials and crude-oil-based specialty products that are used in more than 100 industries, including the cosmetic, pharmaceutical and automotive industries.

## EN ROUTE TO THE GREEN REFINERY

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The construction of our propane deasphalting plant (PDA) in 2011 has allowed us to achieve virtually residue-free production at our refineries. This has enabled us to become more vertically integrated while increasing production efficiency over the long term.

With the successful launch of the PDA, we also took a big step closer to achieving our vision of the “green refinery”. Our products are important and are in demand. At the same time, production requires a lot of energy. As a result, we intend to take full advantage of all options available to us to conserve resources and protect the environment.

**50%**

of our by-products  
can be further processed  
by the PDA.



In our production process, we reduce waste to a minimum: only when we have exhausted options for further refinement do we dispose of the remaining waste in an environmentally compatible way.

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The Central Control Station is the “nerve center” of our refineries. Here, all production processes are monitored around the clock.

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### Refining levels

- MEDICAL WHITE OILS
- TECHNICAL WHITE OILS
- PARAFFINS
- BASE OILS
- PROCESS OILS





# BUILDING ON SPECIALISTS AS A SPECIALIST

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We intend to be among the best in our market, not just today, but in the future as well. And we want to continue our successful development. We will achieve this goal, because our more than 1,600 employees are experts in their fields and identify with our company's objectives.

## Employees

As a responsible employer, we train our employees to be highly qualified, professional team players while giving them the trust and leeway they need to fully contribute their skills to the Group.



## VISION

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**We have set our sights high for the future: by 2020, we want to have a stronger local presence worldwide, both in terms of sales/distribution centers and production sites. We plan to strengthen our partner network, not least so that we can further expand our international sales as well. And we want to improve our financial success by creating greater added value. Our employees are aware of these goals and with their day-to-day commitment they are helping us to confidently steer our company in that direction.**

But our customers are also helping us on our journey. They place their trust in us as a specialist that has reliably supported them, in some cases for many years, and has regularly underpinned high performance standards with operational excellence and certifications.

## REINFORCING STRENGTHS, CONSERVING RESOURCES

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By nurturing and expanding our employees' skills, we take an individualized approach that promotes employees' strengths and helps them to achieve their career goals.

The increasing complexity of our plants and equipment requires the deployment of well-trained employees. Therefore, the processes at our refineries, and in particular at the Measurement and Control Stations, are monitored exclusively by experienced employees who are regularly expanding their knowledge base.

Our Group places the highest priority on health and occupational safety. We make every effort to guarantee both, with the result that we rank significantly higher than the industry average in regular evaluations.



**Every product leaving or being delivered to our refineries is tested by our in-house laboratories to ensure it is of the highest quality.**

**60%**

of our employees are located on-site in the international markets.



Monitoring and control  
at the Measurement  
Station

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# 15 years

is the average length  
of service at our domestic  
locations. That is a high  
figure and a sign that we are  
capable of retaining a great  
deal of experience.



Group-wide, we train  
over 80 apprentices  
and students in dual  
work-study programs  
in 5 vocational fields.

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# FOCUSING ON THE DAY AFTER TOMORROW

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Our Hamburg and Salzbergen sites are well positioned for the future – a sign that the investments we have made in recent years are paying off. Our focus is on the long term when investing. Adhering to this principle will guarantee our long-term success.

## Capital expenditures

High-quality refineries is the “hard-ware basis” for our long-term success. To ensure that this foundation is stable, we have invested €300 million in our facilities over the past 10 years.



## A STRONG BASE IN GERMANY

**Today, our two German locations in Hamburg and Salzbergen are competitively positioned in every respect. The Hamburg refinery's location right next to the harbor means that it could not be easier to receive deliveries of feedstocks.**

The Salzbergen site has excellent rail connections to the Hamburg and Rotterdam ports, as well as to the Ruhr Valley and the Benelux countries. Both sites enjoy a smart energy supply. Since 2013, the Salzbergen location has been servicing customers through a contract-production model that is resulting in significant further reductions in business risk.

## PREPARING FOR THE FUTURE

The intense competition in our market will lead to further consolidation in the years to come. As a quality provider with more than 150 years of experience and a high degree of proximity to the customer, we will be successful in this environment.

To ensure that we continue to be well positioned in the future, we are investing in numerous projects today: for example, we are currently developing a new energy concept that will enable us to further reduce the energy consumed in our production processes. In the Paraffin product segment, we are focusing our positioning even more on customer groups and on the wide array of market opportunities for paraffins. In the area of storage capacity, we are currently improving our tank farm in Hamburg.

### GERMAN REFINERIES

Feedstock capacity:  
**around 1,000 kilotons/  
year**

Blending plants:  
**more than  
800 products**

Tank capacity:  
**500 tanks with a  
volume of around  
610,000 m<sup>3</sup>**

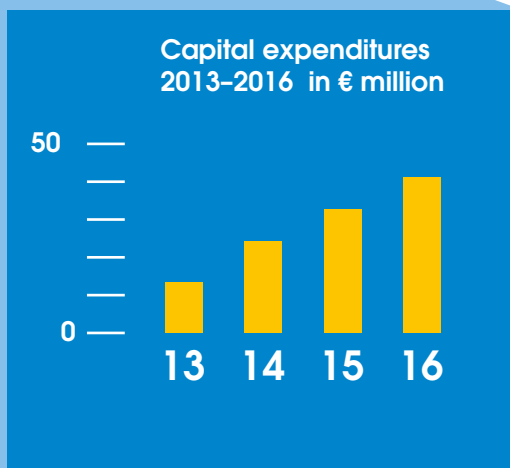




Our rolling pipeline supplies the Salzbergen site with raw materials from the Hamburg port.



In the event of an emergency, our own plant fire department will be on site immediately and provides the highest level of security. Many of our employees are involved here.







# STAYING CREATIVE.

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We are constantly looking for areas where we can improve: How can we further diversify our product mix? Can the process be made even more efficient? How can customers use the new discovery? The constant search for innovation expands our horizons and continually results in totally new solutions.

## Innovation

The refinery-operation business is very energy intensive. By investing in CO<sub>2</sub> reduction and lower energy consumption, H&R KGaA has already met important climate goals and conserved energy in the past.

# kWh

## NEW PRODUCTS

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We work closely with our customers to ensure that our products come as close as possible to meeting specifications. We ask them what they need and then apply our combined expertise in a targeted manner to achieve the desired results. Over the years, this has brought the number of crude-oil-based specialty products and plastic parts we manufacture to the current level of around 800 products that are used in more than 100 industries.

We will continue along this path in the future. Our sales/distribution staff and partners are important intermediaries and sources of ideas for our product innovations. Thanks to their ongoing customer contact, they have an excellent feeling for the market that allows them to pinpoint at an early stage areas where our innovation skills will next be in demand. We place particular priority on the research we perform for the paraffin, plasticizer and white-oil product groups.

## KNOWLEDGE PARTNERSHIPS

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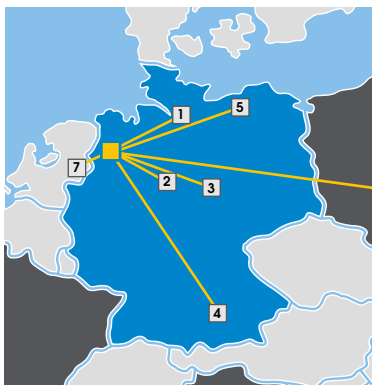
H&R cooperates closely with universities in

- 1 Hamburg,
- 2 Hanover,
- 3 Magdeburg,
- 4 Munich,
- 5 Rostock,
- 6 Bangkok (Thailand) and
- 7 Enschede (the Netherlands). This allows us not only to expand our skills, but also to develop contacts with important high-potential talent.

## HIGHER YIELD

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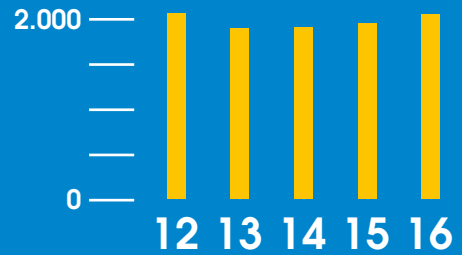
We are also constantly reviewing which processes could increase the yield of crude-oil-based specialty products from our raw material and thereby further improve the level of value added by our refineries. While in the past we focused mainly on expanding our production capacity, in recent years we have increased our investments in plants that can further refine our products.





H&R blends and bottles more than 2,000 products. Ongoing testing of new specifications means that we are constantly diversifying our product mix even further.

R&D: Continual Investments 2012-2016, in € thousands per year



In  
**1880**

the refinery registered its first patent for the production of lubricating oil.



Our refineries operate 24 hours a day, 365 days a year.



# TARGETED GROWTH.

Like our customers, we are at home in global markets. We are further expanding our international presence so that we can support them with confidence while successfully developing side by side with them. We are approaching this in a targeted manner, also taking advantage of partnerships.

## New regions

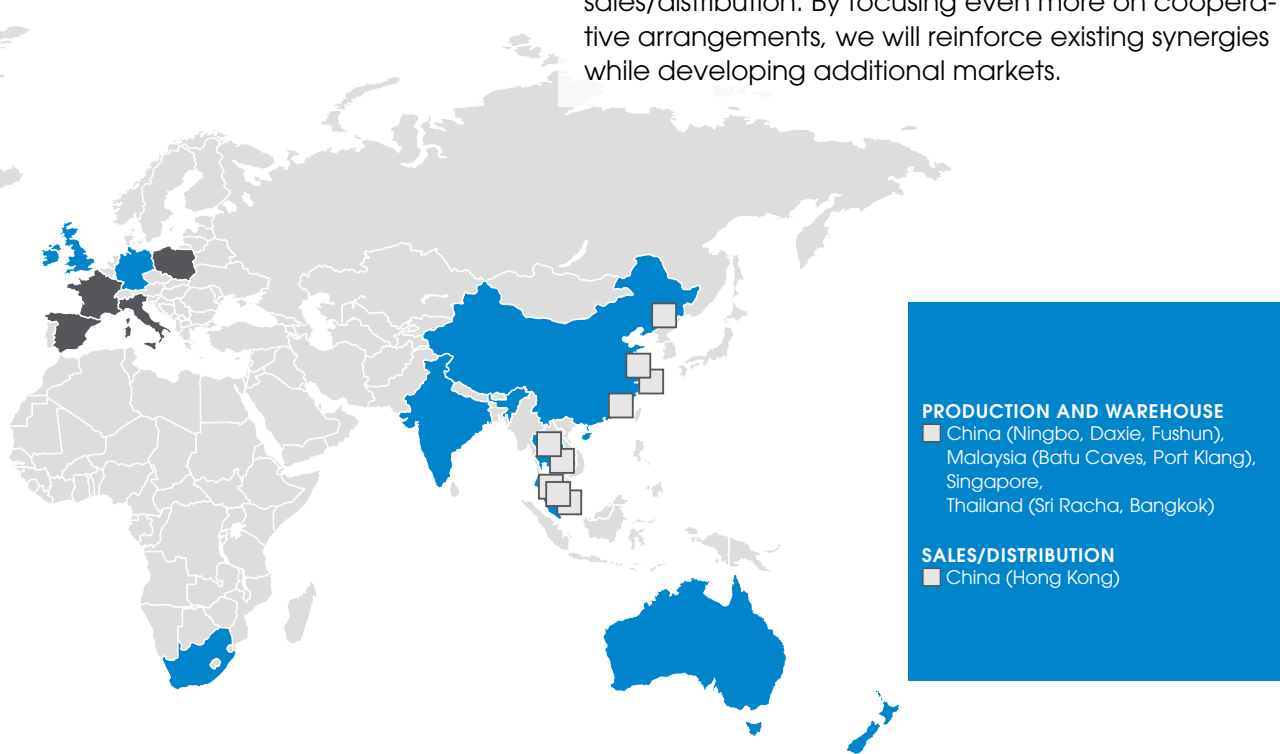
As we continue on our path to the global markets, already today we can rely on a global, well-positioned network of domestic H&R refineries and international processing plants.



## CHINA AND SOUTHEAST ASIA

Asia has been one of the major engines driving the global economy for many years. In addition to the major car manufacturers, all relevant players in the tire industry now have locations there as well. They expect their partners to provide the same quality as in their domestic locations. In China, in particular, we expect the demand for high-quality tires that pose no risk to health to increase. Our Group has the expertise needed to manufacture such tire components, as well as the necessary local production capacity.

We work closely with local partners in the chemical-pharmaceutical segment, both in production and in sales/distribution. By focusing even more on cooperative arrangements, we will reinforce existing synergies while developing additional markets.



## MIDDLE EAST

The normalization of developed countries' international relations with the oil-producing countries in the Middle East opens the way for the H&R Group to develop technical partnerships to collaborate on the development of specialty refineries. It will also allow us to establish relationships with new suppliers of raw materials.

**Tire industry  
in China**



**H&R THAILAND**

Bangkok was H&R's most successful international business location in 2016. Because of the high level of capacity utilization at our partner refinery, H&R built a new plant about 20 km away, in Pinthong.

**H&R CHINA**

Ningbo, located 150 km from Shanghai, is a strategic bridgehead for our activities in China. The site has ultra-modern production facilities and a state-of-the-art quality-assurance laboratory. The plant has 8,000 tons of storage capacity and 30,000 tons of annual loading capacity.



We supply

**27**  
of the world's 30 biggest  
tire manufacturers.



By ensuring proper tire consistency, our plasticizers help to conserve fuel: our plasticizers make up 8% of a tire.

## HEADING INTO THE FUTURE WITH CLEAR PRIORITIES

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### **Leadership position**

We will reinforce our leading positions in our specialty-product markets.

### **International strategy**

We will take advantage of attractive growth opportunities, especially in Asia.

### **Operational excellence**

We will focus on the highest quality with our best-in-class refineries.

### **Trust**

We will carefully nurture our long-standing customer relationships.

### **Certification**

Through regular ISO certifications, we will ensure that our performance is measured against independent standards.



## CONTACT

If you have further questions concerning our company or if you would like to sign up for the company mailing list, please contact our Investor Relations Team:

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# ANNUAL REPORT 2016

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H&R GmbH & Co. KGaA



## OUR FINANCIAL YEAR 2016

During the financial year, we generated decent sales revenues of €0.94 billion. At the same time, our operating in-come was significantly higher than in past years. Overall, the company showed in 2016 that it is well placed in the market and has a stable international position with positive contributions to earnings from virtually all divisions.

### T. 01 THE H&R GROUP IN FIGURES








IN € MILLION	2016	2015 <sup>1)</sup>	Change in absolute terms
Sales revenue	942.7	982.9	-40.2
Operating result (EBITDA)	101.4	85.4	16.0
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Consolidated earnings per share (undiluted, in €)	1.07	0.75	0.32
Operating cash flow	75.5	56.4	19.1
Equity ratio (in %)	49.0	45.4	3.6
Employees as of 31 December (absolute)	1,628	1,568	60

<sup>1)</sup> Prior-year figures adjusted; for details, see note (5), page 109.

### T. 02 THE SEGMENTS IN FIGURES

IN € MILLION	Revenue 2016	Revenue 2015	EBITDA 2016	EBITDA 2015
<b>Chemical and Pharmaceutical Raw Materials Refining</b>				
The ChemPharm Refining Segment produces speciality products from crude oil in the two domestic refineries in Hamburg and Salzbergen.	567.2	614.3	64.5	52.7
<b>Chemical and Pharmaceutical Raw Materials Sales</b>				
Our ChemPharm Sales Segment comprises the production sites abroad and our international sales activities.	328.0	320.2	39.4	35.1
<b>Plastics</b>				
Our Plastics Segment manufactures high-precision plastic parts along with the associated tools and moulds.	56.5	60.1	2.6	-0.8
Reconciliation	-9.1	-11.6	-5.1	-1.5

## Segments and Revenue in 2016 of H&R GmbH & Co. KGaA

Product	Segment	Revenue in € million
PLASTICIZERS 	<b>Chemical-Pharmaceutical Raw Materials REFINING</b>  The ChemPharm Refining Segment produces speciality products from crude oil in the two domestic refineries in Hamburg and Salzbergen.	<b>567.2</b>
PARAFFINS 		
BASE OILS 		
PROCESS OILS 		
WHITE OILS 		
<b>Chemical-Pharmaceutical Raw Materials SALES</b>  Our ChemPharm Sales Segment comprises the production sites abroad and our international sales activities.	<b>328.0</b>	
<b>PLASTIC PARTS</b> Automotive suppliers 	<b>PLASTICS</b>  Our Plastics Segment manufactures high-precision plastic parts along with the associated tools and moulds.	<b>56.5</b>
<b>PLASTIC PARTS</b> Medical technology 		

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Informative notes



Link to the H&R homepage



Information to sustainability



Useful information



*Niels H. Hansen*  
*Chairman of the Management Team*



*Detlev Wösten*  
*Member of the Management Team*

Dear Shareholders,  
Dear Ladies and Gentlemen,  
Dear Employees,

If we were to summarize the past financial year in one sentence, we would say that for our company, 2016 was a very successful year in which we generated one of the highest operating income figures in our company's history.

This was by no means a given for any of us, after the difficult years from 2012 to 2014 – and by no means did we achieve this success simply by sitting back and relaxing. Commodity prices that were stable overall, good market conditions and high demand for our specialty products created positive conditions for our business. But we were able to systematically, and successfully, exploit these opportunities because of our hard work in recent years.

To use a sports metaphor: it's not enough just to have the reputation of being the better team. Ultimately, the winning team is the one that can leverage its advantages and actually seize opportunities.

During the past two years, H&R has managed to significantly improve the conditions for success in a global, increasingly complex market:

- We offer the highest-quality products – products that have set the standards in terms of quality in many areas.
- Among our customers, we have a reputation for reliability and on-time delivery which they reward with a high level of demand and larger sales volumes.
- We are able to operate from an international position that gives us flexibility and heft, regardless of whether our customers obtain their H&R products from us locally or from one of our worldwide locations.

The reason: H&R is a stronger company than it was just a few years ago. Back in 2013, we announced that we were putting the company on a fitness program. The plan was to ensure that H&R improved its competitiveness and ability to innovate, despite stringent cost controls and limited funds for capital expenditures. We achieved this goal together: improved commodity valuations, advancements in

production technologies, a smaller share – but more intensive marketing of – by-products and expansion of our international network of production partners are just a few of our successes in the Chemical-Pharmaceutical division. And by working jointly with the management of the Plastics division and applying strict cost controls, focusing on new acquisitions, carefully adjusting the customer portfolio and realigning our tool-making segment, we have succeeded in turning the division around so that it is now making a positive contribution to earnings.

Rarely is success due to only a few people. We would therefore like to take this opportunity to expressly thank you for your support. Your commitment as financing partners, shareholders and customers provide the framework that is a crucial element of our success. Successfully exploiting potential opportunities was possible only because of your dedication as cooperation partners, project partners and employees. Your high degree of loyalty to H&R makes us proud and motivates us to actively press ahead with the company's development.

Naturally, the majority shareholder will also continue to be a part of this development over the long term: in 2016, H&R AG changed its legal form to become H&R GmbH & Co. KGaA (abbreviated as H&R KGaA). As a result, the majority shareholder's commitment to the company increased even further, changing from indirect participation as a shareholder into organizational involvement as general partner with full personal liability.

Obviously, restoring the ability to pay dividends is in the interests of all shareholders and remains a core objective of our company. Although the loss carryforwards under the German Commercial Code [HGB] once again do not allow for any distributable profits, the Management Team intends to issue bonus shares that will allow shareholders to participate in the positive 2016 results.

However, our success in 2016 should not blind us to the fact that the coming years will continue to be demanding and challenging. Domestic and international political tensions, economic difficulties in partner countries in Europe, the UK's departure from the EU and changes to world trade caused by growing protectionism: all of these factors may significantly affect H&R, which has always seen itself as an international company.



To avoid being buffeted by the markets, we must draw on what we have already accomplished and continue our efforts. This also applies, in particular, to the two refinery sites: maximizing flexibility and efficiency, avoiding errors and improving contribution margins are the leading principles that will continue to guide us in the years to come. At the same time, we will pursue a program of capital expenditures – the size of which is unique in our company’s history – aimed at stabilizing and expanding our competitive position.

This is possible because of our strong financial position. It is our responsibility to ensure that we use these funds efficiently.

As you can see, the situation remains tense: we will have to focus closely on operating and strategic issues to ensure that we can achieve our 2017 target, which is nothing less than repeating the financial success of 2016. Together, we have what it will take to accomplish this goal. We are pleased that you continue to stand by us.

Best regards,

The Management Team of H&R KGaA



**Niels H. Hansen**  
*Chairman of the Management Team*



**Detlev Wösten**  
*Member of the Management Team*

Salzbergen, March 2017

## Company Representative Bodies

The representative bodies of H&R KGaA are comprised of people who combine entrepreneurial thinking with professional skills. They complement each other with their specific skills and diverse expertise, which they use to achieve our shared corporate objectives.

### **Management Team**

---

As the general partner with full personal liability, H&R Komplementär GmbH is responsible for managing H&R KGaA. Its two managing directors are also the managing directors of H&R KGaA. Each member of the Management Team is responsible for one or more functions within the H&R Group.

**Niels H. Hansen**

*Chairman of the Management Team*

**Detlev Wösten**

*Member of the Management Team*

## The Supervisory Board

The Supervisory Board of H&R KGaA is responsible for the supervision of the Executive Board. In the financial year 2016, the Supervisory Board of H&R KGaA comprised the members listed below. The Chairman of the Supervisory Board of H&R KGaA is Dr. Joachim Girg.

### Chairman of the Supervisory Board

**Dr. Joachim Girg**  
Managing Director of  
H&R Beteiligung GmbH

**Sven Hansen** (since 31/7/2016)  
Managing Partner of the H&R  
Group

**Reinhold Grothus**  
Works Council Chairman at  
H&R ChemPharm GmbH

### Members of the Supervisory Board

**Roland Chmiel**  
Certified Public/Chartered  
Accountant, Partner in the law  
and accounting firm of Weiss  
Walter Fischer-Zernin

**Dr. Hartmut Schütter**  
Consulting Engineer

**Harald Januszewski**  
Thermoplast Work Preparation  
at GAUDLITZ GmbH

**Dr. jur. Rolf Schwedhelm**  
Tax Attorney and Partner  
in the law firm of Streck Mack  
Schwedhelm

**Rainer Metzner** (until 31/1/2016)  
Sales Manager – Medical  
Devices at GAUDLITZ GmbH

**Nils Hansen** (until 31/7/2016)  
General Partner,  
H&R Group

**Dr.-Ing. Peter J. Seifried**  
Chemical Engineer,  
Independent Consultant

**Matthias Erl** (since 31/1/2016)  
Technician at GAUDLITZ GmbH

## The Advisory Board

The Advisory Board of H&R KGaA consists of experts who contribute their expertise in the areas of finance and economics, industrial management and refinery technology on an advisory basis.

**Harald Baumgart**  
Managing Director of  
KG Deutsche Gasrußwerke GmbH & Co

**Dr. Erwin Grandinger**  
Businessman

**Eckbert von Bohlen und Halbach**  
Managing Director of Bohlen Industrie GmbH

**Dr. Bernd Pfaffenbach**  
Secretary of State in the German Federal Ministry  
of Economics and Technology, retired

**Sabine Dietrich**  
Member of the Supervisory Board of Commerz-  
bank AG; former member of the Board of  
Directors of BP Europa SE

**Wilhelm Scholten**  
Managing Director of  
Ölfabrik Wilhelm Scholten GmbH

**Dr.-Ing. Bernd Drouven**  
Chairman of the Executive Board of Aurubis AG

**Dr. Gertrud Rosa Traud**  
Chief Economist of Helaba Landesbank  
Hessen-Thüringen



*Dr. Joachim Girg*  
*Chairman of the Supervisory Board*

# Supervisory Board Report

## Dear Shareholders,

Financial year 2016 was remarkable for two reasons.

I. The positive earnings trend that began in the second half of 2014 and increased in 2015 continued during the year under review: earnings before taxes, depreciation and amortization of €101.4 million significantly exceeded our planned budget, matching record earnings posted at the beginning of the decade.

II. By changing its legal form to that of a partnership limited by shares (KGaA), the company has laid the foundation for a successful future while simultaneously preserving H&R AG as a family company from a legal standpoint.

Nevertheless, 2016 will also go down in history as a year full of major uncertainties. As Great Britain's departure from the EU and the outcome of the presidential election in the United States show, medium-term and long-term projects or plans must include plenty of leeway for fluctuations. H&R intends to seize on these trends as an occasion to continue to make intensive efforts to further develop our refining technology and to develop new markets, because this is the only way we can remain competitive globally while continuing to be a successful and attractive player in Germany's high-wage environment.

Although H&R GmbH & Co. KGaA is not yet in a position to pay dividends for 2016, the Supervisory Board is quite pleased that the Management Team intends to issue bonus shares that will allow shareholders to participate in the positive 2016 results. Naturally, achieving the full ability to pay dividends remains a core objective of our company. Positive earnings performance in 2017 should lay the necessary groundwork for us to begin paying dividends.

## Change of Legal Form

In addition to the viability of the business model, organizational and legal issues also comprise some of the main focal points of the work performed by the Supervisory Board, which must take into account both shareholder concerns and requirements that it conduct itself in a responsible manner. In recent years, and particularly after the crises we faced in 2013, there have been numerous intensive discussions about the company's legal form. For the Supervisory Board, an important point here has always been securing and improving financing options. After weighing various alternatives, the Supervisory Board therefore supported the Executive Board's proposed change in legal form to a partnership (KGaA) structure. To ensure compliance with corporate governance requirements, the Supervisory Board worked toward setting up an Advisory Board at the level of the general partner company. At the level of the general partner company, internal rules of procedure govern the rights and obligations of the Advisory Board and include a list of transactions and measures relating to personnel matters, investment or financing decisions and planning that require the approval of the Advisory Board. The members of H&R Komplementär GmbH's Advisory Board, which is currently comprised of three individuals, are independent Supervisory Board members. We also consider the overwhelming approval of the change in legal form by shareholders at the 2016 Annual Shareholders' Meeting to be an affirmation of our deliberations.

## General Information about Supervisory Board Activities

The Supervisory Board diligently and conscientiously performed the supervisory and advisory duties required by law, the Articles of Association and internal rules of procedure. The Supervisory Board and the Executive Board – the latter referred to as the Management Team from 1 August 2016<sup>1)</sup> – had a good, intensive working relationship during financial year 2016. The Management

<sup>1)</sup> For the sake of simplicity and greater readability, going forward we shall only use the term "Management Team" to refer to the management team of the partnership, which is assuming management of H&R GmbH & Co. KGaA, and to describe the status following registration of the change in legal form effective 1 August 2016. This does not apply to legally relevant transactions before that date, for which only the term "Executive Board" shall be used.

Team kept the Chairman of the Supervisory Board informed about all important issues on a regular basis and in a timely manner. The Supervisory Board and the Management Team also stayed in close contact outside of meetings in order to ensure a constant flow of information and an exchange of opinions.

The practice started the previous year of focusing each Supervisory Board meeting on a pivotal product segment or a priority region was continued in 2016. H&R's current position and the targets for the next few years were discussed in detail with the Management Team and the respective specialists from the subsidiaries.






The workflow for a „classic“ Supervisory Board meeting therefore includes the following:

- Committee reports;
- The current situation of the company, broken down into the Refineries and the Sales and Plastics segments;
- Status of current projects;
- Special topic: Product segment or priority region;
- Other.

At the January meeting, the initial special topics were label-free plasticizers and process oils. In March, we discussed the Personal Care division, which primarily involves white oils, petroleum jellies and oleogels. At the May meeting, we focused on business opportunities in the Middle East, e.g. in Iran, now that sanctions have been lifted. In August, we discussed opportunities for cooperation in Southeast Asia, and in October, our market position in South Africa and the United Kingdom, with the responsible regional managers. For the UK, the focus was primarily on the possible consequences of BREXIT on our business activities.

In this space last year, we laid out five core company goals for the Refinery and International Sales/Distribution segments. In addition to general monitoring and control functions, we consider one of our primary missions to be helping the Management Team to achieve these five objectives. The following goals were achieved in 2016:

#### T. 03 PERFORMANCE GOALS, GOALS ACHIEVED IN 2016

Performance goals	Goals achieved in 2016
i) Reduce low-margin and negative-margin by-products and convert to high-value specialty products	 New products and recipes from by-products; Elaboration of technical solutions, additional cover contribution of € 3.3 million
ii) Secure and improve competitive position	 New Solomon study comparing competitiveness
iii) Expand international sales performance	 Earnings growth and new plant, but share of profits did not expand
iv) Safety and environmental protection	 Results at industry average but room for improvement
v) Generate an EBITDA margin of > 10%	 2016 EBITDA margin: 10.6%

The core goal for the Plastics division is also to achieve an EBITDA margin of > 10% over the medium term. GAUDLITZ managed to post a positive net result in 2016 by breaking even for the first time in years. The Supervisory Board considers this a positive sign that the turnaround measures adopted are bearing fruit and that we are gradually getting closer to achieving our goal.

#### Composition and Efficiency Audit

As a listed stock corporation that falls under the German One-Third Employee Participation Act (Drittelbeteiligungsgesetz/DrittelbG), H&R GmbH & Co. KGaA's Supervisory Board consists of nine members. Six of the members are shareholder representatives, four of whom are independent.

The remaining three members are elected by employees (for more on the functions and focal areas of the shareholder representatives, see table T. 04 on page 15). No conflicts of interest involving members of the Management Team or members of the Supervisory Board arose during financial year 2016.

H&R GmbH & Co. KGaA's Supervisory Board would like to promote and strengthen a culture of diversity as a forward-looking foundation for our business. To us, diversity is a way of thinking that is characterized by mutual respect and open-mindedness. The Supervisory Board places particular emphasis in this regard on promoting women to leadership positions and to a corresponding level of representation within the company's management bodies. The 20% quota for female members of the Supervisory Board set by the Supervisory Board in 2015 still applies. Likewise, in coordination and agreement with the Supervisory Board, the Management Team has affirmed the 20% quota for women at the top two levels of management beneath the Executive Board adopted by the Executive Board in 2015, including after the change in legal form. As a company with international operations, we also want to ensure that particular attention is given to the international side – especially to different international experience, foreign languages, cultures and mindsets. Finally, our selection criteria for Supervisory Board candidates also include company-specific characteristics, such as extensive knowledge of refinery technology, plant construction and engineering and specialty oils.

As in the previous year, in 2016 the Supervisory Board again carried out an audit of its efficiency. Building on the extensive questionnaire drawn up in the previous year, the Chairman of the Audit Committee and the Audit Manager of H&R GmbH & Co. KGaA made adjustments to cover the new legal situation. Suggestions for improvements submitted in the previous year were also included in the new questionnaire for 2016. The Audit Manager evaluated the anonymous responses. After an intensive discussion of the results at a meeting of the Audit Committee held on 29 November 2016, a presentation was given to the entire Supervisory Board at the next regular meeting held on 6 December 2016.

The evaluation yielded some minor changes compared to the previous year. Overall, the Supervisory Board members rated the cooperation and the work of our panel as good to very good. The work of both Supervisory Board benches – and above all employee representative issues – received higher scores than in the previous year. The changes to certain work processes identified the previous year were implemented. Due to the change in legal form and the results of the 2016 survey, no priority areas for improvement were defined for 2017. Instead, the Board wants to wait to see what its work is going to look like under the partnership (KGaA) structure.

### [Trips to China, Thailand and to the Middle East](#)

In 2016, the Supervisory Board Chairman took three big trips for the company.

The first trip was to Asia in February 2016. In Ningbo, China, he attended the annual strategy meeting for the international business led by Mr Niels H. Hansen. The international businesses of the joint-stock company [Aktiengesellschaft], now a partnership [KGaA], delivered stable earnings even during the poorly performing financial years 2013-14. One of the company's stated long-term goals is to further expand its international operations. At the meeting in Ningbo, the next steps were discussed and agreed. After a stopover at GAUDLITZ GmbH's site in Wuxi, China, the Supervisory Board Chairman visited H&R Thailand on his way home. Acquired in 2004 as part of the acquisition of the Hamburg refinery OWS and at that time operationally inactive, Thailand was our most successful international business location during the year under review. The key to this successful development is a partnership with a local refinery. After our site, which is located in the immediate vicinity, reached its capacity limits and no further development was possible at that site, H&R built a new plant approximately 20 km away, in Pinthong. Its design is based on the successful Chinese site at Ningbo/Daxie. The Asian trip ended with a visit to the management office and the sales units in Bangkok.

The Supervisory Board Chairman accompanied Mr Niels H. Hansen and Mr Detlev Wösten, as well as one of the managers responsible for the

international business, on two trips to the Middle East. The relaxing and partial lifting of international sanctions against Iran at the start of 2016 could provide numerous new business opportunities for H&R. On the one hand, Iran was a target market for H&R products until the early 2000s. On the other hand, the country could be an attractive supplier of raw materials for both of our domestic refineries. Ultimately, it is important for our company to learn how Iranian refineries will position themselves in the future after the sanctions have been lifted. Thanks to its many years of experience in the development of specialty refineries, H&R could provide significant added value to potential partnerships. Importantly, any future steps in Iran must create advantages for both sides while ensuring compliance with the restrictions still in place. H&R has taken all the necessary steps to ensure the latter. We will continue to closely monitor economic developments and, if necessary, we can adjust our strategies on short notice.

#### Topics Discussed by the Full Supervisory Board

A total of seven Supervisory Board meetings took place in 2016, six of which were face-to-face meetings and one of which was held via teleconference. The May meeting was spread over two days. The Management Team provided extensive information about the company's situation to the Supervisory Board on a regular basis, both verbally and in writing. Moreover, at the beginning of each meeting, all members of the Supervisory Board were informed about the activities of the respective committees during the weeks preceding the session. To the extent required by law or the Articles of Association, up to the date on which the change in legal form was registered, the Supervisory Board approved proposed resolutions after thoroughly reviewing them. No changes were made to the meeting procedures after the change in legal form. Since the date of registration of the change in legal form, there is no longer a list of transactions requiring Supervisory Board approval. Under the partnership limited by shares [KGaA] legal form, decisions as to which transactions and measures require approval are taken by the Advisory Board at the level of the general partner company.

The 2016 attendance rate at Supervisory Board meetings was 96%. Below is a brief presentation of the main areas focused on at the meetings.

The annual session began on 29 January 2016 with the year's first Supervisory Board meeting, at which the attendees held detailed discussions of the status of work on the annual financial statements for 2015 and two focal points for the future.

The partnership limited by shares [KGaA] legal form was introduced and discussed in the presence of a lawyer from a renowned international law firm. In addition to an overview of the KGaA legal form and the composition of its management bodies, the rights and duties of the management bodies – the Management Team, the Supervisory Board and the Annual Shareholders' Meeting – were explained and discussed in detail. Concrete examples of past conversions were presented and used to discuss the impact and consequences of such changes in legal form – for example on the share price.

Related issues arising after the meeting were addressed on an ongoing basis through the Supervisory Board Chairman, in some cases with expert outside legal support.

The second focal point was Label-Free Plasticizers and Process Oils – Further Development and Future. H&R is one of the global market leaders in this field. Above all, TDAE – a label-free plasticizer for the tire industry – guaranteed consistent earnings in previous years. Along with Sales and R&D specialists, attendees introduced and discussed the market environment and innovations in the field of technical rubber goods.

The initial focus of the meeting on 16 March 2016 was a discussion of the 2015 annual financial statements. After the necessary supporting documents were first discussed by the Audit Committee in the presence of the auditor on 26 February 2016, the updated documents were available to all Supervisory Board members from the beginning of March. Following extensive editing, the audit reports were discussed and debated with the auditors at the meeting. Especially in light of the fact that this was the first



audit by the new auditors, this process was particularly intense. At the recommendation of the Audit Committee, the Supervisory Board approved and ratified the annual financial statements of the joint-stock company [AG] and the consolidated financial statements. Also at the recommendation of the Audit Committee, the Supervisory Board decided to propose that the Annual Shareholders' Meeting appoint Warth & Klein Grant Thornton AG Wirtschaftsprüfungsgesellschaft, Hamburg, as auditors of the financial statements and the consolidated financial statements for financial year 2016.

After that, the attendees discussed with the Executive Board, in the presence of the company's legal counsel, the possible change in the company's legal form to that of a partnership limited by shares. In particular, the Supervisory Board discussed the fact that the legal form "GmbH & Co. KGaA" would ensure continuation of the company's long-term growth strategy and would ideally combine a capital-market-oriented approach with the advantages of a family-run company. The Supervisory Board decided to carry out a thorough review of the documents necessary for a change in legal form. Here, it was important to the panel not to limit itself exclusively to formal legal issues, but rather to evaluate – from the company's standpoint – to what extent such a conversion would be advantageous, reasonable, advisable and in the company's interest. The meeting ended with a presentation on Personal Care products. Various potential applications and customer industries for white oils, petroleum jellies and oleogels and H&R's target markets, their size and positioning were discussed in the presence of the Product Manager.

After extensive preparatory work, meetings and teleconferences, the meeting held on 4 April 2016 focused exclusively on the topic "Annual Shareholders' Meeting – Invitation and Agenda", and in particular on Agenda Item 7, "Resolution on Changing the Company's Legal Form to that of a Partnership Limited by Shares with the Accession of H&R Komplementär GmbH". The panel held intensive discussions on the documents presented by the Executive Board since the last meeting, in particular the Conversion Resolution, the Con-

version Report and the Articles of Association, again enlisting the support of outside legal experts. The Supervisory Board then approved the convening of the Annual Shareholders' Meeting and its agenda, including Agenda Item 7 on the change in legal form. At this meeting, the Supervisory Board also took note of and approved the appointment of both Executive Board members, Niels H. Hansen and Detlev Wösten, as Managing Directors of H&R Komplementär GmbH, which took place before implementation of the change in legal form.

On the day before the 2016 Annual Shareholders' Meeting, 17 May 2016, the Supervisory Board considered the current business situation and the status of preparations for the Annual Shareholders' Meeting. This meeting also devoted particular attention to the special topic, "Middle East". Following the Annual Shareholders' Meeting, the board held another meeting on 18 May 2016 to re-elect Mr Roland Chmiel, who had been newly elected as a Supervisory Board member at the 2016 Annual Shareholders' Meeting, as the Deputy Supervisory Board Chairman and to appoint new members to the committees, the number of which had been reduced to three (for more information, please see the next section on committee work from page 15 on).

At the Supervisory Board meeting held on 9 August 2016, the panel addressed implementation of the change in legal form, in particular new processes and responsibilities. In addition, the meeting reviewed current investments in the Refining segment and in special projects relating to overall topic of "Green Refinery". This topic of strategic focus addressed the Malaysian market, its requirements, the competitive situation and potential partners for cooperation. Other topics included association and lobbying work, the current status of the upgrade to the flood-protection wall at the Hamburg refinery site and an update on REACH.

The Supervisory Board meeting held on 18 October 2016 took an in-depth look at two main topics: the status of restructuring in the Plastics division and our international activities at the Durban (South Africa) and Tipton (Great Britain)

locations. In all three cases, the current situation and medium-term planning were discussed with the managers in charge. In the case of H&R UK, we also addressed the potential consequences for our business of the United Kingdom's departure from the European Union. The meeting ended with a presentation by the Chairman of the Committee on Refinery Technology and Strategy concerning the Solomon study entitled "World's Best Lube Refineries".

As in previous years, the focus of the last meeting of the year, held on 6 December 2016, was on a review of the current financial year, planning and the 5-year medium-term plan. The Management Team intends to implement numerous measures to guarantee and expand our competitive position. On the one hand, we intend to offer our customers tailor-made solutions by providing new, innovative products; on the other hand, we are determined to systematically press ahead with our strategy of converting our by-products into profitable primary products. The panel discussed the proposed investment plan in detail. The Chairman of the Audit Committee also presented the results of the efficiency audit and the Supervisory Board Chairman reported on planned changes to the German Corporate Governance Code. The latest revision of the annual Statement of Compliance was drawn up to reflect the change in legal form effective on 1 August 2016. Therefore – unlike in previous years – it was not necessary to revise the Statement of Compliance at the December meeting. The meeting ended with discussions about refinery issues, in particular the tank capacity situation at the Hamburg site.

### The Work of the Supervisory Board Committees

One result of the 2015 Efficiency Audit was a consolidation of committee work. This was based on the fact that in previous years, committee work was focused on the Audit Committee and the Committee on Refinery Technology and Strategy (RTS). The change in legal form also decisively supported these considerations. Therefore, the Steering Committee and the Corporate Actions Committee were eliminated. As a result, neither committee held any meetings in 2016. Thanks to the backgrounds of the people serving on the Audit Committee and RTS, both committees are very well equipped with financial expertise. This ensures that, when needed, the committees can also thoroughly examine financial issues. At the same time, just as before the new legal form was adopted, it is still possible to set up special committees. As in 2015, there was no need to do so in 2016.

In 2016, 11 committee meetings were held, including four meetings of the Audit Committee, five RTS meetings and one meeting of the Nomination Committee. In addition, a combined meeting of the Audit Committee and RTS was held on 22 April 2016. The attendance rate remained high, at 90%.

## T. 04 SUPERVISORY BOARD COMMITTEES OF H&amp;R GMBH &amp; CO. KGAA AND THEIR COMPOSITION AT THE END OF 2016

	Training and Professional Focus	Function	Committees
<b>Dr. Joachim Girg</b> Chairman of the Supervisory Board Representative of the Majority Shareholder	MBA, Managing Director of H&R Beteiligung GmbH, Hamburg	Banking and Capital Markets International Business Strategic Issues Corporate Governance	Audit Committee Refinery Technology and Strategy-Nomination
<b>Roland Chmiel</b> Deputy Chairman of the Supervisory Board Supervisory Board's independent financial expert	CPA/Chartered Accountant, Partner in the law and accounting firm Weiss Walter Fischer-Zernin, Munich	Accounting, Controlling and Compliance Taxes	Audit Committee (Chairman)
<b>Sven Hansen</b> Majority Shareholder	Managing Partner of the H&R Group, Hamburg	Entrepreneurship Strategic Issues and Innovations ChemPharm Specialty Products	Refinery Technology and Strategy Nomination (Chairman)
<b>Dr. Hartmut Schütter</b> Independent Member, Supervisory Board	Consulting Engineer, Schwedt/Oder	Refinery Technology, Plant Construction, Engineering Technology	Refinery Technology and Strategy (Chairman)
<b>Dr. jur. Rolf Schwedhelm</b> Independent Member, Supervisory Board	Tax Attorney and Partner at the law firm Streck Mack Schwedhelm, Cologne	Corporate and Tax Law Corporate Governance	Audit Committee Nomination
<b>Dr.-Ing. Peter Seifried</b> Independent Member, Supervisory Board	Chemical Engineer, Independent Consultant, Seevetal	Refinery Technology, Plant Construction, Engineering Strategic Issues	Audit Committee Refinery Technology and Strategy

### From Five to Three

The Audit Committee held five meetings during the year under review, including one joint meeting with the Committee for Refinery Technology and Strategy. In the presence of the auditors and the Executive Board, it dealt with the financial statements and the combined Management Report for H&R AG and the Group, the Subordinate Status Report and the appropriation of net income. In addition, the Audit Committee gave the Supervisory Board its recommendations regarding approval and/or ratification of the financial statements for financial year 2015 and the proposal to the Annual Shareholders' Meeting concerning the election of the auditors for financial year 2016.

The committee's work concentrated, among other things, on issuing the audit engagement to the auditors elected for financial year 2016; monitoring the auditors' independence and qualifications; determining the focal points of the audit; and determining the auditing firm's fees. Further, the course and results of the audit of the financial statements were followed, discussed and evaluated in a timely manner.

In addition, the body actively reviewed the efficiency of the work by the Supervisory Board.

It obtained advice on the implementation and results of the review and discussed measures to improve the questionnaire used. Moreover, the Audit Committee tackled the way the process of preparing the annual financial statements is organized and addressed the Group's internal control system and compliance-management system, paying particular attention to tax aspects. It also kept itself informed about the work and results of the Internal Audit department. Other issues discussed included the Company Formation Audit Report relating to the change of legal form to a partnership [GmbH & Co. KGaA] and the implications of the new Financial Statement Audit Reform Act [Abschlussprüfungsreformgesetz/AReG].

On top of the committee meetings, the Chairman of the Audit Committee, the auditors, the Management Team and the Head of Finance held regular meetings to exchange information and coordinate their work. The committee's chairman was also kept informed about preparations by the Executive Board for the change in legal form.

The Audit Committee's attendance rate was 100%.

The Committee on Refinery Technology and Strategy held six meetings during the year under review. The committee's work focused primarily on projects to increase value creation and minimize risk and on environmental legislation. Another focal point was benchmarking, especially the detailed analysis of our refineries' positioning, including the results of standardized benchmarks based on Solomon, specific best practice comparisons and the comparison of environmental and safety performance based on comparative figures from other industries compiled by Concawe (Conservation of Clean Air and Water in Europe). A project that constantly cropped up in committee work related to the planned work to upgrade the flood defenses for the Hamburg refinery site.

At a special joint meeting of the Audit Committee and the Committee on Refinery Technology and Strategy held on 22 April 2016, the company's strategic business direction and upcoming challenges were discussed in detail with the Executive Board. Specifically, the meeting focused primarily on the company's medium-term investment planning and financing. Individual investment projects at our refineries and in the International Sales division were discussed in detail with the respective project managers. Here, particular attention was paid to the following projects:

- Greater Value Creation through Expanded Hydrogenation
- Reduction of By-Products
- Salzbergen Energy Concept
- Innovative Manufacturing Processes
- New Partners and Market Regions in Our International Business

The attendance rate for the Committee on Refinery Technology and Strategy was 83%.

Following initial discussions at the Supervisory Board meeting on 8 December 2015, the Nomination Committee met once at the beginning of 2016. The terms of office of Dr. Rolf Schwedhelm and Mr. Roland Chmiel ended at the end of the 2016 Annual Shareholders' Meeting. Both men are independent shareholder representatives. They cover important special areas on the panel; in addition, Mr. Chmiel is the

Supervisory Board's financial expert within the meaning of Article 100, paragraph 5 of the German Stock Corporation Act [AktG]. After intensive consultations, the committee recommended that the full Supervisory Board propose that the Annual Shareholders' Meeting re-elect both men based on their dedicated committee work and their strong teamwork. In particular, it was noted at the meeting that the proposal of Dr. Rolf Schwedhelm and Mr. Roland Chmiel as candidates for election to the Supervisory Board was in the company's interest – even after taking into consideration the stated targets and diversity considerations. The full Supervisory Board unanimously followed this recommendation at its meeting on 29 January 2016.

All committee members attended the meeting of the Nomination Committee.

### Audit of the Annual and Consolidated Financial Statements

Warth & Klein Grant Thornton AG Wirtschaftsprüfungsgesellschaft, Hamburg, audited the annual and consolidated financial statements and the combined management report for H&R GmbH & Co. KGaA and the Group for financial year 2016 and issued an unqualified audit certificate for each.

The annual financial statements for H&R GmbH & Co. KGaA and the combined management report for H&R GmbH & Co. KGaA and the Group were prepared in accordance with the requirements of the German Commercial Code (HGB). The consolidated financial statements were prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union (EU) and the additional requirements of German commercial law, as stipulated in Article 315a, paragraph 1 of the HGB. The auditors carried out the audit in accordance with Article 317 of the HGB and the generally accepted auditing principles promulgated by the Institute of Public Auditors in Germany (IDW). The Management Team distributed the aforementioned documents to the Supervisory Board in good time. The annual and consolidated financial statements and the combined management report were also dealt

with in depth at the Audit Committee meeting on 7 March 2017.

The audit reports by Warth & Klein Grant Thornton were distributed to all Supervisory Board members and were reviewed thoroughly in the presence of the auditors at the Supervisory Board meeting held on 14 March 2017 to discuss the financial statements. The auditors reported on the main findings of their audit and confirmed that the internal control and risk-management system had no major weaknesses as far as the accounting process was concerned. In addition, the auditors talked about significant transactions and decisions that had been taken concerning accounting policies. At the plenum meeting, the Chairman of the Audit Committee gave an extensive report on the Audit Committee's review of the annual and consolidated financial statements.

Based on the recommendation by the Audit Committee and after our own audit of the annual and consolidated financial statements, we approved the results of the audit conducted by the auditors and ratified both the annual and the consolidated financial statements. Because the annual financial statements did not report a distributable profit for the reporting year, the Management Team did not present any proposal for the appropriation of net income to the Supervisory Board.

The report on relations with affiliated companies prepared by the Management Team in accordance with Article 312 of the German Stock Corporation Act (AktG) was also examined by the auditors. The auditors informed the Supervisory Board of the outcome of the audit and issued the following auditors' opinion:

"Having carried out the audit and assessment in accordance with our professional duties, we confirm that

1. the factual information provided in the report is correct,
2. the payments made by the company for the legal transactions listed in the report were not inappropriately high."

