

# COMBINED MANAGEMENT REPORT

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# Foundations of the Group

## Business model of the Group

### BUSINESS ACTIVITIES

Aurubis AG is a provider of non-ferrous metals that operates worldwide. As an integrated group, we process complex metal concentrates, scrap metals, and metal-bearing recycling materials into metals of the highest purity. In addition to our main metal, copper, our metal portfolio also includes gold, silver, lead, nickel, tin, minor metals such as tellurium and selenium, and platinum group metals.

The company is based in Hamburg, Germany, where its headquarters and key production facilities are located. Most of its other sites are located in Europe, with larger production centers in Germany, Belgium, and Bulgaria. Outside of Europe, Aurubis also has a production site in the US and a global sales and service network.

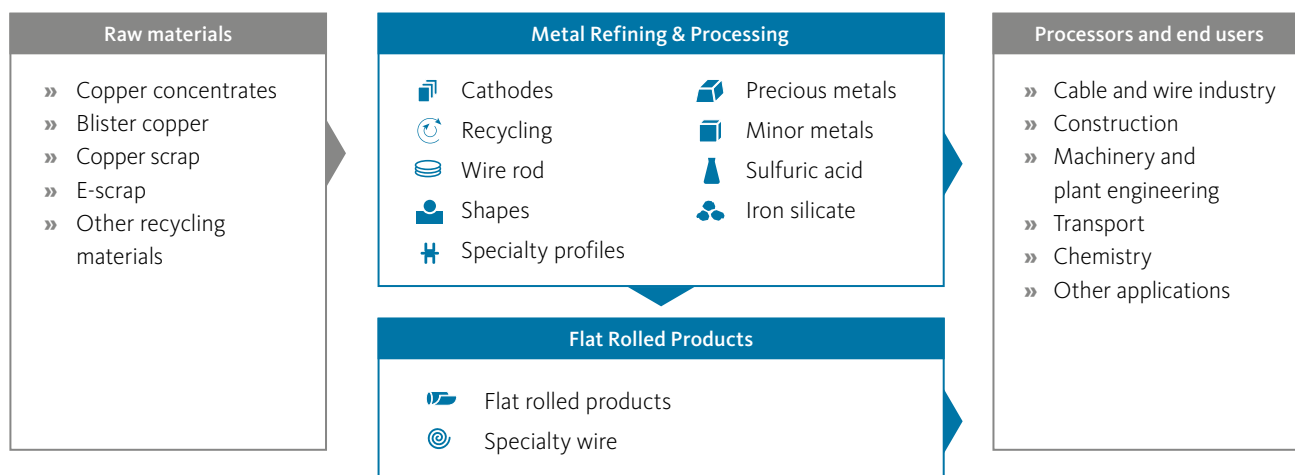
### BUSINESS MODEL

In accordance with our Vision 2025, we will consistently expand our current copper-focused business model to encompass a broader multi-metal approach in the future. This means that, in addition to copper, other metals will be extracted from systematically purchased raw materials and intermediate products and then processed into value-added sales products.

For this purpose, we process copper concentrates that are obtained from ores and offered by mining and trading companies on the global market. Because Aurubis has no mines of its own or stakes in mines, it has to buy the raw materials for its two primary smelters located in Hamburg and Pirdop. As a buyer, Aurubis competes with other primary copper smelters, most of which are located in China and Japan. Copper concentrates for the Hamburg site reach us primarily by waterway and are transshipped via our port terminal in Brunsbüttel. There, the different copper concentrates are also pre-mixed in accordance with the requirements of our production processes. At the site in Pirdop, Bulgaria, concentrates reach us by both land and sea.

We use copper concentrates, copper scrap, other metal-bearing recycling materials, and bought-in intermediates as feed material. Most of the copper scrap and metal-bearing recycling raw materials for our two secondary smelters in Lünen (Germany) and Olen (Belgium) is sourced in Europe. Metal trading companies are the main actors on the supply side, though some recycling materials also reach us directly from product manufacturers. On the demand side, our main competitors are other copper and metal smelters, as well as metal processors that also utilize recycling materials. Copper scrap tends to reach us by land.

### Business model in fiscal year 2017/18



## Sites and employees



## Europe

DE	Hamburg	Headquarters Aurubis AG	2,462	
		E. R. N. Elektro-Recycling NORD GmbH	13	
		Peute Baustoff GmbH	12	
	Lünen	Aurubis AG	629	
	Stolberg	Aurubis Stolberg GmbH & Co. KG	438	
	Emmerich	Deutsche Giessdraht GmbH	112	
	Fehrbellin	CABLO Metall-Recycling & Handel GmbH	47	
	Röthenbach	RETORTE GmbH Selenium Chemicals & Metals	44	
	Nersingen/ Strass	CABLO Metall-Recycling & Handel GmbH	18	
	Berlin	Aurubis AG	3	Group Representative Office
	Hanau	Aurubis AG	2	
BG	Pirdop	Aurubis Bulgaria AD	866	
BE	Olen	Aurubis Belgium NV/SA	582	
	Brussels	Aurubis Belgium NV/SA	27	
NL	Zutphen	Aurubis Netherlands BV	311	
FI	Pori	Aurubis Finland Oy	262	
IT	Avellino	Aurubis Italia Srl	95	
	Mortara	Aurubis Mortara S.p.A.	28	
UK	Smethwick/ Birmingham	Aurubis UK. Ltd.	23	
SK	Dolný Kubín	Aurubis Slovakia s.r.o.	16	
SE	Finspång	Aurubis Sweden AB	9	-
FR	Lyon/ Septème	Aurubis Product Sales GmbH	3	
RU	St. Petersburg	Aurubis Rus LLC. <sup>1</sup>	3	
ES	Barcelona	Aurubis Product Sales GmbH	1	
TR	Istanbul	Aurubis Turkey Kimya Anonim Sirketi <sup>1</sup>	1	

**Employees in Europe 6,007**

## USA

USA	Buffalo	Aurubis Buffalo Inc.	642	
	Chicago	Aurubis Buffalo Inc.	5	

**Employees in the USA 647**


## ASIA

CN	Shanghai	Aurubis Metal Products (Shanghai) Co., Ltd. <sup>1</sup>	5	
	Hong Kong	<sup>2</sup>	1	
	Beijing	<sup>2</sup>	1	
VAE	Dubai	Aurubis Middle East FZE <sup>1</sup>	3	
SG	Singapore	<sup>2</sup>	3	
TH	Bangkok	<sup>2</sup>	3	
JP	Tokyo	<sup>2</sup>	1	
KR	Seoul	<sup>2</sup>	1	
VN	Ho Chi Minh City	<sup>2</sup>	1	

**Employees in Asia 19**
**Total employees 6,673**

All of the companies listed in the table are fully consolidated, with the exception of those marked as non-consolidated.

Schwermetall Halbzeugwerk GmbH & Co. KG, Stolberg (DE), 308 employees, non-consolidated, number of employees not included in the table.

<sup>1</sup> Non-consolidated companies.