This report by the auditors was also reviewed by the Supervisory Board. The Supervisory Board endorses the closing statement made by the Management Team in the report and has no objections to raise.

There were two personnel changes that affected the Supervisory Board in financial year 2016. Mr Nils Hansen resigned from his Supervisory Board position on 1 August 2016 as part of the change in legal form. He was replaced by Mr Sven Hansen, who had been elected as an alternate candidate in the event of such a situation by the Annual Shareholders' Meeting in 2012. At the end of January 2016, the Chairman of the Advisory Board of GAUDLITZ GmbH, Coburg, who for many years was also an employee representative on the Supervisory Board, Mr Rainer Metzner, resigned from his Supervisory Board position and left the Group. His alternate candidate is Mr Matthias Erl.

The Supervisory Board thanks both for their many years of work on the panel. In his new position with H&R Komplementär GmbH, Mr Nils Hansen will continue to play a significant role in the future development of the company. The Supervisory Board wishes him continued good health, personal well-being and the necessary good fortune.

Up to the date on which the change in legal form was registered, 1 August 2016, there were no changes to the Executive Board.

The Supervisory Board thanks the members of the Management Team, all employees worldwide and the employee representatives for their hard work, their personal contributions and their constructive collaboration for the good of the company.

March 2017

Signing for the Supervisory Board



**Dr. Joachim Girg**  
Chairman

# Corporate Governance

## Declaration on Corporate Governance and Corporate Governance Report

Corporate governance refers to a company's decision-making and control processes. Good corporate governance means making decisions based on long-term value creation, ensuring that a company's Management Team and Supervisory Board work together effectively and demonstrating a high level of transparency in corporate communications. These factors are the key guiding principles when it comes to the management and supervision of H&R KGaA.

In Germany, the applicable regulations and the recognized German and international standards for responsible corporate governance are summarized in the German Corporate Governance Code (the "Code"). The Code, which is based on the statutory provisions applicable to a joint-stock company [Aktiengesellschaft/AG], is applied mutatis mutandis by H&R GmbH & Co. KGaA.

Pursuant to Article 289a of the German Commercial Code [HGB], the Management Team hereby issues the following Statement on Corporate Governance – which is an integral part of the summarized Management Report – thereby also fulfilling the recommendations of the current German Corporate Governance Code (Preparation of a Corporate Governance Report).

### 2016-2017 Statement of Compliance

The Executive Board and the Supervisory Board submitted the last Statement of Compliance of H&R AG with the German Corporate Governance Code (hereinafter referred to as "GCGC" or "Code") required by Article 161 of the German Stock Corporation Act [AktG] on 8 December 2015. On 18 May 2016, the regular Annual Shareholders' Meeting adopted a resolution to change the company's legal form to that of a partnership limited by shares [Kommanditgesellschaft auf Aktien, hereinafter referred to as "KGaA"], with the accession of H&R Komplementär GmbH as general partner with full personal liability. The resolution on the change in legal form was recorded in the

company's Commercial Register on 1 August 2016. The company now operates under the name H&R GmbH & Co. KGaA.

The following updated statement refers to the recommendations of the Code as updated on 5 May 2015, which was published in the electronic version of the Federal Gazette [Bundesanzeiger] on 12 June 2015.

### I. Specific features of the KGaA legal form

The GCGC contains descriptions and explanations of the legal requirements applicable to (listed) joint-stock companies [Aktiengesellschaften]; the Code's recommendations are also aimed at the (listed) joint-stock company [Aktiengesellschaft] legal form. The following features apply to the company because of the structure of the KGaA, in terms of specific legal requirements described in the Code and individual recommendations of the Code since the change in legal form to that of a KGaA on 1 August 2016 went into effect:

#### – Annual Shareholders' Meeting

Basically, the Annual Shareholders' Meeting of a partnership limited by shares [KGaA] has the same rights and obligations as the Annual Shareholders' Meeting of a joint-stock company [Aktiengesellschaft/AG].

However, in addition, pursuant to Article 286, paragraph 1, sentence 1 of the AktG, the KGaA's Annual Shareholders' Meeting must decide whether to approve the annual financial statements (compare Section 2.2.1, paragraph 1 of the GCGC). The resolution also requires the approval of the general partner with full personal liability. The Annual Shareholders' Meeting is likewise not allowed to decide on its own regarding amendments to the Articles of Association or major organizational changes (see Section 2.2.1, paragraph 2, sentence 1 GCGC). Such resolutions require the approval of the general partner with full personal liability, to the extent they deal with matters for which the consent of the general partner with full personal liability and the limited partners is required for a limited partnership. Determining the remuneration of the general partner with full personal liability falls within the remit of the Annual Shareholders' Meeting and is

laid out in the Articles of Association. Due to lack of authority, the Annual Shareholders' Meeting cannot decide upon approval of remuneration for the managing directors of H&R Komplementär GmbH (see Section 2.2.1, paragraph 2, sentence 2 GCGC).

#### – Management Team

Under the KGaA legal form, the general partner with full personal liability assumes responsibility for the company's management. The KGaA does not have an Executive Board. The general partner with full personal liability is not appointed by the Supervisory Board, but rather in the KGaA's Articles of Association. The management of H&R GmbH & Co. KGaA is assumed by H&R Komplementär GmbH, which in turn is represented by its managing directors, Mr Niels H. Hansen and Mr Detlev Wösten.

The company's Supervisory Board is not responsible for deciding on the composition of the Management Team or for setting the remuneration for the managing directors (see Section 4.2 GCGC) of H&R Komplementär GmbH. The Shareholders' Meeting of H&R Komplementär GmbH is responsible for concluding employment agreements with the managing directors. The remuneration of the managing directors is set by the Advisory Board established at the level of H&R Komplementär GmbH through a shareholder resolution. With the exception of the deviations indicated under Section II.2, the Code's recommendations regarding the setting of remuneration for the managing directors of H&R Komplementär GmbH and the other contractual provisions of the employment agreements with the managing directors have been followed.

The general partner with full personal liability is subject not to the covenant not to compete stipulated in Article 88 AktG, but rather to the one stipulated in Article 284 AktG (see Section 4.3.1 GCGC). Taking on outside work requires the approval of the Shareholders' Meeting (see Section 4.3.4 GCGC).

#### – Supervisory Board

Compared to the Supervisory Board of an AG, a KGaA's Supervisory Board has limited rights and obligations.

Because of the configuration of the Supervisory Board under the KGaA legal form, the company's strategic direction is determined by the general partner with full personal liability and, if applicable, the Annual Shareholders' Meeting (see Sections 3.2 and 4.1.2 GCGC). As a pure oversight body, the Supervisory Board is not authorized to draw up a list of transactions requiring its approval (see Section 3.3. GCGC). Because the general partner with full personal liability is specified in the Articles of Association, the Supervisory Board likewise is not responsible for appointing, dismissing or governing the obligations and rights of the Management Team (see Sections 4.2 and 5.1.2 GCGC).

## II. Deviations from Code recommendations

The Management Team of the general partner with full personal liability and the Supervisory Board of H&R GmbH & Co. KGaA state:

1. In the period since submission of the last Statement of Compliance on 8 December 2015 until the change in the company's legal form to that of a KGaA went into effect on 1 August 2016, the company has complied with the recommendations of the "Government Commission on the German Corporate Governance Code", with the following deviations:

#### – Section 4.2.3, paragraph 2 of the Code:

The previous Executive Board employment agreement between H&R AG and Executive Board member Mr Detlev Wösten provided for a variable remuneration component without a multi-year assessment basis. This was due to the initially short term of the Executive Board employment agreement. Mr Detlev Wösten's Executive Board employment agreement was terminated effective 1 August 2016. By contrast, Mr Detlev Wösten's managing director employment agreement with H&R Komplementär GmbH contains a variable remuneration component with a multi-year assessment basis.

– Section 5.4.6, paragraph 2 of the Code:

Section 15 of H&R AG's Articles of Association previously promised members of the Supervisory Board a variable remuneration component that was not based on sustainable company development in terms of a multi-year assessment basis. Following a thorough review, on 18 May 2016 the Executive Board and the Supervisory Board proposed to the Annual Shareholders' Meeting that the structure of Supervisory Board members' remuneration be changed. The version of the company's Articles of Association that went into effect on 1 August 2016 only promises members of the Supervisory Board a pure fixed remuneration.

2. Since the change of legal form to that of a KGaA went into effect on 1 August 2016, as well as in the future, the company has complied and will comply with the recommendations of the "Government Commission on the German Corporate Governance Code", including the specific features of the KGaA legal form described in Section I, with the following deviations:

– Section 4.2.3, paragraph 4 of the Code:

The managing director employment agreements concluded by H&R Komplementär GmbH and effective on 1 August 2016 do not include any

agreement on a severance-pay cap within the meaning of Section 4.2.3, paragraph 4 GCGC. The managing directors' employment agreements are concluded for a fixed term and do not contain any option for regular termination. In the event of extraordinary termination for good cause, the managing director shall not be entitled to any severance pay from the company. In the absence of good cause, the existing employment agreements may only be terminated prematurely through termination agreements, which shall stipulate the conditions for terminating the employment agreement (including the amount of any severance pay). At the same time, the Code recommendation shall be followed if a termination agreement includes an agreement on severance pay.

– Section 5.1.2, paragraph 2 of the Code:

The managing director employment agreements concluded by H&R Komplementär GmbH and effective on 1 August 2016 do not specify any age limit. In view of the current age structure of the H&R Komplementär GmbH's management, to date there has been no reason for such a provision, because a formal age limit would unnecessarily complicate the search for suitable managing directors.

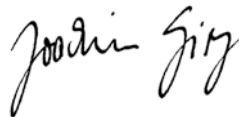
Salzbergen, 9 August 2016



**Niels H. Hansen**  
Chairman of the  
Management Team



**Detlev Wösten**  
Member of the  
Management Team



**Dr. Joachim Girg**  
Chairman of the  
Supervisory Board





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## Corporate Governance Report

### Change in legal form from H&R Aktiengesellschaft to H&R GmbH & Co. KGaA

On 18 May 2016, the regular Annual Shareholders' Meeting of H&R Aktiengesellschaft decided to change the company's legal form from that of a joint-stock corporation [Aktiengesellschaft/AG] into that of a partnership limited by shares [Kommanditgesellschaft auf Aktien/KGaA].

As part of the change in legal form, H&R Komplementär GmbH joined the company as the general partner with full personal liability; it has been responsible for the company's management and representation since the change in the company's legal form to that of a partnership limited by shares was recorded on 1 August 2016. Mr Nils Hansen, also the majority shareholder of H&R KGaA, holds the majority of voting shares in H&R Komplementär GmbH.

Changing H&R Aktiengesellschaft's legal form into that of a partnership limited by shares (Kommanditgesellschaft auf Aktien) led neither to the dissolution of the company nor to the founding of a new legal entity. The legal and commercial identity of the company remained intact.

In the following section, the Management Team and Supervisory Boards report on Corporate Governance at H&R KGaA pursuant to Section 3.10 of the German Corporate Governance Code, applied mutatis mutandis.

### Corporate Governance Practices and Compliance

Management and control at H&R KGaA are based on the Articles of Association, the rules of procedure for the Supervisory Board and the Management Team, the German Corporate Governance Code and the relevant national legislation. Corporate management practices going above and beyond the statutory requirements are summarized in a Group-wide Code of Conduct. This Code of Conduct defines binding rules of conduct derived from our corporate policy. Our values and the resulting corporate policy can be consulted online at

[www.hur.com](http://www.hur.com) under the heading "About H&R". We work continuously to make our employees aware of the need to behave in accordance with the Code of Conduct when carrying out their jobs. We also hold extensive training sessions on special issues, depending on the area of responsibility. These courses at H&R KGaA focus on topics relating to occupational health and safety, environmental protection and anti-trust legislation.

Compliance infringements are systematically tracked and consistently subjected to disciplinary actions. Compliance with the requirements of the Group-wide Code of Conduct is regularly the subject of deliberations by the Supervisory Board.

### Shareholders and Annual Shareholders' Meeting

Our shareholders decide on company matters by exercising their voting rights at a General Shareholders' Meeting, which is held at least once a year. The shareholders entitled to attend and vote are those who on the 21st day before the Shareholders' Meeting (Record Date) hold H&R shares and correctly register to attend the Shareholders' Meeting. Each share entitles its holder to cast one vote (one-share-one-vote rule). Every shareholder who is entitled to vote has the option of exercising his voting right in person, appointing a proxy or abstaining from the vote. In addition, we offer shareholders the option to pool their votes through our company's instruction-bound voting-rights representative.

Shareholders have the right to speak at the Annual Shareholders' Meeting, submit motions and request information about matters concerning the company and its affiliated companies insofar as is necessary to reach a constructive assessment of an item on the agenda. Our Annual Shareholders' Meeting elects six of the nine members of the Supervisory Board by rotation. Among other things, it also considers resolutions on approval of the company's annual financial statements, the appropriation of distributable profit, formal approval of the activities of the general partner with full personal liability and of the Supervisory Board, the appointment of the (Group) auditors, corporate actions and amendments to the Articles of Association. Resolutions on approval of the

annual financial statements, amendments to the Articles of Association and major organizational changes also require the approval of the general partner with full personal liability. The invitation and all documents to be made accessible to the Annual Shareholders' Meeting are published on the Investors Relations section of our website, [www.hur.com](http://www.hur.com), in a timely manner. After the Annual Shareholders' Meeting, the results of voting and attendance figures can also be found in this section of the website.



[www.hur.com](http://www.hur.com)

### Management Team and Supervisory Board Cooperation

H&R KGaA is managed by H&R Komplementär GmbH in its capacity as general partner with full personal liability, which in turn is represented by its managing directors. The managing directors are appointed by the Shareholders' Meeting of H&R Komplementär GmbH. Details about the work of the Management Team are governed by the internal rules of procedure for H&R KGaA's management.

In accordance with statutory requirements, we have implemented a dual management system with a strict separation between corporate management and control functions: the Management Team manages the company. The Management Team regularly consults with the Supervisory Board on the strategic direction of the company and the business plan and notifies it about the progress towards meeting targets and implementing the strategy. The Supervisory Board oversees and monitors the Management Team within the framework of its statutory duties. It is notified and involved in consultations regarding decisions of fundamental importance to our company. For the work of the Management Team, the general partner with full personal liability has drawn up a list of transactions that require the approval of H&R Komplementär GmbH's Advisory Board.

### Supervisory Board

**Composition of the Supervisory Board.** In accordance with Article 7, paragraph 1 of the Articles of Association, in conjunction with Article 96, paragraph 1, alt. 4; Article 101, paragraph 1, sentence 1 AktG; in conjunction with Article 1, paragraph 1, sentence 1, no. 2; paragraph 2, sentence 1, no. 1, Article 4, paragraph 1 of the German One-Third Employee Participation Act (DrittelbG), our Supervisory Board is composed of nine members in total, of whom six are appointed by the Annual Shareholders' Meeting, with no obligation to follow proposals made by the company, and three by the employees in accordance with the regulations on co-determination. The body is therefore subject to co-determination in accordance with the DrittelbG. Under Article 287, paragraph 3 AktG, general partners with full personal liability cannot be members of the Supervisory Board.

Dr. Joachim Girg has been elected to the Supervisory Board as shareholder representative for the period up to the close of the 2017 Annual Shareholders' Meeting, which will formally approve the activities of the members of the Supervisory Board for financial year 2016. The term of office of Mr Sven Hansen, who as alternate member succeeded Mr Nils Hansen on the Supervisory Board, will likewise end at the close of the 2017 Annual Shareholders' Meeting. As part of the change in the company's legal form, Mr Nils Hansen resigned from his position on the company's Supervisory Board effective 31 July 2016.

Dr.-Ing. Peter J. Seifried was elected to the Supervisory Board by the 2015 Annual Shareholders' Meeting. His term of office will end at the close of the 2020 Annual Shareholders' Meeting.

Dr. Hartmut Schütter was elected to the Supervisory Board by the 2013 Annual Shareholders' Meeting. His term of office will end at the close of the 2018 Annual Shareholders' Meeting.

At the 2016 Annual Shareholders' Meeting, Mr Roland Chmiel and Dr. Rolf Schwedhelm were successfully nominated for reelection as members of the Supervisory Board. Their term of office will end at the close of the 2021 Annual Shareholders' Meeting.

The Supervisory Board has been chaired by Dr. Joachim Girg since his election to the Supervisory Board at the 2012 Annual Shareholders' Meeting. The term of office of the three employee representatives on the Supervisory Board, Mr Reinhold Grothus, Mr Harald Januszewski and Mr Matthias Erl, will also end at the close of the 2017 Annual Shareholders' Meeting. As alternate member, Mr Erl succeeded Mr Rainer Metzner on the Supervisory Board, as Mr Metzner left the Group effective 31 January 2016.

**Duties.** The Supervisory Board oversees and advises the Management Team on its management of the company. Amendments to the Articles of Association are made on the basis of Articles 133, 179 and 285, paragraph 2 AktG and Article 18, paragraph 2 of the Articles of Association. The Supervisory Board is entitled to adopt amendments to the Articles of Association that only affect their wording without the approval of the Annual Shareholders' Meeting. The Supervisory Board has also adopted rules of procedure as recommended in Section 5.1.3 of the German Corporate Governance Code.

**Mode of Operation.** In financial year 2016, four committees were initially formed from the ranks of the Supervisory Board; when the change in legal form to that of a KGaA went into effect, the number of committees was reduced to three:

- A Committee on Corporate Actions and Investments chaired by Dr. Joachim Girg; the other committee members are Mr Roland Chmiel and Dr.-Ing. Peter J. Seifried. This committee was set up to prepare for Supervisory Board votes on corporate actions. When the change in legal form went into effect on 1 August 2016, this committee was abolished to increase the efficiency of the Supervisory Board. Depending on the subject matter, issues previously handled by the committee are addressed by the other committees or by the full Supervisory Board as part of the Supervisory Board's remaining statutory duties. Following the change in legal form, budgeting and major capital expenditures require the approval of H&R Komplementär GmbH's Advisory Board.
  - An Audit Committee chaired by Mr Roland Chmiel; the other committee members are Dr. Joachim Girg and Dr.-Ing. Peter J. Seifried and Dr. Rolf Schwedhelm. As an auditor, Mr Chmiel has specialist knowledge and experience applying accounting principles and internal control procedures. This is a requirement for chairing this committee under Section 5.3.2 of the German Corporate Governance Code. Moreover, in the opinion of the Supervisory Board, he is qualified as an independent financial expert within the meaning of Article 100, paragraph 5 AktG. The Audit Committee's responsibilities include supervising the accounting process, monitoring the effectiveness of the risk management system and overseeing the audit of the financial statements, in addition to other responsibilities.
  - A Nomination Committee chaired by Mr Sven Hansen; the other members are Dr. Joachim Girg and Dr. Rolf Schwedhelm. This committee's remit is to identify suitable Supervisory Board candidates who are then nominated by the Supervisory Board plenum at the Annual Shareholders' Meeting. Among other things, apart from qualifications relating specifically to professional background, the committee is guided by the objectives regarding composition listed below (see Section 5.4.1, paragraph 2 GCGC) and by the principle of diversity and it has set a target for women to occupy one-fifth of all positions on the Supervisory Board which are up for election.
  - A Refinery Technology and Strategy Committee chaired by Dr. Hartmut Schütter; the other committee members are Dr. Joachim Girg, Sven Hansen and Dr.-Ing. Peter J. Seifried (since May 2015). The Committee's purpose is to advise the Management Team on the strategic future development of the H&R Group's refinery sites.
- None of the existing Supervisory Board members is a former Executive Board member or managing director. To enable the members of the Supervisory Board to diligently prepare for meetings, the Management Team notifies them in writing, in advance, of the topics to be addressed.

**Objectives:** Pursuant to Section 5.4.1 of the Code, the Supervisory Board has set concrete objectives regarding its composition. These objectives are as follows:

- To ensure that women make up at least 20% of the Supervisory Board members by the middle of financial year 2017; the goal is for an equal percentage to be represented on both the shareholder and employee side. Currently, the Supervisory Board is not meeting this objective.
- To elect Supervisory Board members with an international background.
- To consider special knowledge and experience applying accounting principles and internal control procedures.
- To consider technical expertise, particularly in the field of refining technology.
- To consider knowledge of the company.
- Independence of Supervisory Board members.
- To avoid conflicts of interest.
- To consider the age limit of 70 years at the time of the election.

With regard to the criterion of independence of the Supervisory Board members, the Supervisory Board plenum believes that, based on a Supervisory Board consisting of nine members, the number of independent board members should be at least six, taking into account the employee representatives. The Supervisory Board considers the employee representatives in connection with Annex II, Section 1 b) of the Commission Recommendation of 15 February 2005 on the role of non-executive directors/Supervisory Board members of listed companies and on the committees of the Management/Supervisory Board (OJ EU No. L 52, 25 February 2005, p.51) to be independent. By separate resolution of the shareholder representatives on the Supervisory Board, these have set the number of independent shareholder representatives to at least three. The current composition of the Supervisory Board of H&R

KGaA complies with the aforementioned specific objectives. From the perspective of the Supervisory Board, the Board includes four independent shareholder representatives, Mr Roland Chmiel, Dr. Rolf Schwedhelm, Dr. Hartmut Schütter and Dr.-Ing. Peter Seifried. Thus, taking into account the employee representatives on the supervisory board, the total number of independent Supervisory Board members is seven.

Further details concerning the work of the Supervisory Board during the reporting period can be found in the [Supervisory Board report](#) in the 2016 annual report.

## Management

**Composition of the Management Team.** H&R GmbH & Co. KGaA will be managed by H&R Komplementär GmbH, which in turn is represented by its managing directors. The Management Team represents the company externally. It conducts business and runs the company. In doing so, the Management Team considers the concerns of the limited liability shareholders, its employees and other groups affiliated with the company (stakeholders) while pursuing the goal of sustainable added value. It is guided by the law, the Articles of Association, its rules of procedure and resolutions adopted by the Annual Shareholders' Meeting.

The members of the Management Team have joint responsibility for overall management of the company.

In financial year 2016, the Management Team of H&R Komplementär GmbH consisted of two individuals who, among other things, held the following management responsibilities at H&R KGaA:

Niels H. Hansen,  
Chairman of the Management Team:  
International Business, Sales and Distribution  
Companies and Capital Market Communications

Detlev Wösten,  
Member of the Management Team:  
Technology and Strategy



For further  
information  
see page 09

**Duties.** The Management Team develops the corporate objectives, the basic strategic direction, corporate policy and the Group structure. The Management Team develops the corporate objectives, the basic strategic direction, corporate policy and the Group structure. Further, the Management Team oversees an appropriate risk-management and risk-control system and ensures compliance with legal provisions and internal company guidelines and enforces compliance with these by Group companies.

**Mode of Operation.** The Management Team deliberates at regular meetings of the Executive Committee. These meetings are called by the Chairman of the Management Team, who coordinates the panel's work. The results of the meetings are recorded in minutes which are made available to all members of the Management Team. As the Management Team is relatively small, it has not formed any committees.

Cooperation by members of the Management Team is governed by the internal rules of procedure for H&R KGaA's management. Each member of the Management Team is required, without being asked, to inform the other Management Team members of all significant events in the areas under his responsibility. The rules of procedure also stipulate circumstances which require a unanimous decision by the Management Team plenum.

**Objectives.** Pursuant to the recommendations of the German Corporate Governance Code, the Management Team of H&R Komplementär GmbH, in its capacity as managing director of H&R KGaA, in agreement with the Advisory Board and the shareholders of H&R Komplementär GmbH, has adopted the following resolution:

– When filling management positions at the company, greater priority must be placed on the criterion of diversity. In addition to balanced professional qualifications, the objective is to achieve greater international representation and appropriate representation by women on the Management Team and, in particular, at the top two levels of management beneath the Management Team by taking diversity into account.

– As for achieving a certain percentage of women at the first level of management beneath the Management Team, the two managing directors of H&R Komplementär GmbH, in agreement with the Supervisory Board, have defined a minimum target quota for women of 20% by the middle of financial year 2017.

– As for achieving a certain percentage of women at the second level of management beneath the Management Team, the two managing directors have also defined a minimum target quota for women of 20% by the middle of financial year 2017.

#### Audit of the Financial Statements by WKGT

Both the consolidated financial statements of H&R and the quarterly reports were prepared in accordance with International Financial Reporting Standards (IFRS). The separate financial statements for H&R KGaA were drawn up in accordance with the requirements of the German Commercial Code [HGB]. The separate and consolidated financial statements of H&R KGaA for the 2016 financial year have been audited by Warth & Klein Grant Thornton AG (WKGT), Wirtschaftsprüfungsgesellschaft, Hamburg, (PwC) which has declared itself to be independent as required by Section 7.2.1 of the German Corporate Governance Code. It was agreed with WKGT that the Supervisory Board Chairman would be notified immediately of any grounds for disqualification or conflicts of interest which may arise during the audit, unless these are resolved immediately. It was also agreed that the Supervisory Board would be notified immediately of any findings and events arising during the audit that are significant to the duties of the Supervisory Board. Finally, WKGT is obliged to inform the Supervisory Board should any facts be identified during the audit which would render incorrect the Statement of Compliance issued by the Management Team and the Supervisory Board in accordance with Article 161 of the German Stock Corporation Act [AktG].

## Risk Management

We have an early-warning system for risks that is reviewed by the auditor. For a detailed description of the system, please refer to the section of the Management Report entitled "Risk report".



For further information see page 75

## Avoidance of Conflicts of Interest

There were no consulting or other service agreements or contracts between the Supervisory Board and the company during the year under review.

There were no conflicts of interest of Executive or Supervisory Board members that had to be disclosed to the Supervisory Board without delay. Seats on supervisory boards and/or comparable German and foreign control bodies of business enterprises that had to be set up by law which are held by Executive Board and Supervisory Board members can be found under the section entitled "Governance Bodies of H&R GmbH & Co. KGaA" in the notes to the consolidated financial statements. Relationships with related parties are likewise discussed in the notes to the consolidated financial statements.



For further information see page 144



For further information see page 145

## Deductible for D&O insurance

The company has taken out property damage liability insurance (D&O) for the members of the Management Team and the Supervisory Board

with an appropriate deductible in accordance with Article 93, paragraph 2, sentence 3 AktG (Management Team members) or in accordance with the German Corporate Governance Code (Supervisory Board members).

## Shares Held by Members of the Supervisory Board and Executive Board

After the departure of Mr Nils Hansen (effective 31 July 2016), our Supervisory Board members held a total of 6,650 H&R shares as of 31 December 2016, accounting for less than 1% of H&R KGaA's share capital. As of 31 December 2016, the members of H&R Komplementär GmbH's Management Team held a total of 3,100 shares and thus less than 1% of the share capital of H&R KGaA.

## Directors' dealings

In accordance with Article 19 of the German Market Abuse Regulation [Marktmissbrauchsverordnung/MAR], executives and related individuals are obliged to disclose transactions involving H&R KGaA shares with a trading volume exceeding €5 thousand in the course of a calendar year.

The following transactions have been reported to the company for financial year 2016:

### T. 05 DIRECTORS' DEALINGS 2016

Date	Issuer	City	Name	Function	Financial instrument	Type of transaction	Total number	Price per unit in €	Transaction volume in €
1/12/2016	H&R GmbH & Co. KGaA	Xetra	Detlev Wösten	Managing Director, H&R GmbH & Co. KGaA	Share	Purchase	1,000	15.1487	15,148.75
17/11/2016	H&R GmbH & Co. KGaA	Xetra	Detlev Wösten	Managing Director, H&R GmbH & Co. KGaA	Share	Purchase	1,000	15.2156	15,215.59
20/7/2016	H&R Aktiengesellschaft	Xetra	Nils Hansen	Supervisory Board	Share	Purchase	5,000	14.8286	74,143.00
13/7/2016	H&R Aktiengesellschaft	Trade-gate	Nils Hansen	Supervisory Board	Share	Purchase	5,000	13.2460	66,230.20
9/5/2016	H&R Aktiengesellschaft	Xetra	Nils Hansen	Management Team or Supervisory Board	Share	Purchase	5,000	10.973	54,865.00
1/4/2016	H&R Aktiengesellschaft	Xetra	Nils Hansen	Management Team or Supervisory Board	Share	Purchase	10,000	8.8486	88,486.00
13/1/2016	H&R Aktiengesellschaft	Xetra	Nils Hansen	Management Team or Supervisory Board	Share	Purchase	10,000	8.3618	83,618.00

## Transparency

The prime objective of our communications is to provide comprehensive, prompt and equal information to shareholders, financial analysts, journalists, staff and interested members of the public.

For this purpose, important documents – quarterly press releases, quarterly and annual reports, published insider information and press releases, the Statement of Compliance with the German Corporate Governance Code, the Articles of Association, the invitation to the Annual Shareholders’ Meeting and the financial calendar – are all published in the Investor Relations section of the H&R KGaA website. Interested parties can also register to receive the latest company news automatically via an e-mail newsletter. We also send out free copies of the reports upon request. The Management Team and the Investor Relations department are in regular contact with both institutional and private investors at capital market conferences and shareholder events. For a detailed description of our capital market activities, please consult the section entitled [“H&R on the Capital Market”](#) elsewhere in this Report.



For further information see page 28

## H&R on the Capital Market

### Company Share and Share Price Performance

#### Shares Remain Attractive Form of Investment Despite Volatile Performance

Political surprises and partial unrest on the financial markets also led to high volatility on the stock markets in 2016: The negative trend on the equity markets from the previous year, caused primarily by weak economic performance in China and further drops in the price of oil due to high production output, also continued at the start of 2016. A weak economy in the USA and worries about a possible Brexit vote in Great Britain added to the climate of uncertainty. Although the Britons' surprising vote of "No" to the European Union in June did initially trigger some turbulence in the financial markets, the feared negative consequences failed to materialize during the rest of the year. Financial markets also barely reacted to the election of Donald Trump as the U.S. President in November.

Over the course of the year, the DAX fluctuated by around 2,700 points. In February, it fell to 8,752 points, its low point for the year, but reached a

substantial high for the year of 11,481 points by the end of December. Over the year as a whole, the DAX rose by 6.87%.

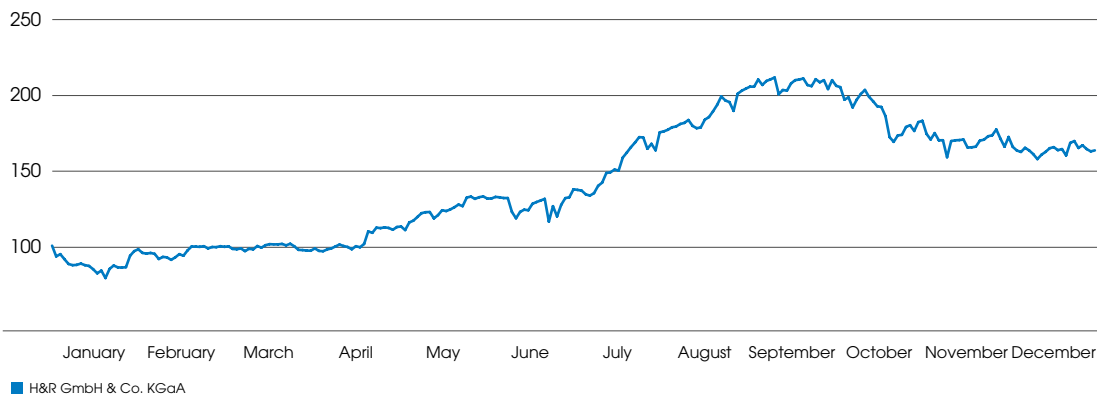
Experts expect the positive trend to continue in 2017, buoyed by the likely continuation of the European Central Bank's (ECB's) zero-interest-rate policy, which will probably reduce the attractiveness of overnight deposit accounts and savings accounts. That being said, there are some important political events looming during this calendar year, the outcome of which may have a noticeable effect on stock-market performance – such as the Brexit negotiations that will start in the spring, parliamentary and presidential elections in the Netherlands and France and, not least, the upcoming Bundestag elections in Germany in the fall.

#### During 2016, H&R Share Rises by Around 60%

H&R's share price had a modest start to trading in 2016. The share price followed the general market trend, initially dropping below the 8-Euro mark in the wake of discussions about low crude-oil prices and difficulties on the Chinese capital markets. When 2015 results were published, though, the share price comfortably left the single-digit range behind, repeatedly testing the 20-Euro

#### G. 01 PERFORMANCE OF THE H&R SHARE

(INDEX 4/1/2016=100)



■ H&R GmbH & Co. KGaA



price level during late summer. The continuing high level of interest in our shares and positive first-half and nine-month results led to brisk trading. Profit-taking then put significant pressure on the share price, causing the H&R share to end the year trading at €14.96, despite the higher forecast for the full year.

### Number of Shares, Market Capitalization and Trading Volume

The number of company shares issued totaled 35,820,154 on 31 December 2016, i.e., unchanged from the previous year. As a company in the Prime Standard segment, H&R KGaA meets exacting disclosure and transparency standards. The share price can be obtained from the trading systems and the financial press.

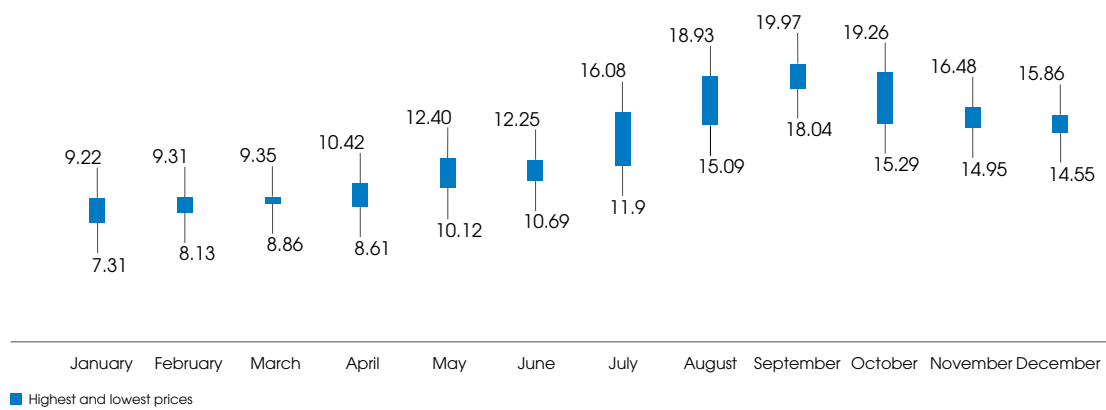
During the past year, interest in our share was very high, as evidenced by the fact that the H&R share's trading activity was nearly twice as high as in the previous year. Overall, around 11.8 million shares (2015: 9.1 million shares) with a total volume of more than €160.0 million (previous year: €73.1 million) were traded on the Frankfurt Stock Exchange and on Xetra.

#### T. 06 BASIC DATA ON THE H&R SHARE

ISIN/WKN	DE0007757007/775700
Abbreviation	2HR
Type	No par bearer shares
Listings	Official Market Frankfurt (Prime Standard), Hamburg and Düsseldorf, freely traded Stuttgart and München
Index	Prime Standard All Share, Classic All Share, Prime Chemicals and Prime IG Chemicals Speciality, DAXPlus Family-Index
Designated Sponsor	Oddo Seydler Bank AG

#### G. 02 HIGHEST AND LOWEST PRICES OF THE H&R SHARE, FULL YEAR 2016

IN €



## T. 07 KEY SHARE DATA

	2016	2015	2014	2013	2012
Number of shares on 31 December	35,820,154	35,820,154	35,820,154	29,973,112	29,973,112
Earnings per share	€1.06	€0.77	€-0.49	€-0.47	€0.02
Highest price for the year	€19.97	€9.70	€9.40	€13.03	€17.90
Lowest price for the year	€7.31	€5.86	€6.45	€8.05	€11.57
Price on 31 December	€14.95	€9.24	€7.54	€8.70	€11.83
Market capitalization on 31 December	€535.5 million	€330.9 million	€ 270.1 million	€ 260.7 million	€ 354.4 million
Average daily trading volume	€608 thousand	€269 thousand	€ 130 thousand	€ 324 thousand	€ 522 thousand

### Board Members Further Increase Stakes

During the reporting period, we received notice of seven directors' dealings in H&R shares. Mr Nils Hansen, a Supervisory Board member until 31 July 2016, increased his holdings of H&R shares by a total of 35,000 shares in five transactions.

Since leaving the Supervisory Board, Mr Nils Hansen is no longer subject to the reporting requirements stipulated in Article 17 of the Market Abuse Regulation [MAR].

Mr Detlev Wösten, Managing Director of H&R Komplementär GmbH, is also indirectly subject to a reporting requirement under Article 17 MAR as Managing Director of H&R GmbH & Co. KGaA. Mr Wösten acquired a total of 2,000 additional shares in two transactions.

The individual transactions are listed in the "Directors' Dealings" section on page 26 of this report.



For further information see page 26

### Shareholder Structure

When the company changed its legal form from that of a joint-stock company [Aktiengesellschaft] to a partnership limited by shares [Kommanditgesellschaft auf Aktien/KGaA], H&R Komplementär GmbH became partner.

In a voting rights notification dated 5 July 2016, Mr Nils Hansen reported that his share of voting rights totaled 60.63% of the company's voting rights due to his direct holdings and the attribution of voting rights held by or attributed to H&R Beteiligung GmbH, H&R Internationale Beteiligung GmbH and H&R Holding GmbH. According to the aforementioned voting rights notification, (i) the share of voting rights of H&R Beteiligung GmbH totaled 59.33% of the company's voting rights due to direct holdings and the attribution of voting rights; (ii) the share of voting rights of H&R Internationale Beteiligung GmbH totaled 26.02% of the company's voting rights due to direct holdings and the attribution of voting rights; and (iii) the share of voting rights of H&R Holding GmbH totaled 59.33% of the company's voting rights due to the attribution of voting rights.

In addition, he personally and directly held another 1.3% of the share capital until he left the Supervisory Board and the reporting requirement expired as a result on 31 July 2016.

According to an informal notification, Mr Wilhelm Scholten's total stake in the share capital on 31 December 2016 was unchanged at 6.07%, 5.45% of which was held via Wilhelm Scholten Beteiligungen GmbH and the remaining 0.62% of which was held via Ölfabrik Wilhelm Scholten GmbH and subsidiary.

The remaining 33.3% of H&R shares were in free float as of 31 December 2016. Increased investments came primarily from funds in English-speaking countries.

### Investor Relations

**Capital-Market Communication Activities Intensified.** During the 2016 reporting year, numerous investors, analysts and private investors again took advantage of the opportunity to exchange information with the company by telephone and e-mail.

Investors also visited us at our production sites in Hamburg and Salzbergen, where they toured our refineries and received information about current business developments directly from the company's Management.

This year, members of the company's management team and employees of the IR department represented the company at even more roadshows and information events and took the opportunity to meet with people in Munich, Zurich, Paris, London and New York.

During the year, we routinely provided information to our target groups through the quarterly reports and company press releases.

**Research Coverage.** Despite heavier trading in H&R shares and the increased attractiveness of the share's liquidity, in 2016 coverage at many banks again focused exclusively on blue chips. For example, Oddo Seydler and Lampe Bank stopped analyzing the H&R share, although interest and trading in our shares were higher than ever in 2016.

Nevertheless, three renowned banks – Kepler Cheuvreux, Baader Bank and Commerzbank – continue to monitor our share.

#### T. 08 RESEARCH COVERAGE OF THE H&R SHARE

Kepler Cheuvreux
Commerzbank
Baader Bank

### We Would Like to Hear from You

Interested parties can download our company reports at any time from the H&R KGaA section of our website, [www.hur.com](http://www.hur.com).



We will also be happy to send you a printed copy, on request.

We also keep our target groups informed about current developments at our company through our e-mail newsletter. You can also register for these publications in the Investor Relations section of our website.

Should you have any questions or suggestions, please contact us as follows:

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 Website: [www.hur.com](http://www.hur.com)

# GROUP MANAGEMENT REPORT<sup>1)</sup>

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<sup>1)</sup> Prior-year figures adjusted; for details, see note (5), page 109.

34	Group Fundamentals
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## Group Fundamentals

### Group Business Model and Structure

#### Sectors and Organizational Structure

The H&R Group organizes its operating activities into two business divisions: the large Chemical-Pharmaceutical Division and the smaller Plastics Division. At the same time, we have three business segments: the ChemPharm Refining segment, the ChemPharm Sales segment and the Plastics segment.

Our biggest segment, ChemPharm Refining, includes the refineries in Hamburg-Neuhof and Salzbergen. These two production sites differ from conventional lubricant refineries in that a significantly higher percentage of output consists of so-called crude-oil-based specialty chemicals such as plasticizers, paraffins and white oils and a considerably lower percentage consists of base oils. During the course of our production processes, we create over 800 different products that are used in more than 100 client industries.

Our ChemPharm Sales segment is comprised of numerous production sites, as well as our distribution sites worldwide. This segment's main products include label-free plasticizers for the tire industry and paraffins for many different applications.

In the Plastics segment, we produce high-precision plastic parts and the molds needed to manufacture them. In addition to the headquarters in Coburg, Germany, we also operate production sites in Eastern Europe and Asia. The Plastics segment's customers include the automotive industry, the medical technology industry and other industries.

#### Group's Legal Structure

As the Group's holding company, H&R KGaA is in charge of the strategic management of our business operations. It is responsible for communicating with the public and the capital markets, and for the Group's financing. In addition, it provides various management functions and services for our subsidiaries.

At the end of the reporting period, there were 34 consolidated subsidiaries (31 December 2015: 34). No companies were added to or removed from the consolidated group.

Our subsidiaries can be found in the list of shareholdings in the notes to the consolidated financial statements under "Scope of Consolidation and Holdings".

The ChemPharm Refining segment, which primarily consists of the refineries in Hamburg and Salzbergen, uses a functional management structure. Managerial staff within this segment have cross-site responsibility for key functions such as raw materials purchasing, project management, accounting and sales/distribution.

In the ChemPharm Sales segment, which does not possess any refinery capacity of its own, the responsibility for all functions is held by local Managing Directors who report directly to the Group's Management Team.

There are two management levels at the Plastics segment: Managing Directors at the international sites report to the Divisional Management Team, which is also responsible for managing the domestic production plant in Coburg, Germany.

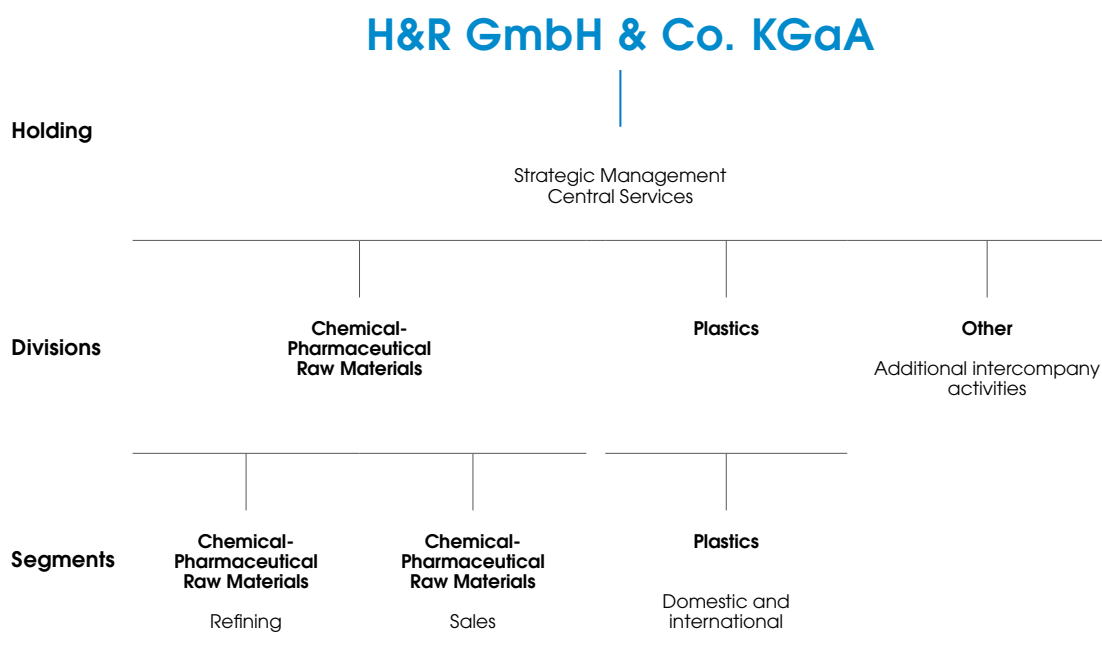


For further information see the glossary on page 154 f.



For further information see page 110

G. 03 PRESENTATION OF THE GROUP STRUCTURE



**Locations**

At year-end 2016, our Group employed 1,628 people worldwide (previous year: 1,568 employees). The following overview shows our most important sites with more than 20 employees:

**T. 09 MAIN SITES IN THE H&R GROUP**

Continent	Country	City	Business Division	Employees
Africa	South Africa	Durban	ChemPharm	42
Asia	China	Wuxi	Plastics	143
		Ningbo/Daixi	ChemPharm	106
		Fushun	ChemPharm	70
Europe	Thailand	Bangkok/Sri Racha	ChemPharm	53
	Germany	Hamburg	ChemPharm	278
		Salzbergen	ChemPharm	381
		Coburg	Plastics	339
	Great Britain	Tipton	ChemPharm	38
	Czech Republic	Dačice	Plastics	83

### Main Products, Services and Business Processes

So-called atmospheric residue (ATRES) and vacuum gas oil (VGO) are the primary raw materials used at our ChemPharm Refining segment's specialty refineries in Germany.

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For further information see the glossary on page 154 f.

In a joint-production process, we generate more than 800 other crude-oil-based specialty products from these crude-oil derivatives, which are obtained by distilling crude oil in the upstream fuel refineries. In addition to base oil as a raw material for lubricant production, we primarily produce plasticizers for the rubber industry, technical and medical white oils, paraffins and specialty wax products. In our propane deasphalting facilities, we carry out efficient further refinement of by-products and co-products. This creates more high-grade crude-oil-based specialty products and bitumen, which is used in road construction and as feedstock for other types of refineries. While in Hamburg we exclusively manufacture our own specialty products, we act as a service provider at the Salzbergen production site: for one of our main customers, we manufacture products to its specifications on a contract basis. Furthermore, at a special filling facility, we also mix lubricants based on different end customers' formulations.

**i**

For further information see the glossary on page 154 f.

We also refine crude-oil-based feedstock at the ChemPharm Sales segment's production plants. Production here focuses on environmentally friendly, label-free plasticizers and wax emulsions. Partnerships with local producers around the world allow us to lower our investment costs, limit risks and accelerate our growth.



In the Plastics segment, we produce high-precision, injection-molded plastic components as well as the molds required to manufacture them. This division is particularly skillful at producing complex plastic parts that require the use of different types of materials.

### Key Sales Markets and Competitive Position

By consistently focusing on customer needs, we have established a solid market presence in the crude-oil-based specialty products business. A comparative study published by the renowned U.S. research organization Solomon Associates in 2015 covering around 50% of the worldwide refinery capacity in the lubricants segment evaluates H&R as being "well positioned competitively": as core elements of our ChemPharm Refining segment, our refineries rank within the first or second quartile of the study's peer group, especially in terms of their efficiency and productivity, and based on the product mix generated are more properly regarded as specialty refineries than as lubricant refineries.

This assessment is supported by the fact that H&R's refineries are well established in a market environment which for years has experienced a continual shortage of generating capacity in Group 1 refineries. Thanks to their high percentage of specialty products, our refinery sites can also hold their own against bigger units owned by major oil companies.

Our environmentally friendly, label-free plasticizers are used in rubber blends for almost all well-known car tire manufacturers as well as in additional rubber and caoutchouc products. Our main competitors in this product area are the major oil companies.

Our paraffins are used for an especially wide variety of applications: in the food industry, for example, cheese rinds are coated with paraffin to prevent the cheese from drying out. The packaging industry has various uses for paraffins, including coating the inside of Tetra Pak containers. In the construction industry, wax emulsions provide construction materials with water-repellent characteristics. In this product segment, we and other competing companies jostle for second place behind the market leader. Thanks to our ability to reliably meet high quality standards, we have also established a good reputation in the market for white oils. For instance, our technical white oils are used to clean printing presses or as plasticizers for plastic components.



Our medical white oils are found, among other applications, in cosmetic products such as creams and ointments. The large oil companies are also significant producers in this field. We sell the vast majority of our base oils to lubricant manufacturers as a raw material. Using additives, we further process a small quantity of these base oils into ready-made lubricants that are primarily used in agriculture. Hansen & Rosenthal KG currently handles sales and distribution for a large portion of the primary products from our Chemical-Pharmaceutical Division. Our sales/distribution partner has been trading in crude-oil-based specialty products for nearly 100 years. Thanks to its long-established market presence, Hansen & Rosenthal has excellent market knowledge and close customer contacts.