<sup>2</sup> Agency/self-employed sales employee, non-consolidated.

## Raw materials

Concentrates and recycling materials are the raw materials from which copper is produced.



## Sales and distribution network

An international sales and distribution network markets our products.



## Products

The copper is processed into products. Some products are already the result of copper production.

## Slitting centers

Service centers located near our customers slit strip to the desired dimensions.

	Cathodes		Specialty profiles
	Iron silicate		Specialty wire
	Wire rod		Strip/foil
	Sulfuric acid		Precious metals
	Shapes		Other metals

Status: September 30, 2018

In the course of our production processes, we convert copper concentrates and copper scrap into copper cathodes [Q Glossary, page 182](#), the product format that is traded on the international metal exchanges. Copper cathodes are the starting product for fabricating additional copper products, but they can also be sold directly. Our product portfolio mainly comprises standard and specialty products made of copper and copper alloys. When it comes to processing, we have manufacturing capabilities for continuous cast copper wire rod, continuous cast shapes [Q Glossary, page 182](#), rolled products, strip, specialty wire, and profiles.

Additional products result from processing the elements that accompany copper in the raw materials. In particular, these include gold, silver, lead, nickel, tin, minor metals like tellurium and selenium, and platinum group metals. We also produce iron silicate [Q Glossary, page 182](#) and sulfuric acid, the latter of which forms as a by-product of our processes. Customers and competitors in this area are very diverse. The customers include companies from the chemical, fertilizer, and mining industries.

The sales markets for our products are significantly fragmented in some cases. Aurubis' direct customers include companies from the copper semis industry, the cable and wire industry, the electrical and electronics sector, and the chemical industry, as well as suppliers from the renewable energies, construction, and automotive sectors.

To close the value chain for copper and other metals, we place a high priority on the "closing-the-loop" approach. The focus of this approach is on materials such as production waste and residues that accumulate along the copper value chain in production, for example with our customers. The materials range from copper scrap with very high copper content, which we can directly feed into the copper fabrication process, to stamping waste containing precious metals and high levels of copper, alloyed scrap, slags from foundries, and other industrial residues.

## GROUP STRUCTURE

In fiscal year 2017/18, the Aurubis Group's organizational framework was based on the underlying business model. The Group's structure is made up of two operating segments, which are the basis of segment reporting pursuant to IFRS 8 for fiscal year 2017/18: Segment Metal Refining & Processing and Segment Flat Rolled Products.

- » Segment **Metal Refining & Processing (MRP)** processes complex metal concentrates, copper scrap, and metal-bearing recycling materials into metals of the highest quality. From an organizational perspective, Segment MRP includes the Commercial and Operations divisions. The Commercial division combines all market-relevant organizational units and is therefore responsible for raw material purchasing and product sales. The Operations division is responsible for the production of all basic products and metals, as well as for their further processing into other products, such as continuous cast wire [Q Glossary, page 182](#) rod and continuous cast shapes. The sites in Hamburg (Germany), Pirdop (Bulgaria), Olen (Belgium), and Lünen (Germany) manufacture copper cathodes, among other products. These cathodes are processed further into wire rod and shapes at the Hamburg (Germany), Olen (Belgium), Emmerich (Germany), and Avellino (Italy) sites.
- » The second segment, **Segment Flat Rolled Products (FRP)**, processes copper and copper alloys – primarily brass, bronze, and high-performance alloys – into flat rolled products and specialty wire, which it then markets. The main production sites for this are Zutphen (Netherlands), Buffalo (USA), Stolberg (Germany), and Pori (Finland). The segment also comprises slitting and service centers in Birmingham (UK), Dolný Kubín (Slovakia), and Mortara (Italy), as well as sales offices worldwide. In fiscal year 2017/18, we signed a contract with Wieland-Werke AG to sell Segment FRP. This is subject to approval by the EU antitrust authorities. The segment thus fulfills the conditions for presentation as discontinued operations pursuant to IFRS 5. With the sale, we plan to leave the strip business and continue strengthening our strategic orientation to the multi-metal business.

The core organization is oriented to the value chain and is supported by the Corporate Development and Technology functions, as well as by divisions such as Human Resources and Finance & Controlling.

A list of shareholdings pursuant to Section 313 (2) of the German Commercial Code (HGB) as at September 30, 2018 is provided in the notes to the financial statements.

### SIGNIFICANT INFLUENCING FACTORS RELEVANT TO THE BUSINESS

The significant factors specific to the business are the treatment and refining charges [Q Glossary, page 183](#) for raw materials, the copper price, copper premiums [Q Glossary, page 182](#) and product surcharges [Q Glossary, page 183](#) for copper products, as well as sales revenues for sulfuric acid. Furthermore, efficient metal gains [Q Glossary, page 183](#) in our plants can lead to effects on earnings.

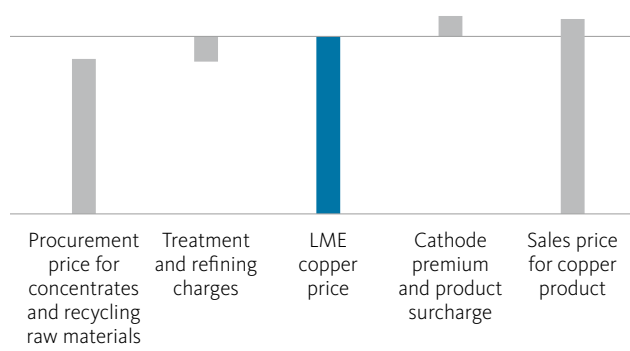
Copper is priced first and foremost on the London Metal Exchange (LME [www.lme.com](http://www.lme.com)) [Q Glossary, page 183](#), which facilitates physical transactions, hedging, and investment business. The price is not just a benchmark for exchange trading but serves as the basis for pricing in the raw material and product business.

Treatment and refining charges are negotiated with suppliers when purchasing copper-bearing raw materials. The TC/RC trend depends on the current supply and demand structure on the global markets. Essentially, these charges are discounts on the purchase price for turning raw materials into copper cathodes (the commodity exchange product) and other metals.

The metal exchange and market quotation for copper serves as the price basis for our copper product sales. The premium and product surcharges, which are charged for converting cathodes into copper products, are also part of the sales price.

### Pricing along the value chain

Schematic illustration



Our business development is also influenced by external factors. These include the economic performance in key countries and activities on the international financial markets; the political, legal, and societal conditions; changes in the exchange rate and interest rate level; and the situation on our relevant markets.

## Corporate control

### CONTROL SYSTEM

The management control system's main objective is to increase the Aurubis Group's corporate value. Concretely, the company should generate value beyond the costs of capital.

### CORPORATE CONTROL PARAMETERS

In order to measure financial success for the medium and long term within the scope of value-oriented corporate control, Aurubis uses the following central control parameters:

- » Operating consolidated earnings before taxes = operating EBT,
- » Operating ROCE (return on capital employed) of the Group.

These parameters are regularly presented to the Executive Board and are utilized for internal control purposes. The Executive Board's variable compensation is also based on these parameters.