More and more attention is being devoted to intensifying efforts to market co-products and by-products. As a matter of principle, H&R KGaA is focusing on maximizing its output of primary products and avoiding by-products. Nevertheless, the production process at our production sites in Salzbergen and Hamburg generates residues which, by using our propane deasphalting plants, we can convert into environmentally friendly, crude-oil-based specialty products and asphalt for use in the road-building industry. Some of this bitumen can also be reused as a raw material by other refinery operators.

The customers of our Plastics Division can be divided into three groups, of which the automotive industry is by far the biggest. Other customer groups include the medical technology industry and other industrial customers. In the latter group, we primarily include products for customers in the electrical, the measuring and control technology and the mechanical engineering segments.

The market for plastic components is highly fragmented and comprises several hundred competitors in Germany alone.

### Legal and Economic Factors

REACH (The European regulation on the Registration, Evaluation, Authorization and Restriction of Chemicals) entered into force in the EU in 2007. The main aim of REACH is to protect human health and the environment when dealing with chemical substances. In order to accomplish this goal, REACH places a special level of responsibility on the manufacturer or importer of a substance by requiring it to assess the risks of substances it has brought to market and their uses over the entire lifecycle and to register as a manufacturer or importer with the European Chemicals Agency (ECHA). H&R KGaA has submitted the required documents for all the substances manufactured at its refineries. Certain substances of very high concern require authorization. The relevant applications were submitted to and approved by the ECHA in the first half of 2016. We are awaiting final approval from the EU Commission. H&R expects a permit for the maximum validity period to be issued.

The price of the crude-oil derivatives used as the primary feedstock at our specialty refineries in Germany generally correlates with the current price of crude oil. The so-called windfall effects result in a temporary change in the earnings situation, i.e., windfall losses or profits.

Such effects on earnings have nothing to do with the company's own operating performance, but instead are caused by sudden, random variations in the market situation. At our company, we define windfall losses or profits as negative or positive changes in inventory prices (raw materials, work-in-progress and finished goods) compared to the previous month. In contrast to just-in-time production, due to the length of our production processes, feedstocks are processed with a time lag. This is closely related to currency-translation effects: the price of crude oil worldwide is denominated in USD, meaning that H&R KGaA is directly affected by fluctuations in this reserve currency and the corresponding currency-translation effects, due to its high requirements for raw materials and the fact that raw material supplies are sourced internationally.



For further information see the glossary on page 154 f.



For further information see the glossary on page 154 f.

## Company Control

### Internal Management System

A value-based management system is used to guide and manage the Group. This system is centered on comprehensive reporting of key performance indicators and ratios, which supports management's monitoring of profitability, liquidity, the capital structure and operating performance.

In addition to this, we monitor both company-specific and macroeconomic early indicators. At the production level, this includes data on plant availability, reject rates and quality fluctuations. In sales and distribution, we examine sales volume statistics, general market data and leading macroeconomic indicators.

The system also consists of monthly reports from the divisions, the management of risks and opportunities and our functional management structure, whereby responsibility is assigned for more than one site in important areas such as raw materials purchasing, project management and sales/distribution.

Over the past two years, we have shifted the focus of our control instruments to short-term performance parameters in response to constant changes in the overall global economic situation.

We measure and control profitability, in particular through profit contributions. Manufacturing planning is based on optimizing contribution margins; the business segments are controlled by means of EBITDA and EBT ratios.

H&R KGaA's presentation of EBITDA refers to earnings before interest income, taxes, other financial result and depreciation, impairments and amortization of the H&R KGaA Group's intangible assets and property, plant and equipment.

H&R KGaA calculates EBITDA as follows:

Income after taxes  
 +/- Income taxes  
 +/- Net interest result  
 +/- Other financial result  
 + Depreciation, impairments and amortization  
 = EBITDA

Although EBITDA is not an earnings figures defined by IFRS, but rather an alternative performance indicator, the H&R KGaA's Management Team considers EBITDA to be the most significant and most fundamental indicator of Group earnings. For the H&R KGaA Group, EBITDA is the relevant income figure that illustrates the income needed to cover the Group's ongoing (maintenance) capital expenditures. This is of critical importance for the company's capital-intensive business model.

T. 10 RECONCILIATION OF THE OPERATING RESULT (EBITDA) TO CONSOLIDATED INCOME AFTER TAXES (IFRS)

€ THOUSAND	2016	2015
<b>Operating result (EBITDA) of H&amp;R GmbH &amp; Co. KGaA</b>	<b>101.4</b>	<b>85.4</b>
Depreciation, impairments and amortization, and property, plant and equipment	-43.2	-36.8
Reversals of fixed-asset impairments	6.0	-
Income from other financing activities	3.1	2.7
Financial expenses	-13.1	-17.1
Income taxes	-14.9	-7.4
<b>Income after taxes</b>	<b>39.3</b>	<b>26.8</b>

The long-term WACC (Weighted-Average Cost of Capital) ratio, which consists of the weighted capital costs of our equity and borrowed capital, is used in medium and long-term planning. For more detail, please consult the notes to the consolidated financial statements.

The ROCE profitability ratio (Return On Capital Employed), which compares earnings before interest and taxes to the average committed capital necessary for operations, is also used in medium and long-term planning.

**i**  
 For further information see the glossary on page 154 f.

**i**

For further information see the glossary on page 154 f.

**Liquidity.** Our free cash flow is essentially determined by the operating result (EBITDA), the change in net working capital (total of inventories and trade accounts receivable less trade accounts payable) and capital expenditure/investments. Because of our business model, our cash flow is generally quite volatile. This is attributable to changes in our net working capital, in particular when deliveries of raw materials for our refineries occur around the same time as the balance sheet reporting dates. By constantly monitoring our free cash flow, we can reliably detect any issues requiring action so that we can respond accordingly. This also ensures that we will be able to maintain the H&R Group's financial stability in the future.

**T. 11 CHANGE IN FREE CASH FLOW**

IN € MILLION	2016	2015	2014	2013	2012
Cash flow from (used in) operating activities	75.5	56.4	-0.4	88.9	84.7
Cash flow from (used in) investment activities	-38.8	-28.1	-10.1	-16.2	-33.7
<b>Free cash flow</b>	<b>36.7</b>	<b>28.4</b>	<b>-10.5</b>	<b>72.8</b>	<b>50.9</b>

The main reason for the improved cash flow from operating activities was that in 2016, consolidated earnings again improved significantly, to €39.3 million (31 December 2015: €26.8 million). Therefore, despite the fact that our capital expenditures rose 38% to €38.8 million, we once again generated positive free cash flow of €36.7 million (31 December 2015: €28.4 million).

**Capital Structure.** We aim to have a balanced capital structure that provides leeway for strategic development of the Group while optimizing the cost of capital for our equity and debt. Under the terms of our loan agreements and our borrower's note loans, we are obliged to uphold two financial covenants relating to our equity funding and the ratio of our net debt to operating earnings (EBITDA).

Another control parameter relating to our capital structure is net gearing, which is the ratio of our net financial debt to equity. The further decrease in net debt in 2016 and the significant improve-

ment in equity caused this ratio to change from 31.4% to 15.1%.

**T. 12 CAPITAL STRUCTURE**

	2016	2015	2014	2013	2012
Net debt/EBITDA	0.41	1.00	3.41	2.24	2.97
Equity ratio in %	49.0	45.4	35.2	31.8	34.2
Net gearing in %	15.1	31.4	45.6	42.2	73.6

**Operative Performance.** We essentially measure our operating business based on sales and absolute earnings indicators such as EBITDA, EBIT and EBT, as well as by sales volumes for our chemical-pharmaceutical specialty products. The trend in the crude-oil price always has a direct impact on the cost of materials, which affects H&R KGaA's sales revenues for reasons related to the business model.

On its own, our revenue is therefore only of limited use as a performance indicator. We calculate the sales and EBITDA figures both for the individual segments and for the Group as a whole. Together with net indebtedness, they are the main relevant control parameters used by the company.

**T. 13 EARNINGS AND VOLUME GROWTH**

IN € MILLION	2016	2015	2014	2013	2012
Sales volume primary products in KT <sup>1)</sup>	849	762	697	734	839
EBITDA	101.4	85.4	31.5	32.6	49.4
EBIT	64.2	48.7	5.8	-4.1	25.5
EBT	54.2	34.2	-7.8	-16.8	1.6

<sup>1)</sup> Chemical-Pharmaceutical Raw Materials Division

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For further information see the glossary on page 154 f.

**i**

For further information see the glossary on page 154 f.

## Research and Development

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### Focus of Our R&D Activities

Our crude-oil-based specialty products and plastic parts are directly incorporated into our customers' products; we cooperate closely with them to optimize the value of the components we supply for their end products. Another focus of our R&D work is on boosting the efficiency of our production processes, thereby increasing the value we add. Research activities are managed at the divisional level.

Our Chemical-Pharmaceutical Division operates R&D laboratories, primarily at its domestic refineries. Valuable synergies are created both from communication between these areas and from exchanging ideas with other production areas. We apply a similar concept in the Plastics Division by combining our R&D work at the headquarters in Coburg.

As in prior years, in 2016 we once again collaborated closely with universities and research institutes. To the extent possible and expedient, we try to protect our own research results from external use through patents. We did not receive any subsidies or other funding for research activities.

**Chemical-Pharmaceutical Raw Materials.** Our products, which overall total around 800, are used as inputs in more than 100 different industries. Equally large is the potential for the development of new or improved products. Our sales/distribution staff and partners are an important source of ideas for product innovations; thanks to the customer relationships they have developed over a long period of time, they have an excellent feel for clients' changing needs. Our research activities focus with particular intensity on the paraffin, plasticizer and white-oil product groups.

We are also researching processes that could increase the yield of crude-oil-based specialty products from our raw materials and thereby further improve the level of value added at our refineries. The promising results of this research work have influenced our investment planning. While in the past we focused mainly on expanding our production capacity, in recent years we have increased our investments in plants that can further refine our products.

The division's collaboration with the universities of Hamburg, Hanover, Magdeburg, Munich, Rostock (all in Germany), Bangkok (Thailand) and Enschede (the Netherlands) forms an important part of its research activities. These partnerships give us access to the universities' research infrastructure and enable us to establish contact with high-potential R&D candidates at an early stage.

**Plastics.** The use of increasingly sophisticated technologies in vehicles to reduce fuel consumption and CO<sub>2</sub> emissions is leading to a growing demand for lightweight and simultaneously complex plastic parts. We often develop such parts – which consist of several different materials – in cooperation with our clients, who are direct suppliers to automobile manufacturers. We further expanded our research and development work in the field of medical technology – an increasingly important market segment for the Plastics Division.

### R&D Expenses, Employees and Key Figures

The importance of our research activities has for years been reflected in our consistently high spending and the increase in the number of people we employ in this area. All employees in the Research & Development department have outstanding qualifications, either in the form of technical training in a chemistry-related profession or in some cases a master's qualification. Other

staff, such as engineering graduates, are as highly qualified as our employees who hold doctorates in chemistry. At around €2.1 million, R&D spending was slightly higher than the prior-year figure.

Our R&D ratio, defined as R&D expense divided by sales revenues, increased slightly from 0.20% to 0.22% as a result of the decrease in sales revenues.

**T. 14 RESEARCH AND DEVELOPMENT COSTS**

€ THOUSAND	2016	2015	2014	2013	2012
Research and Development Costs	2,054	1,955	1,909	1,906	2,072
of which ChemPharm	1,904	1,749	1,563	1,585	1,720
of which Plastics	150	206	346	321	352
as % of annual revenues	0.22	0.20	0.17	0.16	0.17

## Report on Economic Position

### Macroeconomic Conditions

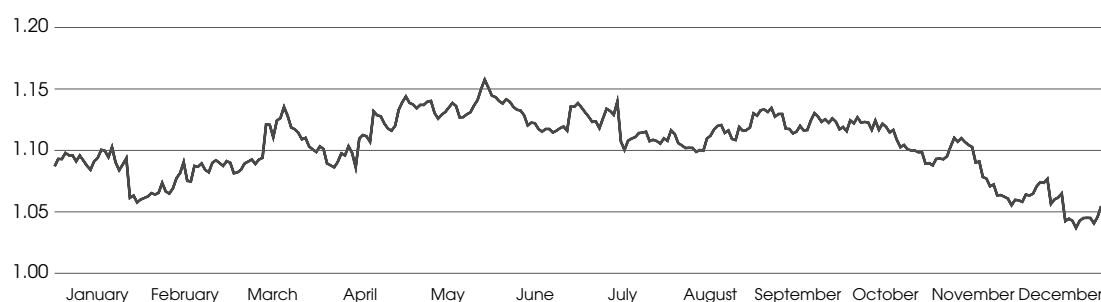
In 2016, around 55.9% of H&R KGaA's sales revenues were generated in Germany (2015: 57.0%). Economic data from the German Institute for Economic Research (Deutsches Institut für Wirtschaftsforschung/DIW Berlin) pointed to a slight acceleration in domestic economic growth toward the end of the year. Despite some uncertainties – including the future direction of U.S. foreign policy, the consequences of the Brexit vote and the effects of the referendum on constitutional reform in Italy – the German economy held steady overall. The German Federal Statistical Office recently reported 1.9% growth.

As for the global economy's prospects in 2016, experts at the International Monetary Fund (IMF) reported sideward movement shortly before year-end and retracted their most recent forecast of 1.6% growth for 2016 that referred mainly to the advanced economies. It is in those countries, in particular, where persistent stagnation could lead to a further rise in populism, i.e. trade or immigration restrictions, and thereby limit productivity, growth and innovation.

The IMF expects somewhat higher growth of 1.7% for the Eurozone. For the first time in six years, experts are predicting an increase in GDP in emerging economies of 4.2%.

**G. 04 EXCHANGE RATES US\$ PER € IN 2016**

(CLOSING RATE US\$ PER €)



The Euro, which is the functional currency used to calculate the earnings trend at H&R KGaA, was under significant pressure throughout the entire year, with trading influenced, in particular, by the European Central Bank's (ECB's) decision to continue to provide the markets with cheap money and to forge ahead with its bond-buying program.

**i**  
For further information see the glossary on page 154 f.

Crude-oil prices (all data refer to the average price of a barrel of North Sea Brent) rose sharply at mid-year. Starting out the year around USD 38.00, the crude price initially declined, but by mid-April 2016 was hovering around USD 45.00. Subsequently, there were increasing upticks in the price above the USD 50.00 mark before it climbed sharply to over USD 55.00 at the end of the year.

**Industry-Specific Climate**

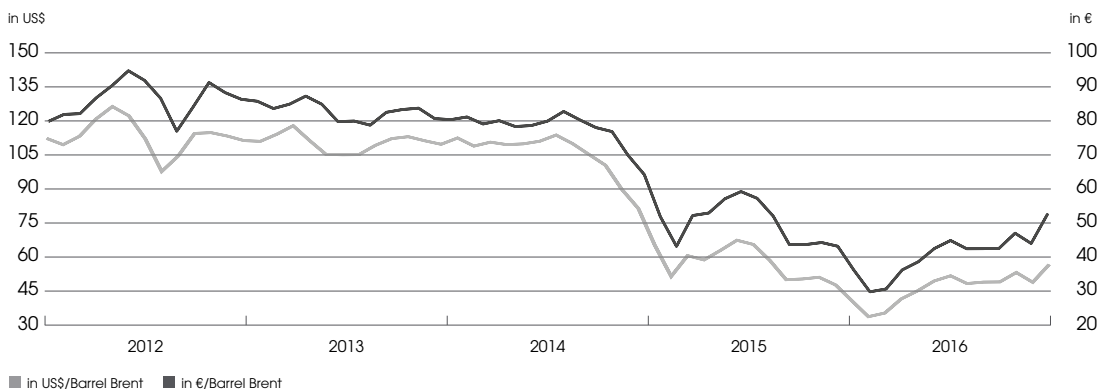
According to the German Chemical Industry Association (VCI), 2016 was a year of mixed results for the chemical-pharmaceutical industry. Despite ongoing difficulties in the global economy, Germany's third-largest industry managed to keep capital expenditures, capacity utilization and employment figures stable. Still, production growth was lower than expected. Because manufacturers' prices continued to drop, sales revenues declined. Overall, production of chemicals increased by 0.5%.

**Overview of Business Performance**

H&R KGaA's Chemical-Pharmaceutical Raw Materials Division sold a total of 849,300 tons of primary products in 2016 (2015: 762,000 tons), generating €942.7 million in sales revenues – less than in the previous year (2015: €982.9 million). Above all, lower prices for raw materials compared to the previous year reduced the cost of materials, the main factor influencing pricing and, therefore, the level of sales revenues. During 2016, fluctuations in the price of crude oil led to “windfall effects” that largely cancelled each other out over the year as a whole. At the same time, positive effects such as decent margins thanks to a good price situation for primary and by-products and stable base-oil prices, resulted in a positive earnings trend. To summarize, the company's consolidated operating income (EBITDA) totaled €101.4 million (2015: €85.4 million).

**G. 05 OIL PRICES 2012–2016**

(AVERAGE MONTHLY PRICES)



### Events with a Major Impact on the Course of Business

Overall, the Group's €0.94 billion of sales revenues were below the prior-year level (2015: €0.98 billion). At the same time, the improved earnings demonstrate that H&R KGaA was more profitable in 2016 than in previous years. Cost efficiencies and high levels of facility availability also enabled the company to benefit from the structural changes that have been visible in the market for years. The elimination and restructuring of major Group 1 refinery capacity in Western Europe increased customer demand for our specialty products. In addition to the positive price situation for our entire product portfolio, lower oil prices relieved the burden on the company on the purchasing side.

H&R KGaA therefore ended financial year 2016 with a correspondingly positive EBITDA of €101.4 million.

### Comparison of the Actual Course of Business with the Forecast Made in the Previous Year

The expectations with which H&R KGaA started financial year 2016 were primarily the result of the good impression the company had made with its repositioning and good performance in 2015.

Based on our planning assumptions, we initially expected sales revenues to increase due to higher oil prices. We expected operating income (EBITDA) to be on the same level as in the previous year, at around €86.0 million. Due to the good business performance, we revised this forecast during the first half of 2016, stating that there was "additional earnings potential of around 10%". Despite the continuing positive business trend in the third quarter of 2016, this forecast of around €95.0 million was confirmed by the figures for the first nine months, before the company again published a somewhat more positive outlook of up to €102.0 million in December.

Ultimately, we posted revenues of €0.94 billion. At €101.4 million, the EBITDA recognized in the consolidated income statement for the financial year was at the upper end of the most recent forecast range.

T. 15 FORECAST FOR FINANCIAL YEAR 2016

Forecast Date	Publication of the 2015 Annual Report	12/8/2016	15/11/2016	20/12/2016	Actual Value
Total sales revenues	"≥ €983.0 million"	pointed out downward trend in sales revenues	pointed out downward trend in sales revenues	"lower than in previous year, but above €900.0 million"	€942.7 million
Sales in ChemPharm Refining	"≥ €620.0 million"	Not defined	Not defined	Not defined	€558.1 million
Sales in ChemPharm Sales	"≥ €314.5 million"	Not defined	Not defined	Not defined	€328.0 million
Sales in Plastics	"≥ €49.1 million"	Not defined	Not defined	Not defined	€56.5 million
EBITDA at Group level	"at prior-year level" ~ €86.0 million	~ €95.0 million	~ €95.0 million	~ €102.0 million	€101.4 million

In the Chemical-Pharmaceutical Raw Materials Division, sales revenues stood at €886.1 million, lower than the prior-year figure (2015: €922.9 million). Above all, on average the price of raw materials we used was lower, which had a major impact on the cost of materials, which in turn because of our business model affected the amount of sales revenues. We referred to this obvious

trend in lower sales revenues in our interim reports but did not update the forecast, which in this case was not very meaningful.

The situation was similar in the Plastics Division. After adjusting the customer portfolio, although the segment's €56.5 million of sales revenues were somewhat lower than in the previous year

(€60.1 million), it ended the year in a more profitable position.

H&R KGaA's decision to raise projected operating income with the publication of the figures for the first half of 2016 was based primarily on the very good first-half indicators. Initially, by contrast, somewhat less dynamic performance was expected for the next few quarters overall. The positive situation for demand and prices for both our primary products and by-products was offset by the continued high sensitivity of market prices and the generally difficult political and economic situation worldwide. Nevertheless, we continued to post good results over the next several months. Because the nine-month figures were likewise positive, we again affirmed the higher forecast. Although the fourth quarter was the weakest in terms of contributions, the company's €101.4 million of EBITDA was its best showing in the last five years and the second-best in the company's history.

## Economic Position of the H&R Group

### Results of Operations

In financial year 2016, we continued the trend of recent years, generating €942.7 million of sales revenues (previous year: €982.9 million) – somewhat lower than the prior-year figure. Sales revenues from the Chemical-Pharmaceutical businesses (which accounted for 94.0% of sales revenues in 2016; previous year: 93.9%) were lower mainly because of the continued lower cost of raw materials in 2016. Improved earnings, on the other hand, demonstrate a higher level of profitability. In the Plastics business (which accounted for 6.0% of sales revenues in 2016 and 6.1% in 2015), by contrast, business declined because of systematic adjustments to the customer portfolio despite the higher profitability.

Although revenues were considerably lower, H&R KGaA's operating income was significantly higher than the prior-year figure.

The regional focus of our business activities remains on Germany, where 55.9% of sales revenues were generated in financial year 2016 (2015: 57.0%).

This percentage includes transactions with our sales partner – the Hansen & Rosenthal Group, which in turn generates a large proportion of its sales revenues outside of Germany. As a result, the percentage of products purchased by foreign end customers is higher than our statistics suggest. Of the remaining 44.1% of revenue, other European countries accounted for 11.7%, while the rest of the world contributed 32.4%.

For H&R KGaA, financial year 2016 was characterized by high demand, rewarding product prices and a good margin situation. The positive start to the year set the pace for solid first-half performance, which – despite a slight loss of momentum – led to successful figures for the year as a whole.

Another contributing factor was the expansion of our international network in the Chemical-Pharmaceutical Raw Materials Division, which enabled us to gain new suppliers of raw materials, production partners and customers. At the same time, the stabilization of the Plastics Division under GAUDLITZ GmbH, which this year not only relieved the burden on income but also made a positive contribution to EBITDA, also contributed to the good performance.

Strong customer demand for specialty products led to high capacity utilization at our production units and, consequently, to very good sales volumes. The de-stocking effects we encountered a couple of years ago did not recur at year-end 2016. H&R KGaA believes that one reason for this was the impact of this year's refinery closings at some of our competitors' sites, which led to noticeable shortages of certain specialty products.

Overall, the company posted a significantly better result for 2016 that exceeded both the prior-year figure and those of recent years: consolidated operating income (EBITDA) increased by €16.0 million to €101.4 million (previous year: €85.4 million). The EBITDA margin rose by 2.1 percentage points to 10.8% (2015: 8.7%).



The other earnings indicators also improved accordingly. For example, consolidated earnings before interest and taxes (EBIT) totaled €64.2 million in 2016 (previous year: €48.7 million). Earnings before taxes (EBT) increased from €34.2 million in 2015 to €54.2 million. Consolidated net income to

shareholders rose to €38.4 million (previous year: €26.9 million).

After earnings per share of €0.75 in the prior-year period, the company reported earnings per share of €1.07 for 2016.

**T. 16 CHANGE IN SALES REVENUES AND EARNINGS**

IN € MILLION	2016	2015	2014	2013	2012
Sales revenues	942.7	982.9	1,058.6	1,214.4	1,228.9
EBITDA	101.4	85.4	31.5	32.6	49.4
EBIT	64.2	48.7	5.8	-4.1	25.5
Earnings before taxes	54.2	34.2	-7.8	-16.8	1.6
Net profit/loss to shareholders	38.4	26.9	-15.4	-14.0	0.5
Earnings per share	1.07	0.75	-0.49	-0.47	0.02

**Orders Trend**

For 2016 as a whole, new orders for products in our Chemical-Pharmaceutical business were at a high level. Even at year-end, there was hardly any decrease in demand.

Following extensive sales efforts and a restructuring of the customer portfolio, the Plastics Division was in robust shape, with the order book increasing slightly to around €34.5 million at the end of the year (31 December 2015: €32.9 million).

**Trends in the Main Items on the Income Statement**

Inventories of finished and unfinished products rose by €9.2 million during the reporting period (previous year: € -27.9 million), mainly due to economies of scale.

In financial year 2016, our cost of materials declined by 5.3% to €671.8 million (previous year: €709.4 million) as a direct result of the reduction in the cost of raw materials. The material expenditure rate decreased to 70.6% (2015: 74.3%), mainly due to the decrease in the price of raw materials and to better operating margins.

**T. 17 TRENDS IN THE MAIN ITEMS ON THE INCOME STATEMENT**

IN € MILLION	2016	2015	2014	2013	2012
Sales revenues	942.7	982.9	1,058.6	1,214.4	1,228.9
Changes in inventories	9.2	-27.9	0.4	-56.5	-6.4
Other operating income	21.6	32.4	18.7	22.3	19.7
Cost of materials	-671.8	-709.4	-881.4	-981.3	-1,017.4
Personnel expenses	-86.7	-79.9	-72.7	-71.4	-72.9
Depreciation, impairments and amortization	-37.2	-36.8	-25.6	-36.7	-23.9
Other operating expenses	-114.1	-113.1	-92.4	-95.2	-102.9
<b>Operating profit/loss</b>	<b>63.7</b>	<b>48.3</b>	<b>5.7</b>	<b>-4.5</b>	<b>25.2</b>
Financial result	-9.5	-14.1	-13.5	-12.4	-23.6
<b>Consolidated earnings before taxes</b>	<b>54.2</b>	<b>34.2</b>	<b>-7.8</b>	<b>-16.8</b>	<b>1.6</b>
<b>Consolidated earnings before minority interests</b>	<b>39.3</b>	<b>26.8</b>	<b>-15.6</b>	<b>-14.0</b>	<b>0.4</b>
<b>Net profit/loss to shareholders</b>	<b>38.4</b>	<b>26.9</b>	<b>-15.4</b>	<b>-14.0</b>	<b>0.5</b>

Personnel expenses increased by 8.6% to €86.7 million (previous year: €79.9 million), reflecting the overall increase in the total number of employees.

Depreciation and amortization, which totaled €36.8 million in 2015, increased slightly to €37.2 million. As in the previous year, the Sales segment recognized impairments to intangible assets at the end of 2016: in China, H&R reported a goodwill impairment of €2.5 million despite good performance because originally, the company had an even more optimistic view of business prospects. €0.2 million of additional currency-translation effects reduced the carrying amount of the goodwill by a total of €2.7 million. In South Africa as well, changes in local conditions led to the assessment that future cash flows will be lower. Because of the assumed impairment loss there, a goodwill adjustment of €7.9 million was made.

However, in 2016, these items were somewhat offset by reversals of impairments totaling €6.0 million on account of the improved business situation at the Hamburg refinery.

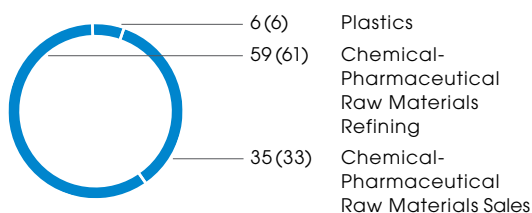
In 2016, the cost of financing dropped from €17.1 million to €13.1 million, which accordingly affected the financial result, which improved from € -14.1 million in 2015 to € -9.5 million in 2016.

### Earnings Trends by Segment

**ChemPharm Refining.** Sales volumes of primary products at our Group's largest segment increased from around 466,600 tons in 2015 to around 484,940 tons in 2016 thanks to higher demand in 2016. At the same time, however, segment sales were lower in financial year 2016, primarily because of cheaper raw-material prices. Because of our substantial material requirements, the lower commodity prices translated into reduced material costs, thereby reducing our sales

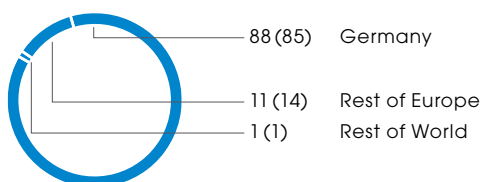
#### G. 06 REVENUE BY SEGMENT IN 2016

IN % (PREVIOUS YEAR'S FIGURES)



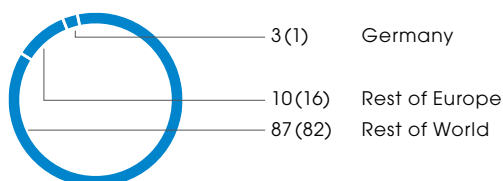
#### G. 07 REVENUE BY REGION IN THE SEGMENT CHEMPHARM REFINING IN 2016

IN % (PREVIOUS YEAR'S FIGURES)



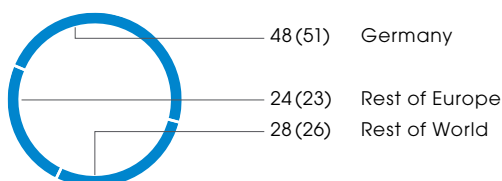
#### G. 08 REVENUE BY REGION IN THE SEGMENT CHEMPHARM SALES IN 2016

IN % (PREVIOUS YEAR'S FIGURES)



#### G. 09 REVENUE BY REGION IN THE SEGMENT PLASTICS IN 2016

IN % (PREVIOUS YEAR'S FIGURES)



revenues. Overall, sales revenues decreased by 7.7% to € 567.2 million (previous year: €614.3 million). Thanks to the positive pricing and market situation and acceptable base-oil prices, the segment's operating income (EBITDA) improved by €11.8 million to €64.5 million, compared to €52.7 million in the previous year.

**ChemPharm Sales.** Revenues in the international segment increased by 2.5% to €328.0 million (previous year: €320.2 million). Sales increased from around 311,320 tons in 2015 to 364,368 tons in 2016. Because of the higher proportion

of specialty products with stable margins in the product portfolio, operating income (EBITDA) increased by 12.3% from €35.1 million in 2015 to €39.4 million in 2016.

**Plastics.** With €56.5 million in sales revenues (2015: €60.1 million), our Plastics Division contributed less to total sales than in the previous year. However, during the reporting period, the segment's results showed a strongly positive trend, contributing €2.6 million to operating earnings (EBITDA) after posting EBITDA of € -0.8 million the previous year.

**T. 18 KEY FIGURES BY SEGMENT**

IN € MILLION	2016	2015	2014	2013	2012
<b>Sales revenues</b>					
Refining	567.2	614.3	768.7	941.0	952.2
Sales	328.0	320.2	244.7	231.7	254.1
Plastics	56.5	60.1	56.5	62.7	55.6
Reconciliation	-9.1	-11.6	-11.3	-21.0	-33.0
<b>Operating result (EBITDA)</b>					
Refining	64.5	52.7	18.2	20.6	33.1
Sales	39.4	35.1	18.8	16.5	19.3
Plastics	2.6	-0.8	-1.5	0.7	-0.8
Reconciliation	-5.1	-1.5	-3.9	-5.1	-3.2

**Net Assets and Financial Position**

**Financial Management Principles and Objectives**

We manage our finances centrally. The overriding objectives of this function are as follows:

- to provide the company with sufficient liquidity and to use it efficiently
- to finance working capital and capital expenditure
- to hedge against financial risks
- to ensure compliance with financing terms
- to optimize our capital structure

To ensure we are in a position to service our debt and to make efficient use of our liquidity, we

transfer surplus cash within Germany to a cash pool which supplies the subsidiaries with the necessary liquidity.

Of the borrower's note loans taken out in November 2011, an €18.0 million tranche matured in November 2016 and was repaid with excess cash. As of 31 December 2016, the balance sheet showed further borrower's note loans totaling €18.0 million that will mature in November 2018.

In August 2016, a widely syndicated loan granted in August 2015 with a maximum volume of €240.0 million was renewed early for an additional year and will now mature in August 2019. The syndicated loan's main purpose is to finance net working capital, the amount of which affects the maximum utilization under the loan agreement (borrowing-base mechanism). The mechanism

**i** For further information see the glossary on page 154 f.

ensures that financing needs are covered even when net working capital increases.

In January 2011 (€50.0 million) and September 2015 (€28.8 million), we took out redeemable loans from KfW (Kreditanstalt für Wiederaufbau, Reconstruction Credit Corporation), each for ten-year terms. These loans are part of a funding scheme which offers financing under favorable conditions for environmentally friendly investments. In September, we were able to repay early another redeemable loan from KfW that we had taken out in 2009 (original amount: €20.0 million).

In addition to other conditions, the utilization of these loans is subject to two covenants: the ratio

of net debt to operating income (EBITDA) and the equity ratio.

In order to increase planning certainty regarding our interest expense, in 2011 we hedged a variable interest-risk position from borrower's note loans maturing in November 2016 and November 2018 totaling €80.0 million with a fixed-interest position under an interest-rate swap. We repaid these borrower's note loans in November 2015, but given the current market situation, we have not liquidated the interest-rate swap.

During the reporting period, we made very little use of derivatives to hedge against the risks inherent in prices of raw materials, exchange rates and other risks.

#### T. 19 MAIN FINANCING INSTRUMENTS OF THE H&R GROUP

	Amount in € million	Year Issued	Maturity
Syndicated loan	up to 240.0	2015	24/8/2019
Borrower's note loans	18.0	2011	30/11/2018
Redeemable loan	50.0	2011	30/9/2020
Redeemable loan	28.8	2015	30/9/2023

#### Analysis of the Cash Flow Statement

Because of the considerably better consolidated result of €39.3 million, we generated net cash flow from operating activities of €75.5 million during the reporting period (previous year: net use of €56.4 million). Changes in net working capital totaled € -18.5 million (previous year: € -7.3 million). Income taxes paid totaled € -7.8 million (previous year: € -2.9 million) and additional current provisions totaled €6.4 million (previous year: €2.4 million).

Cash used in investment activities increased to € -38.8 million (previous year: € -28.1 million). Higher payments related to the replacement of capital assets at our refineries and sites totaling € -39,0 million (2015: € -31.8 million) and additional payments of €-0.9 million (2015: €-0.9 million) for the acquisition of intangible assets were offset

by €2.6 million of proceeds from the disposal of property, plant and equipment (2015: €4.7 million).

Accordingly, free cash flow (total cash flow from investment and operating activities) was positive again at €36.7 million (previous year: €28.4 million). Financing activities resulted in a net use of cash of €-58.9 million (previous year: €-52.4 million). This item was strongly affected by the more relaxed financing situation that has prevailed since the refinancing measures implemented in 2015. Again in 2016, financial debts were repaid (2016: €-99.1 million; 2015: €-150.3 million) and simultaneously new financial liabilities were contracted (2016: €39.8 million; 2015: €97.8 million). At the end of the reporting period, cash and cash equivalents amounted to €58.0 million, compared to €79.3 million a year earlier.

In the fourth quarter of 2016 alone, the company reported operating cash flow of €8.5 million (Q4 2015: €22.7 million). This was primarily attributable to the significant changes in net working capital for the quarter, which stood at € -3.7 million (Q4 2015: €8.7 million). Because of lower capital expenditures of € -10.5 million (2015: €-14.6 million), free cash flow for the fourth quarter stood at € -1.9 million (Q4 2015: €8.1 million).

For the current year, existing payment obligations under finance leases totaled €17,000 (previous year: €0.4 million) and commitments under operating leases totaled €37.1 million (previous year: €4.9 million). The total amount of liabilities to banks maturing in 2017 was €38.2 million as of the reporting date.

#### T. 20 FINANCIAL POSITION

IN € MILLION	2016	2015	2014	2013	2012
Cash flow from (used in) operating activities	75.5	56.4	-0.4	88.9	84.7
Cash flow from (used in) investment activities	-38.8	-28.1	-10.1	-16.2	-33.7
Free cash flow	36.7	28.4	-10.5	72.8	50.9
Cash flow from (used in) financing activities	-58.9	-52.4	-0.3	-49.2	-15.3
Cash and cash equivalents as of 31/12	58.0	79.3	101.6	109.6	89.6

#### Capital Expenditures

During the reporting period, our €39.3 million of investments in property, plant and equipment was considerably higher than in the prior-year period (2015: €33.1 million).

#### T. 21 CAPITAL EXPENDITURES BY SEGMENT

IN € MILLION	2016	2015	2014	2013	2012
Refining	34.0	23.6	18.1	12.0	30.8
Sales	4.5	6.7	4.7	0.5	1.8
Plastics	0.8	0.7	0.8	0.6	3.3
Reconciliation (other activities)	-	-	0.1	-	0.8
<b>Group</b>	<b>39.3</b>	<b>31.1</b>	<b>23.7</b>	<b>13.1</b>	<b>36.7</b>

We invested a total of €38.5 million in the Chemical-Pharmaceutical Raw Materials Division during the 2016 financial year (previous year: €30.3 million). A substantial portion of this amount (€34.0 million) was again invested in the Refining segment, where it was used to expand and replace capital assets at the Hamburg and Salzbergen refineries. The division's remaining €4.5 million of capital expenditures were divided among our Sales segment's international sites.

#### Balance Sheet Analysis

As of year-end 2016, total assets (total liabilities plus shareholders' equity) stood at €648.2 million (31 December 2015: €628.8 million).

On the assets side, cash and cash equivalents decreased by 26.8% to €58.0 million, compared to €79.3 million at the end of 2015. Trade receivables rose 10.4% to €109.2 million at the end of the reporting period (31 December 2015: €98.8 million). The increase in this balance-sheet item was attributable to the oil-price trend and to the valuation on the reporting date.

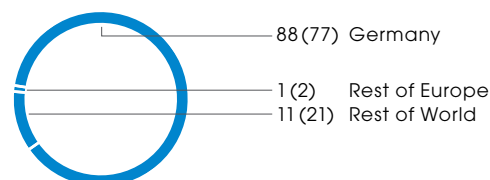
Because of the trend in the price of crude oil and because of margins, inventories – one of the main components of current assets – increased by a considerable 29.2% to €121.4 million (2015: €94.0 million). Overall, current assets increased by a moderate 5.4% to €297.3 million as of 31 December 2016, compared with €282.0 million at the end of 2015. As a proportion of total assets, they increased to 45.9% (31 December 2015: 44.8%).

During financial year 2016, non-current assets likewise increased slightly (1.2%) from €346.8 million on 31 December 2015 to €350.8 million on 31 December 2016. Property, plant and equipment rose 5.1%, from €257.2 million to €270.3 million. Because of the goodwill impairment losses in China and South Africa, goodwill decreased from €35.6 million to €25.0 million. Other intangible assets decreased by 10.4% to €28.7 million (2015: €32.1 million). At the same time, viewed in proportional terms, shares in at-equity valued holdings increased significantly from €1.0 million to €4.3 million. Deferred taxes also increased (1.9%), from €14.0 million to €14.2 million. Other assets, by contrast, decreased by 5.5%, from €1.5 million to €1.4 million. Overall, non-current assets comprised 54.1% of total assets.

On the shareholders' equity and liabilities side, current liabilities decreased by 2.0%, from €173.1 million to €169.6 million. As a proportion of total shareholders' equity and liabilities, they decreased to 26.2% (31 December 2015: 27.5%). Liabilities to banks, which decreased substantially from €82.8 million to €38.2 million because of the valuation on the reporting date and loan repay-

G. 10 INVESTMENT BY REGION IN 2016

IN % (PREVIOUS YEAR'S FIGURES)



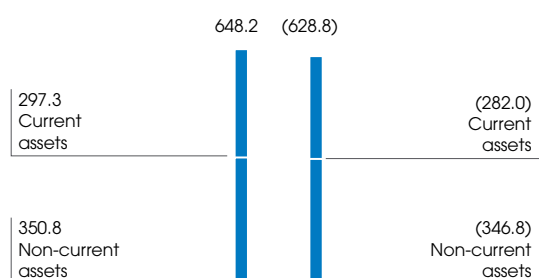
ments, were largely offset by the increase in trade liabilities to €77.2 million (31 December 2015: €53.3 million) as a result of higher purchase prices for ship deliveries of our raw materials.

Higher income tax liabilities totaled €12.0 million (31 December 2015: €6.2 million) and other provisions increased to €19.6 million (31 December 2015: €12.9 million). At €11.7 million, other financial liabilities remained slightly higher than in the previous year (2015: €9.8 million); at the same time, other liabilities increased from €8.1 million to €11.0 million).

During the same period, non-current liabilities decreased by 5.4% to €161.1 million (31 December 2015: €170.3 million) and as a share of total shareholders' equity and liabilities decreased from 27.0% to 24.9%. Non-current liabilities to banks decreased from €78.2 million to €62.0 million. The loan repayments also had an impact here. Pension provisions and other liabilities increased. Other provisions totaled €4.3 million – the same level as in 2015.

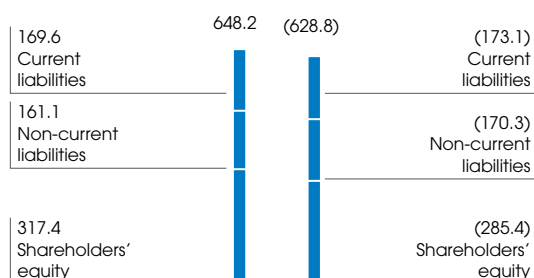
G. 11 ASSETS 2016

IN € MILLION (PREVIOUS YEAR'S FIGURES)



SHAREHOLDERS' EQUITY AND LIABILITIES 2016

IN € MILLION (PREVIOUS YEAR'S FIGURES)



Deferred tax liabilities decreased by 13.6% from €8.5 million to €7.3 million.

At the end of the reporting period, H&R KGaA's equity capital amounted to €317.4 million (31 December 2015: €285.4 million). Thanks to the substantial increase in retained earnings, which after including consolidated net income totaled €136.3 million (31 December 2015: €104.1 million), shareholders' equity was around 11.2% higher than in the previous year.

In line with the shareholders' equity figure, the equity ratio also improved. It increased consid-

erably, to 49.0%, despite the increase in total shareholders' equity and liabilities (31 December 2015: 45.4%). Net gearing (the ratio of net financial debt to equity) dropped by 16.3 percentage points from 31.4% to 15.1%.

Apart from the aforementioned transactions, no companies were acquired or sold during the reporting period. Our off-balance-sheet assets mainly consist of the leased portion of our refinery site in Hamburg and our fleet of leased vehicles.

**i**

For further information see the glossary on page 154 f.

## Non-Financial Performance Indicators



### Sustainability

“Oil is far too good to burn!” – Under this motto, H&R KGaA is acting not only out of economic necessity, although, ultimately, optimizing the use of our raw materials is also a top priority for the Company from a financial standpoint.

At the same time, we see ourselves as a company with responsibility: for H&R KGaA, oil and the “old economy” go hand in hand with the aspiration to apply modern technology and to do the utmost to protect the work and living spaces in and around our production and business locations.

Indeed, we do not exist within a vacuum. Whenever we operate, we have responsibilities: responsibilities as partners to our customers, responsibilities to our employees and responsibility for their working conditions. We are also part of the communities in which our sites are located and we share the same resources with our neighbors. Therefore, we can only succeed in strengthening and preparing our Group for the future if we act in concert with all other stakeholders in pursuit of the same economic, social and environmental objectives.

In this context, we actively face the manifold challenges involved in our mission. Thus, our customers demand not just the same old product quality they have enjoyed for years; instead, nowadays H&R KGaA must be in a position to deliver these products in an environmentally friendly manner – backed, if possible, by the appropriate certifications. Guidelines intended to guarantee ethical conduct are becoming more and more important and extend to all partners, in addition to our own company. This also encompasses both upstream and downstream aspects of our own value chain. Demographic change requires us to retain our skilled employees over the long term. We can only succeed in doing so if we offer our employees good jobs and enhanced job security while positioning ourselves as a responsible employer.

The following pages demonstrate what we have already managed to achieve in the area of “Responsibility”.

### Employees

At year-end 2016, the number of employees at the H&R Group had increased by 60 to 1,628 (31 December 2015: 1,568). The following table shows a breakdown by division:

T. 22 EMPLOYEES BY DIVISION

	2016	2015	2014
Employees	1,628	1,568	1,553
of which ChemPharm	1,035	975	938
of which Plastics	565	562	590
Other	28	31	25
Personnel expenses in € million	86.7	79.9	72.7

Most of our employees work at the domestic refineries in Hamburg and Salzbergen. As of the end of the reporting period, the refineries employed 659 people (31 December 2015: 630).

Our performance-related pay schemes and flat hierarchies also make us an attractive employer for experienced professionals.

The increasing complexity of our plants and equipment requires well-trained employees. For example, for the supervision of the processes in the refineries’ measurement and control rooms, we deploy only experienced employees who are ready and willing to regularly expand their knowledge base through further training and continuing education.

As we can only compete internationally if we have superbly trained employees on board, we consider our spending on advanced training and professional development to be an investment in the future of our company. When choosing training courses, we follow an individual approach that promotes employees’ strengths and helps them to achieve their career goals.



Our employees are characterized by a high degree of loyalty to the H&R Group. This is demonstrated, in particular, by the high average seniority and the persistently low staff turnover ratio at the sites in Germany. The age structure of our domestic workforce has remained roughly the same in recent years. During the period under review, the 41-to-50 age group was the largest. The age distribution of our employees is thus typical of industrial companies in Germany.

## Occupational Health and Safety

A key safety issue at all of our sites is the further training and education of our employees: we hold regular training sessions on topics relating to safety and require all our employees to visit our Internet-based safety instruction system on a regular basis. Contractors working in our factories are also included in our safety strategy.

Detailed analyses of potential losses, a special report on safety-related ratios, safety inspections and the active involvement of the Management Team ensure that our safety performance is constantly improving.

Our accident statistics are based on the international CONCAWE standard (CONservation of Clean Air and Water in Europe) which uses the indicators LWIF (lost workday injury frequency) and LWIS (lost workday injury severity). The LWIF figure shows the frequency of accidents (number of work accidents with at least 1 day lost for every 1 million working hours). The LWIS figure shows the severity of accidents (number of days lost per work accident). Here, both company employees and contractors are taken into account.

The standards we apply are therefore much stricter than those called for by the employers' liability insurance associations in Germany, for instance. During the past year, our safety efforts once again paid off: in 2016, the LWIF figure for our refineries was 0.7 (previous year: 0.6), so based on our track record for the past year at our refineries, we once again outperformed our competition.

**i**  
For further information see the glossary on page 154 f.

### T. 23 OCCUPATIONAL SAFETY AT H&R'S REFINERIES

	2016	CONCAWE Standard	2015	2014	2013
Number of occupational accidents with a least one day lost per million working hours (Lost Workday Injury Frequency; LWIF)	0.7	1.2	0.6	1.2	0.0
Number of occupational accidents with at least one day lost	4.0	-	1.0	2.0	0.0
Number of days lost due to accidents	73.0	-	12.0	56.0	13.0
Number of working days lost per occupational accident (Lost Workday Injury Severity; LWIS)	13.4	44.9	12.0	28.0	0.0
Number of fatal occupational accidents per million working hours	0.0	2.5	0.0	0.0	0.0



## Process Safety

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As an operator of refineries and production facilities, we are simultaneously entrepreneurs and employers, users of natural resources and neighbors. As such, we are under the obligation to act safely and sustainably. Our refinery processes use a variety of substances that require extremely careful handling.

Since the start of 2011, we have measured our performance in this area by means of the PSPI (Process Safety Performance Indicator). To calculate this figure, we track incidents relating to the safety of our processes (PSE – Process Safety Events) per 1 million working hours.

We ensure that our results are meaningful by comparing them with the reference figure from the industry association CONCAWE. Since we began recording the PSE, we have always performed better than the CONCAWE benchmark standard.



## Environmental Report

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Environmental protection and the responsible use of natural resources are key goals of our company policy. On the one hand, we are constantly striving to reduce energy consumption and the amount of environmental pollutants caused by the production process. On the other hand, we also develop environmentally friendly products which either offer an alternative to products containing environmental pollutants or which, by virtue of their use, contribute to protecting the environment. One of the uses of the white oils produced in our refineries is as components of pesticides to improve the yield of renewable raw materials. Our paraffins can be used to weatherproof domestic timber varieties. Their use renders intensive deforestation of slow-growing tropical timber stocks unnecessary. The innovative products from our Plastics Division are increasingly being substituted for parts used in the automotive industry that were previously made of metal. The re-

sulting weight reduction helps to reduce vehicle fuel consumption even further. At the same time, the amount of energy used in their production is much lower than for comparable metal components.

**Energy Efficiency and Climate Protection.** In Germany, high energy costs affect particularly energy-intensive production operations.

Although H&R KGaA claims the exemptions for energy-intensive production sites for the refineries, it pursues a rigorous, systematic policy of lowering this cost factor at its sites.