The Aurubis Group reports in accordance with International Financial Reporting Standards (IFRS). For internal control purposes, it does not comply with the IAS 2 amendment that stipulates exclusive application of the FIFO or average cost method. This is to avoid metal price fluctuations resulting from measurement according to the average cost method. Such measurement effects, in our opinion, are not necessary to gain an understanding of the Aurubis Group's business activities and results from an operational perspective. Furthermore, purchase price allocations led to one-time effects, which would also lead to a distortion in the Aurubis Group's presentation of the results of operations, financial position, and net assets.

Internal Group reporting and control are carried out on the basis of the operating result to present the Aurubis Group's success independently of these measurement effects on internal control systems.

The operating result is derived from the IFRS results of operations by:

- » Adjusting by effects from the use of IFRS 5,
- » Adjusting for measurement results from the use of IAS 2. The metal price fluctuations resulting from the application of the average cost method are eliminated in the same manner as devaluations relating to the reporting date and appreciations in the value of copper inventories,
- » Adjusting for the impact of purchase price allocations, primarily on property, plant, and equipment, since fiscal year 2010/11.

### Operating return on capital employed (ROCE)

in € million	9/30/2018	9/30/2017
Fixed assets excluding financial fixed assets and investments measured using the equity method	1,406	1,375
Inventories	1,549	1,387
Trade accounts receivable	374	357
Other receivables and assets	191	216
– Trade accounts payable	-904	-905
– Provisions and other liabilities	-371	-388
<b>Capital employed as at the balance sheet date</b>	<b>2,246</b>	<b>2,042</b>
Earnings before taxes (EBT)	329	298
Financial result	3	10
<b>Earnings before interest and taxes (EBIT)</b>	<b>332</b>	<b>308</b>
<b>Return on capital employed (operating ROCE)</b>	<b>14.8%</b>	<b>15.1%</b>

Operating ROCE shows the ratio of operating earnings before interest and taxes (EBIT [Q Glossary, page 183](#)) to operating capital employed [Q Glossary, page 183](#) as at the balance sheet date and indicates the return on capital employed.

Corresponding to the calculation of the operating result, operating capital employed is derived by adjusting the balance sheet items in accordance with IFRS by the effects previously mentioned.

A reconciliation of the balance sheet and income statement from IFRS to operating figures is provided in the Economic Report of the Combined Management Report.

## Research, Development, and Innovation

The primary focus of our Research, Development, and Innovation division during the reporting period was on two key fields of work: optimizing existing core processes and developing new processes for complex materials – in line with the new multimetal strategy.

We see the Research, Development, and Innovation division as crucial to maintaining our competitive edge. We strengthened the division further and had 78 employees in fiscal year 2017/18 (previous year: 67 employees). The employees are distributed across the Group, and work at the sites in Buffalo, Hamburg, Lünen, Olen, Pirdop, Pori, Stolberg, Finspång, and Zutphen. We promote intensive communication between the sites.

The strategic project Future Complex Metallurgy (FCM) was a focus of our work again in fiscal year 2017/18. Here, we are developing a flexible process and an industrial plant that will enable the quick recovery, with a high level of selectivity, of metals from complex raw materials and intermediates. Our development work here has involved numerous trials at our R&D pilot facilities, through which we seek to validate and develop the metallurgical process for the project, and to continuously optimize the ramp-up phase of the new facilities. Tests are also planned for the coming fiscal year as well, which should identify the most important process parameters in order to deliver a stable process. The FCM project has given rise to numerous subsequent projects related to downstream processes. Among these is a project aimed at assessing the capacities and recovery times of current facilities.

We are increasingly using sensor technology as part of our efforts to advance the existing key processes in primary and secondary copper production. Together with the mineralogical characterization of the input material, we are thus improving the stability and monitoring of the key processes with the objective of boosting metal output. With a view to advancing these activities, which fall under the topic of digitalization, we expanded our specialist team in 2017/18. Our goal is to drive complex operating processes with advanced analytics methods.

Only with a sufficiently large data basis can we sustainably implement improvements. An example of this is the data-driven energy consumption forecast at the Hamburg site, which will enable us to react more flexibly to fluctuating energy prices in the future.

In the area of mathematical modeling, we have completed prototypes to support operative production planning with the objective of strengthening our competitive edge, and we are currently in the process of implementing them. We have also developed additional models to support production. For instance, we are planning to improve our energy management with such models and are working together with external institutes to develop a practicable, stable, efficient, and flexible energy system.

Fiscal year 2017/18 saw us continue our work on improving metal recovery from iron silicate slag. In this context, we are researching a new metallurgy process that enables the selective extraction of metals contained in the slag. This improved metal extraction capacity will also boost the competitiveness of our primary copper production [Q Glossary, page 183](#) activities.

Within Segment Flat Rolled Products, we worked on developing and marketing lead-free machining materials during the fiscal year. When it comes to wire products, we are in the process of developing different alloy varieties for the BlueBrass family.

In the connector product sector, we worked on sampling low-alloyed, highly conductive copper alloys.

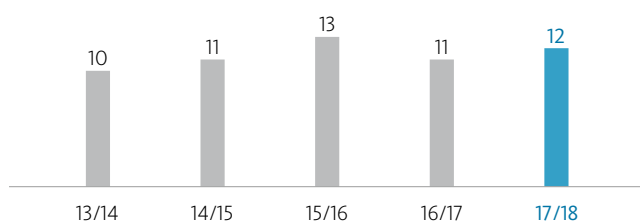
We were also involved with basic research in the areas of battery technology and power electronics in fiscal year 2017/18. In some cases, this took place within the scope of publicly funded projects implemented together with university and industry partners. We successfully achieved the first development results in the business area of power electronics in the form of patent applications.



The entire Aurubis Group's R&D expenditures in fiscal year 2017/18 amounted to € 12 million, compared to € 11 million in reporting year 2016/17.

### R&D expenditure

in € million



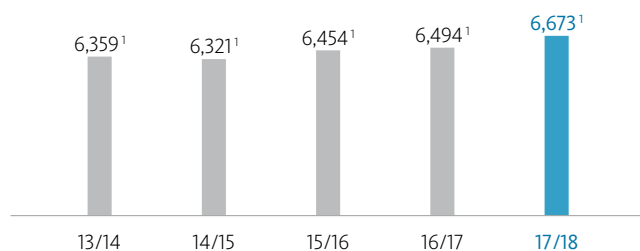
## Human resources

A total of 6,673 employees worked in the Aurubis Group worldwide as at September 30, 2018. Of this number, 56.6 % were employed at German sites and 43.4 % worked in other countries. In the reporting year, we hired a number of new employees in light of several areas that will be growing in importance in the future, such as research, development, innovation, technology, and the internal growth project Future Complex Metallurgy.

Aurubis Group personnel are mainly dispersed among the following countries: Germany (3,780), Bulgaria (866), the USA (647), Belgium (609), the Netherlands (311), Finland (262), and Italy (123).

### Aurubis Group employees

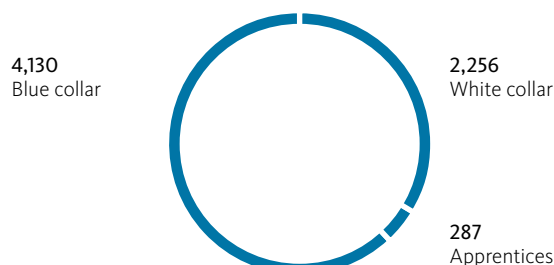
Number as at 9/30



<sup>1</sup> Excluding Schwermetall Halbzeugwerk GmbH & Co. KG.

### Aurubis Group personnel structure

Number as at 9/30/2018



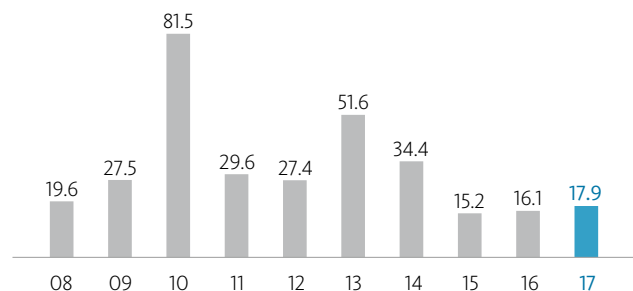
## Environmental protection and occupational health

### ENVIRONMENTAL PROTECTION IN THE GROUP

We take responsibility for protecting our environment and our climate. Our production facilities therefore use modern and energy-efficient plant technology that also complies with very high environmental standards. In this way, we conserve natural resources and maintain a clean environment for future generations. We have set targets in environmental protection, defined corresponding KPIs, and established measures to achieve the targets across the Group. The effectiveness of these targets and measures is reviewed continuously.

### Capital expenditure for environmental protection in copper production

in € million



The continuous improvement of water pollution control, soil conservation, climate protection, and emission prevention are all key to achieving sustainable environmental protection. For this reason, Aurubis has invested more than € 560 million in environmental protection measures in primary and secondary copper production since 2000.

### OCCUPATIONAL HEALTH IN THE GROUP

Corporate Occupational Health and Safety is responsible for ensuring that the technical, organizational, and personal conditions in place in the company are designed to prevent work-related accidents and illnesses.

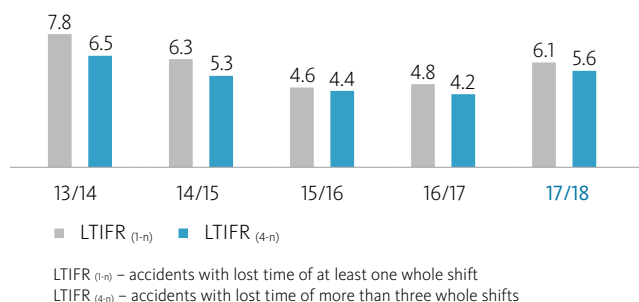
The acronym LTIFR <sup>(1-n)</sup> indicates the accident rate in the company. It stands for “Lost Time Injury Frequency Rate” and refers to the number of work-related accidents with at least one lost shift per one million hours worked.

After having seen its accident rate fall continuously and substantially over the past several years, Aurubis experienced an accident rate increase in the reporting year, with an LTIFR <sup>(1-n)</sup> of 6.1 for fiscal year 2017/18 compared with 4.8 in the previous year. In absolute terms, this equated to 60 accidents in the reporting year compared with 47 in the previous year.

We have been setting short-term and medium-term occupational safety targets since 2010 and are working towards our long-term “Vision Zero,” that is, a completely accident-free work environment. Our medium-term goal is to achieve an LTIFR <sup>(1-n)</sup> of  $\leq 1.0$ .

### Accident frequency

LTIFR = Lost Time Injury Frequency Rate



## Separate Non-Financial Report

The section [Q Sustainability, pages 34-48](#) provides additional information on the topics of sustainability, environmental protection, energy, the climate, and occupational health.

Aurubis AG reports on both the Aurubis Group and Aurubis AG in the form of a consolidated, separate Non-Financial Report, which can also be found in the section [Q Sustainability, pages 34-48](#).

# Economic Report

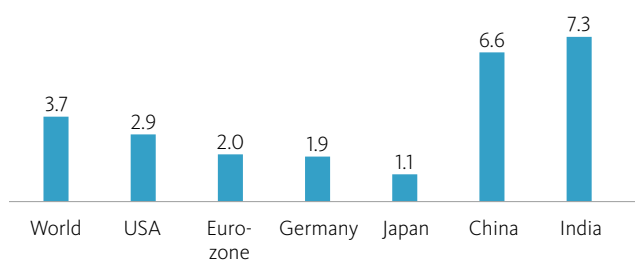
## General economic conditions

The global economy developed positively overall in fiscal year 2017/18. In its autumn forecast, the International Monetary Fund (IMF, [www.imf.org](http://www.imf.org)) expects an increase of 3.7% in global economic growth for 2018, only slightly below its spring forecast.

According to the IMF, the strongest growth momentum comes from Asia, especially China and India, and the US. However, the monetary authorities view the ongoing trade conflicts between the US and China as one of the biggest risk factors for global growth.

### Expected GDP growth in 2018

in %



Source: International Monetary Fund, Oct. 2018

For the euro area, the IMF forecasts continued solid growth of 2.0% for 2018, supported in part by Germany with predicted growth of 1.9%. Both figures are somewhat lower than those the IMF outlined in its spring forecast. The IMF highlights high ongoing domestic demand with low unemployment numbers and the European Central Bank's policy of low interest rates as key drivers of growth.

For the US, the IMF predicts economic growth of 2.9% for 2018. Fiscal policy measures continue to be a significant reason for the good growth level there. The IMF sees the biggest risks for the American economy in the US government's course – especially with respect to cooperation with China.

The Chinese economy should also continue to grow strongly in 2018. At 6.6%, economic growth is expected to be at the level of the April estimate.

The global financial markets were mostly favorable in 2018. In the US, the Federal Reserve increased the federal funds rate multiple times during the course of the year. In September, it was at 2.00 to 2.25%. In Europe, the European Central Bank maintained its zero interest rate policy but announced that it would end its bond-buying program at the end of 2018.

## Conditions specific to the industry

We are mainly active on the international copper market and its sub-markets, which underwent the following developments in fiscal year 2017/18:

The international copper concentrate market was characterized by high mining output, and thus good concentrate availability, in 2018. Despite a series of wage negotiations between mines and unions, especially in South America, there were no notable production losses due to strikes. Production losses due to

accidents or weather-related incidents were low as well. The rate of total production losses owing to these factors declined from 5.5% in the previous year to 1.8% for 2018, according to the research company WoodMackenzie. Apart from low production losses, mine expansions and ramp-ups of mines that had been previously decommissioned contributed to the higher output. As a result, according to the International Copper Study Group (ICSG), mining output for copper in 2018 is expected to be approximately 2% higher and amount to 20.5 million t (copper content).