In order to not only stay competitive but also contribute to protecting the environment at the same time, reducing CO<sub>2</sub> emissions is an important element of our environmental strategy.

Given the depth of their value chain (degree of vertical integration), H&R's refineries face particular challenges. In contrast to other refinery operators whose processes end with the production of fuel or base oils, this is the point where our refineries' real role begins. The additional processing stages for high-value specialty products require further energy inputs, which increases CO<sub>2</sub> emissions. At the same time, though, the creation of higher-grade, long-lasting products helps to conserve resources.

**CO<sub>2</sub>-Emissions.** Our CO<sub>2</sub> footprint and our direct emissions together create indirect effects as well, e.g., from purchasing additional energy. We account for the depth of our value chain by calculating the sum of all individual plant throughputs in the course of production. For financial year 2016, our emissions per ton of feedstock came to 350.3 kg. The past financial year was therefore below the level of the previous year (397.5 kg) and also lower than the 2011 benchmark (398.1 kg).

**Waste.** We try to reduce the amount of waste caused by our production process as far as possible. Most unavoidable waste is recycled. Only when we have exhausted this option do we dispose of the remaining waste in an environmentally compatible way. Fortunately, the total amount of refuse generated by H&R's refinery sites is in any case low. By way of comparison, in 2016

we managed to reduce the amount of waste we produce by approximately 5.3% compared to the benchmark year of 2011 (3.09 kg). Instead of 1.57 kg per ton of feedstock as in 2015, we generated 2.93 kg per ton last year.

**Water Use.** Most of the water required for our refineries is used for cooling. This water does not come into contact with our products and can be returned directly to the environment. Our closed-circuit systems enable us to use our cooling water several times in some cases, thereby reducing our overall water consumption. Only a very small proportion of the water is used directly in our refinery processes. We use sophisticated procedures to purify this water so that it can be returned to the environment as wastewater without any concerns.

In total, in 2016 we drained off 600.9 liters of domestic or process wastewater per ton of feedstock, thus performing well below (around 30.2% below) our 2011 benchmark (861.2 liters). In the previous year, by contrast, the comparative quantity was still higher, at 686.3 liters.

**T. 24 EMISSIONS BY H&R REFINERIES**

PER TON OF FEEDSTOCK	2016	2015	2014
CO <sub>2</sub> for all energy sources <sup>1)</sup> (kg/t feedstock)	350.3	397.5	384.3
Waste water (l/t feedstock)	600.9	686.3	604.7
Waste (kg/t feedstock)	2.93	1.57	2.08

<sup>1)</sup>2016 Modified calculation basis as a result of improved plant engineering

## Product Responsibility



Group-wide, we strive to have uniform safety standards that exceed statutory requirements. In doing so, we take the entire value chain into consideration: from the delivery of raw materials to the use of our components in our customers' products.

We apply the standards laid down in REACH, the new EU regulation for chemicals. In 2010, we successfully completed the relevant registration phase for substances with an annual production volume of more than 1,000 tons. During the period under review, we incorporated the additional information required by the regulation into our material safety data sheets. In order to keep the costs of complying with REACH to a minimum and to take advantage of synergies, we play an active role in the CONCAWE association. At a local level, we also joined the REACH Hamburg expert network in 2014.

Following successful registration, some of the substances we use in our production processes required authorization. We are expecting final approval shortly.

## General Economic Outlook

### Assessment of the Economic Situation by Company Management

Over the reporting period, the economic outlook at H&R KGaA turned out to be considerably more positive than the Management Team had assumed at the beginning of 2016. In particular, the earnings projections were revised upwards during the year.

Following the trend of previous years, our sales revenues also declined in 2016. At the same time, sales volumes were higher than in 2015 thanks to higher customer demand. The downward trend in sales revenues was a direct consequence of and is explained in its entirety by cheaper prices for raw materials.

The result (EBITDA) of €101.4 million was higher than in the previous year (2015: €85.4 million). By systematically taking advantage of market conditions, H&R KGaA sold high-grade products that enjoyed even higher customer demand than in previous years. The positive result for the year as a whole is also a direct consequence of the strategic decisions taken in recent years. For example, the company's more diversified position in its international businesses will help to ensure that its profitability is sustainable, while continuing with contract orders at the Salzbergen site has restabilized our earnings trend.

Further optimizing our smart raw materials management system and achieving internal synergies within the H&R Group were important strategic milestones for ensuring the company's future viability. We now have the ability to analyze samples of raw materials virtually overnight, to determine the "intrinsic value" and to adjust our refineries to produce those products for which there is market demand.

Systematic positioning of the refineries as specialty-products refineries and clearly differentiating them from lubricant refineries has protected our competitive position. Numerous Group 1 base-oil production sites – including major groups' refineries – are leaving the market.

Thanks to our high degree of flexibility, on the other hand, we are holding our ground. H&R's refineries have an above-average share of high-grade petroleum-based specialty products, waxes and white oils, while our share of lower-margin lubricants is below the market average.

Overall, therefore, we believe the company is significantly more stable than it was a few years ago and we can look back on a successful financial year 2016. The goals we originally set at the beginning of the year have largely been achieved and, in the case of the operating result, even exceeded. In particular, considering the aforementioned financing structure, the cash flows generated in 2016 and the company's liquidity position, which has to be described as very good overall, H&R KGaA believes that it is very well positioned, and not just in terms of servicing its debt. Indeed,

the pending capital expenditure targets should also be achieved.

Worldwide, we continue to see stable demand for our products; as a result, the business trend during the first few weeks of 2017 has also been within our expected range.

#### Presentation of the Influence of Financial Policies on the Economic Situation

As in previous years, we have been conservative in exercising our discretionary powers and in making estimates. Our net assets and financial position also reflect, inter alia, the steps we have taken to manage working capital (factoring, inventory management, advance payments for orders). For a full description of the assumptions and discretionary decisions made with respect to the measurement of assets and liabilities, please refer to the presentation in the notes to the consolidated financial statements in this annual report.



For further information see page 145

## Net Assets, Financial Position and Results of Operations of H&R KGaA

### T. 23 EARNINGS POSITION OF H&R GMBH & CO. KGAA UNDER HGB

€ THOUSAND	2016	2015	Change
Sales revenues	961	1,648	-688
Other operating income	12,691	3,258	9,433
Personnel expenses	-1,457	-2,029	572
Depreciation, impairments and amortization	-18	-18	0
Other operating expenses	-6,355	-7,424	1,069
Income from equity investments	400	0	400
Income from profit-transfer agreements	48,685	24,643	24,042
Expenses from loss-transfer agreements	-857	-4,251	3,394
Income from lending financial assets	0	3	-3
Impairment losses on investments	1,000	-320	1,320
Other interest and similar income	5,039	8,280	-3,241
Interest and similar expenses	-9,234	-8,838	-396
<b>Earnings before taxes</b>	<b>48,855</b>	<b>14,952</b>	<b>33,903</b>
Income taxes	-4,550	-1,451	-3,099
Other taxes	-15	-12	-3
<b>Net income/loss for the year</b>	<b>44,291</b>	<b>13,489</b>	<b>30,802</b>
Loss carryforward	-77,609	-91,098	13,489
Accumulated deficit	-33,318	-77,609	44,291

We have prepared the annual financial statements of H&R GmbH & Co. KGaA (abbreviated as H&R KGaA) in accordance with the German Commercial Code (HGB). They are published in the Federal Gazette [Bundesanzeiger] and are permanently available for downloading from the Investor Relations section of the company website, [www.hur.com](http://www.hur.com). For financial year 2016, we have combined the management reports of the H&R Group and of H&R KGaA.

H&R KGaA's sales revenues are generated solely by services rendered to companies in the Group. At roughly around €1.0 million, sales revenues were lower than in the prior year (2015: €1.6 million). During the reporting period, personnel expenses stood at €1.5 million, also below the prior-year level (2015: €2.0 million). The fixed-asset depreciation charge was unchanged at €18 thousand.

Other operating expenses decreased from €7.4 million to €6.4 million. Thanks to the continued improvement in business performance at our subsidiaries, income from profit-transfer agreements, in particular, doubled from €24.6 million in 2015 to €48.7 million in 2016.

The generally less tense earnings situation at most of the subsidiaries with which individual profit-and-loss-transfer agreements exist was also the main reason for the decrease in expenses from loss-transfer agreements from €4.2 million the previous year to less than €0.9 million in the reporting period.

The subsidiaries of H&R KGaA obtain funding for their financing needs from H&R KGaA's resources, which in turn are financed on the capital markets via credit lines and borrower's note loans. However, due to lower need, other interest and similar income also dropped from €8.3 million to €5.0 million. Financing costs in 2016 resulted in an increase in interest and similar expenses, from €8.8 million to €9.2 million.

Overall, earnings before taxes rose to €48.9 million (previous year: €15.0 million).

The tax liability increased from €1.5 million in the previous year to €4.5 million. Overall, H&R KGaA generated €44.3 million of net income (2015: €13.5 million).



[www.hur.com](http://www.hur.com)

After netting the annual result against the loss carryforward, the company's accumulated deficit dropped by €44.3 million to € -33.3 million, compared with € -77.6 million in the previous year.

#### T. 24 NET ASSETS AND FINANCIAL POSITION OF H&R GMBH & CO. KGAA

€ THOUSAND	2016	2015	Change
Prepayments	27	0	27
<b>Intangible assets</b>	<b>27</b>	<b>0</b>	<b>27</b>
Land, land rights and buildings, including structures on third-party land	8	8	0
Other equipment, operating and office equipment	72	85	-13
<b>Property, plant and equipment</b>	<b>80</b>	<b>93</b>	<b>-13</b>
Shares in affiliated companies	123,869	119,369	4,500
Loans to affiliated companies	57,627	72,240	-14,613
Equity investments	1,050	1,050	0
Loans to entities in which the company has a participating interest	0	38	-38
<b>Financial assets</b>	<b>182,546</b>	<b>192,697</b>	<b>-10,151</b>
Receivables due from affiliated companies	91,280	80,047	11,233
Other assets	1,837	1,742	95
<b>Receivables and other assets</b>	<b>93,117</b>	<b>81,789</b>	<b>11,328</b>
<b>Securities</b>	<b>116</b>	<b>151</b>	<b>-35</b>
Bank balances	6,314	12,708	-6,394
<b>Current assets</b>	<b>99,546</b>	<b>94,648</b>	<b>4,898</b>
<b>Prepaid expenses</b>	<b>104</b>	<b>358</b>	<b>-254</b>
<b>ASSETS</b>	<b>282,304</b>	<b>287,796</b>	<b>-5,492</b>
Subscribed capital	91,573	91,573	0
Capital reserve	56,037	56,037	0
Other retained earnings	29,866	29,866	0
Accumulated deficit	-33,318	-77,609	44,291
<b>Shareholders' equity</b>	<b>144,157</b>	<b>99,866</b>	<b>44,291</b>
Provisions for pensions and similar commitments	2,385	2,206	179
Tax provisions	6,734	1,777	4,957
Other provisions	4,049	6,207	-2,158
<b>Provisions</b>	<b>13,168</b>	<b>10,190</b>	<b>-2,978</b>
Liabilities to banks	70,581	133,597	-63,016
Trade accounts payable	46	21	25
Liabilities to affiliated companies	50,675	40,528	10,147
Other liabilities	3,677	3,594	83
Liabilities	124,979	177,740	-52,761
<b>Shareholders' equity and liabilities</b>	<b>282,304</b>	<b>287,796</b>	<b>-5,492</b>

H&R KGaA's total assets decreased by 1.9% to €282.3 million as of 31 December 2016 (31 December 2015: €287.8 million). Because of lower loans to affiliates totaling €57.6 million (previous year: €72.2 million) and somewhat higher interests in affiliated companies of €123.9 million (previous year: €119.4 million), financial assets decreased from €192.8 million to €182.7 million at year-end 2016.

Receivables due from affiliated companies increased due to better results and, therefore, higher claims by KGaA against its subsidiaries under profit-transfer agreements; offset somewhat by scheduled loan repayments, on a net basis the receivables increased from €80.0 million to €91.3 million. Bank balances decreased sharply from €12.7 million to €6.3 million.

Overall, current assets rose 5.2% from €94.6 million to €99.5 million.

On the shareholders' equity and liabilities side, subscribed capital, the capital reserve and other retained earnings were more or less equal to the prior-year figures. The net income generated during the reporting period, €44.3 million, was recognized in the accumulated deficit, which therefore improved to € -33.3 million. Shareholders' equity therefore increased from €99.9 million as of 31 December 2015 to €144.2 million at the end of the reporting period. The equity ratio improved to 53.1% (31 December 2015: 34.7%).

Provisions for pension obligations increased slightly. There was a somewhat more significant decline in other provisions. However, because tax provisions were higher, overall provisions rose to €13.2 million (31 December 2015: €10.2 million).

By contrast, liabilities dropped by a significant 29.7% to €125.0 million (31 December 2015: €177.7 million), mainly due to significantly lower liabilities to banks totaling €70.6 million (previous year: €133.6 million) and a moderate increase in liabilities to affiliated companies (€50.7 million; previous year: €40.5 million).

## Other Statutorily Required Disclosures

### Disclosures in Accordance with Article 289, Paragraph 4 and Article 315, Paragraph 4 of the German Commercial Code (HGB)

#### Item 1: Composition of Subscribed Capital

The share capital available upon conversion of the company into a partnership limited by shares (Kommanditgesellschaft auf Aktien/KGaA) was fully paid in by changing the legal form of the previous legal entity, H&R Aktiengesellschaft. As of 31 December 2016, it totaled €91,572,769.63. It is divided into 35,820,154 no-par bearer shares. This corresponds to a notional value of €2.56 per share. There are no different classes of shares; they are all ordinary shares. Each of these shares entitles the holder to one vote.

#### Item 2: Restrictions on Voting Rights or the Transfer of Shares

There is a voting rights restriction and pooling agreement between the limited liability shareholders of H&R Beteiligung GmbH and H&R Internationale Beteiligung GmbH. A portion of the shares and voting rights in the company held by H&R Beteiligung GmbH (9.70% of voting rights in the company) and all shares and voting rights in the company held by H&R Internationale Beteiligung GmbH (16.32% of voting rights in the company) are subject to the mutual voting rights restriction. A total of 26.02% of company voting rights are therefore subject to a voting rights restriction.

In addition, shares and voting rights held by members of the Supervisory Board and of the Management Team of the general partner with full personal liability are subject to a voting rights restriction pursuant to Article 136 of the German Stock Corporation Act [AktG] regarding voting on the resolution by the Annual Shareholders' Meeting to approve their actions.

The company's Management Team is not aware of any further restrictions affecting voting rights or the transfer of shares.

#### Item 3: Direct or Indirect Interests Exceeding Ten Percent of Voting Rights.

In a voting rights notification dated 5 July 2016, Mr Nils Hansen reported that his share of voting rights totaled 60.63% of the company's voting rights due to his direct holdings and the attribution of voting rights held by or attributed to H&R Beteiligung GmbH, H&R Internationale Beteiligung GmbH and H&R Holding GmbH. According to the aforementioned voting rights notification, (i) the share of voting rights of H&R Beteiligung GmbH totaled 59.33% of the company's voting rights due to direct holdings and the attribution of voting rights; (ii) the share of voting rights of H&R Internationale Beteiligung GmbH totaled 26.02% of the company's voting rights due to direct holdings and the attribution of voting rights; and (iii) the share of voting rights of H&R Holding GmbH totaled 59.33% of the company's voting rights due to the attribution of voting rights.

#### Item 4: Holders of Shares with Special Rights Granting Powers of Control

There are no shares with special rights granting powers of control.

#### Item 5: Control over Voting Rights of Shares Held by Employees

The voting rights of employees who hold shares in the company's capital are not controlled.

#### Item 6: Statutory Regulations and Provisions of the Articles of Association on the Beginning and End of the Legal Position of the General Partner with Full Personal Liability and on Amendments to the Articles of Association

Since the company's legal form was changed to that of a partnership limited by shares on 1 August 2016, the company's management and representation have been the responsibility of its general partner with full personal liability, H&R Komplementär GmbH. The general partner with full personal liability is defined in the company's Articles of Association; see Article 5, paragraph 1 of the Articles of Association. The general partner company shall only leave the company in the cases governed by law or through an amendment to the Articles of Association. If the general partner



with full personal liability leaves the company and a new general partner with full personal liability has not been admitted simultaneously, the company shall continue to operate with the limited liability shareholders alone for a transitional period. In this case, the Supervisory Board must immediately appoint an Emergency Representative who shall represent the company until a new general partner with full personal liability has been admitted. In this case, the Supervisory Board shall be entitled to adjust the Articles of Association to reflect the change in the general partner with full personal liability.

Amendments to the Articles of Association must always be based on a resolution by the Annual Shareholders' Meeting, the adoption of which shall require a simple majority of the share capital represented during the voting, unless a bigger majority is required by law (compare Article 18, paragraph 2 of the Articles of Association and Articles 133 and 179 of the AktG). According to Article 285, paragraph 2 of the AktG, resolutions by the Annual Shareholders' Meeting regarding amendments to the Articles of Association also require the approval of the general partner with full personal liability. Pursuant to Article 24, the Supervisory Board may adopt amendments to the Articles of Association that only affect their wording without the approval of the Annual Shareholders' Meeting. Under Article 4, paragraph 5, the Supervisory Board is authorized to revise the Articles of Association once an increase in share capital has been fully or partly completed, based on the respective utilization of the approved capital and once the authorization period has expired. Pursuant to Article 4, paragraph 6 of the Articles of Association, this also applies to respective utilizations of contingent capital in accordance with Article 4, paragraphs 1 and 6 of the Articles of Association. Finally, the Supervisory Board shall be entitled to adjust the Articles of Association to reflect the change in the general partner with full personal liability (see Article 5, paragraph 5 of the Articles of Association).

#### Item 7: Powers of the General Partner with Full Personal Liability, Particularly Regarding the Option of Issuing or Buying Back Shares

The general partner with full personal liability has various options for implementing corporate actions. Pursuant to Article 4, paragraph 5 of the Articles of Association, the general partner with full personal liability is authorized – with the Supervisory Board's approval – to increase the company's share capital by 12 May 2019 by a maximum of €22,364,796.53 by issuing up to 8,748,348 new, ordinary no-par bearer shares. The issue may be effected in one or more tranches in return for cash and/or contributions-in-kind (2014 Approved Capital). In principle, the shareholders have a subscription right. The new shares may also be acquired by one or more banks with the obligation to offer them for subscription to shareholders.

Subject to the approval of the Supervisory Board, the general partner with full personal liability is authorized to suspend shareholders' subscription rights on one or more occasions:

- a) to the extent necessary to exclude fractional share amounts from shareholders' subscription rights;
- b) to the extent necessary to grant holders of option or conversion rights and/or obligations under warrants or convertible bonds the same rights to subscribe new shares that they would have as shareholders if they had already exercised their option or conversion rights or fulfilled their conversion obligations;
- c) to the extent that the new shares are issued for subscription in cash and the proportion of share capital attributable to the new shares does not exceed the lesser of €7,662,503.90 or 10% of share capital at the time this authorization to exclude subscription rights takes effect and is exercised for the first time ("maximum amount") and the issue price of the new shares is not be significantly lower than the quoted price for company shares of the same type already listed on the stock exchange at the time the issue price is set definitively;

d) to the extent that the new shares are issued in exchange for contributions-in-kind, especially in the form of companies, parts of companies, interests in companies or receivables.

The maximum amount defined in Article 4, paragraph 5(c) of the Articles of Association is to be reduced by the proportion of share capital attributable to new or previously acquired treasury shares that have been issued or sold since 13 May 2014 on the basis of a simplified exclusion of subscription rights in accordance or by analogy with Article 186, paragraph 3, sentence 4 AktG, and by the proportion of share capital attributable to shares that can be acquired through option or conversion rights and/or obligations that have been issued since 13 May 2014 pursuant to Article 186, paragraph 3, sentence 4 AktG, mutatis mutandis. Any reduction is reversed to the extent that authorizations to issue convertible bonds and/or bonds with warrants in accordance with Article 221, paragraph 4, sentence 2 and Article 186, paragraph 3, sentence 4 AktG or to sell treasury shares in accordance with Article 71, paragraph 1, no. 8 and Article 186, paragraph 3, sentence 4 AktG or to issue new shares in accordance or by analogy with Article 186, paragraph 3, sentence 4 AktG are granted again by the Annual Shareholders' Meeting once the authorizations that resulted in the reduction have been exercised.

The general partner with full personal liability is authorized, with the approval of the Supervisory Board, to specify the further details about the capital increase, in particular details regarding the rights accruing to the shares and the terms of issue. The Supervisory Board is authorized, once the increase in share capital has been fully or partly completed, to revise Article 4 of the Articles of Association based on the utilization of the approved capital from time to time and once the authorization period has expired.

Finally, the Annual Shareholders' Meeting passed a resolution on a contingent increase in the company's share capital of up to €7,500,000.00 in the period until 12 May 2019 through the issuance of up to 2,933,745 no-par bearer shares with dividend rights from the beginning of the

financial year in which they are issued. The contingent capital is intended to grant shares to satisfy subscription and/or conversion rights and/or obligations of holders of warrant-linked and/or convertible bonds that are issued by the company or a Group company in accordance with the authorization by the company's Annual General Meeting on 13 May 2014.

The general partner is authorized, with the approval of the Supervisory Board, to determine the further details of the process relating to the contingent capital increase (2014 Contingent Capital).

The Supervisory Board is authorized to amend Article 4, paragraphs 1 and 6 of the Articles of Incorporation in accordance with the respective utilization of the Contingent Capital.

#### Item 8: Essential Agreements Subject to the Condition of a Change in Control Owing to a Takeover Bid

The banks involved in the syndicated loans and borrower's note loans have the right to call in the loans in the event of a change of control.

#### Item 9: Compensation Agreements to be Concluded with the Members of the Management Team or with Employees Covering the Eventuality of a Takeover Bid

No such arrangements exist at this time.

## Subordinate Status Report (Related-Party Transactions)

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Until 31 July 2016, the company exercising direct control was H&R Beteiligung GmbH, a member of the Hansen & Rosenthal Group, with a 43.01% stake.

Following the Annual Shareholders' Meeting of H&R AG on 18 May 2016 and the entry in the Commercial Register on 1 August 2016, the company's legal form was changed to that of a partnership limited by shares, H&R GmbH & Co. KGaA. When the change in legal form went into effect, H&R Komplementär GmbH, Salzbergen, joined the company as the general partner with full personal liability and assumed the management and representation of H&R GmbH & Co. KGaA. Mr Nils Hansen holds the majority (51%) of the shares in H&R Komplementär GmbH and thereby is in a position to directly influence the management of the company.

As a result, we produce a subordinate status report in accordance with Article 312 AktG.

In the report for the 2016 financial year, the Management Team came to the following conclusion: "With regard to the transactions listed in the Report on Relationships with Affiliated Companies for the reporting period from 1 January 2016 to 31 December 2016, based on the circumstances that we were aware of at the time such transactions took place, our company received appropriate consideration for every transaction. No relevant measures were implemented or omitted during the reporting period."

## Remuneration Report

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The following remuneration report is an integral part of the Management Report. It describes the system of remuneration for the Management Team and the Supervisory Board of H&R KGaA.

In the previous year, the remuneration report was presented as part of the management report within the Corporate Governance Report.

### Remuneration of the Management Team

The Management Team of H&R KGaA consists of up to three members. H&R Komplementär GmbH reviews and makes decisions about the remuneration system for the Management Team, as well as the total remuneration for the individual members of the Management Team, through its Advisory Board, within the meaning of both Article 87 of the AktG and the recommendations of the German Corporate Governance Code, applied mutatis mutandis. To evaluate appropriateness, the remuneration is compared to that of other listed companies in similar industries of a similar size and complexity, as well as with the remuneration structure within the company itself. Moreover, it is also set at a level that ensures the company is in a position to compete for highly qualified top managers.

At publicly listed companies such as H&R KGaA, the remuneration structure must also be geared towards sustainable company performance.

Following these requirements, the total remuneration of the members of H&R KGaA's Management Team consists of both non-performance-related and performance-related components. The non-performance-related portions consist of a fixed salary and benefits, while the performance-related components consist of a two-step variable remuneration with a sustainability component and an annual special or recognition bonus determined at the discretion of the Advisory Board of H&R Komplementär GmbH, as general partner with full personal liability, that is limited to a maximum of €100,000.00.

The criteria for measurement of the remuneration for members of the Management Team include the economic situation, the company's performance and its future prospects. In addition, individual remuneration is dependent on the different duties of the members of the Management Team and on their individual performance.

### Fixed Remuneration

The fixed remuneration consists of a non-performance-related basic remuneration – which is paid pro-rata each month as a salary – plus various fringe benefits and non-monetary remuneration. At present, this primarily comprises insurance premiums for private life and disability insurance policies; contributions to pension, health and long-term-care insurance policies corresponding to the amount payable by an employer if social insurance contributions were payable in full; and the private use of a company car. Members of the Management Team pay tax on non-monetary remuneration based on the amounts reportable under tax guidelines.

The fixed salary is reviewed regularly (every two years).

### Variable Remuneration

Until 31 July 2016, the variable remuneration paid to members of the Management Team (formerly members of the Executive Board) of H&R AG, was based on a hurdle system with a target range that was determined using the Group's operating income for the year (EBITDA) and certain long-term objectives for a rolling three-year period.

For Mr Wösten, the variable component of remuneration was defined by EBITDA alone. When this form of variable remuneration was selected, Detlev Wösten's position on the Executive Board was initially scheduled to terminate at the end of 2016.

Along with the company's change in legal form, the rules for members of the Management Team were revised and standardized, as follows:

The maximum annual bonus is limited to the amount of the fixed salary. One-half consists of a component with a short-term incentive effect (referred to as the "earnings component") based on the annual operating group profit (EBITDA), adjusted by any extraordinary result within the meaning of Article 275, paragraph 2, no. 17 HGB (old version), with the other half being a component with a long-term incentive effect (referred to as the "sustainability component").

The earnings component can be up to 50% of the annual target bonus and depends on whether the EBITDA defined in the business plan is achieved. If EBITDA is 110% or more of the plan, the Management Team member is entitled to 100% of the earnings component (50% of the annual target bonus), i.e., a maximum of 50% of the maximum possible bonus. The maximum entitlement to the earnings component is reduced on a straight-line basis by the percentage by which EBITDA is below plan.

The sustainability component provides for a variable bonus based on the average return on capital employed (ROCE) over a rolling three-year period. The return is calculated as the ratio of EBIT to average capital employed (equity plus net financial debt, pension provisions and other non-current provisions) at the H&R GmbH & Co. KGaA Group.

A maximum of 50% of the annual target bonus is paid if the average annual ROCE reaches 15% or more. The maximum entitlement to the sustainability component is reduced pro-rata to 0% for a ROCE of up to 5%. By including this component, we satisfy the requirements of Article 87, paragraph 1, sentence 3 AktG, which stipulates that variable remuneration components must be calculated based on a timeframe spanning several years.

In Mr Detlev Wösten's case, up to 20% of the variable remuneration may be awarded on a project basis. The earnings and sustainability components will then be reduced to 40% each.

Should the term of office of a member of the Management Team end prematurely, any payments agreed for the departing member – including fringe benefits – should not exceed the value of twice the annual salary (severance pay cap) or the value of the remuneration that would be payable for the remaining term of the executive employment contract. This is stipulated in Recommendation Number 4.2.3, paragraph 4 of the German Corporate Governance Code as amended on 24 June 2014. The company has followed this recommendation to the extent legally possible by including what are known as "coupling clauses"

in the employment contracts of members of the Management Team. These stipulate that, if the appointment is revoked, the member resigns for good cause or the board position is otherwise terminated by the company, the employment contracts of members of the Management Team will terminate two years after the term of office ends, but no later than the planned end of the appointment period.

The executive employment contracts of all members of the Management Team ensure that the variable remuneration is limited in case of extraordinary developments in the company that could not have been foreseen at the time the ex-

ecutive employment contract was signed or at the time that targets were defined and which are deemed to render unreasonable for the company adherence to the payment of the agreed variable remuneration or to the defined targets. This could also be dealt with by appropriate adjustment of the targets already defined for the payment of variable remuneration. The company does not use securities-based incentive systems such as stock-option programs. No loans or advances have been extended to members of the Management Team.

**T. 27 REMUNERATION MANAGEMENT TEAM - GRANTED**

Granted Benefits	Niels H. Hansen			Deflev Wösten		
	Chairman of the Management Team/ Chairman of the Executive Board (until 31 July 2016) Chairman of the Executive Board since 1 January 2012			Member of the Management Team/ Member of the Executive Board (until 31 July 2016) Member of the Executive Board since 1 August 2011		
IN €	2015	2016	2016	2015	2016	2016
	Executive Board remuneration	Executive Board remuneration until 31/7/2016	Remuneration of the Management Team from 1/8/2016	Executive Board remuneration	Executive Board remuneration until 31/7/2016	Remuneration of the Management Team from 1/8/2016
Fixed remuneration	356,788	220,725	211,232	231,788	135,308	93,750
Fringe benefits <sup>1)</sup>	251	176	254	17,103	10,007	7,276
<b>Total</b>	<b>357,039</b>	<b>220,901</b>	<b>211,486</b>	<b>248,891</b>	<b>145,315</b>	<b>101,026</b>
One-year variable remuneration	225,000	142,458	136,979	225,000	131,250	61,641
Multiple-year variable remuneration	-	-	-	-	-	-
<b>Total</b>	<b>582,039</b>	<b>363,359</b>	<b>348,465</b>	<b>473,891</b>	<b>276,565</b>	<b>162,667</b>
Pension expenses	-	-	-	-	-	-
<b>Total remuneration</b>	<b>582,039</b>	<b>363,359</b>	<b>348,465</b>	<b>473,891</b>	<b>276,565</b>	<b>162,667</b>
		<b>711,824</b>			<b>439,232</b>	

<sup>1)</sup> Inter alia, this item includes the use of a car and accident-insurance premiums

## T. 28 MANAGEMENT TEAM - ACCRUED

Accrued Benefits	Niels H. Hansen			Detlev Wösten		
	Chairman of the Management Team/ Chairman of the Executive Board (until 31 July 2016) Chairman of the Executive Board since 1 January 2012			Member of the Management Team/ Member of the Executive Board (until 31 July 2016) Member of the Executive Board since 1 August 2011		
IN €	2015	2016	2016	2015	2016	2016
		Executive Board remuneration until 31/7/2016	Remuneration of the Management Team from 1/8/2016		Executive Board remuneration until 31/7/2016	Remuneration of the Management Team from 1/8/2016
Fixed remuneration	356,788	220,725	211,232	231,788	135,308	93,750
Fringe benefits <sup>1)</sup>	251	176	254	17,103	10,007	7,276
<b>Total</b>	<b>357,039</b>	<b>220,901</b>	<b>211,486</b>	<b>248,891</b>	<b>145,315</b>	<b>101,026</b>
One-year variable remuneration	92,750	225,000	-	141,750	225,000	-
Multiple-year variable remuneration	-	-	-	-	-	-
Other	-	-	-	-	-	-
<b>Total</b>	<b>449,789</b>	<b>445,901</b>	<b>211,486</b>	<b>390,641</b>	<b>370,315</b>	<b>101,026</b>
Pension expenses	-	-	-	-	-	-
<b>Total remuneration</b>	<b>431,373</b>	<b>445,901</b>	<b>211,486</b>	<b>389,976</b>	<b>370,315</b>	<b>101,026</b>
		<b>657,387</b>			<b>471,340</b>	

<sup>1)</sup> Inter alia, this item includes the use of a car and accident-insurance premiums

## Supervisory Board Remuneration

Since the change in legal form went into effect, Supervisory Board remuneration has been governed by Article 13 of our Articles of Association and primarily comprises the following elements:

Every member of the Supervisory Board receives a fixed annual payment of €30,000.00 in addition to the reimbursement of out-of-pocket expenses. The Chairman of the Supervisory Board receives three times and his deputy one and a half times this amount.

Supervisory Board members who are also members of Supervisory Board committees receive an additional fixed remuneration of €10,000.00 per committee; if there is a Nomination Committee, its members receive fixed annual remuneration of €5,000.00. Supervisory Board members who chair one of the committees receive twice the remuneration payable for membership of the committee in question.

## T. 29 SUPERVISORY BOARD REMUNERATION

IN €	Fixed remuneration		Remuneration for committee work		Variable remuneration		Total	
	2015	2016	2015	2016	2015	2016	2015	2016
Dr. Joachim Girk (Chairman)	60,000	90,000	20,000	25,000	11,050	-	91,050	115,000
Roland Chmiel	30,000	45,000	15,000	20,000	11,050	-	56,050	65,000
Nils Hansen (until 31/7/2016)	20,000	17,459.02	10,000	11,639.34	11,050	-	41,050	29,098.36
Sven Hansen (from 31/7/2016)	-	12,540.98	-	8,360.66	-	-	-	20,901.64
Dr. Rolf Schwedhelm	20,000	30,000	2,500	15,000	11,050	-	33,550	45,000
Dr. Hartmut Schütter	20,000	30,000	5,000	20,000	11,050	-	36,050	50,000
Dr. Peter Seifried	12,384	30,000	3,863	20,000	6,842	-	23,089	50,000
Reinhold Grothus	20,000	30,000	2,500	-	11,050	-	33,550	30,000
Matthias Erl (from 31/1/2016)	-	27,459.02	-	-	-	-	-	27,459.02
Harald Januszewski	20,000	30,000	-	-	11,050	-	31,050	30,000
Rainer Metzner (until 31/1/2016)	20,000	2,540.98	-	-	11,050	-	31,050	2,540.98
Anja Krusel (until 19/5/2015)	7,616	-	2,856	-	4,208	-	14,680	-
<b>TOTAL</b>	<b>230,000</b>	<b>345,000</b>	<b>61,719</b>	<b>120,000</b>	<b>99,450</b>	<b>-</b>	<b>391,169</b>	<b>465,000</b>

## Events after the Balance Sheet Date

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Between 31 December 2016 and the editorial deadline for this Report, there were no events with a material impact on the net assets, financial position or results of operations.

## Forecast, Risks and Opportunities Report

### Forecast Report

#### Orientation of the Group in Financial Year 2017

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Statements concerning short-term company trends from 1 January to 31 December of financial year 2017 assume that, based on our current knowledge, there will be no fundamental legal or organizational changes in the structure of the Group.

The main challenge facing our company is how to deal with the trade-off between raw-material prices and market conditions.

H&R KGaA is positioned so that it can actively take advantage of its flexibility at three different levels of the value chain: as a refinery operator and producer, in further processing and in distribution. If, in addition to our in-house expertise, we also need external capacity, we can enlist a network of tried and tested partnerships. Every one of our Group subsidiaries fits into this simple matrix.

At the same time, we need to take goal-oriented, individually tailored steps to achieve our 2017 targets.

In 2017, we will prepare our Chemical-Pharmaceutical Refining business – which as one of our core competencies was the main driver of total sales revenues and earnings during the reporting period – to tackle future challenges through extensive modernization and expansion efforts. Above all, this applies to the efficiency and degree of vertical integration at our refineries. Here, we have instituted measures designed to more clearly highlight the market-driven influences on our business that are only partly within our control while at the same time increasing the level of certainty for medium-term corporate planning.

This should minimize the adverse effect of these volatile factors on our earnings accordingly. For the Salzbergen site, this means continuing the

contract-production model implemented in 2013, which adds stability and planning predictability to our forecasts for sales revenues and earnings.

In our view, the Hamburg refinery's performance is by far the strongest lever we have for optimizing our results. The important groundwork has already been done in previous years, in terms of optimizing management of raw materials in order to be able to react on short notice and with flexibility to trends in the raw-material and sales markets and to be able to purchase and use raw materials on a just-in-time basis.

In 2017, we will again redouble our efforts to find solutions for the ideal selection and use of raw materials and to expand our expertise in order to improve this cost item.

On the one hand, the mere selection of certain raw materials is capable of increasing the output ratio of primary products to co-products or by-products; on the other hand, systematically marketing the remaining by-products is particularly important.

At the same time, some of these products enjoy significantly higher demand. For example, our bitumen is no longer just the raw material for asphalt; in the future, it will also be used as the input for new coker facilities at other refineries.

In the Chemical-Pharmaceutical Sales segment, our strategy of forming production partnerships to supplement our own production sites has proven to be successful. In financial year 2017, our international business has a firmly established position in global markets and will support H&R KGaA's overall performance as a stable driver of sales revenues and earnings.

The Plastics segment has largely completed the restructuring phase, simultaneously restructuring its Sales organizations. This involved consciously pruning the customer portfolio while at the same time winning back former customers. The goal is still to reduce dependence on the automotive industry by expanding activities in the fields of medical, electrical engineering, measurement



and control technology and to operate the business profitably over the next few years with customary market returns.

### Future Sales Markets

In the Chemical-Pharmaceutical business, Germany and other European countries will continue to be the main drivers of our sales revenues. In view of the maturity of these markets, our growth strategy in this region is based less on increasing volumes than on improving the efficiency of production processes and manufacturing higher-quality products. At the same time, we intend to continue to benefit from our products' broad range of applications in over 100 different industries.

Outside of Europe, we are focusing squarely on Asia. China continues to be more than just an important supply hub for our activities in the region. We continue to regard the country as a growth market for our specialty products and are focusing primarily on producing and marketing wax products and label-free plasticizers for the tire industry. In our view, the significance of this market has already increased due to the relocation of many tire manufacturers from Europe to China.

### Future Use of New Technologies and Processes

Constantly improving processes to increase efficiency and raise product quality is a core element of our corporate strategy.

By operating new equipment at our facilities, we increase the value added by our domestic refineries. This enables us to convert products previously not capable of being refined into high-grade crude-oil-based specialty products and to minimize the amount of waste residue left over by the production process. At the same time, we believe that the challenges posed by energy and climate-protection policies – which are currently the focus of attention – also present opportunities and we intend to press ahead with innovative ideas for interlinking sectors and, therefore, for using renewable energy sources in a systematic, holistic and environmentally friendly manner.

At both of our domestic refinery sites, we are planning corresponding investments to increase output and to improve the quality of our products. In the Plastics Division, too, we work continuously to improve our production processes.

### Future Products and Services

In the future, we will continue to pursue our successful strategy of developing innovative products that are closely aligned with our customers' needs. In the Chemical-Pharmaceutical Division, our sales partner, Hansen & Rosenthal KG, serves as an interface between our customers and our R&D departments.

By constantly testing new product specifications, we aim to have our input materials contribute to further efficiency gains in our customers' production processes and further increase the quality of their products. Moreover, one of the focal points of our research and development activities is to ensure the continued diversification of our primary products while increasing their percentage share of the overall product mix. We are already developing the next generation of these products in order to maintain our technological lead in this field. Work is also under way to develop innovative processes for manufacturing white oils and other crude-oil-based specialty products. New sales and distribution strategies are designed to boost marketing of current by-products.

The Plastics division enters this financial year in a stronger position. For example, GAUDLITZ GmbH has managed to reposition itself for former customers. At the same time, we aim to expand the customer base in medical technology and industry; we hope to attract new customers through a performance-based reorganization of organizational and production processes from a sales/distribution and operating standpoint and to jointly tap into new markets with existing customers. In recent years, the company has managed to achieve double-digit growth rates in the profitable in-house development segment. We also plan to expand work in this area during the current financial year.

## Comparison of Actual and Target Figures

The following table compares the actual values of the main or key control figures used by H&R KGaA for the past financial year (FY) with the original forecast and shows the outlook for financial year 2017:

T. 30 COMPARISON OF ACTUAL VALUES WITH FORECAST

Key Figure	Forecast FY 2016	Actual FY 2016	Outlook FY 2017
Group sales	€1,100 million to €1,200 million	€942.7 million	€950.0 million to €1,100 million
of which Refining	63%	€558.1 million (approx. 59%)	62%
of which Sales	32%	€328.0 million (approx. 35%)	32%
of which Plastics	5%	€56.5 million (approx. 6%)	6%
Reconciliation with Group sales	n. a.	€ -9.1 million	n. a.
Consolidated EBITDA	~ €85.0 million	€101.4 million	"2015 plus X" approx. €86.0 million to €100.0 million
of which Refining	62%	€64.5 million (approx. 58%)	67%
of which Sales	34%	€39.4 million (approx. 39%)	31%
of which Plastics	2%	€2.6 million (approx. 3%)	2%
Reconciliation with consolidated EBITDA	n. a.	€-5.1 million	n. a.

For the main indicator, sales revenues or sales revenues by segment, the company failed to reach the 2016 forecast that was based on the assumption of a higher price for crude oil due to the decline in raw-material costs, which are the primary driver of sales revenues. However, the percentage breakdown of sales revenues for the individual segments was largely in line with the assumptions made at the beginning of 2016.

We expect sales revenues to increase in 2017 and we assume that the ChemPharm segment, in particular, will experience a significant increase in sales volumes. At the same time, our range of expected sales take into account the potentially lower costs of raw materials and their impact on sales at our refinery sites, which are sensitive to such costs.

The target set for operating income (EBITDA) – which H&R KGaA uses as an alternative performance indicator and which the company calculates as earnings before interest, taxes, other financial result and depreciation, impairments and amortization – was significantly exceeded and at €101.4 million was only 1.9% lower than the three-figure record EBITDA achieved in 2010.

For 2017, we have a target range of €86.0 million to €100.0 million, which covers the range from the 2015 result through to this year's EBITDA.

We therefore regard 2015 as a key cornerstone, because after the difficult preceding years and important structural measures taken, it marks a new beginning and, therefore, a solid foundation for earnings for H&R KGaA.

A three-figure EBITDA at the same level as 2016 results represents the top range of our expectations for the current financial year.

Our range considers the potential for similarly good business performance in 2017; at the same time, though, we are not forgetting the challenges standing in our way: From both geopolitical and economic policy standpoints, companies with international operations are facing some significant uncertainties. The conflict in the Middle East, the focus of U.S. interests in the coming years, the continued existence of the EU and the Brexit negotiations, as well as a changing regulatory environment for interest rates and capital markets, should be reason enough to have a wary attitude about what to expect at the start of this year.

## Economic Environment in the Next Financial Year

### Future Macroeconomic Situation

The German Council of Economic Experts (whose remit is to assess macroeconomic trends in Germany), the so-called “Five Wise Men”, overall expects continued moderate growth of the global economy. For 2017, it is forecasting a 2.8% increase in global GDP. However, the experts note that future developments face numerous risks, including geopolitical risks and political uncertainty in Europe, not least because of the upcoming Brexit negotiations and the situation with Italian banks. Added to this is possible turmoil in the international financial markets.

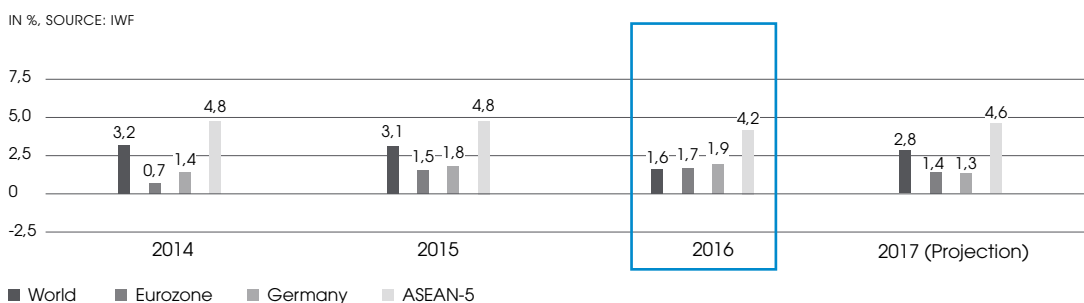
The recovery in Germany and the Eurozone is continuing. The Council of Experts expects real GDP growth of 1.3% in Germany in 2017. For the

Eurozone, the Council of Experts is forecasting real growth of 1.4% in 2017. In the Eurozone, while the extraordinarily loose monetary policy of the European Central Bank (EC) has contributed significantly to the upturn, the economic recovery can hardly justify the extent of the quantitative easing. Moreover, because massive structural problems remain, the recovery is not sustainable.

Our budget for financial year 2017 is based on a USD-EUR exchange rate which we set at 1.15 for 2017 at the beginning of the year.

For crude-oil prices, we also rely on the estimates published by the economics departments of major banks. For the budget year 2017, we assumed a price per barrel of North Sea Brent of \$55 which, as of the planning date, was once again increasing slightly compared to the end of 2016.

G. 12 GLOBAL ECONOMIC GROWTH FORECAST



### Future State of the Sector

For 2017, the German Chemical Industry Association, VCI, foresees no stronger dynamics for chemical production, predicting a 0.5% production increase. With a slightly rising price level, total sales should improve by 1% to €185 billion. The VCI only expects foreign business to contribute to growth.

Clearly, there is still a shortage of Group 1 production capacity for specialty products in the chemical-pharmaceutical industry. For 2015 and 2016 alone, the annual list of Group 1 refinery capacity in Western Europe published by the trade magazine Lubes'n Greases indicates a decrease

of more than 14% to the current level of 87,750 barrels/day.

Similar shortages of capacity have also been recorded in previous years. Customers of refineries that have closed turned to the remaining providers at other sites to cover their demand, particularly at year-end. We expect this trend to continue.

Over the next few years, we expect the highly fragmented plastics industry to consolidate through mergers and takeovers. Especially in the battle over the automotive industry – a major customer – only those companies capable of manu-

facturing high-quality products dependably and efficiently will prevail. The medical devices industry is another sector that is gaining in importance as a customer thanks to technological progress and demographic developments.

## Expected Results of Operations by Segment

### Projected Revenue Trends

Our sales revenues are significantly affected by the cost of raw materials for our Chemical-Pharmaceutical Division, which we pass on to our customers through our product prices. The price for our most important raw material, long residue, is closely correlated with the price of crude oil.

If our planning assumptions for crude-oil prices and the USD-EUR exchange rate prove correct, we anticipate that prices for raw materials and products will remain constant overall. Our 2017 forecast of sales revenues is based on estimates made by the economics departments of major banks, which indicate that the price of crude oil – a factor influencing sales revenues – will be slightly higher than in 2016; we also expect higher sales volumes in the Refining segment to boost sales revenues. We believe there is also further potential in the Sales segment.

Overall, we expect consolidated sales revenues for 2017 to again exceed €1 billion. The ChemPharm Refining segment will contribute approximately 62% of revenues. In pure mathematical terms, the Sales business will contribute around 32%, i.e., less than in the previous year. The Plastics Division will contribute around 6%.

### Expected Earnings Trends

The past two financial years have been quite positive for our company. In particular, the organizational and structural changes in 2015 laid the foundation for successful business performance that allowed H&R KGaA to benefit from the good market conditions in 2016. As a result, our refineries were able to deliver the required high-er volumes of products to our customers and to

satisfy demand Group-wide in 2016. Accordingly, operating income was strong, totaling €101.4 million by year-end, i.e., significantly above the prior-year figure and the projections published at the beginning of the year.

At the same time, the company was “on track” during the past financial year, in terms of achieving the targeted EBITDA of around €100.0 million as part of the Management Team’s “Vision 2020”. We believe the most important things we can do to repeat the positive earnings trend in 2017 are to continue with the contract-production model in Salzbergen and to take advantage of the potential at the Hamburg site.

There, it will be important to make the best possible use of scheduled shutdowns to carry out major replacement and maintenance work while reducing adverse effects to a minimum. In addition, higher capital expenditures will lead to higher depreciation charges – in subsequent years, as well. We are also redoubling our efforts to sell and distribute by-products and intend to increase our sales volumes in this product segment.

All in all, we expect our Refining business to remain stable, contributing the same level of earnings as in 2016.

To accomplish this, we are focusing on continuing to optimize our refinery and production processes, which will result in cost savings.

In the Sales segment, by focusing heavily on the high-margin international business, we expect stable, positive EBITDA contributions at the same level as last year. As in 2016, we expect the trend in sales revenues and earnings from our international subsidiaries – especially in Asia – to be mixed, but to meet our expectations overall.

In conclusion, we expect 2017 operating income (EBITDA) to be somewhere in the range between 2015 EBITDA and the very good 2016 result.

The earnings contribution from our ChemPharm Refining segment will account for around 67% of this amount. The international business will make up approximately 31%. The Plastics Divi-

sion should contribute around 2% to the Group's operating income (EBITDA).

### Expected Trends in the Main Income Statement Items

No structural changes to the income statement are expected for 2017.

## Expected Financial Position by Segment

### Planned Financing Activities

The Annual Shareholders' Meeting of H&R KGaA has empowered the company to increase the share capital in exchange for cash or contributions-in-kind, so that corporate actions would also be a possibility when reviewing strategic options or other plans that exceed the scope of normal investments. At the moment, no specific corporate actions are planned

H&R KGaA has entered into various loan agreements and borrower's note loans with banks. In 2016, we used our own funds to reduce our financing from borrower's note loans from €36.0 million to €18.0 million and extended the term of our €240.0 million widely syndicated loan until August 2019. This offers us additional flexibility in terms of utilization. The maximum drawdown under this loan changes in line with working-capital requirements (borrowing-base mechanism). In this way, we have ensured that our short-term financing needs for 2017 and the coming years are covered. Environmental loans from KfW form another important pillar of our financing; at year-end, a total amount of €53.8 million was outstanding. Because of the positive environmental aspects of projects at our refineries, these will continue to be available as an important option for our long-term financing.

Various financial covenants have been agreed for the borrower's note loans and the syndicated loan.

For more information on our main financing instruments, please refer to the section "Financial Management Principles and Objectives" in the notes to the consolidated financial statements.

### Expected Liquidity Trend

In light of the financing adjustment implemented in 2015, we do not see a need for further structural changes in the current financial year. Thanks to the available credit lines under our syndicated loan, we have sustainable access to sufficient liquidity until 2019, even in the event of higher crude-oil prices and the associated increase in working-capital requirements. Financing requirements for long-term capital expenditures are covered both by current operating cash flow and by long-term financing. Stable liquidity is also supported by our expectation of strong results from operations similar to 2016 earnings.

### Planned Investments

After several years of moderate capital expenditures, we are planning to significantly increase our investments in maintenance, modernization and added value at our facilities during the current financial year.

Around 87% of total capital expenditures will be in the ChemPharm Refining segment.

Around 7% of the expenditures will be in the Sales segment and approximately 6% will be focused on investments in the Plastics Division and on other items. Together with other measures intended to increase the efficiency and cost-effectiveness of our production processes, our capital expenditures will exceed our ordinary depreciation and amortization charges.

## **Overall Statement by the Management Team on the Future Business Trend in 2017**

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Following financial years 2012 to 2014, which brought the company less financial success but were so important to laying the groundwork for sustainable, positive business development, H&R KGaA created a stable basis for future growth in 2015 and performed successfully in 2016.

Pressing ahead with international expansion will continue to be an important factor in our success. H&R KGaA has a global presence and its position is particularly strong in areas where economic experts expect to see good growth opportunities in the future. We will increase stability by focusing on operating highly specialized refineries whose yields of high-value, in-demand products make them superior to conventional lubricant refineries.

The results of 2016 also demonstrate that even in a shrinking market, our products will allow us to become a more significant player. To hold onto this position, we must invest more in the future viability of our locations in 2017 and in the years to come.

Overall, if our planning assumptions prove to be correct, our sales revenues should improve considerably in 2017. Although sales revenues in the Chemical-Pharmaceutical Raw Materials Division are driven mainly by prices of raw materials, we expect the high level of demand and sales volumes to persist. Combined with a stable price and margin trend, this should also positively influence the earnings trend.

# Risk Report

## Risk Policy

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H&R KGaA's business policy is aimed at increasing the value of the company over the long term. In order to achieve this, we must seize market opportunities while carefully weighing the associated risks.

The goal of our risk policy is to optimize the relationship between risks and opportunities while avoiding risks that could jeopardize the company's continued existence as a going concern. Systematic risk management is the direct responsibility of the Management Team. Risks are generally identified and communicated by the managing directors of the respective local operating units. As far as possible, risks are eliminated or otherwise addressed at a local level.



As a manufacturer of crude-oil-based specialty products, we have a particular responsibility to operate our refineries in a way that protects both people and the environment. All our production sites therefore have officers who actively work to ensure the safety of our employees and our facilities while protecting the environment.

## Risk Management System

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The risks to which H&R KGaA and its subsidiaries are exposed are identified, assessed, communicated and limited, as appropriate, across the entire Group in a uniform manner. We use various methods to identify risks, such as monitoring industry-specific and macroeconomic risk indicators and analyzing purchasing and sales markets.

Identifying risks is considered to be the responsibility of all employees. This is encouraged by a flat organizational chart and a culture that encourages open discussion of potential risks, with local managing directors leading by example.

H&R KGaA uses the COSO (Committee of Sponsoring Organizations of the Treadway Commission) model to assess risks; this method is one of the standards for internal controls recognized by the American Securities and Exchange Commission (SEC). The risk manager (generally the relevant operations manager) conducts on-site risk assessments on a quarterly basis by means of a questionnaire, an inventory list, a data collection form and a current calculation document.

Risks are classified according to certain criteria. They are then measured using an approach in which the nominal extent of a potential risk is multiplied by the probability of its occurrence. All risks measured for an individual company are entered in the "risk inventory" and reported quarterly to the Risk Control department of the parent company, H&R KGaA. The Risk Control department helps the risk managers to establish early warning indicators that make it possible to react quickly if a risk becomes more acute.

The early warning indicators are checked regularly to ensure that they are appropriate and up to date. Where possible and economically feasible, measures to reduce or avoid risks are also defined.

Every quarter, the Risk Control department sends the Management Team the consolidated risk inventory, including a detailed breakdown of the Value-at-Risk (VaR), which serves as the basis for controlling overall risk. If new risks arise at short notice or a loss event occurs, the Management Team is notified directly, independently of normal communication channels.

In addition, a monthly performance report is prepared for all the main individual companies and the Group. This report compares revenue and earnings figures with the relevant target figures. The Risk Control department analyzes any variances between target and actual figures. These analyses enable the Management Team to identify undesirable trends at an early stage so that the necessary countermeasures can be implemented immediately.

The regular divisional meetings attended by local managing directors and the Management Team are another tool used for early risk detection. The interface thus created between the operating and administrative levels ensures that operational risks are captured by and reflected in the accounting process (e.g., in the form of provisions) and communicated internally.

At Supervisory Board meetings, changes in the risk inventory and the risk strategy are dealt with on a regular basis as part of the risk-management reporting process. If the risk situation changes significantly, the Supervisory Board will also be informed promptly between meetings by the Management Team.

The functionality and effectiveness of the risk early-warning system are reviewed not only by the Management Team, but also on a regular basis as part of the audit of the financial statements. The results of these audits are taken into consideration in the ongoing refinement of our risk management system.

### **Description of the Main Features of the Internal Control and Risk Management System with Regard to the Group Accounting Process (Article 289, Paragraph 5 and Article 315, Paragraph 2, No. 5 of the German Commercial Code/HGB)**

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H&R KGaA's accounting guidelines specify uniform accounting and valuation principles for the companies included in the consolidated financial statements in accordance with International Financial Reporting Standards (IFRS).

New accounting regulations are reviewed immediately to determine whether they affect companies in the H&R Group and if necessary are incorporated into our accounting guidelines. The local managing directors are responsible for applying existing regulations at the level of the individu-

al companies. Consolidated financial statements are prepared and drawn up by Group Accounting at H&R KGaA. The employees of this department also serve as contact persons to answer questions on accounting matters from the subsidiaries.

To minimize the risk of incorrect accounting even in complex circumstances, H&R KGaA employees involved in the accounting process undergo continuous and extensive training. The relevant departments have the appropriate manpower, both in terms of numbers and competence. Advice on specific accounting matters is also obtained from external experts as necessary. The internal control system at the H&R Group consists of principles, processes and measures which ensure that the accounting is effective, economical and correct and complies with the relevant legal requirements.

The H&R Group's internal control system consists of a management system and a monitoring system.

Important aspects of the measures that have been integrated into our processes include both manual controls, such as the dual-review principle, and automated IT controls.

The Audit Committee of H&R KGaA's Supervisory Board is integrated into the H&R Group's internal monitoring system through its audit activities, which are independent of operating processes. In accordance with Article 107, paragraph 3 of the German Stock Corporation Act (AktG), this body primarily focuses on monitoring the accounting process, the audit of the financial statements and the effectiveness of the internal control and risk management systems.

Extensive access regulations for the relevant IT systems and a strict dual-review policy in the Accounting Departments – both at the individual companies and at the Group level – ensure that the accounting processes are thorough, precise and secure.

The subsidiaries are obliged to report their figures to Group Finance every month in a standardized format in accordance with IFRS accounting rules.



This enables variances between target and actual figures to be identified at an early stage and gives us the opportunity to determine the reasons behind the variances and to take any necessary countermeasures.

used to hedge underlying transactions that either exist already or are highly likely to take place in the future (anticipatory hedging).

Derivative financial instruments are not used for speculative purposes. The contracts currently in place serve mainly to hedge exchange-rate risks.

### The Risk Management System as it Relates to Derivative Financial Instruments

### Individual Risks

H&R KGaA has very strict rules governing the use of derivative financial instruments. We only use standard market instruments from selected banks with good ratings. As a rule, the transactions are carried out by the Group Treasury department after approval by the Management Team and are then monitored on an ongoing basis. They are

Throughout the Group, we have standardized the classification of all our relevant risks. A risk is classified as low, medium or high based on the parameters “Probability of Occurrence” and “Potential Financial Impact”. The resulting risk classification matrix is shown in the following table:

T. 31 POTENTIAL FINANCIAL IMPACT<sup>1)</sup>

	Likelihood of occurrence <sup>2)</sup>		
	Unlikely	Possible	Likely
Existential threat	■	■	■
Significant	■	■	■
Moderate	■	■	■

<sup>1)</sup> Moderate: some negative effects on business activity, financial position, results of operations and cash flows if EBITDA falls below €30.0 million in 2017;  
 Significant: substantial negative effects on business activity, financial position, results of operations and cash flows if EBITDA falls below €30.0 million over the next two years;  
 Existential threat: considerable negative effects on, e.g., business activity, financial position, results of operations and cash flows owing to which the continued existence of the enterprise would be jeopardized, e.g., with an EBITDA permanently below €30.0 million.

<sup>2)</sup> 1-33%: Unlikely; 34-66%: Possible; 67-99%: Likely  
 ■ Low risk    ■ Medium risk    ■ High risk

Depending on the degree of a potential financial effect and the estimated likelihood of occurrence, risks are generally classified as being “high”, “medium” or “low”.

## T. 32 CORPORATE RISK

	Likelihood of occurrence	Possible financial impact	Risk situation compared to previous year
<b>Macroeconomic and Industry Risks</b>			
Fluctuations in demand and margins	Possible	Significant	Unchanged
Raw material supply risks	Unlikely	Significant	Unchanged
Risks from the development of substitute products and general competition	Likely	Moderate	Unchanged
Changes in the tax and legal environment	Possible	Moderate	Unchanged
<b>Operating and Corporate Strategy Risks</b>			
Production risks	Unlikely	Significant	Unchanged
Investment risks	Unlikely	Significant	
Risks associated with contractual relationship with Hansen & Rosenthal Group	Unlikely	Significant	Unchanged
Product liability risks	Unlikely	Moderate	Unchanged
Information technology risks	Unlikely	Significant	Unchanged
Personnel risks	Unlikely	Moderate	Unchanged
<b>Financial Risks</b>			
Liquidity risks	Unlikely	Significant	Unchanged
Risks from the breach of covenants	Possible	Significant	Unchanged
Risks from future refinancing requirements	Unlikely	Significant	Lower
Exchange-rate risks	Possible	Moderate	Unchanged
Interest-rate risks	Possible	Moderate	Lower
Risks from defaulting customers and banks	Unlikely	Moderate	Unchanged

Unless stipulated otherwise below, the description of risks applies equally to the H&R Group and to H&R KGaA. This reflects the fact that, while certain risks may originate with the subsidiaries and not with H&R KGaA, H&R KGaA will have direct exposure as the parent company. Above all, this applies to risks involving operating processes and the immediate business activities of the subsidiaries.

By contrast, in its capacity as the parent company, H&R KGaA holds equity investments in Group companies as its own original risk. The carrying amounts of these investments are subject to the risk of an impairment loss in the event of negative changes in the economic situation of these Group companies. This may have a negative impact on H&R KGaA's net income.

### Macroeconomic and Industry Risks

**Demand and Margin Fluctuations (Risk Class: High).** External influences can cause demand for our chemical-pharmaceutical specialty products and high-precision plastic parts to decline. These external factors may include periods of economic weakness, temporary price dumping by existing competitors or the emergence of new suppliers in relevant markets.

We continue to generate the majority of our sales revenues in Europe. Economic developments in this region therefore have an important influence on our sales and earnings trend.

In the Plastics Division, there is a risk of excessive dependence on direct suppliers to the automotive industry and/or individual customers, for example because automobile manufacturers' declining sales also affect H&R KGaA's business indirectly. Accordingly, we make every effort to diversify into new customer areas. Expanding our activities beyond Europe also furthers our global presence and makes us less dependent on developments in the domestic economy.

Closely correlated with the risk of weak demand is the risk of low product margins. As the fixed costs of the complex plants in the chemical industry are relatively high, lower margins are often tolerated at times of weaker demand in order to maintain capacity-utilization rates. We counter this risk with the targeted expansion of the percentage of our business that generates crude-oil-based specialty products that are less price sensitive.

As a rule, fluctuating raw-material prices and low prices for base oils also result in product-margin volatility. Base oil is a by-product of our joint production process and is used to make motor oils, among other things. If commodity prices are high and base-oil prices are simultaneously low, this will affect margins accordingly. Even with moderate raw-material prices, the effects can have a significant impact. The conversion of the Salzbergen Refinery to contract production back in 2013 has significantly reduced the overall risk of these effects.

At the same time, for financial year 2016 as a whole, H&R KGaA benefited from a basically profitable relationship between the purchase price of raw materials and the selling price of base oil. The company was also able to take advantage of the opportunities the positive trend in primary and by-product prices offered in the form of better margins.

Moreover, because of the fact that the production process in the ChemPharm Refining segment takes several weeks, sharp and, in particular, rapid declines in crude-oil prices such as those seen in 2014 may lead to a relative increase in material costs (i.e., an increase in the percentage of the product price accounted for by material costs), to lower margins and, in some cases, even to significant losses (so-called “windfall losses”) at H&R KGaA. The reason for this is that, on the date of their acquisition, the market prices for petroleum-based inputs are considerably higher than the market prices on the date when the primary products manufactured from such inputs are sold. This leads to a substantial increase in the relative material-use ratio for H&R KGaA, because production planning is based on a stable crude-oil price for the duration of the production run and it

is not economical to hedge fluctuations in commodity prices over that period.

Although the “windfall losses” and “windfall profits” that occurred in 2016 largely cancelled each other out, the company rates this risk as “High” based on the likelihood of occurrence and the significant impact it can have.

The high degree of competition in the plastics industry means that for many product groups, there is a risk of having to accept lower margins in order to safeguard or expand market share. We are therefore continuing to expand production in product segments with a more attractive market environment, such as medical technology. In some cases, the risk of increases in raw-material prices can partly be passed on to our customers through escalation clauses. If the risk does materialize, the financial impact is also lower because of the lower business volume.

**Risks Related to Raw Materials Procurement (Risk Class: Medium).** At our specialty refineries in Hamburg and Salzbergen the main raw material is a residue left over when fuels are produced from crude oil. To minimize the risk of supply shortages, we purchase this so-called long residue from different sources. To this end, we sign annual volume agreements with several well-known oil companies in different parts of the world. We purchase another portion on the spot market in order to diversify our sources even further.

In the International Chemical-Pharmaceutical Division and the Plastics Division, our strategy for avoiding raw-material supply shortages is based on always having several suppliers for important raw materials.

**Risks from the Development of Substitute Products and General Competition (Risk Class: Medium).** One risk applicable to both divisions is the development of substitutes or alternative production methods for our products. Furthermore, for the Chemical-Pharmaceutical segments, there is a risk that customers may develop manufacturing processes which rely to a lesser extent or not at all on crude-oil-based specialty products

as feedstock. We address these risks through intensive research and development activities in all the Group's operating divisions. This approach makes us the leading innovator in some product groups. The high degree of diversification in our product portfolio also reduces the effects individual substitutes would have on Group earnings. Moreover, there are a number of limitations in terms of quality, performance, compatibility with established manufacturing processes, availability, environmental impact and price for potential chemical and renewable raw-material substitutes. In addition to substitution risk, there is also the possibility, over the lifecycle of a given product, that competitors will develop and bring to market products of their own which are identical to our specialty products. This would expose us to greater competitive pressure.

Due to the many unknowns, the risk arising from market or competitive trends cannot be quantified.

#### **Changes in the Tax and Legal Environment**

**(Risk Class: Medium).** As an operator of industrial plants, we run a business that is governed by laws and regulations. Our two refinery sites in Germany, in particular, are required to comply with the requirements of legislation on the environment, chemicals and energy. A potential tightening of these regulations entails the risk of financial burdens caused by higher operating costs and capital expenditures. We limit these risks by remaining involved as much as possible – either directly or through membership in various associations – in political decision-making processes, identifying changing requirements through our compliance system, anticipating stricter standards in many areas and working safely and efficiently. We also address these objectives through technology and modernization projects, as part of our investment strategy. By implementing procedures to protect resources and lower emissions, we simultaneously improve our profitability and our reputation in the market.

The political framework for future changes in legal requirements is also defined in the Paris Agreement on climate change and will now be

transposed step-by-step into international and domestic agreements.

Despite the aforementioned measures implemented and improvements made in recent years, our refinery operations involve emissions and the use of chemicals and are energy-intensive. The trend in some areas toward tougher legal requirements for the manufacturing sector in Germany and Europe could lead to competitive disadvantages vis-à-vis competitors in the rest of Europe and the world.

#### **Operating and Corporate Strategy Risks**

##### **Technical Production Risks (Risk Class: Medium).**

H&R KGaA's subsidiaries produce crude-oil-based specialty products and high-precision plastic parts. Operating the plants that produce such products entails both operating risks and accident risks. Technical disruptions, flooding, fires or explosions can cause harm to people or the environment and result in production downtime.

We counter these risks with a comprehensive safety strategy: extensive control and safety measures, coordinated by our IT-based measuring stations, enable us to identify many production risks at an early stage and to adopt suitable countermeasures. We also invest regularly in environmental protection and safety measures at our refineries. The certification of our production sites in accordance with strict ISO standards contributes significantly to ensuring that production processes are safe. If an accident occurs despite these precautions, the financial losses are largely covered by insurance, provided that the risk is insurable and such coverage makes sense from a financial and economic standpoint.

##### **Risks Associated with the Sales/Distribution Relationship with the Hansen & Rosenthal Group (Risk Class: High).**

Sales of the ChemPharm Refining segment's products are handled almost exclusively by companies belonging to the Hansen & Rosenthal Group, which acts as sales/distribution partner under long-term contracts, reflecting many years of business ties; the Group is also a significant customer of H&R KGaA.

If this contractual relationship comes to an end and the Hansen & Rosenthal Group is no longer available as sales/distribution partner, this would have a considerable negative impact on H&R KGaA's net assets, results of operations and financial position. Among other things, the company would have to develop its own sales and distribution capacity for the ChemPharm Refining segment at short notice. Even if it succeeded in doing so, it would still face the risk of either not being able to establish direct customer relationships at all or not being able to do so over the long term. In such a case, contract production for the Hansen & Rosenthal Group at the Salzbergen site could be terminated as well. H&R KGaA would then have to come up with new funds to finance the refinery business at both locations.

H&R KGaA estimates the impact of such a risk, if it should occur, as "High"; however, it rates the probability that such a risk will materialize as "Unlikely": H&R KGaA is part of the Hansen & Rosenthal Group, the main shareholder and Managing Director of which is also the majority shareholder of H&R Komplementär GmbH, the general partner with full personal liability of H&R KGaA. The interdependencies are not one-sided only; to the contrary, H&R KGaA is the current sales/distribution partner's biggest supplier. Consequently, a long-term continuation of the sales/distribution relationship is in the interest of both parties.

**Investment Risks (Risk Class: Medium).** In the years ahead, we intend to keep investing in measures to maintain the added value and competitiveness of our existing production sites. In principle, investment projects may entail cost overruns and delays in construction. To mitigate these risks, we deploy project teams with in-depth knowledge of our plants who will therefore professionally coordinate and strictly monitor such value-maintenance measures. In addition, these measures always take place at plants whose technology has already been tried and tested in practice and for which the financial costs can be estimated with above-average certainty.

**Product-Liability Risks (Risk Class: Low).** Our crude-oil-based specialty products and plastic parts are incorporated directly into our custom-

ers' products. Incorrect specifications for our products may result in damages to our customers and give rise to warranty claims. For this reason, all the products in both our Chemical-Pharmaceutical Division and our Plastics Division are subject to intensive quality controls. If we are faced with liability claims despite this, we are largely covered by insurance.

**IT Risks (Risk Class: Medium).** The increasingly networked nature of our complex information-technology systems carries risks. Vital data can be falsified or deleted by unauthorized access from outside, operating errors or faulty programming.

To address this risk, we have an external service provider make regular back-ups of our current data. To protect ourselves against malicious hackers, we have complex firewalls in place and virus scanners that update themselves continually. An extensive access-authorization system is also used to protect sensitive data. We have taken precautions against a complete breakdown of our data center by establishing a fallback data center that can take over most important IT functions at short notice. We also counter information-technology risks through ongoing investments in hardware and software and by continuously improving our system expertise. Our IT department is suitably equipped for a company the size of the H&R Group and will continue to make every effort to optimize all our resources.

**Human-Resources Risks (Risk Class: Low).** Qualified and committed employees play an important role in our success. In the chemical industry, there is a great deal of competition for highly qualified staff to operate plants and refine production processes. We limit the associated risk of employee turnover through a number of personnel-policy measures: a pleasant working atmosphere, targeted development opportunities for junior staff and practical training and continuing education for professionals all help to create an attractive working environment.

Our Research & Development department has a wide range of cooperative arrangements with various universities which help establish contact

with high-potential candidates at an early stage. A flat organizational chart, good development opportunities and a performance-related remuneration system also make us an attractive employer for experienced professionals.

We also boost our employees' motivation with attractive performance-related pay schemes, a company platform for making suggestions for improvement and activities throughout the Group to encourage healthy living.

### Financial Risks

Our subsidiaries receive the funds they use to execute business and production processes through H&R KGaA, which in turn ensures that such funds will be available. As a result, risks involving these financing instruments generally originate with H&R KGaA itself.

**Liquidity Risks (Risk Class: Medium).** Prices for the raw materials used in our Chemical-Pharmaceutical segments are closely correlated with the price of crude oil. Accordingly, the prices for our raw materials are subject to fluctuations. The prices for our finished products are similarly volatile.

In order to cover the net working capital (the sum of inventories and trade accounts receivable less trade accounts payable) required for our production activities, a large part of the line of credit under the syndicated loan we took out back in August 2015 has been earmarked as a risk cushion; at the end of 2016, €17.1 million had been utilized for cash loans, letters of credit and guarantees. The possible utilization amount depends on the level of net working capital (borrowing-base mechanism) but cannot exceed €240.0 million. Our Group Treasury department monitors our liquidity status on a daily basis to avoid any cash-flow difficulties. The credit lines granted by the banks in the lending consortium are subject to financial covenants relating to our equity base and the ratio of our net debt to operating earnings (EBITDA). If any of these covenants are breached, the banks are entitled to call in the loan.

**Financial Covenant Breach Risk (Risk Class: High).** Compliance with the financial covenants will also be a crucial part of the financing agree-

ments in 2017. If one of these covenants were to be breached, this could jeopardize the continued existence of the financing arrangements and therefore the Group's financial and economic situation. Because of the possibility of occurrence and the potentially significant financial consequences, this is – from an objective standpoint – fundamentally a “High-Risk” issue. Overall, though, we rate the risk situation as noncritical, not least because of our continued compliance with the covenants during the past two financial years.

**Risks of Future Need to Refinance (Risk Class: Medium).** The short-term financing figure represents our existing refinancing risks, which primarily consist of loans of our Chinese subsidiaries and maturities on KfW redeemable loans. The syndicated loan agreement for a maximum of €240.0 million accounts for the bulk of current refinancing risks.

However, there is no guarantee per se that it will be possible to refinance in the future under the same or more favorable terms and conditions.

In general, banks have shown a great deal of interest in a further loan commitment to H&R KGaA. Because the lending banks' risk would be manageable even if the company's financial and economic situation should deteriorate (raw material and product inventories that can be sold at short notice), we assume that we will succeed in concluding any follow-up financing agreements required in the future. However, if ultimately we were unable to refinance, the company would have to use a higher percentage of its cash and cash equivalents to repay these amounts. This could have a significant impact on business activities, as well as on the company's net assets, financial position and results of operations.

**Risks from Defaulting Customers and Banks (Risk Class: Low).** Our indirect risks from delays in payment and/or defaults on the part of our subsidiaries' customers are limited by the broadly diversified customer base and the low level of dependence on individual debtors. Strict receivables management by our sales/distribution partner, Hansen & Rosenthal, reduces these risks even further. Trade-credit insurance has also been taken out for a number of major customers.

The default risk for banks with which we have arranged credit lines, entered into hedging transactions or invested funds has increased since the onset of the financial crisis. We counter this risk by only entering into financial transactions with top-rated banks and by spreading larger transactions among several banks.

**Exchange-Rate Risks (Risk Class: Medium).** As an international Group, we are exposed to various exchange-rate risks, which for cost-benefit reasons we generally do not hedge. The depreciation of a foreign subsidiary's local currency can diminish the cash flow generated there in terms of the Group currency, the euro. Furthermore, revenues from the sale of products from within the Eurozone to a country outside the Eurozone will fall if the foreign currency in question depreciates against the euro.

Some of the most important foreign currencies for us are the U.S. dollar, the Australian dollar, the pound sterling, the Thai baht, the Malaysian ringgit and the South African rand. For a sensitivity analysis of exchange-rate fluctuations between the U.S. dollar and the euro, our Group currency, please refer to the [notes to the consolidated financial statements](#). Nonetheless, despite the strong growth in our international business, around 80% of our sales are still invoiced in euros. Overall, we weigh the costs for hedging all foreign currency risks against the financial effects of a potential loss event. So long as the probability of occurrence is below 50%, we will dispense with the corresponding hedge transactions.

The U.S. dollar/euro exchange rate also affects our raw-material costs, as we purchase our main raw materials – the crude-oil derivatives long residue and vacuum gas oil – in U.S. dollars. An appreciation of the U.S. dollar against the euro therefore increases our raw-material expenses; however, we are generally able to pass most of this increase on to our customers.

**Interest-Rate Risks (Risk Class: Medium).** Changes in market interest rates lead to a change in the fair value of fixed-interest financial instruments and to fluctuations in interest payments for variable-interest financial instruments. To in-

crease planning certainty for the net interest result, we take out fixed-interest loans and fix some variable-interest financial liabilities.

In order to secure long-term conditions for our Group financing, we first increased our fixed-interest KfW funding with a new loan in 2015. Second, we concluded a new syndicated loan facility for €240.0 million, now maturing in August 2019. Currently, fixed-interest borrower's note loans totaling €18.0 million maturing in November 2018 are still outstanding. An interest-rate swap was used to convert to a fixed interest rate the variable-interest, borrower's note loans for €80.0 million maturing in November 2016 and for €40.0 million maturing in November 2018.

For the time being, we have avoided liquidating this interest-rate swap, which currently still totals €40.0 million, following repayment of the borrower's note loans. The reason for this was the current low-interest situation in the Eurozone. Because currently we are not utilizing any variable-rate, euro-denominated financing, we are currently exposed to a net interest-rate risk under the interest-rate swap from falling interest rates in the Eurozone.

There is additional exposure to falling interest rates in the form of the locally generated surplus cash of foreign equity investments in the respective currencies. The risk of increased interest expense from rising interest rates currently exists for our Chinese equity investments due to short-term fixed-interest loans denominated in CNY and USD that will have to be refinanced when they mature in 2017.

There are also company retirement liabilities in the form of pension commitments. The actual amount of these commitments is based, on the one hand, on an actuarial forecast and, on the other hand, is heavily dependent on conditions in the capital markets, in particular the interest rate. Lower interest rates cause pension liabilities to increase and result in a corresponding charge against H&R KGaA's equity.



For further information see page 97

## General Statement on the Risk Situation

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### Assessment of the Risk Situation by Company Management

Our risk-management system and the established planning and control systems are used to assess our overall risk situation. When all material individual risks are reviewed in aggregate, potential opportunities are not taken into account as offsets. We therefore believe that, based on currently available information, there are no risks that could jeopardize the continued existence of the H&R Group as a going concern.

### Company Rating

The creditworthiness of H&R KGaA has not been evaluated by an independent rating agency. Our banking partners review the credit standing of H&R KGaA on an ongoing basis.



## Report on Opportunities

### Opportunities Management

At the H&R Group, the systematic management of opportunities is closely linked to the management of risks. We define opportunities as developments that could have a positive effect on our results of operations, financial position or net assets over the next 12 to 18 months. Operating opportunities are identified and exploited in the various segments, because it is within the segments themselves that the greatest product and market knowledge is to be found. Managing strategic opportunities – such as acquisitions, joint ventures or major investments – is the responsibility of the Group's Management Team. We use a variety of methods to make the best use of both operating and strategic opportunities. For example, we perform analyses of the market and our competitors that are as precise as possible. We develop scenarios for successful market entry, question the focus of our product portfolio, evaluate the cost drivers as well as the relevant success factors and from this information identify specific market opportunities that are then coordinated by the Management Team in close collaboration with the local operations managers. At the same time, we try to identify future market trends in a targeted manner by holding discussions with customers. In the Chemical-Pharmaceutical segments, there is an active exchange of ideas on these issues between the production sites, our Research & Development department and our sales and distribution partner Hansen & Rosenthal, which uses its close customer contacts to identify current and future customer needs and to provide ideas for new products.

Finally, using a system similar to our risk classes, we rate our opportunities by degree of potential financial impact and probability of occurrence.

**Opportunities Arising from Macroeconomic Trends (Opportunity Class: Medium).** The Chemical-Pharmaceutical segments could benefit from the gradual withdrawal of the big oil companies from the crude-oil-based specialty-products business. In Western Europe alone, Group 1 refineries' generating capacity has decreased over the past 18 to 24 months due to the shutdown and restructuring of major refinery sites. By contrast, H&R's refineries can continue to provide these

products and the fact that a higher share of their capacity is devoted to specialty products than to lubricants may mean that they would have another advantage over the remaining Group 1 refineries. If, at the same time, the demand for crude-oil-based specialty products increases during this financial year, our revenues and earnings could exceed current expectations.

Over the last few years, we have laid the foundation for profitable business in a number of emerging markets in East Asia. Although economic researchers at the Asian Development Bank do not expect the economies in the ASEAN-5 zone to pick up significantly in 2017, the region will nevertheless remain attractive with a growth rate of 4.6%. In particular, experts point to Thailand's middle class, which they expect to grow fast and become more consumption-oriented. If these Asian economies develop in line with the forecasts, this could have a positive impact on our company, our results of operations and our cash flows and could lead to better overall performance than expected.

In recent years, we have concentrated on developing environmentally friendly products that satisfy the highest quality standards. Stricter environmental regulations or mandatory disclosures about product characteristics in our customer industries could also create additional incentives to use our crude-oil-based specialty products and plastic parts.

For the Plastics Division, demographic developments will create attractive growth opportunities, especially in the field of medical technology. Further opportunities will be generated by the trend in the automotive industry toward replacing heavy metal parts with lighter plastic components to reduce vehicle weight.

**Strategic Opportunities for the Company (Opportunity Class: High).** In the Chemical-Pharmaceutical segments, we see considerable opportunities in extending the value chain even further and increasing production efficiency with innovative manufacturing processes. In addition, our Research & Development department is working on innovative products that, once they are ready for market, could create significant added value for

**i**  
For further information see the glossary on page 154 f.

our customers. If we make faster progress in our research and development, this could be accompanied by the market launch of newer, improved products. This could have a positive effect on our revenues and our earnings and enable H&R KGaA to exceed current expectations.

Internationally, we actively monitor market trends and align regional opportunities with our international expansion strategy. To do this, we can rely on our existing network of subsidiaries as important strategic bridgeheads that will enable us to quickly penetrate emerging markets in a carefully targeted manner. An example here is the trend in China. Important players in the tire industry have relocated their manufacturing operations to Asia, where they demand the same quality they previously required at their European sites. China, which is such an important sales market for the automotive industry, will follow this trend and will also ensure a high level of demand for high-quality tires that pose no risk to health. H&R KGaA possesses the know-how to manufacture such tire components and, since its takeover of the Hansen & Rosenthal Group's Chinese businesses, has also had the necessary local production capacity since 2014.

In the Chemical-Pharmaceutical Division, we are already taking advantage of joint-production agreements with local partners who enable us to develop new markets in a stable and successful manner. Our primary goal in expanding collaboration beyond the production area is to exploit synergies with our sales/distribution partners. Increasing the market penetration of our products could also have a positive effect on our business and lead to an improved earnings situation.

Basically, we should note that, thanks to our high degree of diversification both at the product and customer levels, overall demand for our products is stable. Opportunities also arise from the fact that many of our specialty products are being used simultaneously in several of our numerous customer industries. For example, our high-quality paraffins are used in the candle, building-material and food industries – sectors with very different economic cycles.

**Economic Performance Opportunities (Opportunity Class: Medium).** The refinery-operation business is very energy intensive. By investing in CO<sub>2</sub> reduction and lower energy consumption, H&R KGaA has already met important climate goals in the past, with the concomitant reductions in energy costs. At the same time, the special compensation arrangements for energy-intensive firms were put to use.

We can also benefit – in the form of higher margins – when the supply of our products becomes scarce, such as during shutdowns, closings or capacity reductions at our competitors' refineries. For the Western European Group 1 refineries alone, industry experts expect production capacity to drop further this year. Accordingly, not only will the number of suppliers for many of our products decline; because our refineries focus on high-value specialty products while lubricants account for a smaller percentage, these refineries should have a competitive edge over competitors that are more heavily weighted towards lubricants.

More intensive, targeted marketing of our by-products will also create opportunities. For example, we are currently producing bitumen, which is primarily used in road building, as a by-product at our propane-deasphalting plant. However, by building new process-engineering plants, so-called cokers, bitumen can also be used as a feedstock for producing diesel and low-sulfur heating oil. As of 2015, two such cokers had already been built in Europe; others are expected to follow in the USA, Russia, India and Saudi Arabia. The more bitumen is used as a feedstock, the higher the demand may be for available high-quality bitumen for infrastructure projects.

In the Plastics Division, new large-scale orders from the automotive supply or medical technology sectors could lift revenue and earnings above our expectations.

## Overall Statement on Opportunities

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### Assessment of Opportunities by Company Management

Although the absolute number of reported risks is higher than the number of specific opportunities identified, H&R KGaA assesses the distribution of risks and opportunities as balanced overall.

During the past year, in which the distribution ratio was similar, H&R KGaA not only was able to benefit, but to benefit significantly from the existing opportunities. Among other things, this due to the fact that total sales revenues and earnings are supported by a variety of different chemical-pharmaceutical specialty products sold to different industries. We view this, along with our global presence and our good market position, as the major drivers of opportunities in 2017. H&R KGaA will actively search for and develop additional opportunities.

### Overall Statement on the Expected Development of the Group

The decline in sales revenues in 2016 once again showed that this parameter is not very meaningful: influenced only by lower raw-material costs, the lower sales figure was contradicted by strong demand – even in the traditionally weaker winter months – and higher sales volumes. H&R KGaA reported a similarly big increase in earnings.

The trend in demand and sales volumes continued at the beginning of the year, laying the foundation for the company to successfully position itself in the market in 2017 as well.

According to experts in the regions and countries in which we operate, the economic data continue to be positive. At the same time, we are convinced that the company is well positioned: as an operator of specialty refineries, H&R KGaA has succeeded in significantly increasing the percentage of high-value products it produces compared to conventional lubricant refineries. And it is precisely these products that will be in noticeably short supply as a consequence of the elimination of major refinery capacity in Europe. As a result,

we will invest more than we used to in our plants' capacity in order to satisfy the demands of the market.

H&R is stronger than ever. At the same time, it has to strike a balance between its own strengths, on the one hand, and the markets, on the other. And then there is the geopolitical situation, which for companies with international operations and links is becoming increasingly complex. It is therefore with self-confidence, but also a dose of realism, that we are drawing up our forecasts for 2017 and setting as our target an operating income (EBITDA) figure that should range from the results we achieved in 2015 up to last year's EBITDA level.

# CONSOLIDATED FINANCIAL STATEMENTS

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## Consolidated Balance Sheet of H&R GmbH & Co. KGaA

as of 31 December 2016

### ASSETS

€ THOUSAND	Notes	31/12/2016	31/12/2015	1/1/2015
<b>Current assets</b>				
Cash and cash equivalents	(7)	57,999	79,274	101,558
Trade accounts receivable	(8)	109,154	98,838	105,598
Income tax claims		200	198	1,701
Inventories	(9)	121,431	93,996	134,202
Other financial assets	(10)	1,366	1,783	2,176
Other assets	(11)	7,168	7,876	8,630
<b>Current assets</b>		<b>297,318</b>	<b>281,965</b>	<b>353,865</b>
<b>Non-current assets</b>				
Property, plant and equipment	(12)	270,334	257,167	255,280
Goodwill	(13)	25,035	35,635	39,908
Other intangible assets	(13)	28,741	32,071	32,885
Shares in at-equity valued holdings	(14)	4,302	975	763
Other financial assets	(10)	6,762	5,471	5,382
Other assets	(11)	1,436	1,519	1,465
Deferred tax assets	(34)	14,224	13,956	17,069
<b>Non-current assets</b>		<b>350,834</b>	<b>346,794</b>	<b>352,752</b>
<b>Total assets</b>		<b>648,152</b>	<b>628,759</b>	<b>706,617</b>

**SHAREHOLDERS' EQUITY AND LIABILITIES**

€ THOUSAND	Notes	31/12/2016	31/12/2015	1/1/2015
<b>Current liabilities</b>				
Liabilities to banks	(15)	38,187	82,752	52,018
Trade accounts payable	(16)	77,234	53,343	112,415
Income tax liabilities		11,959	6,207	2,230
Other provisions	(17)	19,561	12,939	10,511
Other financial liabilities	(18)	11,652	9,820	12,813
Other liabilities	(19)	11,042	8,084	9,948
<b>Current liabilities</b>		<b>169,635</b>	<b>173,145</b>	<b>199,935</b>
<b>Non-current liabilities</b>				
Liabilities to banks	(15)	62,041	78,248	156,051
Pension provisions	(20)	83,558	75,487	82,566
Other provisions	(17)	4,288	4,159	4,270
Other financial liabilities	(18)	1,940	2,387	4,712
Other liabilities	(19)	1,983	1,506	79
Deferred tax liabilities	(34)	7,310	8,464	11,314
<b>Non-current liabilities</b>		<b>161,120</b>	<b>170,251</b>	<b>258,992</b>
<b>Shareholders' equity</b>				
Subscribed capital	(21)	91,573	91,573	91,573
Capital reserve	(22)	42,753	42,753	43,329
Retained earnings	(23)	136,271	104,055	72,560
Other reserves	(24)	5,202	4,714	426
<b>Equity of H&amp;R GmbH &amp; Co. KGaA shareholders</b>		<b>275,799</b>	<b>243,095</b>	<b>207,888</b>
Non-controlling interests	(25)	41,598	42,268	39,802
<b>Shareholders' equity</b>		<b>317,397</b>	<b>285,363</b>	<b>247,690</b>
<b>Total shareholders' equity and liabilities</b>		<b>648,152</b>	<b>628,759</b>	<b>706,617</b>

## Consolidated Income Statement of H&R GmbH & Co. KGaA

1 January 2016 to 31 December 2016

€ THOUSAND	Notes	1/1 to 31/12/2016	1/1 to 31/12/2015 <sup>1)</sup>
Sales revenues	(27)	942,653	982,907
Changes in inventories of finished goods and work in progress	(9)	9,168	-27,885
Other operating income	(28)	21,570	32,391
Cost of materials	(29)	-671,765	-709,390
Personnel expenses	(30)	-86,715	-79,861
Depreciation, impairments and amortization	(12, 13)	-43,240	-36,769
Reversals of impairments to property, plant and equipment	(12)	6,047	-
Other operating expenses	(31)	114,056	-113,058
<b>Income from operations</b>		<b>63,662</b>	<b>48,335</b>
Income from at-equity valued holdings	(14)	513	336
Financial income	(32)	3,130	2,680
Financial expenses	(33)	-13,144	-17,137
<b>Earnings before taxes (EBT)</b>		<b>54,161</b>	<b>34,214</b>
Income taxes	(34)	-14,874	-7,407
<b>Income after taxes</b>		<b>39,287</b>	<b>26,807</b>
of which attributable to non-controlling interests		913	-96
<b>of which attributable to shareholders of H&amp;R GmbH &amp; Co. KGaA</b>		<b>38,374</b>	<b>26,903</b>
Earnings per share (undiluted), €	(35)	1.07	0.75
Earnings per share (diluted), €	(35)	1.07	0.75

<sup>1)</sup> Prior-year figures adjusted; for details, see note (5).



# Consolidated Statement of Comprehensive Income of H&R GmbH & Co. KGaA

1 January 2016 to 31 December 2016

€ THOUSAND	Notes	1/1 to 31/12/2016	1/1 to 31/12/2015 <sup>1)</sup>
<b>Income after taxes</b>		<b>39,287</b>	<b>26,807</b>
of which attributable to non-controlling interests		913	-96
of which attributable to shareholders of H&R GmbH & Co. KGaA		38,374	26,903
<b>Positions that will not be reclassified into profit or loss</b>			
Remeasurement of defined-benefit pension plans		-8,610	5,952
Deferred income taxes		2,542	-1,360
<b>Change in the amount included in equity (remeasurement of defined benefit pension plans)</b>		<b>-6,068</b>	<b>4,592</b>
<b>Positions that may subsequently be reclassified into profit or loss</b>			
Amount reclassified into profit and loss (cash flow hedges)		-	2,797
<b>Changes recognized outside profit and loss (cash flow hedges)</b>	(38)	<b>-</b>	<b>2,797</b>
Changes in the fair value of financial assets available for sale		2	-1
Deferred income taxes		-1	-69
<b>Changes recognized outside profit and loss (financial assets available for sale)</b>	(38)	<b>1</b>	<b>-70</b>
<b>Changes in the currency translation adjustment recognized in equity</b>		<b>-1,186</b>	<b>4,139</b>
<b>Other comprehensive income</b>		<b>-7,253</b>	<b>11,458</b>
of which attributable to non-controlling interests		-1,673	2,578
of which attributable to shareholders of H&R GmbH & Co. KGaA		-5,580	8,880
<b>Total comprehensive income</b>		<b>32,034</b>	<b>38,265</b>
of which attributable to non-controlling interests		-760	2,482
of which attributable to shareholders of H&R GmbH & Co. KGaA		32,794	35,783

<sup>1)</sup> Prior-year figures adjusted; for details, see note (5).

## Consolidated Statement of Changes in Shareholders' Equity of H&R GmbH & Co. KGaA

as of 31 December 2016

€ THOUSAND	Subscribed capital (21)	Capital reserves (22)	Retained earnings (23)
<b>1/1/2015</b>	<b>91,573</b>	<b>43,329</b>	<b>73,773</b>
Effects from the application of IAS 8	-	-	-1,213
1/1/2015 after adjustment	91,573	43,329	72,560
Capital increase in H&R GmbH & Co. KGaA	-	-576	-
Disposal of non-controlling interests	-	-	-
Income after taxes <sup>1)</sup>	-	-	26,903
Other comprehensive income	-	-	4,592
Total comprehensive income <sup>1)</sup>	-	-	31,495
<b>31/12/2015<sup>1)</sup></b>	<b>91,573</b>	<b>42,753</b>	<b>104,055</b>
Acquisition of non-controlling interests	-	-	-90
Income after taxes	-	-	38,374
Other comprehensive income	-	-	-6,068
Total comprehensive income	-	-	32,306
<b>31/12/2016</b>	<b>91,573</b>	<b>42,753</b>	<b>136,271</b>

<sup>1)</sup> Prior-year figures adjusted; for details, see note (5).

Other reserves/cumulative other comprehensive income						
Market valuation of financial assets	Cash flow hedges (24)	Foreign currency translation differences (23)	Equity share attributable to shareholders of H&R GmbH & Co. KGaA	Non-controlling interests (25)		Total
265	-2,797	2,958	209,101	39,802		248,903
-	-	-	-1,213	-		-1,213
265	-2,797	2,958	207,888	39,802		247,690
-	-	-	-576	-		-576
-	-	-	-	-16		-16
-	-	-	26,903	-96		26,807
-70	2,797	1,561	8,880	2,578		11,458
-70	2,797	1,561	35,783	2,482		38,265
195	-	4,519	243,095	42,268		285,363
-	-	-	-90	90		-
-	-	-	38,374	913		39,287
1	-	487	-5,580	-1,673		-7,253
1	-	487	32,794	-760		32,034
196	-	5,006	275,799	41,598		317,397

# Consolidated Cash Flow Statement of H&R GmbH & Co. KGaA

1 January 2016 to 31 December 2016

€ THOUSAND		Notes	2016	2015 <sup>1)</sup>
1.	Income after taxes		39,287	26,807
2.	Income taxes		14,874	7,407
3.	Net interest result		12,669	16,386
4.	+/- Fixed asset depreciation, impairments, amortization/reversals of writedowns		37,193	36,769
5.	+/- Increase/decrease in non-current provisions		-2,256	-4,401
6.	+ Interest received		475	751
7.	- Interest paid		-11,213	-11,548
8.	+/- Income tax received/paid or owed		-7,778	-2,918
9.	+/- Other non-cash expenses and income		496	-5,488
10.	+/- Increase/decrease in current provisions		6,444	2,428
11.	-/+ Gain/loss from the disposal of fixed assets		434	-3,280
12.	-/+ Changes in net working capital		-18,488	-7,275
13.	+/- Changes in remaining net assets/other non-cash items		3,317	787
<b>14.</b>	<b>= Cash flow from operating activities (sum of items 1 to 13)</b>	(37)	<b>75,454</b>	<b>56,425</b>
15.	+ Proceeds from disposals of tangible fixed assets		2,644	4,653
16.	- Payments for investments in tangible fixed assets		-38,961	-31,800
17.	- Payments for investments in intangible assets		-896	-928
18.	- Payments for investments in financial assets		-1,575	-
<b>19.</b>	<b>= Cash flow from investment activities (sum of items 15 to 18)</b>	(37)	<b>-38,788</b>	<b>-28,075</b>
<b>20.</b>	<b>Free cash flow (sum of items 14 and 19)</b>		<b>36,666</b>	<b>28,350</b>
21.	+ Dividends received from joint ventures		336	123
22.	- Payments resulting from the settlement of financial debt		-99,054	-150,345
23.	+ Receipts from the taking up of financial debt		39,847	97,804
<b>24.</b>	<b>= Cash flow from financing activities (sum of items 21 to 24)</b>	(37)	<b>-58,871</b>	<b>-52,418</b>
25.	+/- Changes in cash and cash equivalents (sum of items 14, 19 and 24)		-22,205	-24,068
26.	+ Cash and cash equivalents at the beginning of the period		79,274	101,558
27.	+/- Change in cash and cash equivalents due to changes in exchange rates		930	1,784
<b>28.</b>	<b>= Cash and cash equivalents at the end of the period</b>		<b>57,999</b>	<b>79,274</b>

<sup>1)</sup> Prior-year figures adjusted; for details, see note (5).

# Notes to the Consolidated Financial Statements of H&R GmbH & Co. KGaA

as of 31 December 2016

## (1) General Information

On 18 May 2016, the regular Annual Shareholders' Meeting of H&R Aktiengesellschaft decided to change the company's legal form from that of a joint-stock corporation (Aktiengesellschaft/AG) into that of a partnership limited by shares (Kommanditgesellschaft auf Aktien/KGaA). As part of the change in legal form, H&R Komplementär GmbH joined the company as the general partner with full personal liability and assumed the management and representation of the company. Mr Nils Hansen holds the majority of voting shares in H&R Komplementär GmbH.

Changing H&R Aktiengesellschaft's legal form into that of a partnership limited by shares (Kommanditgesellschaft auf Aktien) led neither to the dissolution of the company nor to the founding of a new legal entity. The legal and commercial identity of the company remained intact. H&R GmbH & Co. KGaA will be managed by the Managing Directors of H&R Komplementär GmbH. H&R GmbH & Co. KGaA's parent company is H&R Komplementär GmbH.

H&R GmbH & Co. KGaA, a listed company headquartered at 48499 Salzbergen (Germany), Neuenkirchener Strasse 8, does business in various specialty chemical and plastics markets via its subsidiaries. The Group's businesses include the production of chemical-pharmaceutical raw materials as well as the manufacture of injection-molded precision plastic parts. It is recorded in the Commercial Register at the Osnabrück Municipal Court under number HRB210689.