On the smelter industry side, in contrast, there were several shutdowns in Asia in 2018, primarily due to environmental regulations. In light of production restrictions, there was also a reduction in some Asian smelters' demand for copper concentrate.

The European market for recycling raw materials once again proved to be a buyers' market for smelters during fiscal year 2017/18. The supply volume for copper scrap was very high, especially in fall 2017, in all significant regions for scrap trading. The increased copper prices in 2017 resulted in good volume flow from the collection and treatment activities in the metal trade. On the demand side, this was accompanied by a good supply situation for smelters and other consumers. Because of the restrictions China introduced for copper scrap imports with high impurity levels, stronger demand among Chinese consumers for high-purity copper scrap from Europe was noticeable in calendar year 2018. Coupled with temporary declines in the copper price in 2018, this initially led to a shortage on the copper scrap market. A higher supply of recycling materials from the US due to the trade conflict between the US and China had a countereffect. The refining charges for copper scrap in Europe, which were published by the research firm CRU, remained at a good level compared to the past several years, however. Complex recycling raw materials such as electrical and electronic scrap were also sufficiently available on the market.

Refined copper output was mainly affected by two factors in fiscal year 2017/18. On the one hand, there were the previously mentioned production shutdowns at smelters in Asia, including India, China, and Japan, as well as isolated smelter shutdowns in Chile. These contrasted with capacity expansions in China and, from January to July 2018, with good utilization of global refining capacity, at about 85%. Also significant was the good availability of copper scrap, which according to ICSG estimates will lead to a 6% increase in secondary production in 2018. Overall, the ICSG expects that the global output of refined copper in 2018 will be 2.7% higher than the previous year, or at roughly 24.2 million t.

On the demand side for refined copper, there was very little change in the first seven months of 2018 compared with the previous year. At 13.8 million t, the level achieved was slightly above the corresponding period in 2017. For the entire year, the ICSG expects a 2.1% increase in global demand, to 24.3 million t. There are larger uncertainties when it comes to the calculation of copper demand in China.

The level of exchange inventories of copper cathodes declined notably in the course of 2018. After 577,000 t at the beginning of the fiscal year, approximately 495,000 t was stored at the LME, COMEX, and SHFE metal exchanges as at the end of fiscal year 2017/18. Additionally, copper inventories at the Chinese bonded warehouse decreased by about 13%, to 430,000 t, at the end of the fiscal year.

According to the ICSG, there was a slight production deficit of 51,000 t on the global market for refined copper in the first six months of 2018. The ICSG also expects a marginal deficit of 90,000 t for the entire year 2018.

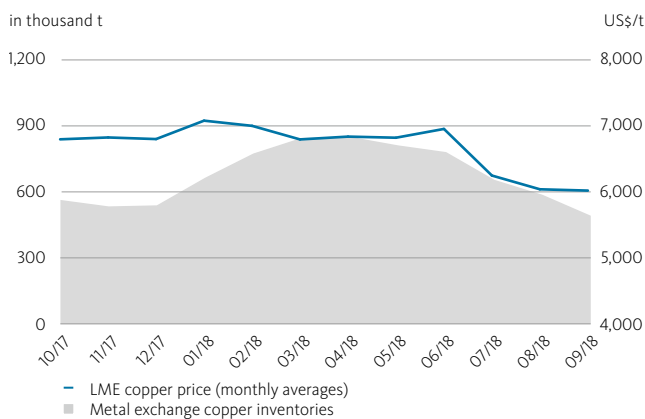
The international market for continuous cast wire rod, which accounts for about 75 % of global cathode output worldwide, continued its stable development in the first half of 2018. We deliver most of our wire rod to Europe. Growth in the first half of 2018 rose considerably in this area, at over 4%. This was due to the ongoing good economic situation, but also, in part, to the low growth levels recorded for the same period in 2017. These in turn were attributable to inventory corrections in the cable sector, which had resulted from changes to fire resistance standards for cables within the European Union, and which had led to uncertainty on the part of customers. While the development of demand in northern Europe was stable, growth in southern Europe increased significantly. For the entire year 2018, CRU expects European demand growth of about 4%.

The global market for sulfuric acid developed very favorably in fiscal year 2017/18. High demand on the one hand and smelter shutdowns on the other led to a tightening market and thus to rising prices. According to the industry service provider ICIS, the gliding averages for multiple quotations worldwide were at the highest level in years. Demand growth came from the metals industry, where sulfuric acid is used in mining to process specific ores, as well as from the fertilizer industry.

The LME copper price was highly volatile in fiscal year 2017/18, influenced especially by speculations about the outcome of the wage negotiations between mines and unions, as well as about the continued trade conflicts between the US and China. Following a copper price of US\$ 6,455/t (settlement [Q Glossary, page 183](#)) at the beginning of October 2017 and developments marked by price fluctuations, the fiscal year closed with an LME copper price of US\$ 6,180/t (settlement). The lowest price of the year was US\$ 5,823/t (September 4, 2018). About three months prior, the high was US\$ 7,263/t (June 8, 2018). The average price for the fiscal year was US\$ 6,684/t (previous year: US\$ 5,781/t).

### Copper price and metal exchange copper inventories

from 10/1/2017 to 9/30/2018



## Economic development within the Aurubis Group

### RESULTS OF OPERATIONS, NET ASSETS, AND FINANCIAL POSITION

In order to portray the Aurubis Group's operating success independently of measurement influences for internal management purposes, the presentation of the results of operations, net assets, and financial position in accordance with IFRS is supplemented by the results of operations and net assets explained on the basis of operating values.

With the signing of the term sheet on February 12, 2018, Segment Flat Rolled Products (FRP) fulfills the conditions to be recognized as discontinued operations in accordance with IFRS. On March 29, 2018, Aurubis AG and Wieland-Werke AG signed a contract to sell Segment Flat Rolled Products. The final execution of the sales contract is subject to approval by the antitrust authorities. A final decision is expected in early 2019.

In this respect, the presentation and measurement rules specified in IFRS 5 must be applied for Segment FRP in fiscal year 2017/18. These include, among other things, a separate, aggregated disclosure of consolidated net income from discontinued operations in the consolidated income statement, as well as a separate, aggregated disclosure of assets and liabilities held for sale for the discontinued operations in the consolidated statement of financial position. Furthermore, additional notes to the financial statements are necessary [Q Acquisitions and discontinued operations, page 123](#). With respect to measurement in accordance with IFRS 5, among other things, any impact on income deriving from scheduled depreciation and amortization in Segment FRP, or from application of equity accounting for the purpose of consolidating the investment in the joint venture, Schwermetall Halbzeugwerk GmbH & Co. KG (Schwermetall), must be discontinued in the IFRS consolidated financial statements.

The Executive Board continues to treat Segment FRP as an operating reporting segment and, consequently, the financial reporting for operating purposes will remain unchanged until such time as the sales transaction is finalized.