Pursuant to Article 315a of the German Commercial Code (HGB), H&R GmbH & Co. KGaA, as a stock-exchange-listed Group parent company, is required to prepare consolidated financial statements in accordance with international accounting standards and rules. The consolidated finan-

cial statements of H&R GmbH & Co. KGaA were prepared based on the accounting rules of the International Accounting Standards Board (IASB), the application of which was mandatory under EU Regulation No. 1606/2002 as of the balance sheet date, and according to the additionally applicable requirements of Article 315a (1) of the HGB. The requirements of the Standards (IFRS/IAS) and interpretations (IFRIC/SIC) whose application was mandatory as of the balance sheet date were met without exception.

The income statement is prepared in accordance with the total-cost method. The balance sheet is broken down into current and non-current assets and liabilities. Under this approach, assets and liabilities are shown as current if they are held for trading purposes, are intended for sale within the normal course of the business cycle or are expected to be sold within 12 months of the balance sheet date. Pension provisions as well as deferred tax claims and/or liabilities are in principle treated as being non-current.

The 2016 consolidated financial statements were prepared using the euro (€) as the functional currency. Unless stated otherwise, all amounts are shown in thousands of euros (€ thousand). Rounding can lead to the amounts mentioned in this report not adding up exactly to the sums stated, and to percentages not exactly matching the amounts reported.

The financial year of H&R GmbH & Co. KGaA and the subsidiaries included in the consolidated financial statements coincides with the calendar year.

The consolidated financial statements are published in the Federal Gazette [Bundesanzeiger].

## (2) Effects of New Accounting Standards

### Standards and Interpretations to be Applied for the First Time in the Current Financial Year.

Application of changes to the following standards by the International Accounting Standards Board (IASB) became mandatory for the first time in the current financial year:

#### STANDARDS AND INTERPRETATIONS TO BE APPLIED FOR THE FIRST TIME

Title	IASB Effective date	Date of endorsement	EU effective date
Amendment to IFRS 11 – Acquisition of an Interest in a Joint Operation	1/1/2016	24/11/2015	1/1/2016
Amendments to IAS 16 and IAS 41 – Bearer Plants	1/1/2016	23/11/2015	1/1/2016
Amendment to IAS 19 – Defined Benefit Plans: Employee Contributions	1/7/2014	17/12/2014	1/2/2015
Annual Improvements to IFRSs 2010-2012 Cycle	1/7/2014	17/12/2014	1/2/2015
Amendments to IFRS 10, IFRS 12 and IAS 28 – Investment Entities	1/1/2016	22/9/2016	1/1/2016
Amendments to IAS 1 – Disclosure Initiative	1/1/2016	18/12/2015	1/1/2016
Annual Improvements to IFRSs 2012-2014 Cycle	1/1/2016	15/12/2015	1/1/2016
Amendment to IAS 27 – Equity Method in Separate Financial Statements	1/1/2016	18/12/2015	1/1/2016
Amendments to IAS 16 and IAS 38 – Clarification of Acceptable Methods of Depreciation and Amortization	1/1/2016	2/12/2015	1/1/2016

The first-time application of these new accounting rules had no material impact on the consolidated financial statements.

**Published Standards and Interpretations that Are Not Yet Being Applied.** As of the balance sheet date, the following accounting standards had already been published by the International Accounting Standards Board (IASB) and the International Financial Reporting Interpretations Committee (IFRIC) but application of the standards was not yet mandatory.

**PUBLISHED STANDARDS AND INTERPRETATIONS THAT ARE NOT YET BEING APPLIED**

Standard/ Interpre- tation	Title	IASB effective date	Date of endorsement	EU effective date	Material impact on H&R
IFRS 14	Regulatory Deferral Accounts	1/1/2016	No approval	No application	None
IFRS 9	Financial Instruments	1/1/2018	22/11/2016	1/1/2018	See expla- nation
IFRS 15	Revenue from Contracts with Customers	1/1/2018	22/9/2016	1/1/2018	See expla- nation
	Clarifications of IFRS 15	1/1/2018	Expected in Q1 2017	1/1/2018	See expla- nation
IFRS 16	Leases	1/1/2019	Expected in Q4 2017	To be determined	To be checked
	Amendments to IAS 12 – Recognition of Deferred Tax Assets for Unrealized Losses	1/1/2017	Expected in Q2 2017	To be determined	None
	Amendments to IAS 7 – Disclosure Initiative	1/1/2017	Expected in Q2 2017	To be determined	None
	Amendments to IFRS 2 – Classification and Measurement of Share-Based Payment Transactions	1/1/2018	Expected in Q3 2017	To be determined	None
	Amendments to IFRS 4 – Applying IFRS 9 – Finan- cial Instruments with IFRS 4 – Insurance Contracts	1/1/2018	Expected in Q3 2017	To be determined	None
	Annual Improvements to IFRSs 2014-2016 Cycle	1/1/2018 1/1/2017	Expected in Q3 2017	To be determined	None
	IFRIC 22 – Foreign Currency Transactions and Advance Consideration	1/1/2018	Expected in Q3 2017	To be determined	None
	Amendments to IAS 40 – Transfers of Investment Property	1/1/2018	Expected in Q3 2017	To be determined	None
	Amendments to IFRS 10 and IAS 28 – Sales or Contribution of Assets between an Investor and its Associate or Joint Venture	Postponed	Postponed	Postponed	None

In July 2014, the IASB published the final version of IFRS 9 – “Financial Instruments”. In the future, it will replace IAS 39 – “Financial Instruments”. In particular, IFRS 9 contains new rules on classifying and measuring financial assets, on accounting for impairment losses to financial assets and on hedge accounting. In the future, the classification and measurement of financial assets will depend on the company’s business model and the characteristics of the financial asset’s contractual cash flows. The new loss-impairment model means that instead of losses that have actually occurred, entities are now required to recognize expected losses. The purpose of the new hedge accounting rules is to enhance disclosures about a company’s risk-management activities. H&R GmbH & Co. KGaA does not expect these to have a material impact on the consolidated financial statements.

In May 2014, the IASB published IFRS 15 – “Revenue from Contracts with Customers”, which in the future will be the main standard governing revenue recognition. The new model provides a five-step framework for revenue recognition.

First, the contract with a customer and the separate performance obligations in the contract must be identified. Then, the transaction price must be determined and allocated to the individual performance obligations in the contract. Finally, the revenue must be recognized for each performance obligation in an amount equal to the allocated transaction price as soon as the performance obligation has been satisfied and/or control over the goods or services has been transferred to the customer. H&R GmbH & Co. KGaA generates revenue from the sale of products and from services; in the overwhelming majority of cases, revenue recognition involves contracts with only one performance obligation. Therefore, for H&R GmbH & Co. KGaA, the first-time application of this standard will not have a material impact on the consolidated financial statements.

In January 2016, the IASB published IFRS 16 – Leases, which replaces the previous standard on leasing, IAS 17. It introduces a single lessee accounting model under which the lessee must recognize assets and liabilities for all leases with

a term of more than 12 months, unless the underlying asset is of low value. The new standard is to be applied for financial years beginning on or after 1 January 2019. EU endorsement of the standard is still pending. Among other things, application of the standard will affect financial ratios, because in the future the lessee must recognize depreciation, amortization and interest expense instead of other operating income in the Statement of Comprehensive Income. Because of the mandatory recognition of a right-to-use asset and a corresponding liability, this will lead to an expansion of the balance sheet (increase in lease assets and financial liabilities). Furthermore, more detailed disclosures in the notes may be required. However, the Group cannot yet definitively assess what impact the first-time application of the standards will have if the standard is endorsed in this form by the EU.

H&R GmbH & Co. KGaA will not avail itself of the option for early application of the standards and interpretations that have not yet been applied.

### (3) General Accounting and Measurement Methods

**Principles of Consolidation.** The accounts included in the consolidated financial statements are prepared in accordance with uniform accounting and valuation methods. The closing date is the closing date of the parent company.

Subsidiaries are companies or entities which, according to the criteria listed in IFRS 10, are controlled by H&R GmbH & Co. KGaA. Accordingly, H&R GmbH & Co. KGaA controls rights at these companies that give it the ability to direct the relevant activities of these companies in order to influence the companies' returns. Control further requires H&R GmbH & Co. KGaA to be exposed to variable returns from the subsidiaries and to have the ability to affect those variable returns through its decision-making power. If it loses control over a subsidiary, the subsidiary is no longer included in the consolidated group.

All Group internal business transactions and interim results as well as existing claims and liabilities between consolidated companies are eliminated in the course of consolidation. Deferred income tax effects arising from the consolidation process are appropriately taken into account.

In accordance with IFRS 3 – Business Combinations, company mergers are recorded in the financial statements using the acquisition method. The acquirer is deemed to be the entity that obtains control over the acquired company in accordance with the rules set forth in IFRS 10. In the case of a company purchase, the pro-rata equity of the acquired subsidiary is determined at the time of acquisition, taking into account the fair values of the identifiable assets, debts and contingent liabilities, deferred taxes and the value of any goodwill at that time. If foreign companies are acquired, the acquisition costs are converted into euros at the respective exchange rate on the purchase date.

The acquisition costs correspond to the fair value of the transferred assets, the equity instruments issued and the debts arising and/or being assumed at the time of the transaction. In addition, they contain the fair values of any reported assets or liabilities resulting from a conditional consideration arrangement. Purchase-related ancillary costs are immediately recorded as a charge against income.

Acquisition costs are offset against the pro-rata fair value of the net equity. Net equity is determined by recognizing the identifiable assets, debts and contingent liabilities of the acquired company at their fair value at the time of acquisition. Any amount remaining on the asset side after set-off is treated as goodwill. Pursuant to IFRS 3, any negative amount resulting from revaluation of the net assets acquired is immediately charged against income.



Non-controlling interests in fully consolidated companies are valued at the pro-rata fair value of the net assets. Transactions with non-controlling interests are treated like transactions with Group equity owners. The difference between the acquired pro-rata equity of other shareholders and the purchase price is therefore directly netted against equity.

**Shares in At-Equity Valued Holdings.** Interests in associates and in joint ventures are reported in accordance with the equity method. Joint ventures are companies that H&R GmbH & Co. KGaA manages jointly with a third party. H&R GmbH & Co. KGaA's interest in associates ranges from 20% to 50%. Under the equity method, the carrying amount of at-equity valued holdings is increased or reduced by the change in equity corresponding to H&R GmbH & Co. KGaA's interest in the equity of these companies. The Group's interest in associated companies and in joint ventures includes the goodwill arising from the acquisition. The changes in the pro-rata equity affecting the income statement are recognized under income from at-equity valued holdings. For companies whose financial statements are prepared in accordance with the equity method, an impairment loss must be recognized if the recoverable amount is below the carrying amount. As of 31 December 2016, four joint ventures were being accounted for using this method.

**Currency Translation.** The annual financial statements of the foreign subsidiaries are converted into euros in accordance with the functional-currency principle. As the companies essentially manage their business independently from a financial, economic and organizational point of view, the respective functional currency as a rule is that of the country in which the company is headquartered.

In the separate financial statements of the Group companies, foreign-currency transactions are translated into the functional currency at the exchange rates in effect at the time of the transaction. On the balance sheet, receivables and payables in foreign currencies are valued at the exchange rate on the balance sheet date; the resulting exchange-rate gains and losses are recognized on the income statement.

In the consolidated financial statements, the assets and liabilities are converted into euros at the exchange rate on the respective balance sheet date. Any changes taking place during the year, as well as profit and loss items, are converted into euros at the average annual exchange rate. With the exception of revenues and expenses directly recognized in equity, the shareholders' equity is carried at historical exchange rates. The resulting variances are recognized in equity but are not reported on the income statement until the subsidiary is sold.

The exchange rates used for foreign-currency translation have changed as follows:

#### EXCHANGE RATES FOR THE MAIN CURRENCIES

	Exchange rate on the balance sheet date 31/12/2016	Exchange rate on the balance sheet date 31/12/2015	Average rate 2016	Average rate 2015
US Dollar	1.0541	1.0887	1.1066	1.1096
British Pound	0.8562	0.73395	0.8189	0.72599
Australian Dollar	1.4596	1.4897	1.4886	1.4765
South African Rand	14.4570	16.953	16.2772	14.1528
Thai Baht	37.726	39.248	39.042	38.001
Chinese Yuan	7.3202	7.0608	7.3496	6.973
Czech Crown	27.021	27.023	27.034	27.285
Malaysian Ringgit	4.7287	4.6959	4.5842	4.3315

**Cash and Cash Equivalents.** Cash and cash equivalents comprise cash in hand, checks received and credit balances at banks and have a maximum term of three months at the time of acquisition or investment. Cash and cash equivalents are valued at acquisition cost.

**Financial Instruments.** Financial instruments are contractually agreed claims or obligations that lead to an inflow or outflow of financial assets or to the issuance of equity capital rights. They also comprise derivative claims or obligations from underlying financial instruments. According to IAS 39, financial instruments are recognized on the income statement at the point in time of inclusion in the following valuation categories: financial assets or liabilities at fair value through profit and loss, loans and receivables, available-for-sale financial assets and held-to-maturity investments, as well as other liabilities.

**Financial Assets.** Financial assets comprise cash and cash equivalents, loans issued and receivables, equity and debentures acquired and derivatives with positive fair values.

Financial assets are recognized and measured in accordance with the criteria stipulated in IAS 39. According to these criteria, financial assets are recognized on the balance sheet if H&R GmbH & Co. KGaA or another consolidated subsidiary has a contractual right to receive cash or other financial assets. Financial assets are booked at the value on the trading day on which the Group has committed to buy the asset. Financial assets are categorized upon initial recognition. Loans and receivables as well as financial assets available for sale are first booked at their fair value plus transaction costs.

Loans and receivables are non-derivative financial assets with contractually fixed or determinable payments that are not quoted on an active market. They are shown on the balance sheet under trade receivables and other financial assets. Loans and receivables are subsequently measured at amortized cost using the effective-interest method. If there are objective and substantial signs of an impairment in value, an impairment test is carried out. Signs of an impairment in value include, among others, the high probability of insolvency proceedings, significant financial difficulties of a debtor or the disappearance of an active market for financial assets.

Financial assets available for sale are non-derivative financial assets that were either specifically and explicitly assigned to this category or that could not be assigned to any other category of financial assets. After their initial recognition, available-for-sale financial assets are measured at fair value. Changes in fair value are recognized in equity, without any effect on profit or loss, until the assets are disposed of. Permanent impairment losses are reported on the income statement. Reversals of the impairment losses are offset against equity without any effect on profit or loss, unless they concern a debt instrument and the reversal of the impairment loss relates to an impairment loss previously recognized through profit or loss. If no fair value can be determined, the interests are valued at amortized cost.

The financial assets valued at fair value and recognized through profit or loss concern securities classified as current assets as well as derivative financial instruments with a positive fair value not included in a hedge (Hedge Accounting).

Assets are derecognized at the time of the extinction and/or the transfer of the rights to payments arising out of the asset and thus at the point in time at which essentially all risks and opportunities related to ownership were transferred.

The credit and default risk from financial assets lies in the danger that a contracting party will fail to pay; it therefore does not exceed the amount of the claims against the respective counterparty for the recognized carrying amounts.

Financial assets and financial liabilities are not offset, apart from the reimbursement right against BP (see explanation (10) and (20)), since no such offset agreements exist.

**Derivative Financial Instruments.** Derivative financial instruments are used in order to reduce currency and interest-rate risks, e.g. in the form of currency forward contracts and interest-rate swaps.

Derivative financial instruments are carried on the balance sheet at fair value and, depending on the market value, are shown as financial assets or liabilities. The fair value of the derivatives is calculated using standard market valuation methods, taking into account the market data available on the valuation date. With currency forward contracts, the valuation is carried out on a case-by-case basis at the pertinent forward exchange rate on the balance sheet date. The fair value of derivative financial instruments for interest-rate hedging is determined by discounting future incoming and outgoing cash flows. Standard market interest rates which have been adjusted to reflect their own credit risk and which correspond to the respective time to maturity of the financial instruments are used for discounting. To the extent expedient, derivative financial instruments that satisfy hedge accounting criteria pursuant to IAS 39 are designated either to hedge the fair value of an asset or a debt (fair value hedge) or to hedge the risk of fluctuating cash flows from future transactions that are very likely to occur (cash flow hedge). No hedge accounting was applied during the financial year.

**Inventories.** According to IAS 2, inventories include those assets held for sale in the ordinary course of business (finished products and products for sale), assets in the process of production for sale (work in process) or materials and supplies that are consumed in the production of inventory or in the rendering of services (raw, auxiliary and production materials).

Raw, auxiliary and production materials are stated at the lower of acquisition or manufacturing cost and the net realizable value, as determined on the basis of the weighted-average-cost method, i.e. at the sales price that can be obtained in the normal course of business less the estimated manufacturing and marketing costs. Finished goods and work in progress are measured at acquisition or manufacturing costs, provided that these are lower than the net realizable value. Manufacturing costs comprise the material and production costs directly allocable to the manufacturing process, directly allocable portions of the material and manufacturing overhead costs and production-oriented general and administrative overhead costs. Raw, auxiliary and production materials are not depreciated if the end products can be sold at a profit. By-products from the production process (joint production) are measured at their selling prices and the remaining manufacturing costs are allocated to the primary products. Financing costs are not taken into account.

**Property, Plant and Equipment.** Tangible fixed assets are valued at acquisition or manufacturing costs less cumulative depreciation and impairment losses plus reversals of impairments.

Acquisition costs consist of the price of the acquisition, the ancillary acquisition costs and subsequent acquisition costs less acquisition price reductions obtained. Expenses for the ongoing repair and maintenance of tangible fixed assets are included in profit or loss. Expenses for renewal and maintenance are capitalized as subsequent manufacturing costs only if they result in a substantial extension of the useful life, a significant improvement or a meaningful change in the use of the fixed asset.

Expenses related to scheduled shutdowns of large facilities are stated separately at the amount of the costs of the shutdown, as part of the facility in question, and are depreciated on a straight-line basis over the period until the next scheduled shutdown. To the extent that depreciable property consists of essential identifiable components with individually different useful lives, such components are carried separately and depreciated over their respective useful lives. Investment subsidies are deferred and recognized as income over the average useful lives of the subsidized assets.

Depreciable fixed assets are subject to scheduled straight-line depreciation over their respective useful lives; residual amounts are taken into account. These useful economic lifespans are reviewed on each balance sheet date and adjusted, if necessary. Upon sale or retirement, the acquisition or manufacturing costs and the relevant accumulated depreciation of the facilities are derecognized; the resulting gains or losses are recognized in profit or loss. The useful lifespans used can be summarized as follows:

<b>ASSETS</b>	
	<b>Useful economic life</b>
Buildings	10 to 36 years
Land use rights	45 to 50 years
Tank farms	25 years
Technical equipment and machinery	10 to 20 years
Other facilities	3 to 6 years
Operating and office equipment	3 to 13 years

**Borrowing Costs.** Essentially, the cost of borrowed capital is recognized in profit or loss in the period in which the external capital expense is incurred. According to IAS 23, borrowing costs that are directly attributable to the construction, acquisition or production of a qualifying asset are capitalized part of the cost of that asset. In financial year 2016, as in the previous year, no borrowing costs were capitalized.

**Leasing.** A lease is an agreement whereby the lessor, in return for a payment or series of payments, conveys to the lessee the right to use an asset for a specific period of time. Leasing transactions are classified either as finance leases or as operating leases. If the H&R Group, as the lessee in leasing transactions, bears all essential risks and opportunities related to ownership, then such transactions are treated as finance leases. In that case, the Group capitalizes the leased property at the lower of the fair value and the present value of the minimum lease payments and thereafter depreciates the leased property over the estimated useful life or the lease term, whichever is shorter. At the same time, a matching financial liability is recognized at the lower of the fair value of the leased property and the present value of the minimum lease payments; interest and principal payments will subsequently be made, and the liability adjusted accordingly, using the effective-interest method. All remaining lease agreements in which the Group is the lessee are treated as operating leases. In this case, lease payments made are recorded under expenses and lease payments received are recorded as income.

**Goodwill.** The first time it is reported, the goodwill resulting from a merger is stated at acquisition cost, which is measured as the surplus of the value of the consideration transferred over the value of the identifiable assets acquired and liabilities assumed. After the first-time recognition, goodwill is measured at acquisition cost less accumulated impairment losses.

Goodwill is not subject to scheduled amortization, but, rather, is subjected to an impairment test every year. If any events or changed circumstances are identified that indicate a potential impairment loss, the impairment test is also carried out more frequently. In the event of the need to recognize a goodwill impairment loss, it is immediately recognized under depreciation and amortization on the income statement. Reversal of an impairment loss for goodwill in later periods is not allowed.

The annual goodwill impairment tests take place at the level of the cash-generating units (CGUs) that are relevant for the test. The cash-generating unit represents the lowest level at which goodwill is monitored for internal management purposes. H&R GmbH & Co. KGaA essentially considers both strategic business units under standard management with comparable product portfolios and, sporadically, also individual, legally autonomous companies to be cash-generating units. Goodwill impairment is determined by comparing the carrying amount of the cash-generating unit, including the goodwill to be allocated to it, with the recoverable amount for the cash-generating unit. The recoverable amount is the higher of fair value less costs of disposal and the value in use. The recoverable amount here is the value in use determined using the discounted-cash-flow method. If the carrying amount exceeds the Division's recoverable amount, an impairment loss equal to the difference must be recognized on the income statement. If the calculated impairment loss is equal to or higher than the carrying amount of the goodwill, the goodwill must be written off entirely. The remaining impairment loss is, as a rule, allocated to the remaining non-current assets of the cash-generating unit in proportion to their carrying amounts.

The expected cash flows of the cash-generating units are derived from H&R Group's current five-year plan. As in the previous year, for subsequent periods, the cash flow was extrapolated using an expected growth rate of 1% p.a. The plan is based, in particular, on assumptions concerning the trend in sales revenues, the material-usage ratio and investments already initiated, as well as on empirical values and market expectations. Pursuant to IAS 36, investments to expand capacity for which to date no cash outflows have occurred are not included. In addition, a stable margin was assumed for a number of products for all five plan years.

Average costs of capital were used for the discounted cash flow; these capital costs are calculated based on market values. The after-tax discount rates used were 6.4% in the ChemPharm Refining segment (previous year: 5.6%) and between 7.0% and 13.1% in the ChemPharm Sales segment (previous year: between 6.3% and 11.7%). That is equal to pre-tax interest rates of 8.9% in the ChemPharm Refining segment (previous year: 7.8%) and 8.7% to 18.3% in the ChemPharm Sales segment (previous year: 8.2% to 16.3%). Differences in the individual cash-generating units' cost of capital result in particular from various assumptions and estimates concerning country risk, credit risk and price inflation in the country in which the cash-generating unit is headquartered.

**Other Intangible Assets.** Other intangible assets are capitalized at their acquisition or manufacturing costs. Insofar as they have determinable useful lives, they are subject to scheduled depreciation on a straight-line basis over their respective useful lives. The following useful lifespans were assumed in determining scheduled depreciation:

<b>ASSETS</b>	
	<b>Useful life</b>
Software	3 to 5 years
Licenses	3 to 5 years
Concessions and patents	3 to 10 years

The H&R Group has received CO<sub>2</sub> emission rights free of charge in connection with the introduction of emissions trading in the European Union; they are valued at a zero acquisition cost. Additional CO<sub>2</sub> emission rights acquired are stated at amortized cost.

Any expenses that arise in connection with the registration of products pursuant to the EU Chemicals Regulation (REACH) are capitalized under other intangible assets and amortized over an expected useful life of ten years.

Permanent impairment losses to other intangible assets are accounted for under unscheduled depreciation and amortization. In the event the reasons for unscheduled depreciation/amortization no longer apply, the appropriate reversals are effected to the extent that the amortized cost is not exceeded. The reasons for unscheduled depreciation/amortization are reviewed on each balance sheet date.

**Research and Development Costs.** Research expenses are recognized as expenses in the period in which they are incurred. Development expenses are capitalized only if the requirements of IAS 38 have been satisfied. According to this Standard, capitalization is always required when there is reasonable certainty that the development activity will lead to future cash flows that will also cover the relevant development costs. As internal developments are subject to various uncertainties, the conditions for capitalizing costs incurred in bringing a product to market generally are not met.

**Financial Liabilities.** Financial liabilities include liabilities to banks, trade payables and derivatives with negative fair values, as well as other financial liabilities.

When first reported, financial liabilities are always stated at their fair value and after deduction of transaction costs. In subsequent periods, they are measured at amortized cost using the effective-interest method.

Financial liabilities are derecognized when the contractual obligations are settled, reversed or have expired.

**Other Receivables and Liabilities.** Accruals and deferrals and other non-financial assets and liabilities are initially recognized at amortized cost. Reversal takes place on a straight-line basis or using the percentage-of-completion method.

Government grants for assets are shown on the balance sheet as deferrals in the other liabilities section and are reversed and recognized in profit or loss over the average useful life of the subsidized assets. Private subsidies are recognized as other liabilities under both current and non-current liabilities and are reversed over their expected useful lives.

**Pensions and Similar Obligations.** Company pensions of the H&R Group are designed based on the legal, tax and economic circumstances in the respective countries and include both defined-contribution and defined-benefit plans. Under defined-contribution plans, the Group makes contributions to public or private pension-insurance plans based on a statutory or contractual obligation or even voluntarily. The Group has no further payment liabilities beyond payment of the contributions. Contributions are recognized under personnel expenses when due.

The present value of the pension commitments under defined-benefit pension plans (defined-benefit obligations, DBOs) and of the associated past service expense is calculated using the projected unit credit method. Under this method, the valuation is based on actuarial calculations for which specific assumptions must be made concerning salary and pension payment trends, turnover rates and death rates, as well as interest rates. Due to changing conditions, the actual future expenses and liabilities can differ significantly from the estimates in the actuarial report.

Under defined-benefit pension plan accounting rules, interest expense is recognized under net interest result on the income statement. Past service expenses are recorded as personnel expenses. Effects from the remeasurement of defined-benefit pension plans are recognized directly in equity and on the statement of comprehensive income, where deferred taxes are taken into account. The fair value of the plan's assets is deducted from the present value of the pension obligations recorded on the balance sheet. The plan's assets consist of a reinsurance policy for the pension commitment to a former member of the Management Team that is measured at fair

value. If the plan's assets exceed the corresponding pension liability, the excess amount is shown as "Other receivable", subject to the upper limit stipulated in IAS 19.

**Other Provisions.** Other provisions are established in accordance with IAS 37 if, on the basis of a past event, a current, legal or factual obligation exists, settlement is likely to result in an outflow of resources with economic benefits and a reliable estimate of the amount of the liability is possible. The amount set up as a provision represents the best estimate of the amount required to settle the current obligation as of the balance sheet date. In the event of a significant interest-rate effect, the present value of the expected expenses is used.

The anniversary provisions are valued according to the projected unit credit method pursuant to IAS 19. Contractual obligations under lease agreements (e.g. demolition, renovation or eviction) are recognized on the balance sheet as provisions, insofar as the expected utilization of resources with an economic benefit is likely. Provisions for impending losses resulting from unfavorable contracts are set up when the expected economic benefit resulting from the contract is lower than the costs that are unavoidable in order to satisfy the contractual obligations.

The annual obligations to return emission rights based on the actual CO<sub>2</sub> emissions of the refineries are at first covered by the emission certificates received free of charge and are valued at their acquisition cost, which is equal to zero. In the event that the emissions rights assigned free of charge should not suffice, provisions for the additional emissions rights that will have to be acquired will be set up at (expected) acquisition cost.

**Recognition of Revenue.** The proceeds from products sold and services rendered as part of the company's usual business activities are recognized as sales revenues. Other operating earnings are shown as other operating income.

Sales revenues and other operating income are recognized when the service is provided or when the risk is transferred to the customer or when the claim originates. Moreover, sales revenues are also realized from sales in which legal ownership has been transferred to the customer but delivery has been postponed at the customer's request. Ultimately, it must be possible to determine the amount of sales revenues in a reliable manner and it must be possible to assume that the receivable is recoverable. Sales revenues are reported after deducting value-added tax, after applying reductions in selling price such as returns, discounts or price reductions and after eliminating intercompany sales. Intercompany transactions are conducted as arm's-length transactions.

**Income Tax.** Income taxes comprise both the taxes levied in the individual countries on taxable profits and changes in deferred taxes that have an effect on profit or loss. The current tax expense is based on the taxable income determined in accordance with the tax regulations of the respective country for the year, taking into account the applicable tax rate in that jurisdiction. Pursuant to IAS 12, deferred taxes reflect differences between the time when asset and liability amounts are reported in the consolidated financial statements under accounting rules and the time when the corresponding amounts are reported under tax rules governing the determination of taxable income. Current and deferred taxes are essentially recognized in profit or loss, unless they are related to circumstances recognized in other comprehensive income. In that case, the current and deferred taxes are also recognized in other comprehensive income.

Deferred tax assets pertaining to deductible temporary differences and loss carryforwards are recognized to the extent it is probable that either sufficient taxable profit or deferred tax liabilities with matching periods will be available against which the temporary differences and still unused loss carryforwards can be utilized. The amount of deferred tax assets recognized for temporary differences and tax-loss carryforwards is determined on the basis of future taxable income over a five-

year forecast period. In Germany, the unlimited carryforward option for domestic losses is limited by the minimum taxation level. For foreign loss carryforwards, there are often country-specific time limitations on the carryforward option and restrictions on the use of profits from operating activities.

Deferred tax liabilities arising from temporary differences relating to holdings in subsidiaries, associated companies and joint ventures are recognized unless the date of the reversal of the temporary differences can be determined by the Group and it is probable that the temporary differences will not be reversed within a foreseeable period of time due to this influence.

When determining the deferred taxes, the expected tax rates in specific countries at the time of the expected realization are assumed.

Actual and deferred tax receivables and liabilities are netted if the tax receivables and liabilities refer to income taxes levied by the same tax authority for either the same taxpayer or for different taxpayers intending to effect settlement on a net basis.

**Contingent Liabilities.** Contingent liabilities are potential obligations toward third parties or current commitments in which a cash outflow is unlikely and/or its amount cannot be determined in a reliable manner. In principle, contingent liabilities are not reported on the balance sheet. The liability amounts stated in the notes under contingent liabilities match the scope of liability in effect on the balance sheet date.

#### (4) Discretionary Decisions and Estimates

In preparing the consolidated financial statements, to a certain extent assumptions and estimates must be made that will affect the asset and liability, income and expense and contingent liability amounts reported for the period under review. Estimates are based on empirical values and other assumptions that are deemed to be appropriate given the circumstances.



Assumptions and estimates are used in particular in determining overhead surcharges when valuing inventories, in determining the useful economic lives of tangible fixed assets throughout the Group in a uniform manner, in estimating the recoverability of receivables and in reporting and valuing provisions. Moreover, discretionary decisions and estimates are necessary in testing intangible assets for impairment and in measuring the amount of deferred tax assets relating to loss carryforwards to recognize. Further details on the individual items can be found in each section.

Signs pointing to an impairment loss, as well as recoverable amounts and fair values identified, are also associated with estimates. These include, in particular, estimated future cash flows, the applicable discount rates, expected useful lives and residual values.

For sensitivity analyses, generally a possible fluctuation range of 10% is assumed, as a change of up to this amount seems possible, especially over the long term. Sensitivity analyses were carried out in particular for the goodwill impairment tests at the level of the cash-generating units and in connection with financial instruments. For pension provisions, the sensitivity analysis assumes a 50-basis-point change in the interest rate and a 50-basis-point change in the pension trend.

Other essential assumption factors are the discount rate and the underlying mortality tables in connection with the pension provisions and similar commitments, as well as the estimates of necessary expenditures for the circumstances taken into account for other provisions. This also concerns the possibility of a cash outflow due to dismantling obligations, which is described in greater detail in note (40). Details on sensitivity analyses and the bases for estimates in the area of pension provisions can be found in note (20).

The assumptions and estimates are based on currently available information. In addition, the trends in the economic environment in the industries and regions in which the Group does business, which are currently assumed to be realistic, were also taken into account in regard to expected future business developments. Developments in these macroeconomic conditions that deviate from the assumptions and are outside of Management's control may cause the actual amounts to deviate from the original estimates. In such cases, the assumptions and, if required, the carrying amounts of the assets and liabilities affected will be adjusted accordingly.

#### (5) Prior-year figures adjusted pursuant to IAS 8

During the preparation of the consolidated financial statements for 2016 H&R GmbH & Co. KGaA stated that provisions for energy and electricity taxes were not made in sufficient amounts in previous years. This error was corrected retrospectively in accordance with IAS 8.

The following tables show the effects of the correction on the opening balance as of 1 January 2015 and on the prior-year periods in accordance with IAS 8:

#### CONSOLIDATED BALANCE SHEET

€ THOUSAND	1/1/2015			31/12/2015		
	Before adjustment	Adjustment	After adjustment	Before adjustment	Adjustment	After adjustment
Other provisions	9,298	1,213	10,511	11,174	1,765	12,939
Current liabilities	198,722	1,213	199,935	171,380	1,765	173,145
Retained earnings, incl. consolidated net income	73,773	-1,213	72,560	105,820	-1,765	104,055
Equity of H&R GmbH & Co. KGaA shareholders	209,101	-1,213	207,888	244,860	-1,765	243,095
Shareholders' equity	248,903	-1,213	247,690	287,128	-1,765	285,363

#### CONSOLIDATED INCOME STATEMENT

€ THOUSAND	2015		
	Before adjustment	Adjustment	After adjustment
Other operating expenses	-112,506	-552	-113,058
Operating profit/loss	48,887	-552	48,335
Earnings before taxes (EBT)	34,766	-552	34,214
Income/loss after taxes	27,359	-552	26,807
Consolidated earnings attributable to shareholders of H&R GmbH & Co. KGaA	27,455	-552	26,903
Earnings per share (undiluted), €	0.77	-0.02	0.75
Earnings per share (diluted), €	0.77	-0.02	0.75

#### CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

€ THOUSAND	2015		
	Before adjustment	Adjustment	After adjustment
Income after taxes	27,359	-552	26,807
Consolidated earnings attributable to shareholders of H&R GmbH & Co. KGaA	27,455	-552	26,903
Total comprehensive income	38,817	-552	38,265
Income/loss after taxes attributable to shareholders of H&R GmbH & Co. KGaA	36,335	-552	35,783

### (6) Scope of Consolidation and Holdings

The consolidated financial statements of H&R GmbH & Co. KGaA include all material domestic and foreign companies that H&R GmbH & Co. KGaA controls according to the criteria stipulated in IFRS 10 and for which H&R AG controls existing rights that give it the ability to direct the relevant activities of these companies.

As in the previous year, H&R GmbH & Co. KGaA's consolidated group consisted of 34 fully consoli-

dated companies, including 17 foreign companies. H&R GmbH & Co. KGaA holds shares in some companies via trust companies. These indirect shares are also fully consolidated whenever H&R GmbH & Co. KGaA exercises control. The holdings are shown in the list of shareholdings. Although controlled by H&R GmbH & Co. KGaA, three companies were not included in the scope of consolidation, as they have no material significance for the net assets, financial position and results of operations of H&R GmbH & Co. KGaA.

(5) Prior-year figures adjusted pursuant to IAS 8 | (6) Scope of Consolidation and Holdings

The following disclosures concerning the holdings satisfy the requirements of Article 313 of the German Commercial Code (HGB).

**FULLY CONSOLIDATED SUBSIDIARIES**

Company name	Company headquarters	Segment	% held by H&R GmbH & Co. KGaA
H&R Chemisch-Pharmazeutische Spezialitäten GmbH	Salzbergen, Germany	a	100
H&R Lube Blending GmbH	Salzbergen, Germany	a	100
H&R ChemPharm GmbH	Salzbergen, Germany	a	100
H&R LubeTrading GmbH	Salzbergen, Germany	a	100
H&R International GmbH	Hamburg, Germany	b	100
H&R Ölwerke Schindler GmbH	Hamburg, Germany	a	100
H&R InfoTech GmbH	Hamburg, Germany	d	100
H&R Benelux B.V.	Nuth, The Netherlands	b	100
H&R ChemPharm (UK) Ltd.	Tipton, Great Britain	b	100
H&R ANZ Pty Ltd.	Victoria, Australia	b	100
H&R Singapore Pte. Ltd.	Singapore, Singapore	b	100
H&R Global Special Products Co. Ltd.	Bangkok, Thailand	b	100 <sup>1)</sup>
H&R Malaysia Sdn. Bhd.	Port Klang, Malaysia	b	100 <sup>1)</sup>
H&R ChemPharm (Thailand) Limited	Bangkok, Thailand	b	100
H&R WAX Malaysia Sdn. Bhd.	Batu Caves, Malaysia	b	100
Dunrose Investments 148 (Proprietary) Limited	Sandton, South Africa	b	100
H&R South Africa (Pty) Limited	Durban, South Africa	b	100
H&R South Africa GmbH	Hamburg, Germany	b	100
H&R South Africa Sales (Pty) Limited	Durban, South Africa	b	100
H&R China Holding GmbH	Hamburg, Germany	b	51
H&R China (Hong Kong) Co., Ltd.	Hong Kong	b	51
H&R China (Ningbo) Co., Ltd.	Ningbo, China	b	51
H&R China (Fushun) Co., Ltd.	Fushun, China	b	51
H&R China (Daxie) Co., Ltd.	Ningbo Daxie, China	b	51
H&R Grundstücksverwaltungs GmbH	Salzbergen, Germany	a	98.68
H&R Grundstücksverwaltungs-Beteiligungsgesellschaft mbH	Salzbergen, Germany	a	74.04
GAUDLITZ GmbH	Coburg, Germany	c	100
GAUDLITZ Precision Technology (Wuxi) Co. Ltd.	Wuxi, China	c	100
GAUDLITZ Precision s.r.o.	Dačice, Czech Republic	c	100
GAUDLITZ Grundstücksverwaltungs-Beteiligungsgesellschaft mbH	Coburg, Germany	c	100
H&R Group Services GmbH	Hamburg, Germany	d	100
SYTHENGRUND WASAGCHEMIE Grundstücksverwertungsges. Haltern mbH	Haltern, Germany	d	100
B.-H. Beteiligungs- und Handelsges. mbH	Salzbergen, Germany	d	100

**OTHER INVESTMENTS**

Company name	Company headquarters	Segment	% Held by H&R GmbH & Co. KGaA	Income after taxes € thousand	Shareholders' equity € thousand
<b>Joint ventures</b>					
Westfalen Chemie GmbH & Co. KG	Salzbergen, Germany	a	50		
Westfalen Chemie Verwaltungsgesellschaft mbH	Salzbergen, Germany	a	50		
HRI IT-Service GmbH	Berlin, Germany	d	50		
<b>Associates</b>					
IGEPA IT-Service GmbH	Münster, Germany	d	45		
<b>Unconsolidated subsidiaries</b>					
H&R India Sales Private Limited	Mumbai, India	b	99 <sup>2)</sup>		
Wafa Kunststofftechnik GmbH & Co. KG, i.K.	Augsburg, Germany	c	100 <sup>2)</sup>		
Wafa Kunststofftechnik Verwaltungs GmbH, i.K.	Augsburg, Germany	c	100 <sup>2)</sup>		
<b>Other interests</b>					
SRS EcoTherm GmbH	Salzbergen, Germany	a	10	1,883	15,164
Betreiber-Gesellschaft Silbersee II Haltern am See mit beschränkter Haftung	Essen, Germany	d	8 <sup>2)</sup>		

Segment: a) ChemPharm Refining                      c) Precision Plastics  
                   b) ChemPharm Sales                      d) Other activities

<sup>1)</sup> Including holdings held in trust: The holdings in the following companies are only indirectly held, via trust companies: H&R GmbH & Co. KGaA holds 49% of the shares in H&R Global Special Products Co. Ltd., Bangkok, Thailand, via subsidiaries; 51% of the shares are managed for the Group by trust companies. H&R Global Special Products Co. Ltd. in turn holds 60.98% of H&R ChemPharm (Thailand) Limited, Bangkok, Thailand. A further 38.98% are held by a subsidiary whose shares are wholly-owned by H&R GmbH & Co. KGaA. The remaining 0.04% are managed on behalf of the Group by trustees. The Group directly holds 30% of the shares in H&R Malaysia Sdn. Bhd., Port Klang, Malaysia. The remaining 70% are held on behalf of the Group by trustees.

<sup>2)</sup> No financial statements are available for these companies.

**Notes to the Consolidated Balance Sheet**

**(7) Cash and Cash Equivalents**

€ THOUSAND	31/12/2016	31/12/2015
Cash on hand	23	18
Cash in banks	57,976	79,256
<b>Total</b>	<b>57,999</b>	<b>79,274</b>

**(8) Trade Accounts Receivable**

€ THOUSAND	31/12/2016	31/12/2015
Trade accounts receivable (gross)	109,696	99,599
Impairment losses	-542	-761
<b>Total</b>	<b>109,154</b>	<b>98,838</b>

No trade accounts receivable (previous year: €0 thousand) were pledged as credit guarantees. Receivables from related persons or companies are listed under note (43).

#### TRADE ACCOUNTS RECEIVABLE

€ THOUSAND	Carrying amount	Including: neither impaired nor overdue at the year-end date	Including: not impaired at the year-end date and overdue in the following aging					
			Less than 30 days	Between 31 and 60 days	Between 61 and 90 days	Between 91 and 180 days	Between 181 and 360 days	More than 360 days
31/12/2016	109,154	98,044	8,588	1,133	910	132	200	149
31/12/2015	98,838	91,655	5,813	666	296	162	16	373

With regard to the trade accounts receivable that are neither impaired nor overdue, there were no indications that the debtors would not honor their payment obligations.

In the Group, risk provisions for trade accounts receivable based on individual writedowns can be summarized as follows:

#### IMPAIRMENTS OF TRADE ACCOUNTS RECEIVABLE

€ THOUSAND	2016	2015
Status as of 1/1	761	689
Additions	118	173
Utilization	-	-79
Reversals	-320	-41
Currency-translation differences	-17	19
Status as of 31/12	542	761

Overdue impaired trade accounts receivable are shown in the following aging schedule:

#### TRADE ACCOUNTS RECEIVABLE

€ THOUSAND	Less than 30 days	Between 31 and 60 days	Between 61 and 90 days	Between 91 and 180 days	Between 181 and 360 days	More than 360 days
31/12/2016	-	-	94	45	67	334
31/12/2015	49	52	40	3	1	473

#### (9) Inventories

€ THOUSAND	31/12/2016	31/12/2015
Raw, auxiliary and production materials	56,041	40,454
Work in progress	18,290	14,084
Finished products and products for sale	44,474	38,206
Prepayments made on inventories	2,626	1,252
<b>Total</b>	<b>121,431</b>	<b>93,996</b>

Individual inventory impairment losses were taken in all cases where the proceeds that could foreseeably be realized from selling the inventories were lower than their carrying amount (lower of cost or market principle). The foreseeable sales proceeds less any costs still incurred up to the time of sale were recognized as the net proceeds from disposal.

The carrying amount of inventories, which are reported at fair value less selling expenses, amounted to €1,649 thousand in the year under review (previous year: €5,954 thousand).

Pursuant to IAS 2.34, €148 thousand in write-downs of net disposal values were recognized as expenses during the reporting period

(previous year: €769 thousand). These affected the ChemPharm Refining and Plastics divisions. For more information on expenditures relating to inventories, please consult note (29).

No inventories (previous year: €0 thousand) were pledged as collateral for liabilities.

## (10) Other Financial Assets

€ THOUSAND	31/12/2016		31/12/2015	
	Total	Of which long-term	Total	Of which long-term
Loans and receivables	2,844	2,594	2,439	1,870
Receivable due from BP	1,594	1,594	1,383	1,383
Other securities	1,193	1,077	1,226	1,074
Other interests	1,052	1,052	1,055	1,055
Other financial assets	1,445	445	1,151	89
<b>Total</b>	<b>8,128</b>	<b>6,762</b>	<b>7,254</b>	<b>5,471</b>

The loans and receivables essentially comprise receivables from SRS Ecotherm as well as a loan to a joint venture enterprise.

Further to the takeover of the BP special business in 2004, mutual release agreements were made in regard to those retirees who were allocated either economically or contractually to one of the contractual partners, but who, for purposes of employment law, remained with the other partner. According to the overall contractual arrangements with BP, which included all release claims and liabilities, and taking into account the contractual parties' goal of achieving a total set-off of all payables and receivables, the liabilities and claims based on the same legal grounds because of the economic and legal substance of the business transaction were combined and shown as a single balance (€1,594 thousand; previous year: €1,383 thousand) pursuant to IAS 1.32.

The claims to compensation were as shown in the following table:

€ THOUSAND	2016	2015
Status as of 1/1	10,985	11,894
Interest income	257	253
Revaluation of the compensation claims	1,121	-553
Claims paid	-606	-609
<b>Status as of 31/12</b>	<b>11,757</b>	<b>10,985</b>

The holdings essentially comprise the shares in SRS EcoTherm GmbH, Salzbergen, with a value of €1,050 thousand (previous year: €1,050 thousand). The holdings are carried at acquisition cost, as these financial investments are not listed on any active market and therefore have no market price, and other valuation methods would not have led to more reliable fair values. H&R GmbH & Co. KGaA is not intending to dispose of these holdings.

The remaining securities include in particular fund units of the Correnta Funds I and II. These securities are carried at their market value on the balance sheet date. Variances are shown under other comprehensive income. This item also includes other short-term securities, which totaled €116 thousand on the balance sheet date (previous year: €151 thousand).

Of the remaining financial assets, as of 31 December 2016, €6 thousand (previous year: €6 thousand) had specific valuation allowances.

### (11) Other Assets

€ THOUSAND	31/12/2016		31/12/2015	
	Total	Of which long-term	Total	Of which long-term
Reinsurance contracts	1,361	1,361	1,345	1,345
Other tax receivables	4,051	-	5,340	-
Accruals and deferrals	1,743	75	1,430	45
Other assets	1,449	-	1,280	129
<b>Total</b>	<b>8,604</b>	<b>1,436</b>	<b>9,395</b>	<b>1,519</b>

The short-term accrual comprises prepaid amounts for which the pertinent expense is to be allocated to the following year. In the financial year under review, this item mainly includes

insurance contributions, advance rent payments and accrued IT maintenance fees. Other tax receivables mainly refer to VAT receivables.

### (12) Property, Plant and Equipment

#### CHANGES IN 2016

€ THOUSAND	Land and buildings	Technical equipment/ machinery	Other facilities/ operating and office equipment	Prepayments and construction in progress	Total
<b>Acquisition and production costs</b>					
<b>Status as of 1/1/2016</b>	<b>92,240</b>	<b>402,552</b>	<b>23,189</b>	<b>13,028</b>	<b>531,009</b>
Changes in scope of consolidation	-	-	-	-	-
Additions	903	22,351	2,299	13,784	39,337
Disposals	-764	-7,261	-448	-62	-8,535
Currency conversion	-1,089	-866	-51	-3	-2,009
Reclassifications	33	15,900	-3,572	-12,354	7
<b>Status as of 31/12/2016</b>	<b>91,323</b>	<b>432,676</b>	<b>21,417</b>	<b>14,393</b>	<b>559,809</b>
<b>Cumulative depreciation</b>					
<b>Status as of 1/1/2016</b>	<b>31,153</b>	<b>224,229</b>	<b>18,457</b>	<b>3</b>	<b>273,842</b>
Scheduled depreciation	3,500	24,546	1,607	-	29,653
Impairment losses reversed	-	-6,047	-	-	-6,047
Disposals	-280	-6,747	-428	-	-7,455
Reclassifications	-	3,868	-3,868	-	-
Currency conversion	-103	-409	-6	-	-518
<b>Status as of 31/12/2016</b>	<b>34,270</b>	<b>239,440</b>	<b>15,762</b>	<b>3</b>	<b>289,475</b>
<b>Carrying amounts</b>					
<b>Status as of 31/12/2016</b>	<b>57,053</b>	<b>193,236</b>	<b>5,655</b>	<b>14,390</b>	<b>270,334</b>
<b>Status as of 31/12/2015</b>	<b>61,087</b>	<b>178,323</b>	<b>4,732</b>	<b>13,025</b>	<b>257,167</b>

## CHANGES IN 2015

€ THOUSAND	Land and buildings	Technical equipment/machinery	Other facilities/operating and office equipment	Prepayments and construction in progress	Total
<b>Acquisition and production costs</b>					
<b>Status as of 1/1/2015</b>	<b>87,390</b>	<b>385,558</b>	<b>21,497</b>	<b>13,685</b>	<b>508,130</b>
Changes in scope of consolidation	2,620	-	-36	-	2,584
Additions	1,378	15,081	1,649	10,366	28,474
Disposals	-3,099	-7,306	-359	-883	-11,647
Currency conversion	2,034	1,245	94	116	3,489
Reclassifications	1,917	7,974	344	-10,256	-21
<b>Status as of 31/12/2015</b>	<b>92,240</b>	<b>402,552</b>	<b>23,189</b>	<b>13,028</b>	<b>531,009</b>
<b>Cumulative depreciation</b>					
<b>Status as of 1/1/2015</b>	<b>27,518</b>	<b>208,067</b>	<b>17,262</b>	<b>3</b>	<b>252,850</b>
Scheduled depreciation	3,481	22,960	1,542	-	27,983
Impairment losses	332	-	-	-	332
Disposals	-119	-6,837	-332	-	-7,288
Changes in scope of consolidation	-6	-	-36	-	-42
Currency conversion	-53	39	21	-	7
<b>Status as of 31/12/2015</b>	<b>31,153</b>	<b>224,229</b>	<b>18,457</b>	<b>3</b>	<b>273,842</b>
<b>Carrying amounts</b>					
<b>Status as of 31/12/2015</b>	<b>61,087</b>	<b>178,323</b>	<b>4,732</b>	<b>13,025</b>	<b>257,167</b>
<b>Status as of 1/1/2015</b>	<b>59,872</b>	<b>177,491</b>	<b>4,235</b>	<b>13,682</b>	<b>255,280</b>

Land and buildings are essentially the Group companies' production sites and the technical plant and machinery are production facilities.