As a result, the accounting impacts deriving from IFRS 5 in the financial statements are reversed in the reconciliation between IFRS reporting and operating reporting.

As regards the reconciliation of the consolidated income statement, the items reported as discontinued activities are again shown separately. For purposes of measurement, the impacts on income deriving from scheduled depreciation and amortization of fixed assets, or from application of equity accounting for the purpose of consolidating the investment are accounted for, as in the past. In order to demonstrate the Aurubis Group's operating success, subsequent adjustments are also made to inventories and non-current assets.

In order to adjust the measurement impacts in inventories resulting from the application of IAS 2, metal price fluctuations resulting from the application of the average cost method are eliminated in the same manner as any write-downs or appreciation in value for copper inventories at the reporting date. Furthermore, from fiscal year 2010/11 onwards, fixed assets have been adjusted for effects deriving from purchase price allocations (PPAs), primarily relating to property, plant, and equipment.

As regards the reconciliation of the consolidated statement of financial position, assets and liabilities held for sale as discontinued operations are again disclosed in a disaggregated form and the measurement effects on the relevant items in the statement of financial position are recognized as they have been in the past. Subsequently, in order to demonstrate the Aurubis Group's operating success, measurement impacts on inventories and fixed assets are also adjusted for.

The following table shows how the respective operating results for the 2017/18 fiscal year and for the comparative prior-year period have been determined.

## Reconciliation of the consolidated income statement

12 months 2017/18						12 months 2016/17				
in € million	IFRS from continuing operations	Adjustment effects				IFRS from continuing operations	Adjustment effects			
		Discon- tinued opera- tions	Inven- tories	PPA	Operating		Discon- tinued opera- tions	Inven- tories	PPA	Operating
<b>Revenues</b>	<b>10,424</b>	<b>1,270</b>	<b>0</b>	<b>0</b>	<b>11,694</b>	<b>9,880</b>	<b>1,160</b>	<b>0</b>	<b>0</b>	<b>11,040</b>
Changes in inventories of finished goods and work in process	0	-1	-7	0	-8	-17	22	-70	0	-65
Own work capitalized	19	0	0	0	19	9	0	0	0	9
Other operating income	43	2	0	0	45	47	0	0	0	47
Cost of materials	-9,464	-1,039	-33	0	-10,536	-8,826	-948	-88	0	-9,862
<b>Gross profit</b>	<b>1,022</b>	<b>232</b>	<b>-40</b>	<b>0</b>	<b>1,214</b>	<b>1,093</b>	<b>234</b>	<b>-158</b>	<b>0</b>	<b>1,169</b>
Personnel expenses	-352	-132	0	0	-484	-338	-132	0	0	-470
Depreciation of property, plant, and equipment and amortization of intangible assets	-119	-14	0	3	-130	-121	-14	0	3	-132
Other operating expenses	-217	-51	0	0	-268	-210	-49	0	0	-259
<b>Operational result (EBIT)</b>	<b>334</b>	<b>35</b>	<b>-40</b>	<b>3</b>	<b>332</b>	<b>424</b>	<b>39</b>	<b>-158</b>	<b>3</b>	<b>308</b>
Result from investments measured using the equity method	0	13	-2	0	11	0	11	-3	0	8
Interest income	3	0	0	0	3	3	0	0	0	3
Interest expense	-16	-2	0	0	-18	-18	-2	0	0	-20
Other financial income	1	0	0	0	1	0	0	0	0	0
Other financial expenses	0	0	0	0	0	-1	0	0	0	-1
<b>Earnings before taxes (EBT)</b>	<b>322</b>	<b>46</b>	<b>-42</b>	<b>3</b>	<b>329</b>	<b>408</b>	<b>48</b>	<b>-161</b>	<b>3</b>	<b>298</b>
Income taxes	-59	-16	14	-3	-64	-90	-14	43	-1	-62
<b>Consolidated net income</b>	<b>263</b>	<b>30</b>	<b>-28</b>	<b>0</b>	<b>265</b>	<b>318</b>	<b>34</b>	<b>-118</b>	<b>2</b>	<b>236</b>

Explanation of the presentation and the adjustment effects [Q Results of operations, net assets, and financial position, page 67.](#)

## RESULTS OF OPERATIONS (OPERATING)

Operating EBT in the fiscal year amounts to € 329 million and is derived from continuing and discontinued operations of the IFRS result before income taxes, as follows:

The Aurubis Group generated IFRS earnings before taxes of € 322 million from continuing operations in fiscal year 2017/18 (previous year: € 408 million). IFRS earnings before taxes from discontinued operations amount to € 46 million (previous year: € 48 million).

The accounting impacts of IFRS 5, which has been applied to Segment FRP since early March, were reversed to derive the operating result. Accordingly, scheduled depreciation and amortization (€ -8 million) and the recognition in income of the shares of Schwermetall consolidated using the equity method (€ 9 million) were taken into account in the reconciliation to the operating result, as in the past.

Moreover, to derive the operating result, the IFRS result was adjusted for inventory measurement effects of € -42 million (previous year: € -161 million) (the total of the following positions: "Changes in inventories of finished goods and work in process," "Cost of materials," and "Result from investments measured using the equity method"), as well as for impacts of € 3 million (previous year: € 3 million) deriving from allocations of the purchase price, resulting in operating earnings before taxes of € 329 million (previous year: € 298 million).

Operating EBT was positively influenced by:

- » A higher concentrate throughput due to a good performance at the Hamburg and Pirdop sites. The previous year was negatively impacted by a scheduled maintenance shutdown in Hamburg in Q1 2016/17,
- » Substantially higher refining charges for copper scrap with good availability,
- » Higher sulfuric acid revenues due to considerably higher sales prices,
- » A higher metal gain with increased copper prices,
- » Significantly higher sales volumes for wire rod products,
- » Higher sales volumes for flat rolled products, and
- » Additional positive contributions from our efficiency improvement program.

The weaker US dollar had an opposite effect.

The Group's revenues increased by € 654 million to € 11,694 million (previous year: € 11,040 million) during the reporting period. This development was primarily due to the higher average copper price.

### Breakdown of revenues

in %	2017/18	2016/17
Germany	34	35
European Union	37	36
Rest of Europe	4	5
Other countries	25	24
<b>Total</b>	<b>100</b>	<b>100</b>

The inventory change amounted to € -8 million. The inventory change of € -65 million in the previous year was primarily caused by a reduction in copper inventories.

In a manner corresponding to the development for revenues and inventory changes, the cost of materials increased by € 674 million, from € 9,862 million in the previous year to € 10,536 million.

Own work capitalized increased by € 10 million in the fiscal year, to € 19 million (previous year: € 9 million). The increase is mainly due to activities related to the Future Complex Metallurgy project.

After taking other operating income into account, the residual gross profit was € 1,214 million (previous year: € 1,169 million).

Personnel expenses rose from € 470 million in the previous year to € 484 million due to wage tariff agreement increases and a slightly higher number of employees. During the reporting year, we particularly strengthened our personnel resources in order to address certain issues that will grow in importance in the future. These include areas such as research, development, innovation, technology, and the Future Complex Metallurgy project. Lower personnel costs at the Buffalo, USA, site – resulting from the exchange rate development – had an opposite effect.

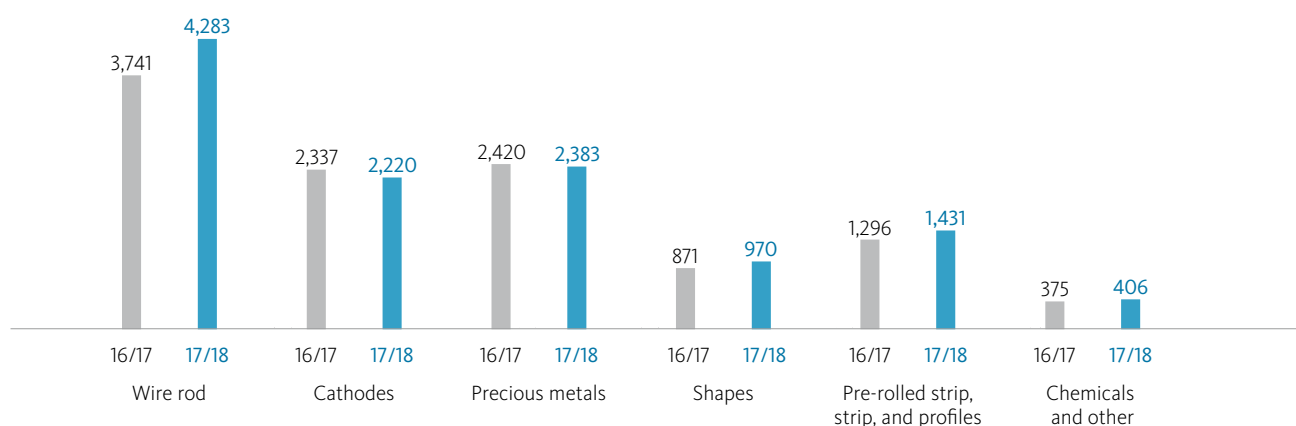
At € 130 million, depreciation and amortization of fixed assets was slightly below the prior-year level (€ 132 million).

Other operating expenses were € 268 million compared to € 259 million in the previous year.



## Development of revenues by products

in € million



The operational result before interest and taxes (EBIT) therefore amounted to € 332 million (previous year: € 308 million).

At € 15 million, net interest expense was below the prior-year level (€ 17 million). The decrease resulted from reduced gross debt in connection with the redemption of bonded loans (Schuldscheindarlehen).

After taking the financial result into account, operating earnings before taxes (EBT) were € 329 million (previous year: € 298 million).

Operating consolidated net income of € 265 million remained after tax (previous year: € 236 million). Operating earnings per share amounted to € 5.87 (previous year: € 5.21).

### RESULTS OF OPERATIONS (IFRS) FROM CONTINUING OPERATIONS

Due to the classification of Segment FRP as an operation intended for sale, the following values regarding the results of operations are exclusively related to continuing operations.

The Aurubis Group generated a consolidated net result of € 263 million in fiscal year 2017/18 (previous year: € 318 million).

### Consolidated income statement

in € million	2017/18 IFRS	2016/17 IFRS
<b>Revenues</b>	<b>10,424</b>	<b>9,880</b>
Changes in inventories/ own work capitalized	19	-8
Other operating income	43	47
Cost of materials	-9,464	-8,826
<b>Gross profit</b>	<b>1,022</b>	<b>1,093</b>
Personnel expenses	-352	-338
Depreciation of property, plant, and equipment and amortization of intangible assets	-119	-121
Other operating expenses	-217	-210
<b>Operational result (EBIT)</b>	<b>334</b>	<b>424</b>
Financial result	-12	-16
<b>Earnings before taxes (EBT)</b>	<b>322</b>	<b>408</b>
Income taxes	-59	-90
<b>Consolidated net income</b>	<b>263</b>	<b>318</b>

The Group's revenues increased by € 544 million to € 10,424 million (previous year: € 9,880 million) during the reporting period. This development was primarily due to the higher average copper price.

Own work capitalized increased by € 10 million in the fiscal year, to € 19 million (previous year: € 9 million). The increase is mainly due to activities related to the Future Complex Metallurgy project.

In a manner corresponding to the development for revenues and inventory changes, the cost of materials increased by € 638 million, from € 8,826 million in the previous year to € 9,464 million.

After taking other operating income into account, the residual gross profit was € 1,022 million (previous year: € 1,093 million).

In addition to the effects on earnings described in the explanation of the operating results of operations, the change in gross profit was also due to metal price developments. The use of the average cost method leads to metal price valuations that are close to market prices. Metal price volatility therefore has a direct effect on the change in inventories/cost of materials and thus on the IFRS gross profit. The depiction of this volatility in the IFRS gross profit is not relevant to the cash flow and does not reflect Aurubis' operating performance.

Personnel expenses rose from € 338 million in the previous year to € 352 million due to wage tariff agreement increases and a slightly higher number of employees. During the reporting year, we particularly strengthened our personnel resources in order to address certain issues that will grow in importance in the future. These include areas such as research, development, innovation, technology, and the Future Complex Metallurgy project.

At € 119 million, depreciation and amortization of fixed assets was slightly below the prior-year level (€ 121 million).

Other operating expenses were € 217 million compared to € 210 million in the previous year.

Earnings before interest and taxes (EBIT) therefore amounted to € 334 million (previous year: € 424 million).

At € 13 million, net interest expense was below the prior-year level (€ 15 million). The decrease resulted from reduced gross

debt in connection with the redemption of bonded loans (Schuldscheindarlehen).

After taking the financial result into account, earnings before taxes were € 322 million (previous year: € 408 million).

Consolidated net income of € 263 million from continuing operations remained after tax (previous year: € 318 million). Earnings per share from continuing operations amounted to € 5.81 (previous year: € 7.04).

## NET ASSETS (OPERATING)

The table [Q Reconciliation of the consolidated statement of financial position, page 72](#) shows the derivation of the operating statement of financial position as at September 30, 2018, and as at September 30, 2017.

Total assets increased from € 3,975 million as at September 30, 2017 to € 4,077 million as at September 30, 2018, primarily due to increased inventories.

The Group's equity increased by € 174 million, from € 2,087 million as at the end of the last fiscal year to € 2,261 million as at September 30, 2018. This was largely due to the operating consolidated net income of € 265 million. The dividend payment of € 67 million and the impact on other comprehensive income deriving from the measurement of hedging transactions at market, amounting to € 27 million, had an opposite effect.

Overall, the operating equity ratio (the ratio of equity to total assets) was therefore 55.5% compared to 52.5% as at the end of the previous fiscal year.