The additions to assets represented by facilities in 2016 refer primarily to the refinery sites in Salzbergen and Hamburg. In Salzbergen, capital expenditures were made to modernize power-generation facilities and bottling logistics. At the Hamburg site, the additions primarily refer to investments to optimize production facilities and product logistics. Moreover, expenditures for major overhauls at both sites were capitalized.

The impairment loss reversal of €6.1 million (previous year: €0) refers to the H&R Ölwerke Schindler GmbH cash-generating unit (CGU) from the Refining segment and is included under reversals of impairments to property, plant and equipment on the income statement. This impairment loss reversal was caused by material improvements in the market environment and economic conditions as well as a positive outlook. The impairment tests were prepared using a pre-tax interest rate of 8.72% (after-tax interest rate: 6.35%) and yielded a recoverable amount of

€328 million. The CGU's recoverable amount is its value in use.

The H&R Group has entered into a number of finance and operating lease agreements for technical equipment, operating and office equipment as well as intangible assets.

The results for H&R GmbH & Co. KGaA include income from compensation payments by third parties for write-offs of property, plant and equipment totaling €832 thousand.

**Finance Lease.** The finance leases essentially include land-use rights and an agreement that meets the requirements of IFRIC 4 and relates to the supply of energy as well as of cooling and boiler feed water. The lease agreement has a term of 20 years and ends on 30 June 2023.

Tangible fixed assets used under finance leases are reported under property, plant and equipment with a carrying amount of €24,230 thousand (previous year: €19,521 thousand). This amount is further broken down into technical equipment and machinery, with a carrying amount of



€16,358 thousand (previous year: €11,100 thousand) and land-use rights, with a carrying amount of €7,872 thousand (previous year: €8,421 thousand). These amounts were paid in full in advance. As of the balance sheet date, the acquisition costs of these fixed assets totaled €38,734 thousand (previous year: €32,308 thousand).

The finance leases involve the lease payments listed below that will become due in the following periods. The variable lease installments were carried forward based on the most recent effective interest rate:

€ THOUSAND	Up to 1 year		1 to 5 years		Longer than 5 years	
	31/12/2016	31/12/2015	31/12/2016	31/12/2015	31/12/2016	31/12/2015
Minimum lease payments	17	365	-	17	-	-
Future financing costs under finance leases	-	8	-	-	-	-
Present value of the finance lease liability	17	357	-	17	-	-

Most of these payments relate to an agreement that satisfies the criteria for a finance lease and concerns the supply of energy as well as of cooling and boiler feed water.

None of the assets underlying the finance leases may be disposed of during the term of their respective leases.

**Operating Lease.** In addition to the finance leases, other lease and/or rental agreements were also entered into which must be classified as operating leases based on their contents, as ownership of the property constituting the subject matter of the lease or rental agreement is attributable to the lessor or landlord. This involves, in particular,

land and buildings, hardware, vehicles, forklift trucks, office machines and tank railcars. For technical equipment and operating and office equipment, the terms are generally between two and five years. For land and buildings, the terms are longer than five years. The agreements generally terminate automatically at the end of their term, although in some cases there are renewal options.

Operating leases entailed expenses totaling €5,477 thousand (previous year: €5,861).

Future minimum lease payments based on non-cancelable operating leases will become due in future periods as follows:

€ THOUSAND	Up to 1 year		1 to 5 years		Longer than 5 years		Total	
	31/12/2016	31/12/2015	31/12/2016	31/12/2015	31/12/2016	31/12/2015	31/12/2016	31/12/2015
Land and buildings	1,377	1,383	4,945	5,095	19,422	20,511	25,744	26,989
Technical equipment	1,701	1,518	2,139	1,561	-	-	3,840	3,079
Operating and office equipment	2,510	1,952	3,684	1,472	1,322	-	7,516	3,424
<b>Total</b>	<b>5,588</b>	<b>4,853</b>	<b>10,768</b>	<b>8,128</b>	<b>20,744</b>	<b>20,511</b>	<b>37,100</b>	<b>33,492</b>

### (13) Goodwill and Other Intangible Assets

The table below shows changes in intangible assets during financial year 2016:

#### CHANGES IN 2016

€ THOUSAND	Other intangible assets							Total
	Goodwill	Distribu- tion and similar rights	Software	Licenses/ Product rights	Patents/ Production tech- nology	Other rights	Subtotal	
<b>Acquisition and production costs</b>								
<b>Status as of 1/1/2016</b>	<b>55,744</b>	<b>19,824</b>	<b>10,452</b>	<b>4,734</b>	<b>14,757</b>	<b>409</b>	<b>50,176</b>	<b>105,920</b>
Currency conversion	-295	-658	-14	-8	-515	-	-1,195	-1,490
Additions	-	-	584	249	-	101	934	934
Disposals	-	-	-	-	-	-	-	-
Reclassifications	-	-	274	12	-	-293	-7	-7
<b>Status as of 31/12/2016</b>	<b>55,449</b>	<b>19,166</b>	<b>11,296</b>	<b>4,987</b>	<b>14,242</b>	<b>217</b>	<b>49,908</b>	<b>105,357</b>
<b>Cumulative depreciation</b>								
<b>Status as of 1/1/2016</b>	<b>20,109</b>	<b>2,909</b>	<b>9,627</b>	<b>3,441</b>	<b>2,045</b>	<b>83</b>	<b>18,105</b>	<b>38,214</b>
Currency conversion	-95	-54	-6	-5	-58	-	-125	-220
Scheduled depreciation	-	1,180	476	135	1,396	-	3,187	3,187
Impairment losses	10,400	-	-	-	-	-	-	10,400
Disposals	-	-	-	-	-	-	-	-
<b>Status as of 31/12/2016</b>	<b>30,414</b>	<b>4,035</b>	<b>10,097</b>	<b>3,571</b>	<b>3,383</b>	<b>83</b>	<b>21,167</b>	<b>51,581</b>
<b>Carrying amounts</b>								
<b>Status as of 31/12/2016</b>	<b>25,035</b>	<b>15,131</b>	<b>1,199</b>	<b>1,416</b>	<b>10,861</b>	<b>134</b>	<b>28,741</b>	<b>53,776</b>
<b>Status as of 31/12/2015</b>	<b>35,635</b>	<b>16,915</b>	<b>825</b>	<b>1,293</b>	<b>12,712</b>	<b>326</b>	<b>32,071</b>	<b>67,706</b>

#### CHANGES IN 2015

€ THOUSAND	Other intangible assets							Total
	Goodwill	Distribu- tion and similar rights	Software	Licenses/ Product rights	Patents/ Production tech- nology	Other rights	Subtotal	
<b>Acquisition and production costs</b>								
<b>Status as of 1/1/2015</b>	<b>55,267</b>	<b>18,623</b>	<b>10,021</b>	<b>4,593</b>	<b>13,865</b>	<b>235</b>	<b>47,337</b>	<b>102,604</b>
Currency conversion	477	1,161	13	-43	892	-	2,023	2,500
Additions	-	42	407	120	-	339	908	908
Disposals	-	-2	-	-	-	-111	-113	-113
Reclassifications	-	-	11	64	-	-54	21	21
<b>Status as of 31/12/2015</b>	<b>55,744</b>	<b>19,824</b>	<b>10,452</b>	<b>4,734</b>	<b>14,757</b>	<b>409</b>	<b>50,176</b>	<b>105,920</b>
<b>Cumulative depreciation</b>								
<b>Status as of 1/1/2015</b>	<b>15,359</b>	<b>1,653</b>	<b>9,236</b>	<b>2,887</b>	<b>593</b>	<b>83</b>	<b>14,452</b>	<b>29,811</b>
Currency conversion	-44	4	5	5	-19	-	-5	-49
Scheduled depreciation	-	1,254	386	549	1,471	-	3,660	3,660
Impairment losses	4,794	-	-	-	-	-	-	4,794
Disposals	-	-2	-	-	-	-	-2	-2
<b>Status as of 31/12/2015</b>	<b>20,109</b>	<b>2,909</b>	<b>9,627</b>	<b>3,441</b>	<b>2,045</b>	<b>83</b>	<b>18,105</b>	<b>38,214</b>
<b>Carrying amounts</b>								
<b>Status as of 31/12/2015</b>	<b>35,635</b>	<b>16,915</b>	<b>825</b>	<b>1,293</b>	<b>12,712</b>	<b>326</b>	<b>32,071</b>	<b>67,706</b>
<b>Status as of 1/1/2015</b>	<b>39,908</b>	<b>16,970</b>	<b>785</b>	<b>1,706</b>	<b>13,272</b>	<b>152</b>	<b>32,885</b>	<b>72,793</b>

The carrying value of goodwill can be broken down as follows:

€ THOUSAND				
Reporting segment	Cash Generating Unit (CGU)	31/12/2016	31/12/2015	
ChemPharm Refining	Salzbergen CGU	16,738	16,738	
ChemPharm Sales	H&R China CGU	2,580	5,277	
ChemPharm Sales	H&R ChemPharm (UK) CGU	282	282	
ChemPharm Sales	Asia CGU	371	374	
ChemPharm Sales	South Africa CGU	5,064	12,964	
<b>Total</b>		<b>25,035</b>	<b>35,635</b>	

In performing the impairment test on the CGU, Management must make certain future-oriented valuation assumptions. Basically, these valuation assumptions, which are made in the face of uncertainty, may differ from values measured later, which can cause the recoverable amount to drop below the respective carrying amount of the CGU, thereby triggering recognition of an impairment loss. The CGUs' recoverable amounts are equal to their values in use.

The impairment tests carried out during the reporting period resulted in unscheduled write-downs of goodwill totaling €10.4 million (previous year: €4.8 million) which are included on the income statement under the item "Depreciation, impairments and amortization".

As a result of a tougher local market environment for the China CGU, the Group now assumes that expectations of higher future cash flows will have to be postponed. The impairment test yielded a recoverable amount of €112.1 million (previous year: €137.2 million), which required recognizing a goodwill impairment loss of €2.5 million (previous year: €3.0 million). €0.2 million of additional currency-translation effects (previous year: € -0.6 million) reduced the carrying amount of the China CGU's goodwill by a total of €2.7 million (previous year: €2.4 million).

For the South Africa CGU as well, changes in local conditions – especially the weakening of the South African Rand against the euro – led to the assessment that future cash flows for the South

Africa CGU are likely to be lower. The CGU's recoverable amount as determined during the course of the impairment test was €18.1 million (previous year: €28.5 million), which resulted in recognition of a goodwill impairment loss of €7.9 million (previous year: €1.0 million).

The China CGU and the South Africa CGU consist of the legal entities in each region's chemical-pharmaceutical division. For the impairment tests on these CGUs, the following interest rates were used:

IN %	2016		2015	
	Before taxes	After taxes	Before taxes	After taxes
China CGU	10.5	8.1	9.4	7.4
South Africa CGU	17.6	13.1	15.9	11.9

In the sensitivity analyses performed on the cash-generating units to which goodwill has been allocated, the effects of reducing future cash flows by 10%, increasing the weighted cost of capital by 10% and lowering the growth rate by one percentage point were analyzed. For the cash-generating units that had already suffered an impairment during the financial year, each negative change in a parameter would result in further impairment losses. For the remaining cash-generating units, the sensitivity analyses indicated that none of these CGUs would require recognition of an impairment loss.

The other intangible assets primarily consist of customer relationships with a residual carrying amount of €15.1 million (previous year: €16.9 million) and production technologies with a residual carrying amount of €10.9 million (previous year: €12.7 million). The remaining pay-back period is around 13 years for the customer relationships and around 8 years for acquired production technologies. Moreover, expenses arising in connection with the registration of products pursuant to the EU Chemicals Regulation (REACH) were also capitalized under other intangible assets. The remaining other intangible assets are mainly production and application software as well as production, control and process flow licenses. The additions in financial year 2016 primarily refer to the acquisition of new software licenses.

#### (14) Shares in At-Equity Valued Holdings

The reported shares in at-equity valued holdings concern, partly, the 50% share in the joint venture Westfalen Chemie GmbH & Co. KG as well as the related general partner Westfalen Chemie Verwaltungsgesellschaft mbH. Westfalen operates a hydrogen production and bottling facility at the Salzbergen site, from which the Salzbergen Refinery obtains hydrogen for its own production. In addition, H&R GmbH & Co. KGaA has a 50% stake in the joint venture HRI IT-Service GmbH, Berlin. In January 2016, H&R GmbH & Co. KGaA acquired 45% of the shares of IGEPA IT Service GmbH, Münster.

Disclosures on at-equity valued holdings consolidated into the H&R Group are based on the Group's uniform accounting and measurement principles. As with the H&R Group, the joint ventures' financial year coincides with the calendar year. The following table shows the aggregate financial information of these joint ventures and/or associates that are classified as individually immaterial under IFRS 12:

€ THOUSAND	Joint ventures		Associates
	31/12/2016	31/12/2015	31/12/2016
<b>Assets</b>			
Non-current assets	2,384	2,840	181
Current assets	1,475	1,358	1,705
<b>Liabilities</b>			
Non-current liabilities	259	1,003	198
Current liabilities	3,352	2,971	721
<b>Cumulative equity</b>	<b>248</b>	<b>224</b>	<b>967</b>
Income	11,336	11,848	5,920
Expenses	-11,009	-11,176	-5,153
<b>Earnings after income taxes</b>	<b>327</b>	<b>672</b>	<b>767</b>
Other comprehensive income	-	-	-
<b>Total comprehensive income</b>	<b>327</b>	<b>672</b>	<b>767</b>

The following table shows the changes in the carrying amounts of at-equity valued holdings:

€ THOUSAND	2016	2015
<b>Carrying amounts on 1/1</b>	<b>975</b>	<b>763</b>
Addition	3,150	-
Proportionate share of result	513	336
Distribution	-336	-124
<b>Carrying amounts on 31/12</b>	<b>4,302</b>	<b>975</b>

## (15) Liabilities to Banks

Liabilities to banks include the following items:

€ THOUSAND	Carrying amount on 31/12/2016	Residual term up to one year	Residual term 2018 to 2020	From 2021 onwards
Loans under KfW programs	53,654	10,344	31,030	12,280
Syndicated loan	-	-	-	-
Borrower's note loans	17,897	-	17,897	-
Other loans	28,677	27,843	834	-
<b>Total</b>	<b>100,228</b>	<b>38,187</b>	<b>49,761</b>	<b>12,280</b>
of which secured	1,619			

€ THOUSAND	Carrying amount on 31/12/2015	Residual term up to one year	Residual term 2017 to 2019	From 2020 onwards
Loans under KfW programs	68,907	9,004	47,623	12,280
Syndicated loan	30,000	30,000	-	-
Borrower's note loans	35,774	17,883	17,891	-
Other loans	26,319	25,865	454	-
<b>Total</b>	<b>161,000</b>	<b>82,752</b>	<b>65,968</b>	<b>12,280</b>
of which secured	10,670			

**Loans under KfW Programs.** The KfW funds arranged by various banks were, or will be, used for capital expenditures that qualify for subsidies under the KfW Environmental Program. The KfW funds were provided in the form of fixed-interest loans with interest rates of between 3.5% and 3.6%. The lenders may terminate the loans depending on covenants (net gearing and the equity ratio) or in the event of a change in control.

**Borrower's Note Loans.** The borrower's note loans consist of two fixed-interest tranches issued in 2011 with original maturities of five and seven years. The conditions and termination rights are dependent on compliance with certain stipulations and financial ratios such as the net debt to EBITDA ratio and the equity ratio (covenants). In the event of a change of control, the party extending the borrower's note loans is entitled to terminate the agreements.

**Syndicated Loan.** Since 24 August 2015, a broadly syndicated loan with a maximum amount of €240 million has been available to H&R. The maximum possible drawdown under this loan

changes in line with working capital (borrowing-base mechanism), thereby ensuring that financing will be available at attractive conditions even when working-capital requirements increase. The syndicated loan is utilized by H&R GmbH & Co. KGaA and by Group companies via branch lines. In mid-2015, the original maturity was extended by one year to 24 August 2019.

The availability and conditions are linked to certain ratios (financial covenants). In the event of a breach of a covenant, the syndicate banks are entitled to terminate the syndicated loan. The syndicated loan is subject to a variable interest rate (EURIBOR + margin). The margin percentage is dependent on certain financial covenants (Net Debt/EBITDA). The adjustment always takes place after the filing of the quarterly and/or annual reports. The syndicated loan was only utilized to a minor extent in financial year 2016.

**Other Loans.** Other loans include a loan redeemable through scheduled installments at fixed interest rates, as well as subsidiaries' variable-rate working capital loans, including drawdowns under branch lines of the syndicated loan secured by credit requests and guarantees.

**Financial Covenants.** Financial covenants such as the debt/equity ratio and the equity ratio are included in the agreements for the borrower's note loans and the syndicated loans as well as for bilateral loans. The financial covenants were fully met both at the balance sheet date and also during the course of the year.

**Collateral.** As in the previous year, additional collateral has been provided for a redeemable loan in South Africa originally totaling the equivalent of €2 million. In addition, in the previous year, tangible fixed assets with a value of €15 million were pledged as collateral for loans from the KfW (Kreditanstalt für Wiederaufbau, Reconstruction Credit Corporation) environmental program originally amounting to €20 million.

No collateral was pledged for either the syndicated loan or for the borrower's note loan.

## (16) Trade Payables

Trade payables have a term of up to one year and are collateralized by the customary retention of title.

## (17) Other Provisions

€ THOUSAND	HR provisions (17.1)	Environmental protection (17.2)	Energy taxes (17.3)	Trade-related commitments (17.3)	Miscellaneous provisions (17.4)	Total
<b>Status as of 1/1/2016</b>	<b>10,470</b>	<b>1,600</b>	-	<b>1,154</b>	<b>2,109</b>	<b>15,333</b>
Adjustment pursuant to IAS 8	-	-	1,765	-	-	1,765
<b>Status as of 1/1/2016 after adjustment</b>	<b>10,470</b>	<b>1,600</b>	<b>1,765</b>	<b>1,154</b>	<b>2,109</b>	<b>17,098</b>
of which long-term	3,159	1,000	-	-	-	4,159
Utilization	-6,308	-400	-	-746	-1,264	-8,718
Reversal	-554	-	-	-23	-154	-731
Additions	11,092	-	2,363	1,873	862	16,190
Compounding/ discounting	39	-16	-	-	-	23
Currency-translation differences	20	-	-	-21	-12	-13
<b>Status as of 31/12/2016</b>	<b>14,759</b>	<b>1,184</b>	<b>4,128</b>	<b>2,237</b>	<b>1,541</b>	<b>23,849</b>
of which long-term	3,304	984	-	-	-	4,288

The following cash outflows are expected in connection with the provisions shown on the balance sheet for 2016:

### EXPECTED CASH OUTFLOWS FOR OTHER PROVISIONS

€ THOUSAND	HR provisions	Environmental protection	Energy taxes	Trade-related commitments	Miscellaneous provisions	Total
2017	11,455	200	4,128	2,237	1,541	19,561
2018	308	984	-	-	-	1,292
2019-2021	599	-	-	-	-	599
2022-2026	1,202	-	-	-	-	1,202
2027 and later	1,195	-	-	-	-	1,195
<b>Total</b>	<b>14,759</b>	<b>1,184</b>	<b>4,128</b>	<b>2,237</b>	<b>1,541</b>	<b>23,849</b>

The amounts and due dates of the cash outflows may vary.

### (17.1) HR Provisions

The short-term HR provisions primarily concern directors' fees, profit sharing, performance bonuses, deferred leave, flex-time credits as well as professional association contributions.

The long-term HR provisions consist of early retirement pensions and service anniversaries.

### (17.2) Environmental Protection

Subsoil contamination with hazardous materials resulting from the production of ammunition (grenades) under the supervision of the armed forces during the two World Wars and from the decommissioning of military explosives were already discovered some time ago on a piece of

land belonging to a Group company that is used by third parties to produce such explosive materials. The affected soil was disposed of some years ago. However, due to the size and diversity of the plot of land, areas contaminated with hazardous substances are being discovered on a regular basis; these must be remediated by professionals. The level of hazardous materials in the ground and surface water is regularly measured and monitored in coordination with the relevant authorities. The explosives business was sold in 2007; however, the land was not transferred to the buyer, but, rather, was leased to the explosives company, which continues to operate there.

Sythengrund GmbH had various tests carried out to assess the hazardous materials situation. These assessments revealed that the plume of pollutants extending beyond the site borders cannot be removed using current technology. The company is therefore focusing its ongoing measures on monitoring and securing the pollutants, carrying out long-term research into potential additional contamination and supporting research projects into developing more advanced chemical/physical treatment methods. All steps to monitor and secure the pollutants, as well as to decontaminate affected areas, are carried out in close cooperation with the regulatory authorities of the Recklinghausen District.

In August 2015, the quartz sand deposits, which cover an area of around 50 hectares, were sold to a nearby quartz sand producer. In a notarized purchase agreement dated 16 September 2016, most of the remaining land (around 210 hectares) was sold to the Recklinghausen District. Handover of the land is scheduled for 1 January 2019. On that date, the explosives manufacturer must cease its operations on this site. This purchase agreement with the Recklinghausen District represents a final settlement of the company's liability as site owner, thereby eliminating, from today's perspective, the risk of many years of litigation to determine the extent of the liability. The remaining areas are insignificant and will gradually be sold. Responsibility for traffic safety at the site will also transfer to the Recklinghausen District on 1 January 2019. In addition, the investment in the operating company *Betreibergesellschaft Silbersee II Haltern am See mbH* was sold to the district in this purchase agreement.

#### (17.3) Energy Taxes

The provisions for energy taxes also include provisions for electricity taxes.

#### (17.4) Trade-Related Commitments

Provisions for trade-related commitments primarily include provisions for complaints, rebates, discounts and price reductions.

#### (17.5) Miscellaneous Provisions

Miscellaneous provisions primarily include provisions for waste disposal and other obligations.

## (18) Other Financial Liabilities

€ THOUSAND	31/12/2016		31/12/2015	
	Total	Of which long-term	Total	Of which long-term
Lease liabilities	17	-	374	17
Loan liabilities	3,184	-	2,947	-
Liabilities arising from derivatives	2,537	1,200	4,743	2,368
Liabilities from company acquisitions	5,344	738	3,559	-
Other financial liabilities	2,510	2	584	2
<b>Total</b>	<b>13,592</b>	<b>1,940</b>	<b>12,207</b>	<b>2,387</b>

The lease liabilities result from financial leases. Further information concerning finance leases can be found in note (12).

Liabilities arising from derivatives result from transactions intended to hedge interest-rate risks. Further details about derivatives can be found in note (38.2).

Liabilities from acquisitions relate to existing liabilities from the acquisition of the Chinese businesses in 2014 and the purchase of the shares of IGEPA IT Service GmbH.

## (19) Other Liabilities

€ THOUSAND	31/12/2016		31/12/2015	
	Total	Of which long-term	Total	Of which long-term
Tax liabilities	5,264	-	3,206	-
Accruals and deferrals	4,595	1,983	4,355	1,506
Payments received	2,243	-	1,150	-
Other liabilities	923	-	879	-
<b>Total</b>	<b>13,025</b>	<b>1,983</b>	<b>9,590</b>	<b>1,506</b>

Tax liabilities primarily concern the current VAT and payroll tax liabilities as well as import VAT still due.

The accruals and deferrals include an investment subsidy received by H&R Lube Blending GmbH from the German State [Land] of Lower Saxony. The subsidy, which had been applied for in 1996, was approved in 1998 and constitutes 15% of the investment sum. Recognition takes place on a pro rata temporis basis in accordance with the respective useful lives of the subsidized assets.

## (20) Pension Provisions

The Group has both defined-contribution and defined-benefit company retirement plans.

In the case of the defined-contribution plans, the Group pays contributions to state or private pension schemes on the basis of legal or contractual provisions or on a voluntary basis. Once it has made the contributions, the Group has no further obligations in this area. Defined-contribution pension plans exist mainly in the international companies of the Chemical-Pharmaceutical Division.



All other retirement plans are defined-benefit plans and are the result of various takeovers of business areas and activities. These benefits apply exclusively to companies based in Germany. All of the H&R Group's pension plans are closed or frozen, so that H&R GmbH & Co. KGaA is only exposed to risks arising from pension and salary trends and from demographic changes, based on already existing commitments. With the exception of a reinsurance policy for the pension of a former member of the Management Team, there are no plan assets, so there is currently no strategy for equalizing risks arising from either assets or liabilities.

H&R GmbH & Co. KGaA was formed from the merger of Schmierstoffraffinerie Salzbergen GmbH (SRS GmbH) and H&R GmbH & Co. KGaA in 2001. Because of the Works Agreement dated 7 October 1986, all employees transferred over from Wintershall by SRS GmbH have a right to company retirement benefits in accordance with the Wintershall Pension Agreement dated 1 January 1987. The Works Agreement dated 9 March 1994 terminated the Works Agreement of 7 October 1986 effective 30 June 1994, thereby closing the pension scheme to newly hired employees. The level of benefits promised mainly depends on the length of service and the last salary drawn. After the termination of the Works Agreement of 7 October 1986, the entitlements earned were frozen. The pension entitlements of some pensioners are based on the older Wintershall pension charter.

All employees at H&R GmbH & Co. KGaA have a right to company pension benefits in accordance with the version of the pension agreement dated 1 January 1986, last amended by the Works Agreement of 4 June 1998. For those drawing pensions, their rights in some cases are based on earlier versions of the pension agreement. The amount of the pension depends on the number of pensionable years of service and the pensionable salary in the last year before leaving the company. Individual employees receive so-called contractual pensions based on individual contractual commitments. The benefit requirements and calculations differ in individual agreements.

Pursuant to the 18 December 1978 version of GAUDLITZ GmbH's Pension Agreement, all employees who joined the company by 10 June 1978 and whose employment agreements have not been terminated have the right to a company pension. The amount of the pension depends on the number of pensionable years of service and the pensionable salary in 1978. For those drawing pensions, in some cases their rights are based on earlier versions of the pension agreement.

At SYTHENGRUND Wasagchemie Grundstücksverwertungsgesellschaft Haltern mbH, there is a Pension Agreement dating from 1 January 1986 in the 4 June 1998 version of Chemie Sythen GmbH's Works Agreement. The pension amounts depend on the number of pensionable years of service and on the pensionable salary. The pension scheme was closed in 1992 to people joining the company after 31 July 1991.

Pension obligations for a total of 183 employees were transferred to H&R Ölwerke Schindler GmbH effective 2 January 2004 with the takeover of BP's specialty product businesses. Due to various mergers and takeovers, there are a total of 13 different sets of rules and addenda that may apply to these 183 employees. The basic principles are set forth in the following pension agreements, charters, pension schemes, retirement plans, etc.:

- Pension Agreement for employees of Aral AG on non-union rates dated 24 June 1991
- Pension scheme for employees of Aral AG on union rates dated 15 October 1985
- Aral AG 1999 Pension Agreement
- Pension Charter dated 1 January 1980 pursuant to the Central Works Agreement dated 30 November 1979
- Additional pension for shift work in accordance with Letter f of the Pension Charter of 1 January 1980 pursuant to the Central Works Agreement dated 30 November 1979
- 1988 Pension Charter based on the Central Works Agreement dated 2 December 1987
- Pension Charter dated 1 January 1988, Section 13 (Articles 40-46), Pension for shift work on the basis of the Central Works Agreement dated 2 December 1987

- Pension plan of Burmah Oil (Deutschland) GmbH dated 1 January 1992
- Salary conversion in accordance with the 1999 Model ARAL Pension Agreement
- Raab Karcher Transitional Pension Scheme dated 1 March 1989
- Central Works Agreement dated 1 February 1993 (1975 Pension Plan)
- Central Works Agreement dated 1 January 1993 (1986 Pension Plan)
- Central Works Agreement dated 1 February 1993 (1990 Pension Plan)

The pension amount in the aforementioned plans is determined based on the pensionable years of service and on the pensionable monthly remuneration, taking into account the minimum number of years of eligible service.

From BP, H&R Ölwerke Schindler has not only assumed pension obligations for eligible employees of the company (so-called Group 1), but has also agreed an indemnity obligation for some former employees of BP Lubes Services GmbH (pensioners and employees who left the company, so-called Group 3). The company is entitled to reimbursement from BP of the sum posted for the commitments to the aforementioned categories of qualified individuals [see also note (10)].

H&R Ölwerke Schindler GmbH's obligations to the individual groups as of 31 December 2016 are shown in the following table:

€ THOUSAND	31/12/2016	31/12/2015
Group 1	48,087	41,147
Group 3	11,757	10,985

A further category (so-called Group 2) comprises employees of BP who were not taken on by H&R Ölwerke Schindler. For this group of people in Group 2, H&R Ölwerke Schindler has agreed to reimburse BP for the relevant pension obligations which remain with BP, in the amount of €10,163 thousand (previous year: €9,602 thousand). Pursuant to IAS 1.32, these obligations were netted against a receivable from BP arising from a reimbursement claim for pension obliga-

tions assumed amounting to €11,757 thousand (previous year: €10,985 thousand), which also arose as part of the takeover of the specialty business [see note (10)]. The net receivable of €1,594 thousand (previous year: €1,383 thousand) is shown in receivables from BP under other long-term assets. The amount of the obligation may vary due to changes in actuarial assumptions.

The change in the liability under defined-benefit plans is shown below:

€ THOUSAND	2016	2015
<b>Status as of 1/1</b>	<b>76,847</b>	<b>83,648</b>
Current service cost	834	853
Interest expense	1,809	1,757
Revaluations	8,881	-6,263
Including due to changes in financial assumptions	9,615	-5,699
Including due to empirical adjustments	-734	-564
Payments made	-3,165	-3,148
<b>Status as of 31/12</b>	<b>85,206</b>	<b>76,847</b>

The plan assets of H&R GmbH & Co. KGaA consist of a reinsurance policy for the pension commitment to a former member of the Management Team that is measured at fair value. The plan assets are not listed on any active market. H&R GmbH & Co. KGaA does not have any specific risk exposure from these plan assets beyond the normal risk. Annual contributions of H&R GmbH & Co. KGaA to this reinsurance policy totaled €249 thousand and were due for the last time in 2016.

The following table shows the changes in the fair value of plan assets:

€ THOUSAND	2016	2015
<b>Status as of 1/1</b>	<b>1,362</b>	<b>1,081</b>
Interest income	33	22
Revaluations	4	10
Contributions to plan	249	249
<b>Status as of 31/12</b>	<b>1,648</b>	<b>1,362</b>

The following table shows changes in the carrying amount of the net debt related to defined-benefit pension plans:

€ THOUSAND	2016	2015
<b>Status as of 1/1</b>	<b>75,487</b>	<b>82,566</b>
Current service cost	834	853
Interest expense	1,776	1,736
Payments made	-3,165	-3,148
Employee contributions to the plan	-249	-249
Revaluations	8,875	-6,271
Including return on plan assets	-4	-10
Including due to changes in financial assumptions	9,613	-5,697
Including due to empirical adjustments	-734	-564
Including due to changes in demographic assumptions	-	-
<b>Status as of 31/12</b>	<b>83,558</b>	<b>75,487</b>

The following valuation parameters were used to determine the pension obligations:

	31/12/2016	31/12/2015
Interest rate	1.7%	2.4%
Salary trend	4.0%	4.0%
Pension trend	2.0%	2.0%
Retirement age	60/61/63/65	60/61/63/65

The likelihood of leaving is based on the 2005G Heubeck guideline tables. An age-dependent staff turnover probability has been built into the pension provision for employees of H&R Ölwerke Schindler GmbH; it was calculated by the independent expert using tables drawn up by internal experts. For employees at other sites, to simplify matters, by ignoring the likelihood of turnover, the assumption is made that no employee will leave the company before the vesting periods have been met and that thereafter the vested claim will be exactly financed by the existing provision in each case.

There were no plan changes, curtailments or settlements in financial year 2016.

Payments totaling €3,844 thousand are expected for the next financial year (previous year: €3,686 thousand). The average duration of the benefit obligations is 16.2 years.

If the indicators in the table below change as shown, this would cause the following changes in the pension obligation.

#### CHANGE IN PENSION OBLIGATION

	Change in indicator	31/12/2016		31/12/2015	
		Change in obligation if increased in € thousand	Change in obligation if decreased in € thousand	Change in obligation if increased in € thousand	Change in obligation if decreased in € thousand
Change in discount rate	0.50%	-6,427	7,309	-5,601	6,343
Change in expected salary trend	0.50%	1,516	-1,396	1,312	-1,203
Change in expected pension trend	0.50%	3,339	-3,580	3,433	-3,123
Change in expected mortality	1 year	644	-685	339	-429

The above sensitivity analyses are based on the assumption of a change in one parameter while all other parameters remain constant. These are individual scenarios from a broad spectrum of possibilities, so the actual pension commitment trend will most certainly deviate from these forecasts. In addition, it is unlikely that only one parameter

will change; in reality, several indicators can be expected to change and affect one another simultaneously. The same method used to calculate the benefit obligations reported on the balance sheet was used in this sensitivity analysis. It is the same method used last year.

All pension plans within the H&R Group are closed; no new employees are admitted. Only H&R Ölwerke Schindler GmbH still has active employees with a pension claim.

#### (21) Subscribed Capital

As of the balance sheet date, subscribed capital totaled €91,573 thousand (previous year: €91,573 thousand), divided into 35,820,154 ordinary bearer shares without face value (previous year: 35,820,154 ordinary bearer shares). This corresponds to a notional value of €2.56 per share. There are no different classes of shares; all shares are ordinary shares. The subscribed capital was fully paid in. Each share conveys one voting right.

**Approved Capital.** By a decision of the Annual Shareholders' Meeting of 31 May 2011, the Management Team was authorized, subject to approval by the Supervisory Board, to increase issued capital through one or more issues of ordinary bearer shares without face value in return for cash. Said issuance(s) could occur any time before 30 May 2016, could total up to €1 million in volume (2011 Approved Capital), and had to be issued for the purpose of distributing employee shares to the employees of the company and its affiliated companies. Shareholders' subscription rights were excluded. No use was made of this authorization.

The general partner with full personal liability is authorized – with the Supervisory Board's approval – to increase the company's share capital by 12 May 2019 by a maximum of €22.4 million by issuing up to 8,748,348 new ordinary bearer shares without face value. The issue may be effected in one or more tranches in return for cash and/or contributions-in-kind (2014 Approved Capital). In principle, shareholders must be granted a subscription right; however, the Management Team may, with the Supervisory Board's approval, exclude the subscription right on one or more occasions under certain conditions. The most recent amendment (reduction in the approved capital) was recorded in the Commercial Register on 25 September 2014.

#### (22) Capital Reserve

The capital reserve includes the amounts by which the proceeds from the issuance of preferred and ordinary shares exceed their face value. In financial year 2015, the capital reserve decreased by €576 thousand from €43,329 thousand to €42,753 thousand due to the expenses associated with raising capital the previous year. This included €408 thousand of tax effects (previous year: €408 thousand) that were immediately credited to the capital reserve. On the balance sheet date, the capital reserve was unchanged at €42,753 thousand.

#### (23) Retained Earnings

On the balance sheet date, retained earnings totaled €136,271 thousand (previous year: €104,055 thousand). The revalued net liability under defined-benefit pension plans recorded under other comprehensive income totaled €-25,134 thousand (previous year: € -19,066 thousand) on the balance sheet date. Other retained earnings totaled €2,293 thousand as of the balance sheet date (previous year: €2,383 thousand). The €90 thousand reduction in retained earnings resulted from the acquisition of the remaining 6.49% minority interest in Gaudlitz Precision s.r.o.

**Dividends.** At the Annual Shareholders' Meeting on 18 May 2016, it was decided not to distribute any dividends from H&R GmbH & Co. KGaA's annual net income for financial year 2015 as determined in accordance with the German Commercial Code (HGB). The Management Team and the Supervisory Board will submit a proposal to the Annual Shareholders' Meeting on 18 May 2017 not to distribute any dividends for financial year 2016, as the annual financial statements for H&R GmbH & Co. KGaA prepared in accordance with the HGB do not show any distributable profits. This proposal is subject to approval by the shareholders at the Annual Shareholders' Meeting.

#### (24) Other Reserves

Other reserves refer to the cumulative total other comprehensive income and include the currency-translation adjustment, adjustments from marking-to-market financial assets and cash flow hedges. As of the balance sheet date, reserves relating to the marking-to-market of securities

totalled €196 thousand (previous year: €195 thousand). The foreign-currency translation adjustment totaled €5,006 thousand on the balance sheet date (previous year: €4,519 thousand).

### (25) Non-Controlling Interests

Non-controlling interests include shares of earnings and capital held by shareholders outside the Group; during the year under review, these changed as follows.

€ THOUSAND	2016	2015
<b>Status as of 1/1</b>	<b>42,268</b>	<b>39,802</b>
Currency-translation differences	-1,673	2,578
Proportionate share of net income or loss	913	-96
Disposals	90	-16
<b>Status as of 31/12</b>	<b>41,598</b>	<b>42,268</b>

Most of the non-controlling interests are accounted for by H&R China Holding GmbH and its subsidiaries, which were added to the consolidated group in 2014. The non-controlling interest in H&R China Holding GmbH totals 49%.

The table below shows a summary of financial data for the H&R China Group:

€ THOUSAND	31/12/2016	31/12/2015
Current assets	62,795	50,407
Non-current assets	78,852	86,811
Current liabilities	49,739	42,830
Non-current liabilities	6,976	7,974
Cumulative equity	84,932	86,414
<b>Non-controlling interests' proportionate share of net assets</b>	<b>41,617</b>	<b>42,343</b>

€ THOUSAND	2016	2015
Income	127,346	108,944
Expenses	-125,468	-109,083
Net income/loss	1,878	-139
<b>Non-controlling interests' proportionate share of net income/loss</b>	<b>920</b>	<b>-68</b>
Other comprehensive income	-3,360	5,166
<b>Non-controlling interests' proportionate share of other comprehensive income</b>	<b>-1,646</b>	<b>2,532</b>
Total comprehensive income	-1,482	5,027
<b>Non-controlling interests' proportionate share of total comprehensive income</b>	<b>-726</b>	<b>2,464</b>
Cash flow from operating activities	5,406	4,907
<b>Non-controlling interests' proportionate share of cash flow from operating activities</b>	<b>2,649</b>	<b>2,404</b>
Cash flow from investment activities	-1,754	-2,016
<b>Non-controlling interests' proportionate share of cash flow from investment activities</b>	<b>-859</b>	<b>-988</b>
Cash flow from financing activities	3,977	-20,254
<b>Non-controlling interests' proportionate share of cash flow from financing activities</b>	<b>1,949</b>	<b>-9,924</b>

## Notes to the Consolidated Income Statement

### (26) Research and Development Costs

In financial year 2016, research and development activities in the Chemical-Pharmaceuticals Division focused on further improving product quality in the product areas of formulated oils, paraffins and white oils. Research and development costs were incurred in the Plastics Division for testing and experiments on new materials in the plastics area as well as research relating to the possibility of the increased use of plastic parts in various sectors.

In 2016, research and development expenditures totaled €2,054 thousand (previous year: €1,955 thousand). For further information regarding research and development costs we refer the reader to the pertinent section in the Management Report.

### (27) Sales Revenues

Sales revenues – less revenue reductions – are recognized at the time when the service is provided or when risk is transferred to the customer. Segment reporting gives an overview of the trend in sales by division and by geographical segment [see note (36)].

### (28) Other Operating Income

€ THOUSAND	2016	2015
Exchange-rate gains from foreign-currency items	6,976	12,614
Income from services	5,461	5,107
Income from passing on costs	3,272	3,402
Income from insurance claims	857	1,689
Income from the disposal of assets	184	4,833
Income from the reversal of provisions	981	612
Income from rents and leases	977	1,217
Miscellaneous	2,862	2,917
<b>Total</b>	<b>21,570</b>	<b>32,391</b>

Income from passing on costs results mainly from the re invoicing of consumption taxes, project-related costs and current costs to the companies in which there is a participating interest, Westfalen Chemie GmbH & Co. KG and SRS EcoTherm GmbH.

### (29) Cost of Materials

€ THOUSAND	2016	2015
Raw materials	465,984	509,731
Auxiliary and production materials	15,294	15,607
Products for sale	152,898	145,845
<b>Cost of raw materials, auxiliary and production materials and merchandise purchased</b>	<b>634,176</b>	<b>671,183</b>
Energy costs	36,518	36,994
Other external services	1,071	1,213
<b>Total expenditures on purchased services</b>	<b>37,589</b>	<b>38,207</b>
<b>Total</b>	<b>671,765</b>	<b>709,390</b>

### (30) Personnel Expenses

€ THOUSAND	2016	2015
Wages and salaries	73,704	67,084
Social security payments	11,149	10,896
Defined-benefit pension plan expenses	981	1,083
Defined-contribution pension plan expenses	483	498
Other social security expenses	398	300
<b>Total</b>	<b>86,715</b>	<b>79,861</b>

Amounts arising from compounding the interest on personnel provisions, particularly pension provisions, are not reported as personnel expenses. They are reported under interest income/expense as part of the financial result.

### AVERAGE NUMBER OF EMPLOYEES

	2016	2015
ChemPharm Refining	648	628
ChemPharm Sales	358	339
Plastics	556	573
Other	28	30
<b>Total</b>	<b>1,590</b>	<b>1,570</b>

### (31) Other Operating Expenses

€ THOUSAND	2016	2015 <sup>1)</sup>
Freight costs, dispatch systems and other distribution costs	26,131	24,355
Third-party goods and services	18,110	13,194
Third-party repairs and maintenance	12,270	13,778
Rents and leases	9,069	8,970
Loss from foreign-currency translation	8,400	13,886
IT costs	8,047	7,365
Legal and consulting fees, expenses for annual financial statements and Annual Shareholders' Meeting	4,979	5,166
Insurance premiums, fees and contributions	3,747	3,052
Costs passed on	3,090	3,081
Other taxes	2,126	2,257
Other personnel costs	2,553	3,438
Leasing costs	1,878	2,299
Travel expenses	1,448	1,586
Commissions	1,311	1,795
Miscellaneous	10,897	8,836
<b>Total</b>	<b>114,056</b>	<b>113,058</b>

<sup>1)</sup> Prior-year figures adjusted. For details, see note (5).

### (32) Financial Income

€ THOUSAND	2016	2015
Interest income from short-term bank deposits	443	512
Income from loans	30	20
Other interest and similar income	2	219
<b>Total interest income</b>	<b>475</b>	<b>751</b>
Income from derivatives	2,255	1,917
Other financial income	400	12
<b>Miscellaneous financial income</b>	<b>2,655</b>	<b>1,929</b>
<b>Financial Income</b>	<b>3,130</b>	<b>2,680</b>

### (33) Financial Expenses

€ THOUSAND	2016	2015
Interest expense relating to loan interest	5,490	7,094
Interest expense relating to derivatives	2,510	2,437
Interest expense from the compounding of pension provisions	1,776	1,736
Credit commission	808	369
Other interest and similar expenses	2,560	1,586
<b>Total interest expense</b>	<b>13,144</b>	<b>13,222</b>
Expenses related to derivatives	-	3,915
Other financial expenses	-	-
<b>Miscellaneous financial expenses</b>	<b>-</b>	<b>3,915</b>
<b>Financial expenses</b>	<b>13,144</b>	<b>17,137</b>

### (34) Income Tax

Since 1 January 2009, the net income of German companies has been subject to a uniform corporation tax rate of 15% plus a solidarity surcharge of 5.5%. In conjunction with a trade tax burden of 13.18% (previous year: 12.98%), this amounts to a combined income tax rate for the Group in Germany of 29.00% (previous year: 28.81%). As in the previous year, income tax rates for companies abroad are between 17% and 30%. Any interest on tax arrears is reported under interest expense. Deferred income tax expense includes changes in deferred tax assets and liabilities.

Taxes on income paid or owed in individual countries as well as tax accruals and deferrals are shown as income taxes. These can be broken down as follows:

€ THOUSAND	2016	2015 <sup>1)</sup>
Current income tax expenses	-13,725	-10,799
Current income tax refunds	107	726
<b>Total current taxes</b>	<b>-13,618</b>	<b>-10,073</b>
Deferred taxes from timing differences	-1,092	3,193
Deferred taxes from loss carryforwards	-164	-527
<b>Total deferred taxes</b>	<b>-1,256</b>	<b>2,666</b>
<b>Total</b>	<b>-14,874</b>	<b>-7,407</b>

<sup>1)</sup> Prior-year figures adjusted. For details, see note (5).

In accordance with IAS 12.34, a deferred tax asset is recognized for a tax loss carryforward available as of the reporting date if it is considered probable that there will be sufficient future taxable profit against which the loss carryforward can be utilized. At H&R GmbH & Co. KGaA, domestic tax loss carryforwards led to the recognition of €10,619 thousand of deferred tax assets (previous year: €10,783 thousand). Overall, in Group companies that reported a loss in the prior or the current year, a surplus of deferred tax assets totaling €878 thousand was recognized (previous year: €13,547 thousand). Recognition of the deferred tax assets is justified since the Group expects positive future taxable income to exceed the impact on earnings caused by the reversal of the temporary differences.

In addition to the deferred tax assets recognized for loss carryforwards, there are also domestic corporation tax losses in the amount of €612 thousand (previous year: €20,507 thousand), trade tax losses of €553 thousand (previous year: €18,117 thousand) whose realization is not sufficiently guaranteed and for which therefore no deferred tax assets have been recognized. Based on current laws, the tax carryforwards cannot expire. As of the balance sheet date, foreign loss carryforwards for which no deferred tax assets have been recognized totaled €13,167 thousand (previous year: €12,804 thousand) and may mostly be utilized without restriction within 1 to 5 years. No deferred tax assets were rec-

ognized for deductible temporary differences totaling €1,216 thousand (previous year: €1,866 thousand). The deferred tax expense was reduced by €4,038 thousand (previous year: €2,397 thousand) in the year under review through the use of previously unrecognized deferred tax assets relating to loss carryforwards.

For revalued defined-benefit pension obligations, deferred tax assets totaling €2,542 thousand were added (previous year: €1,360 thousand were reversed) and recognized in other comprehensive income. Reversal of the cash flow hedge reserve in the previous year due to the retirement of the hedged item resulted in the reclassification of deferred taxes to the income statement, which led to a reduction of €1,118 thousand in other comprehensive income in the previous year. The change in financial assets available for sale measured at fair value led to a change in the deferred taxes recognized in other comprehensive income (with no effect on profit or loss) in the amount of € -1 thousand (previous year: € -69 thousand).

For €12,249 thousand of temporary differences in the retained earnings of subsidiaries (previous year: €11,852 thousand), no deferred tax liabilities were recognized because of existing control pursuant to IAS 12.39.

The expected income tax expense and the reported income tax expense can be reconciled as follows:

€ THOUSAND	2016	2015 <sup>1)</sup>
<b>Earnings before taxes</b>	<b>54,161</b>	<b>34,214</b>
<b>Theoretical income tax rate: 29.00% (previous year: 28.81%)</b>	<b>15,707</b>	<b>9,856</b>
Effects from tax rate differences	-2,335	-2,110
Effects from previous years' taxes	-2,139	-3,294
Tax effects from the reversing of deferred taxes	-329	-2,319
Non-deductible expenses	1,171	1,318
Goodwill impairment	725	864
Tax-exempt income	-66	-317
Foreign withholding tax	1,450	1,018
Effects from changes in tax rates	-85	-12
Unrecognized deferred tax assets for loss carryforwards	754	1,083
Utilization of loss carryforwards	-4	-51
Deferred tax asset valuation allowances	-	1,237
Other tax effects	25	134
<b>Income tax expense as per consolidated income statement</b>	<b>14,874</b>	<b>7,407</b>

<sup>1)</sup> Prior-year figures adjusted. For details, see note (5).



The deferred tax items were attributable to the following individual balance sheet items:

€ THOUSAND	31/12/2016		31/12/2015	
	Deferred tax assets	Deferred tax liabilities	Deferred tax assets	Deferred tax liabilities
Intangible assets	348	8,173	1,359	11,313
Property, plant and equipment	243	10,420	303	7,588
Financial assets	16	483	268	873
Inventories	585	-	291	5
Receivables and other assets	129	34	400	202
Pension provisions	12,228	-	9,528	-
Other provisions	947	38	1,215	38
Liabilities	1,044	97	1,790	426
Tax loss carryforwards	10,619	-	10,783	-
<b>Subtotal</b>	<b>26,159</b>	<b>19,245</b>	<b>25,937</b>	<b>20,445</b>
of which long-term	13,872	19,153	12,826	19,612
Netting	-11,935	-11,935	-11,981	-11,981
<b>Total</b>	<b>14,224</b>	<b>7,310</b>	<b>13,956</b>	<b>8,464</b>

<sup>1)</sup> Prior-year figures adjusted. For details, see note (5).

### (35) Earnings per Share

Earnings per share are calculated according to IAS 33 (Earnings per Share) by dividing consolidated net income by the average number of ordinary shares outstanding during the reporting period. As in the previous year, the average number of shares outstanding during each financial year was 35,820,154 ordinary shares.

The diluted earnings per share ratio is equal to the basic earnings per share ratio, because H&R GmbH & Co. KGaA has not issued any potentially dilutive ordinary shares.

Accordingly, earnings per share is calculated as follows:

€ THOUSAND	2016	2015 <sup>1)</sup>
Consolidated earnings attributable to shareholders in thousand €	38,374	26,903
Ordinary shares	35,820,154	35,820,154
Earnings per share (undiluted) in €	1.07	0.75
Earnings per share (diluted) in €	1.07	0.75

<sup>1)</sup> Prior-year figures adjusted. For details, see note (5).

## Additional Notes

### (36) Segment Reporting

Pursuant to IFRS 8, the business segments for reporting purposes were determined by identifying the individual divisions whose performance is monitored as part of internal reporting as a basis for management decisions.

The summary listing of the operating segments subject to separate, internal reporting is performed in accordance with IFRS 8.12, which stipulates that all of the following must be comparable within each segment: the nature of products and services; the types of production processes; the class or category of customers for products and services as well as the methods used to market products and services.

The ChemPharm Refining segment includes both of the chemical-production sites in Germany, where lubricant refining takes place and where the production processes, organizational structures and distribution networks are closely interlinked. This segment's main products are paraffins, white oils, plasticizers, base oils, lubricants and other crude-oil-based specialty products.

The ChemPharm Sales segment encompasses foreign companies that process chemical-pharmaceutical raw materials and distribute these new products and other merchandise. These are mainly paraffins, plasticizers, wax emulsions and other crude-oil-based specialty products.

The Plastics Division develops, manufactures and sells high-precision plastic parts produced using the injection-molding method.

€ THOUSAND	Chemical-Pharmaceutical Raw Materials			
	ChemPharm Refining		ChemPharm Sales	
	2016	2015	2016	2015
External sales	558,119	602,656	328,023	320,152
Intercompany sales	9,083	11,600	-	-
Sales by segment	567,202	614,256	328,023	320,152
Depreciation, impairments and amortization	-22,688	-21,050	-19,023	-13,324
Of which impairment losses	-	-	-10,400	-4,794
Reversals of writedowns	6,047	-	-	-
Interest income	1	8	489	498
Interest expense	-5,186	-7,525	-2,661	-3,379
Earnings before income taxes <sup>1)</sup>	42,645	24,158	18,196	18,895
EBIT <sup>1)</sup>	47,829	31,674	20,368	21,776
EBITDA <sup>1)</sup>	64,470	52,724	39,391	35,100
Assets	384,517	297,640	255,532	212,345
Liabilities <sup>1)</sup>	129,346	46,516	51,192	47,241
Capital expenditures	34,658	23,976	4,479	6,707
Income from at-equity valued holdings	301	336	-	-
Shares in at-equity valued holdings	755	790	-	-

<sup>1)</sup> Prior-year figures adjusted. For details, see note (5).

“Other activities” are those associated with non-operating companies, as well as segments exempt from mandatory reporting. This includes H&R GmbH & Co. KGaA, which as the holding company is responsible for the strategic leadership of the Group companies comprising the various segments and for deciding how to efficiently allocate funds within the Group. In addition, the Other Activities segment generates income from IT services and from leasing land and buildings.

The list of shareholdings shows which segment each Group company belongs to.

The segments’ operating performance and further information on their products are described in the combined Management Report.

**Remarks Concerning Segment Data.** Intercompany sales indicate the level of sales between the segments. Sales and proceeds between the segments are always accounted for on an arm’s length basis. The segment sales figure is equal to the sum of external and internal sales.

The column “Consolidation/Reconciliation” contains eliminations of all intercompany transactions as well as intra-divisional receivables and payables.

The valuation principles for H&R GmbH & Co. KGaA’s segment reporting are based on the IFRS guidelines applied in the consolidated financial statements. The geographical distribution of external sales is calculated according to the locations of the respective customers. The assets and investments are assigned to the regions on the basis of the pertinent company’s domicile.

	Plastics		Other Activities		Reconciliation		Total	
	Plastics		Other Activities		Consolidation/Reconciliation			
	2016	2015	2016	2015	2016	2015	2016	2015
	56,511	60,099	-	-	-	-	942,653	982,907
	-	-	-	-	-9,083	-11,600	-	-
	56,511	60,099	-	-	-9,083	-11,600	942,653	982,907
	-1,328	-1,759	-201	-636	-	-	-43,240	-36,769
	-	-	-	-332	-	-	-10,400	-5,126
	-	-	-	-	-	-	6,047	-
	6	5	4,983	8,258	-5,004	-8,018	475	751
	-1,053	-1,377	-9,249	-12,876	5,005	8,020	-13,144	-17,137
	214	-3,968	-7,078	-4,863	184	-8	54,161	34,214
	1,234	-2,608	-5,439	-2,161	183	-10	64,175	48,671
	2,562	-849	-5,238	-1,525	183	-10	101,368	85,440
	19,238	30,147	152,887	128,112	-164,022	-39,485	648,152	628,759
	10,114	6,204	13,921	6,955	-57,605	236,480	146,968	343,396
	1,025	1,066	110	253	-	-	40,272	32,002
	-	-	212	-	-	-	513	336
	-	-	3,547	185	-	-	4,302	975

H&R GmbH & Co. KGaA generated €422.5 million of sales revenues (previous year: €451.2 million), or more than 10% of consolidated sales revenues, with one customer in the ChemPharm Refining segment. External sales in the Chem-Pharm Refin-

ing segment include €73.2 million of revenues from services rendered (previous year: €70.6 million). All other sales revenues are derived from the delivery of products.

## GEOGRAPHICAL INFORMATION

€ THOUSAND	Non-current assets		External sales	
	31/12/2016	31/12/2015	2016	2015
Germany	220,209	200,031	526,985	548,762
Rest of Europe	3,444	4,285	110,008	125,818
Rest of world	100,457	120,557	305,660	308,327
<b>Group</b>	<b>324,110</b>	<b>324,873</b>	<b>942,653</b>	<b>982,907</b>

## RECONCILIATION OF OPERATING RESULT TO CONSOLIDATED INCOME AFTER TAXES

€ THOUSAND	2016	2015 <sup>1)</sup>
Operating result of segments (EBITDA)	106,423	86,975
Reconciliation	-5,055	-1,535
<b>Operating result (EBITDA) of H&amp;R GmbH &amp; Co. KGaA</b>	<b>101,368</b>	<b>85,440</b>
Depreciation, impairments and amortization	-43,240	-36,769
Reversals of fixed-asset impairments	6,047	-
Interest income and income from other financing activities	3,130	2,680
Financial expenses	-13,144	-17,137
Income taxes	-14,874	-7,407
<b>Income/loss after taxes</b>	<b>39,287</b>	<b>26,807</b>

<sup>1)</sup> Prior-year figures adjusted. For details, see note (5).

### (37) Notes to the Consolidated Cash Flow Statement

The cash flow statement has been prepared in accordance with the requirements of IAS 7. It shows the origin and use of cash flows.

The statement of cash flows divides the payment streams into three areas: cash flow from operating activities, cash flow from investment activities and cash flow from financing activities.

Cash and cash equivalents include bank deposits, cash in hand and checks.

Non-cash operating expenses and earnings and gains from disposals of property, plant and equipment are eliminated from cash flow from operating activities. Interest received, interest paid and income taxes paid and outstanding are allocated to this area. Cash flow from operating activities is calculated using the indirect method.

Cash flow from investment activities includes cash investments in intangible, fixed and financial assets, including holdings consolidated for the first time in the financial year.

Cash flow from financing activities includes new borrowings and repayments of financial liabilities and liabilities for finance leases, as well as dividend payments.

The general form in which the statement of cash flows is presented and the reporting options exercised are unchanged from the previous period.

### (38) Financial Instruments (38.1) General Information

On the assets side, financial instruments primarily comprise cash and cash equivalents, trade accounts receivable and other financial assets. Financial assets available for sale are reported at fair value. Other financial assets are reported at amortized cost. The fair values of financial assets available for sale are derived from stock market prices or are calculated on the basis of recognized valuation methods. In the case of other financial assets, it is assumed that the fair value is equal to the carrying amount.

On the liabilities side, financial instruments mainly include liabilities valued at acquisition cost. The portfolio of financial instruments is reported in the balance sheet. The level of the financial assets corresponds to the maximum

default risk. If default risks of financial assets can be identified, such risks are recognized in the form of impairment losses.

As an international company, the H&R Group is exposed to risks relating to prices of commodities and raw materials, currency fluctuations and changes in interest rates in the course of its ordinary business activities. Details concerning the risk management system used to deal with these risks can be found in note (47), Risk Management Policy, Capital Management and Hedging Measures.

### (38.2) Information Concerning Derivatives

Derivative financial instruments are employed to hedge foreign-exchange risks from the operating business and risks from changes in interest rates related to financing transactions. The types of instruments employed are primarily foreign currency forward transactions and interest-rate hedging transactions (swaps).

There were no hedge accounting items to report as of 31 December 2016.

The following tables show the reported fair values of the various derivative financial instruments as of 31 December 2016 and 31 December 2015.

#### NOMINAL AND MARKET VALUES OF DERIVATIVES IN 2016

	Nominal value	Currency	Maturity	Carrying amounts 31/12/2016 € thousand
Interest-rate swap	€ thousand 40,000	€	until 2018	-2,509
Currency forward contract	US\$ thousand 15,360	\$	until 2017	-27

#### NOMINAL AND MARKET VALUES OF DERIVATIVES IN 2015

	Nominal value	Currency	Maturity	Carrying amounts 31/12/2015 € thousand
Interest-rate swap	€ thousand 40,000	€	until 2016	-1,133
Interest-rate swap	€ thousand 40,000	€	until 2018	-3,604
Currency forward contract	US\$ thousand 10,306	\$	until 2016	-6

The interest-rate swaps formed part of a hedge. The amount recognized in other comprehensive income up to the date when the hedging instrument expired was gradually reversed through profit or loss over the remaining life of the derivatives. Because the hedged item was retired in the previous year, the entire remaining amount was reclassified to the period's income statement, leading to an expense of €3,915 thousand in 2015. Similarly, the corresponding pro-rata amount of deferred taxes totaling €1,118 thousand was recognized as tax income. All subsequent changes in the fair value of the derivatives are immediately recognized in profit or loss.

In financial year 2016, the net profit on financial instruments measured at fair value through profit or loss totaled €2,207 thousand (previous year: €1,916 thousand).

**(38.3) Maturity Analysis**

The H&R Group's liquidity risk consists of contractually agreed obligations to make future interest and redemption payments on financial liabilities and derivative financial instruments.

The maturities of these undiscounted payment streams are shown in the table below:

**2016**

€ THOUSAND	Carrying amount	2017 Cash flows		2018 Cash flows	
		Interest	Redemption	Interest	Redemption
Trade accounts payable	77,234	-	77,234	-	-
Liabilities to banks	100,228	2,598	38,187	2,107	28,313
Finance lease liabilities	17	-	17	-	-
Liabilities arising out of derivatives with no hedge accounting items	2,537	-	1,337	-	1,200
Other financial liabilities	11,038	37	10,297	-	739

**2016**

€ THOUSAND	2019-2021 Cash flows		2022-2026 Cash flows		Cash flows 2027 and beyond	
	Interest	Redemption	Interest	Redemption	Interest	Redemption
Trade accounts payable	-	-	-	-	-	-
Liabilities to banks	2,103	25,541	333	8,187	-	-
Finance lease liabilities	-	-	-	-	-	-
Liabilities arising out of derivatives with no hedge accounting items	-	-	-	-	-	-
Other financial liabilities	-	-	-	-	-	2

**2015**

€ THOUSAND	Carrying amount	2016 Cash flows		2017 Cash flows	
		Interest	Redemption	Interest	Redemption
Trade accounts payable	53,343	-	53,343	-	-
Liabilities to banks	161,000	4,602	82,752	3,484	12,513
Finance lease liabilities	374	-	357	-	17
Liabilities arising out of derivatives with no hedge accounting items	4,742	-	2,374	-	1,184
Other financial liabilities	7,090	53	7,088	-	-

**2015**

€ THOUSAND	2018-2020 Cash flows		2021-2025 Cash flows		Cash flows 2026 and beyond	
	Interest	Redemption	Interest	Redemption	Interest	Redemption
Trade accounts payable	-	-	-	-	-	-
Liabilities to banks	3,641	53,455	722	12,280	-	-
Finance lease liabilities	-	-	-	-	-	-
Liabilities arising out of derivatives with no hedge accounting items	-	1,184	-	-	-	-
Other financial liabilities	-	-	-	2	-	-

### (38.4) Information on Categories of Financial Instruments

According to IFRS 7, financial assets and liabilities have to be grouped in such a way that a distinction can be made between financial instruments stated at fair value and those valued at amortized cost.

The following table shows the carrying amounts of the individual financial assets and liabilities for each individual financial instrument category. Together with the disclosure on the financial instruments measured at fair value, the reconciliation against the balance sheet items gives the reader an insight into the type and nature of the financial instruments held by H&R GmbH & Co. KGaA.

31/12/2016

€ THOUSAND	Valuation category according to IAS 39	Carrying amounts	Balance sheet valuation acc. to IAS 39			Carrying amount according to IAS 17	Fair value (for information)
			Amortized cost	Fair value without impact on net income	Fair value with impact on net income		
<b>Assets</b>							
Cash and cash equivalents	LaR	57,999	57,999				57,999
Trade accounts receivable	LaR	109,224	109,224				109,224
Other financial assets							
Loans and receivables	LaR	4,289	4,289				4,289
Other short-term securities	FAHT	116			116		
Financial assets available for sale	AfS	2,129	1,052	1,077			
<b>Liabilities</b>							
Trade accounts payable	FLAC	77,234	77,234				77,234
Liabilities to banks	FLAC	100,228	100,228				103,947
Other financial liabilities							
Finance lease liabilities		17				17	
Derivatives without hedge accounting item	FLHT	2,537			2,537		
Other financial liabilities	FLAC	11,039	11,039				11,039
Loans and receivables	LaR	171,442	171,442				171,442
Financial assets available for sale	AfS	2,129	1,052	1,077			
Financial assets held for trading	FAHT	116			116		
Financial liabilities measured at amortized cost	FLAC	188,501	188,501				188,501
Financial liabilities held for trading	FLHT	2,537			2,537		

31/12/2015

€ THOUSAND	Valuation category according to IAS 39	Carrying amounts	Balance sheet valuation acc. to IAS 39		Fair value with impact on net income	Fair value without impact on net income	Carrying amount according to IAS 17	Fair value (for information)
			Amortized cost					
<b>Assets</b>								
Cash and cash equivalents	LaR	79,274	79,274					79,274
Trade accounts receivable	LaR	98,838	98,838					98,838
Other financial assets								
Loans and receivables	LaR	3,592	3,592					3,592
Other short-term securities	FAHfT	152				152		
Financial assets available for sale	AfS	2,127	1,055	1,072				
<b>Liabilities</b>								
Trade accounts payable	FLAC	53,343	53,343					53,343
Liabilities to banks	FLAC	161,000	161,000					168,573
Other financial liabilities								
Finance lease liabilities		374					374	
Derivatives without hedge accounting item	FLHfT	4,743				4,743		
Other financial liabilities	FLAC	7,090	7,090					7,090
Loans and receivables	LaR	181,704	181,704					181,704
Financial assets available for sale	AfS	2,127	1,055	1,072				
Financial assets held for trading	FAHfT	152				152		
Financial liabilities measured at amortized cost	FLAC	221,433	221,433					221,433
Financial liabilities held for trading	FLHfT	4,743				4,743		

Since trade accounts receivable, trade accounts payable, other financial assets, other financial liabilities and cash and cash equivalents generally have short-term maturities, their carrying amounts do not deviate significantly from their fair values on the reporting date. The fair values

of other long-term receivables and liabilities with remaining maturities of more than one year are equal to the present value of the payments associated with the assets, subject to the relevant current discount rates.



**Net Results by Valuation Category.** The expenses, income, gains and losses from financial instruments can be broken down into the following categories:

2016					
€ THOUSAND	Loans and receivables	Financial assets held for trading	Financial liabilities held for trading	Financial liabilities measured at amortized cost	Total
Interest income	457	1	-	-	458
Interest expense	-	-	-2,510	-8,128	-10,638
Impairments/reversals of impairments	56	-	-	-	56
Other financial expenses/income	478	-	2,207	-164	2,521
<b>Net income/(loss)</b>	<b>991</b>	<b>1</b>	<b>-303</b>	<b>-8,292</b>	<b>-7,603</b>

2015					
€ THOUSAND	Loans and receivables	Financial assets held for trading	Financial liabilities held for trading	Financial liabilities measured at amortized cost	Total
Interest income	750	1	-	-	751
Interest expense	-	-	-2,437	-8,401	-10,838
Impairment losses	-173	-	-	-	-173
Other financial expenses/income	-153	-	-2,012	29	-2,136
<b>Net income/(loss)</b>	<b>424</b>	<b>1</b>	<b>-4,449</b>	<b>-8,372</b>	<b>-12,396</b>

There were no reclassifications to the income statement relating to financial instruments available for sale; gains recognized in other comprehensive income totaled €1 thousand (previous year: loss of €1 thousand). In the previous year, other financial expenses relating to assets and liabilities held for trading included changes in the fair values of derivative financial instruments and losses realized in connection with cash flow hedges totaling €3,915 thousand, which were reclassified from other comprehensive income to the income statement.

### (38.5) Additional Information Concerning Financial Instruments

GAUDLITZ GmbH holds financial assets available for sale in the form of securities that were stated at fair value as of the reporting date. The reported market value was €1,075 thousand (previous year: €1,072 thousand).

At the first level, fair value measurement is based on quoted (non-adjusted) prices in active markets for similar assets or liabilities. If this is not possible, second-level measurement is based on observable market transactions for comparable assets or liabilities. At the third and last level, fair values are measured by models that use parameters that are based on non-observable market data to value assets and liabilities.

The financial instruments of H&R GmbH & Co. KGaA measured at fair value are allocated to the aforementioned levels by category, as follows:

€ THOUSAND	31/12/2016			31/12/2015		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
<b>Assets</b>						
Financial assets available for sale	1,075	-	-	1,072	-	-
Financial assets held for trading	116	-	-	152	-	-
<b>Total</b>	<b>1,191</b>	<b>-</b>	<b>-</b>	<b>1,224</b>	<b>-</b>	<b>-</b>
<b>Liabilities</b>						
Derivatives without hedge accounting item	-	2,509	-	-	4,743	-
<b>Total</b>	<b>-</b>	<b>2,509</b>	<b>-</b>	<b>-</b>	<b>4,743</b>	<b>-</b>

The Level 2 financial liabilities are interest-rate swaps carried on the balance sheet at their fair value. The fair values are determined using observable market interest-rate curves. There were no reclassifications among the individual levels in financial year 2016.

The following table shows the allocation of the financial instruments' fair values, which are reported on the balance sheet at their carrying amounts, to the different levels:

#### ALLOCATION OF FAIR VALUES OF FINANCIAL INSTRUMENTS

€ THOUSAND	31/12/2016			31/12/2015		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
<b>Liabilities</b>						
Liabilities to banks	-	103,947	-	-	168,573	-

The fair values are determined using observable market interest-rate curves. The expected cash flows were discounted accordingly. There were no reclassifications among the individual levels in financial year 2016.

No offsetting between financial assets and financial liabilities took place as there are no netting agreements.

In the operating business, the outstanding balances are continuously monitored at the divisional level, i.e., locally. Insofar as the Hansen & Rosenthal Group handles sales and distribution, details are also integrated into its monitoring system. Default risks are addressed through individual impairments and global impairments. Non-recoverable receivables are derecognized and the impairment recorded in the allowance for doubt-

ful accounts (contra-asset account) is reversed. When a doubtful receivable is collected, the previous impairment is reversed. The maximum default risk is reflected in the carrying amounts of the financial assets reported on the balance sheet, including free-standing derivatives with a positive market value. As of the reporting date, there were no material agreements in place that reduce the maximum default risk.

#### (39) Purchase Commitments

Capital expenditures for which contractual obligations existed on the reporting date but which have not yet been incurred totaled €13,567 thousand as of 31 December 2016 (previous year: €6,099 thousand).

#### (40) Contingent Liabilities

On the balance sheet date, H&R GmbH & Co. KGaA had joint liability for pension commitments totaling €50 thousand (previous year: €52 thousand).

A portion of the operating premises at the Hamburg refinery site is rented. Obligations to clean up and restore the property to its original condition will apply when the rental agreement expires. In the very unlikely event that the lessor gives notice of extraordinary termination or does not renew the long-term rental agreement, this would give rise to claims against the lessor for compensation; as a result, no outflow of resources is assumed and therefore no provision has been set up to cover the obligations to restore the property to its original condition. This situation is regularly monitored by the management.

In connection with deliveries of lubricants, the tax authorities are currently investigating the extent to which a tax exemption applies to certain deliveries or whether value-added taxes must be billed retroactively. The total potential risk associated with unpaid value-added tax is €8.9 million (previous year: €8.9 million). However, there are equivalent contingent receivable claims arising from rights of recourse against customers. H&R estimates the probability of occurrence at 20% in each case, which is equal to a probability-weighted contingent liability of €1.78 million (previous year: €1.78 million) and a probability-weighted contingent asset of the same amount.

#### (41) Other Financial Obligations

Financial obligations under long-term rental and lease agreements and other obligations stretching over several years are shown in the following table (nominal amounts):

€ THOUSAND	31/12/2016	31/12/2015
Due within one year	10,223	8,977
Due > 1 year and < 5 years	16,368	12,353
Due > 5 years	23,862	21,350
<b>Total</b>	<b>50,453</b>	<b>42,680</b>

Other financial liabilities at the Hamburg site mainly include a long-term lease agreement with Hamburg Port Authority, Hamburg.

In addition, other financial liabilities at the Salzb-  
bergen location include contracts for the delivery of natural gas, compressed air and nitrogen as well as maintenance and servicing contracts for the process control system.

Further information about finance and operating lease agreements can be found in note (12).

## (42) Governance Bodies of H&amp;R GmbH &amp; Co. KGaA

**MANAGEMENT TEAM OF H&R KOMPLEMENTÄR GMBH**

	Membership of Supervisory and Advisory Boards
<b>Niels H. Hansen</b> Chairman of the Management Team Hamburg	-
<b>Detlev Wösten</b> Member of the Management Team Buchholz	Member of the Supervisory Board of Glasgaard-AG, Lollar/Salzböden

**SUPERVISORY BOARD OF H&R GMBH UND CO. KGAA**

	Membership of Supervisory and Advisory Boards
<b>Dr. Joachim Girg</b> Chairman of the Supervisory Board Managing Director of H&R Beteiligung GmbH, Hamburg	Member of the Supervisory Board of Hamburger Getreide- Lagerhaus Aktiengesellschaft, Hamburg (until 21/12/2016)
<b>Roland Chmiel</b> Deputy Chairman – CPA/Chartered Accountant, Partner in the law and accounting firm Weiss Walter Fischer-Zernin, Munich	Member of the Supervisory Board of Togonal AG, Munich
<b>Nils Hansen</b> Managing Partner of H&R Group companies, Hamburg	-
<b>Sven Hansen</b> Managing Director of Tudapetrol Mineralölerzeugnisse Nils Hansen KG (since 1/8/2016)	-
<b>Dr. Rolf Schwedhelm</b> Tax Lawyer and Partner at Streck Mack Schwedhelm, Cologne	Chairman of the Supervisory Board of Deutsche Anwalt Akademie Gesellschaft für Aus- und Fortbildung sowie Serviceleistungen mbH (German Lawyer Academy Society for Education, Training and Services), Berlin
<b>Dr.-Ing. Peter J. Seifried</b> Chemical Engineer, Independent Consultant (since 19/5/2015)	Chairman of the Executive Board of the German Lubricants Industry Association (Verband der Schmierstoffindustrie e.V./ VSI) Elected Member of the Executive Board of UNITI, the German Association of Small and Medium-Sized Lubricant Manufac- turers and Retailers (Bundesverband mittelständischer Mineral- ölonternehmen e.V.) Member of the Board of Trustees and the Board of Directors of the Oest Group
<b>Dr. Hartmut Schütter</b> Consulting Engineer, Schwedt/Oder	-

**SUPERVISORY BOARD OF H&R GMBH UND CO. KGAA (EMPLOYEE REPRESENTATIVES)**

	Membership of Supervisory and Advisory Boards
<b>Reinhold Grothus</b> Works Council Chairman at H&R ChemPharm GmbH, Salzbergen	-
<b>Matthias Erl</b> GAUDLITZ GmbH, Coburg (since 1/2/2016)	-
<b>Rainer Metzner</b> Sales Manager – Medical, Works Council Chair-man at GAUDLITZ GmbH, Coburg (until 31/1/2016)	-
<b>Harald Januszewski</b> GAUDLITZ GmbH, Coburg	-

### (43) Disclosures of Relationships with Related Parties according to IAS 24

Transactions with related parties were carried out on arm's-length terms. There were no transactions of material significance with unconsolidated subsidiaries.

The following goods and services have been rendered for related companies and persons who might exercise a significant degree of influence, or have been utilized by them:

#### TRANSACTIONS WITH HANSEN & ROSENTHAL

€ THOUSAND	Provided to Hansen & Rosenthal		Received from Hansen & Rosenthal	
	2016	2015	2016	2015
Supplies of chemical/pharmaceutical products	349,067	377,662	86,153	94,498
Ancillary costs from delivery transactions (freight costs, road tolls, etc.)	-	-	3,242	4,309
Commission fees	146	155	1,092	1,283
Other services and passed-through third-party costs	78,149	74,757	4,025	2,899

All companies of the majority shareholder Nils Hansen are pooled under Hansen & Rosenthal (H&R).

The supply of goods for chemical-pharmaceutical products from the Salzbergen site takes place under a long-term distribution and supply contract, by which the relevant Hansen & Rosenthal company purchases the products and then resells them to its end customers in its own name and

for its own account. In addition, Hansen & Rosenthal KG receives a commission fee for deliveries based on a long-term commission contract for marketing certain products from the Hamburg site. Moreover, H&R Group subsidiaries provide production, IT and staffing services to the Hansen & Rosenthal Group.

The following receivables and liabilities existed as of 31 December 2016:

#### RECEIVABLES DUE FROM AND LIABILITIES OWED TO HANSEN & ROSENTHAL

€ THOUSAND	Receivables due from Hansen & Rosenthal		Liabilities owed to Hansen & Rosenthal	
	31/12/2016	31/12/2015	31/12/2016	31/12/2015
Goods and services	38,570	22,049	8,045	12,947
Other services	9,026	23,419	6,981	8,507
<b>Total</b>	<b>47,596</b>	<b>45,468</b>	<b>15,026</b>	<b>21,454</b>

Other receivables mainly include receivables from the commission business (€22,136 thousand; previous year: €23,419 thousand), where Hansen & Rosenthal, as commission agent, receives payments from customers and forwards them to the H&R Group.

The following goods and services were provided to or utilized by joint ventures:

#### TRANSACTIONS WITH JOINT VENTURES

€ THOUSAND	Provided to joint ventures		Received from joint ventures	
	2016	2015	2016	2015
Purchase of hydrogen and steam	-	-	1,702	1,976
Interest income	13	16	-	-
Rental income	41	41	-	-
Services	806	808	4,466	4,551
<b>Total</b>	<b>860</b>	<b>865</b>	<b>6,168</b>	<b>6,527</b>

The following receivables and liabilities existed as of 31 December 2016:

#### RECEIVABLES DUE FROM AND LIABILITIES OWED TO JOINT VENTURES

€ THOUSAND	Receivables due from joint ventures		Liabilities owed to joint ventures	
	31/12/2016	31/12/2015	31/12/2016	31/12/2015
Goods and services	185	473	169	207
Other services	551	587	-	-
<b>Total</b>	<b>736</b>	<b>1,060</b>	<b>169</b>	<b>207</b>

**Supervisory Board and Management Team.** For performing their duties, the Management Team (Executive Board of H&R AG until 31/7/2016, plus Management Team of H&R Komplementär GmbH from 1/8/2016) received remuneration totaling €1,151 thousand (previous year: €1,056 thousand) for the financial year. Of this sum, the performance-related components of the remuneration accounted for €472 thousand (previous year: €450 thousand) and non-performance-related components accounted for €679 thousand (previous year: €606 thousand). The performance-related remuneration includes a sustainability component. Members of the Management Team receive no share-based remuneration and no pension commitments. There were no expenses associated with terminating the employment agreements of members of the Executive Board and/or the Management Team. As of the reporting date, there was a liability of €127 thousand owed to H&R Komplementär GmbH.

Former members of the Management Team and their survivors received payments totaling €207 thousand during the financial year (previous

year: €202 thousand). For former members of the Management Team and their survivors, pension commitments amounted to €3,616 thousand (previous year: €3,399 thousand).

Remuneration for members of the Supervisory Board included basic remuneration plus additional compensation for committee work and fees for attending meetings and totaled €465 thousand (previous year: €391 thousand).

In addition to their Supervisory Board remuneration, the employee representatives on the Supervisory Board receive fees that are not related to their work for the Supervisory Board. These fees totaled €198 thousand in financial year 2016 (previous year: €175 thousand).

As in the previous year, no members of the Management Team or members of the Supervisory Board had received loans from the company as of 31 December 2016.

Data on the remuneration of individual members of the Management Team and the Supervisory

Board are provided in the Remuneration Report, which is an integral part of the combined management report. The Remuneration Report can be found in the Chapter “Other Statutorily Required Disclosures” on p. 60.

In October of 2012, H&R GmbH & Co. KGaA established an Advisory Board which advises the Management Team. Expenses of €127 thousand were incurred for the work of the Advisory Board in 2016 (previous year: €120 thousand). In 2016, fees paid to members of the governing bodies of H&R GmbH & Co. KGaA within the scope of consultant agreements amounted to €98 thousand (previous year: €105 thousand). As of 31 December 2016, liabilities owed to members of the governing bodies totaled €550 thousand (previous year: €388 thousand).

**(44) Statement of Compliance Pursuant to Section 161 of the German Stock Corporation Act (AktG)**

The Statement of Compliance with the German Corporate Governance Code required by Article 161 of the German Companies Act (AktG) was submitted in December 2016. It is published on the Internet at [www.hur.com](http://www.hur.com) and is included in this annual report.

**(45) Group Audit Fees**

The following fees for the services provided by Warth & Klein Grant Thornton AG Wirtschaftsprüfungsgesellschaft were calculated for the financial year:

€ THOUSAND	31/12/2016	31/12/2015
Audits	327	332
Other certification or valuation services	4	49
Tax advisory services	-	-
Other services	-	-
<b>Total</b>	<b>331</b>	<b>381</b>

Audit fees include the amounts paid for auditing the consolidated financial statements and for the statutory audits of the financial statements of H&R GmbH & Co. KGaA and its subsidiaries.

**(46) Exemption from Disclosure under Article 264, Paragraph 3 HGB**

For the following fully consolidated subsidiaries, the company has elected to make use of the opportunity to be exempted from the disclosure requirement in accordance with Article 264, Paragraph 3, in conjunction with Article 325 of the German Commercial Code (HGB), and partly made use of concessions regarding audits and the preparation of financial statements:

- H&R Ölwerke Schindler GmbH
- H&R Chemisch-Pharmazeutische Spezialitäten GmbH
- GAUDLITZ GmbH
- H&R Lube Blending GmbH
- H&R ChemPharm GmbH
- H&R Lube Trading GmbH
- H&R International GmbH
- H&R InfoTech GmbH
- H&R South Africa GmbH
- SYTHENGRUND Wasagchemie Grundstücksverwertungsgesellschaft Haltern mbH
- H&R Group Services GmbH

**(47) Risk-Management Policy, Capital Management and Safeguards**

The operating business and the financing transactions of the H&R Group, as a company with international operations, are subject to different financial risks. In particular, these include liquidity risk and counterparty default risk, as well as risks associated with fluctuations in raw-material prices, currency exchange rates and interest rates. These risks are limited through systematic risk-management measures, including hedging transactions.

H&R GmbH & Co. KGaA has implemented a Group-wide risk-management system which identifies, analyzes and measures these risks so that informed decisions can then be made about actions to take to prevent or limit such risks. The key components of the risk-management system are the planning and controlling process, internal Group rules and regulations and the reporting function. The company holds regular conferences on business performance at which the results of operations and potential risks and opportunities are highlighted and targets and control meas-

ures are agreed. Derivative financial instruments are also utilized in this context. The purchase of derivative financial instruments for speculative purposes is not permitted. All transactions with derivative financial instruments must be approved by the Management Team.

The Group companies are subject to strict risk management. Dealing authorizations, responsibilities and supervision procedures are established on a binding basis in internal guidelines. In this respect, derivative financial instruments may not, as a matter of principle, be implemented for speculative purposes, but instead serve to hedge against risks in connection with the operating business. Credit risk exposure to contractual partners is investigated systematically when a contract is signed and is monitored on an ongoing basis. In addition, credit risk is reduced using appropriate types of collateral.

The Management Team defines the Group's equity ratio as the basic parameter for capital management, which in turn is aimed at ensuring that the Group will continue to be able to cover its financing needs for capital expenditures and debt service obligations in the future. In this context, H&R GmbH & Co. KGaA strives to maintain a capital structure that optimizes the costs of capital provided both by lenders and by investors. Further important control parameters applicable to our capital structure are net debt and net gearing, which refers to the ratio between net debt and equity. These ratios are constantly monitored by the Management Team.

The borrower's note loans, the syndicated loans and the bilateral loans require the company to meet financial covenants relating to its capital base and the ratio of net debt to the operating result (EBITDA).

#### CAPITAL STRUCTURE

€ MILLION	2016	2015 <sup>1)</sup>	2014 <sup>1)</sup>	2013	2012
Net debt/EBITDA	0.41	1.00	3.47	2.24	2.97
Equity ratio in %	49.0	45.4	35.1	31.8	34.2
Net gearing in %	15.1	31.4	47.2	42.2	73.4

<sup>1)</sup> Prior-year figures adjusted. For details, see note (5).

**Liquidity Risks.** The H&R Group ensures that it has sufficient liquidity by monitoring its liquidity status daily, by maintaining financing facilities that have not been utilized in full and by refinancing expiring loan agreements in a timely manner. Compliance with financial covenants is a crucial part of the financing agreements. If these covenants were to be breached and could not be renegotiated or if alternative sources of financing could not be found on short notice, this would jeopardize the continued existence of the Group. H&R GmbH & Co. KGaA counters this risk by maintaining a financing structure that includes sufficient equity, as well as through measures designed to ensure the sustainability and stability of earnings, such as switching the Salzbergen site to a contract-processing model.

**Default Risks.** Our risks from delays in payment and/or defaults on the part of our customers are limited by our broadly diversified customer base and the low level of dependence on individual debtors. Strict receivables management by our sales/distribution partner, Hansen & Rosenthal, reduces these risks even further. Based on the information currently available, existing del credere risks are covered through impairment losses.

The default risk for banks with which we have arranged credit lines, entered into hedging transactions or invested funds has increased since the onset of the financial crisis. We counter this risk by only entering into financial transactions with top-rated banks and by spreading larger transactions among several banks.



**Raw Materials Price Risk.** The H&R Group is exposed to price-fluctuation risks in, among other things, purchases of raw materials, particularly purchases of atmospheric residue and vacuum gas oil. Most supply agreements concluded with customers for specialty products manufactured by the Chemical-Pharmaceutical Raw Materials Division's specialty refineries specify fixed prices for a period of three months at most. Moreover, the production process at a specialty refinery can require up to eight weeks, from the date on which raw materials arrive to the date when the finished product has been manufactured. This means that rapid increases in raw materials costs cannot be passed on to the markets immediately, but only with a time delay. The relevant price trends are constantly monitored and analyzed. Changes in prices of raw materials can result in the recognition of "windfall losses" and "windfall profits" which generally balance out over time.

**Foreign Currency Risks.** The international orientation of the H&R Group means that its operating activities give rise, among other things, to currency risks resulting from fluctuations between the company's currency and other currencies. In particular, these are encountered in the area of procurement, as a result of US dollar transactions. In the trading business, these risks are hedged through forward transactions. Hedging is not performed in the production process, as the length of time entailed in the production process means that the intended hedge may be reversed by the time the currency forward transactions are concluded.

For the presentation of market risks, IFRS 7 requires sensitivity analyses showing the impact of hypothetical changes in relevant risk variables on earnings and equity. It is assumed that the portfolio as of the reporting date is representative of holdings for the entire year.

The following table shows the net exposure in the most significant foreign currency as of the balance sheet date:

NET EXPOSURE	
€ THOUSAND	US\$
31/12/2016	-10,512
31/12/2015	-4,210

The net exposure consists of balance sheet items in the respective currency, which is not the functional currency, less derivatives used to hedge the foreign-currency effects of the respective balance sheet position.

The following table shows the effects on the income statement and on equity of exchange-rate fluctuations in the currencies most significant to the H&R Group. The effects of projected cash flows for the next twelve months are not included.

€ THOUSAND	Impact on:	31/12/2015	31/12/2016
		USD	USD
Exchange rate +10 %	Consolidated Income Statement	956	383
	Shareholders' equity	921	376
Exchange rate -10 %	Consolidated Income Statement	-1,168	-468
	Shareholders' equity	-1,125	-460

**Interest-Rate Risks.** The H&R Group employs variable-interest-rate facilities, among other things, as part of its financing activities. Interest-rate swaps are used as interest-hedging instruments to limit risks arising from changes in market interest rates. Such transactions may also be entered into on a decentralized basis within the H&R Group, but require the prior approval of the Management Team.

A sensitivity analysis for interest-rate risk is performed on financial liabilities with variable interest rates. As of the 31 December 2016 balance

sheet date, a hypothetical 0.5% (or 50 basis-point) increase in the interest rate would have increased interest expense by €200 thousand (previous year: €413 thousand) and would have reduced the amount of equity shown accordingly.

#### (48) Events after the Reporting Date

During the period between 31 December 2016 and the date of approval of the consolidated financial statements, there were no events with a material impact on the net assets, financial position or results of operations of H&R GmbH & Co. KGAA.

#### (49) Approval of the Financial Statements

The financial statements were approved and released for publication by the Management Team on 1 March 2017.

Salzbergen, 1 March 2017

The Management Team



**Niels H. Hansen**  
Chairman of the  
Management Team



**Detlev Wösten**  
Member of the  
Management Team

## Attestation by the Legal Representatives

We hereby affirm that, to the best of our knowledge and according to the applicable accounting standards, the consolidated financial statements convey a true picture of the net assets, financial position and results of operations of the Group and that the combined management report presents the course of business, including the Group's operating results and situation, in a way that presents a true and fair view while describing the material opportunities for and risks to the Group's expected development.

Salzbergen, 1 March 2017

The Management Team



**Niels H. Hansen**  
Chairman of the  
Management Team



**Detlev Wösten**  
Member of the  
Management Team

## Auditor's Opinion

We have audited the consolidated financial statements prepared by H&R GmbH & Co. KGaA – comprising a consolidated statement of financial position, consolidated statement of profit or loss and other comprehensive income for the period, consolidated statement of changes in equity, consolidated statement of cash flows and notes to the consolidated financial statements – and the combined management report of H&R GmbH & Co. KGaA and the group for the financial year from 1 January to 31 December 2016. The preparation of the consolidated financial statements and the combined management report in accordance with IFRS, as adopted by the EU, and with the additional requirements of the German commercial law pursuant to section 315a paragraph 1 HGB are the responsibility of the parent company's management. Our responsibility is to express an opinion on the consolidated financial statements and the combined management report based on our audit.

We conducted our audit of the consolidated financial statements in accordance with paragraph 317 HGB 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 combined 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 combined 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 the combined 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 of H&R GmbH & Co. KGaA for the financial year from 1 January to 31 December 2016 comply with IFRS, as adopted by the EU, and the additional requirements of the German commercial law pursuant to § 315a Abs. 1 HGB 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 combined management report of H&R GmbH & Co. KGaA and the group is consistent with the consolidated financial statements, complies with the legal requirements, as a whole provides a suitable view of the Group's position and suitable presents the opportunities and risks of future development.

Hamburg, 1 March 2017

Warth & Klein Grant Thornton AG  
Wirtschaftsprüfungsgesellschaft

<b>Dr. Senger</b>	<b>von Oertzen</b>
<i>Wirtschaftsprüfer</i>	<i>Wirtschaftsprüfer</i>
<i>(German Public Auditor)</i>	<i>(German Public Auditor)</i>

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Contact, Imprint, Disclaimer

## Glossary

### ASEAN-5

Association of Southeast Asian Nations (Malaysia, Indonesia, Thailand, Singapore and the Philippines).

### ATRES

Short for Atmospheric Residue, also known as “long residue”. It is a by-product of crude-oil distillation and is used as a feedstock by H&R to manufacture primary products at its refineries.

### Barrel

Unit of measurement for liquid; in relation to oil products, a barrel contains 159 litres.

### Blending

In the production of lubricants, blending refers to the mixing of oil and additives to form automotive and industrial lubricants.

### Brent

Leading type of oil from the North Sea.

### Cash flow

Key financial figure: cash balance of inflow and outflow of funds; split between current operations, investment activity and financing activity.

### CONCAWE Standard

Safety figures LWIF (lost workday injury frequency) and LWIS (lost workday injury severity). The LWIF figure shows the frequency of accidents (number of work accidents with at least 1 day lost for every 1 million working hours). The LWIS figure shows the severity of accidents (number of days lost per work accident).

### Earnings per Share

Key financial figure: net income for year divided by the weighted average number of outstanding shares; shows how high the profit is for each share.

### EBITDA

(Earnings before interest, taxes, depreciation and amortisation) Key financial figure: defined as consolidated earnings before interest earnings, taxes on income as well as depreciation on tangible assets and amortisation of goodwill. In the case of H&R, operation income.

### Equity Ratio

Key financial figure: shows the ratio of equity to total assets and represents the finance structure.

### Free cash flow

Key performance indicator: the sum of cash flow from operating activities and cash flow from investing activities; provides information about the liquid funds held after capital expenditure has been deducted.

### German Corporate Governance Code

Recommendations and suggestions on conduct from the governmental commission of the same name on corporate management and supervision for listed companies in Germany.

### Group I Refinery

Refineries can be divided into various groups (Groups I to IV). This is done by reference to various properties of the base oil, such as the sulphur content and the viscosity index.

### Net Gearing Ratio

Key performance indicator: the ratio of net financial debt to equity; provides an insight into the financing structure.

### Net Working Capital

Key performance indicator: net working capital is defined as trade receivables plus inventories less trade payables.

**Paraffin**

Products of special refinery production: paraffin is oil-based wax which is used in over 100 different industries and sectors for manufacturing a wide variety of products.

**Plasticisers**

Product of special refinery production: extracts are used as softening agents in the rubber and caoutchouc industry (in particular in tyre production).

**Propane Deasphalting Unit (PDU)**

Extraction unit which produces deasphalted oil and asphalt from vacuum residue using propane as solvent.

**REACH**

Registration, Evaluation, Authorization and Restriction of Chemicals. The acronym stands for the name of the EC regulation on chemical substances.

**Return on Capital Employed (ROCE)**

Key performance indicator: the ratio of EBIT to average capital employed (equity plus net financial debt, pension provisions and other non-current provisions); crucial for value-based corporate management at H&R AG.

**Return on Equity**

Key performance indicator: the ratio of profit (consolidated net profit before minority interests) to average equity; provides information about the amount of interest paid on capital from equity providers.

**Special Refinery Activities**

Production of highly refined raw materials for the chemical and pharmaceutical industries using oil-based materials.

**Syndicated Loan**

Granting of a fixed credit line for a specified period of time by a consortium of several banks.

**Tool**

Designation for the injection mould in the manufacture of plastic parts.

**Value Creation**

Increase in value of goods used in the production process.

**VGO**

Vacuum-gas oil, like ATRES, is created from the process of refining crude oil and is also used as an input material for H&R's refineries.

**WACC**

Weighted Average Cost of Capital

**White Oil**

Product of special refinery production: highly refined and purified oil which is used especially as an input material in the cosmetics and polystyrene industries.

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## Six-Year Overview H&amp;R Group Key Figures (IFRS)

T. 33

		2016	2015 <sup>2)</sup>	2014	2013	2012	2011
Sales volume (main products) <sup>1)</sup>	KT	849	762	697	734	839	872
Revenue	€ MILLION	942.7	982.9	1,058.60	1,214.40	1,228.90	1,209.50
Operating result (EBITDA)	€ MILLION	101.4	85.4	31.5	32.6	49.4	89.1
EBIT	€ MILLION	64.2	48.7	5.8	-4.1	25.5	68.1
Earnings before taxes	€ MILLION	54.2	34.2	-7.8	-16.8	1.6	54.5
Consolidated earnings before minority interests	€ MILLION	39.3	26.8	-15.6	-14	0.4	38.5
Group profit/(loss) after minority interests	€ MILLION	38.4	26.9	-15.4	-14	0.5	38.5
Consolidated earnings per share (undiluted)	€	1.07	0.75	-0.49	-0.47	0.02	1.29
Dividend per share	€	0	0	0	0	0	0.6
Market capitalisation as at 31/12	€ MILLION	535.5	330.9	270.1	260.7	354.4	496.1
Balance sheet total	€ MILLION	648.2	628.8	706.6	594.7	623.1	636.6
Net Working Capital	€ MILLION	153.4	139.5	127.4	104.2	188.9	265
Equity	€ MILLION	317.4	285.4	248.9	189.2	213.3	236.7
Equity capital share	%	49.0	45.4	35.2	31.8	34.2	37.2
Net indebtedness	€ MILLION	42.1	86.7	107.3	73.1	146.3	183.4
Net gearing	%	15.1	31.4	45.8	38.6	68.6	77.5
Operating cash flow	€ MILLION	75.5	56.4	-0.4	88.9	84.7	-11.8
Free cash flow	€ MILLION	36.7	28.4	-10.5	72.8	50.9	-54.2

<sup>1)</sup> Chemical-Pharmaceutical Raw Materials Division.<sup>2)</sup> Prior-year figures adjusted; for details, see note (5), page 109.

## Financial Calendar



[www.hur.com](http://www.hur.com)

Our financial calendar is updated on an ongoing basis. Please visit our website [www.hur.com](http://www.hur.com) in the Investor Relations section for the latest events.

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21 March 2017	Publication of Final Figures 2016, Press and Analysts' Conference
12 May 2017	Publication of Q1 2017
18 May 2017	Annual Shareholders' Meeting, Hamburg
11 August 2017	Publication of Q2 2017
15 November 2017	Publication of Q3 2017

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## Disclaimer

### Forward-looking statements

This document contains forward-looking statements that reflect management's current views with respect to future events. Such statements are subject to risks and uncertainties that are beyond H&R's ability to control or estimate precisely, such as future market and economic conditions, the behavior of other market participants, the ability to successfully integrate acquired businesses and achieve anticipated synergies and the actions of government regulators. If any of these or other risks and uncertainties occur, or if the assumptions underlying any of these statements prove incorrect, then actual results may be materially different from those expressed or implied by such statements. H&R does not intend or assume any obligation to update any forward-looking statements to reflect events or circumstances after the date of these materials.

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### Variations for technical reasons

For technical reasons (e.g. conversion of electronic formats) there may be variations between the accounting documents contained in this annual report and those submitted to the electronic Federal Gazette (Bundesanzeiger). In this case, the version submitted to the electronic Federal Gazette shall be binding.

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