## Development of borrowings

in € million	9/30/2018	9/30/2017
Non-current bank borrowings	248	317
Non-current liabilities under finance leases	33	23
<b>Non-current borrowings</b>	<b>281</b>	<b>340</b>
Current bank borrowings	30	8
Current liabilities under finance leases	3	3
<b>Current borrowings</b>	<b>33</b>	<b>11</b>
<b>Borrowings</b>	<b>314</b>	<b>351</b>

At € 314 million as at September 30, 2018, borrowings were below the level of the previous fiscal year-end (€ 351 million). The primary reason for this was the redemption of bonded loans (Schuldscheindarlehen) in February 2018.

### Reconciliation of the consolidated statement of financial position

	9/30/2018					9/30/2017			
	IFRS from continuing operations	Adjustment effects				IFRS	Adjustment effects		
in € million		Discontinued operations	Inventories	PPA	Operating		Inventories	PPA	Operating
<b>ASSETS</b>									
Fixed assets	1,354	174	-13	-32	1,483	1,489	-11	-34	1,444
Deferred tax assets	3	1	25	0	29	6	25	0	31
Non-current receivables and other assets	28	2	0	0	30	32	0	0	32
Inventories	1,681	274	-406	0	1,549	1,752	-366	0	1,386
Current receivables and other assets	385	122	0	0	507	511	0	0	511
Cash and cash equivalents	461	18	0	0	479	571	0	0	571
Assets held for sale	590	-590	0	0	0	0	0	0	0
<b>Total assets</b>	<b>4,502</b>	<b>1</b>	<b>-394</b>	<b>-32</b>	<b>4,077</b>	<b>4,361</b>	<b>-352</b>	<b>-34</b>	<b>3,975</b>
<b>EQUITY AND LIABILITIES</b>									
Equity	2,566	1	-281	-25	2,261	2,366	-254	-25	2,087
Deferred tax liabilities	188	16	-113	-7	84	205	-98	-9	98
Non-current provisions	254	34	0	0	288	307	0	0	307
Non-current liabilities	281	1	0	0	282	344	0	0	344
Current provisions	34	8	0	0	42	39	0	0	39
Current liabilities	1,017	103	0	0	1,120	1,100	0	0	1,100
Liabilities deriving from assets held for sale	162	-162	0	0	0	0	0	0	0
<b>Total equity and liabilities</b>	<b>4,502</b>	<b>1</b>	<b>-394</b>	<b>-32</b>	<b>4,077</b>	<b>4,361</b>	<b>-352</b>	<b>-34</b>	<b>3,975</b>

Explanation of the presentation and the adjustment effects in [Q Results of operations, net assets, and financial position, page 67](#).

**RETURN ON CAPITAL (OPERATING)**

The return on capital employed (ROCE) shows the return on the capital employed in the operating business or for an investment. It was determined taking the operating EBIT of the last 4 quarters into consideration.

Operating ROCE was 14.8% due to higher capital employed, compared to 15.1% in the comparative period.

**Operating return on capital employed (ROCE)**

in € million	9/30/2018	9/30/2017
Fixed assets excl. financial assets and investments measured using the equity method	1,406	1,375
Inventories	1,549	1,387
Trade accounts receivable	374	357
Other receivables and assets	191	216
– Trade accounts payable	-904	-905
– Provisions and other liabilities	-371	-388
<b>Capital employed as at the reporting date</b>	<b>2,246</b>	<b>2,042</b>
Earnings before taxes (EBT)	329	298
Financial result	3	10
<b>Earnings before interest and taxes (EBIT)</b>	<b>332</b>	<b>308</b>
<b>Return on capital employed (operating ROCE)</b>	<b>14.8%</b>	<b>15.1%</b>

**NET ASSETS (IFRS)**

Due to the classification of Segment FRP as discontinued operations, the following values regarding net assets in the current year are mainly related to the continuing operations in the Group.

Total assets increased from € 4,361 million as at the end of the last fiscal year to € 4,502 million as at September 30, 2018, due in particular to higher inventories as at the balance sheet date.

**Structure of the statement of financial position of the Group**

in %	9/30/2018	9/30/2017
Fixed assets	30	34
Inventories	37	40
Receivables, etc.	10	13
Assets held for sale	13	0
Cash and cash equivalents	10	13
	<b>100</b>	<b>100</b>
Equity	57	54
Provisions	10	13
Liabilities	29	33
Liabilities deriving from assets held for sale	4	0
	<b>100</b>	<b>100</b>

The Group's equity increased by € 200 million, from € 2,366 million as at the end of the last fiscal year to € 2,566 million as at September 30, 2018. This was largely due to the consolidated net income of € 263 million from continuing operations and of € 29 million from discontinued operations. The dividend payment of € 67 million and the impact on other comprehensive income deriving from the measurement of hedging transactions at market, amounting to € 27 million, had an opposite effect.

Overall, the equity ratio was 57.0% as at September 30, 2018, compared to 54.2% as at the end of the previous fiscal year.

The following table shows the development of borrowings:

## Development of borrowings

in € million	9/30/2018	9/30/2017
Non-current bank borrowings	248	317
Non-current liabilities under finance leases	33	23
<b>Non-current borrowings</b>	<b>281</b>	<b>340</b>
Current bank borrowings	30	8
Current liabilities under finance leases	3	3
<b>Current borrowings</b>	<b>33</b>	<b>11</b>
<b>Borrowings</b>	<b>314</b>	<b>351</b>

At € 314 million as at September 30, 2018, borrowings were below the level of the previous fiscal year-end (€ 351 million). The primary reason for this was the redemption of bonded loans (Schuldscheindarlehen) in February 2018.

## RETURN ON CAPITAL (IFRS)

The operating result is used for control purposes within the Group. Operating ROCE is explained under [Q Return on capital, page 73](#).

## FINANCIAL POSITION OF THE AURUBIS GROUP

The following comments include both continuing and discontinued operations.

The Group's liquidity sourcing is secured through a combination of the Group's cash flow, short-term and long-term borrowings, as well as lines of credit available from our banks. Existing credit facilities and lines of credit can be utilized to compensate for fluctuations in the cash flow development at any time. These fluctuations result from operating business in particular and primarily serve to finance net working capital.

The development of the Aurubis Group's liquidity position is monitored regularly on a timely basis. Control and monitoring are carried out on the basis of defined key ratios. In the reporting year, we repaid two bonded loans (Schuldscheindarlehen) that were due.

The main key financial ratio for controlling debt is debt coverage, which calculates the ratio of net borrowings [Q Glossary, page 183](#) (borrowings less cash and cash equivalents) to earnings before interest, taxes, depreciation, and amortization (EBITDA [Q Glossary, page 183](#)) and shows the number of periods required to redeem the existing borrowings from the Group's income – assuming an unchanged earnings situation.

The interest coverage ratio expresses how the net interest expense is covered by earnings before interest, taxes, depreciation, and amortization (EBITDA).

Our long-term objective is to achieve a well-balanced debt structure. In this context, we consider debt coverage < 3 and interest coverage > 5 to be well balanced.

We use the operating result for control purposes within the Group. Accordingly, the Group's key operating financial ratios are presented as follows:

### Operating Group financial ratios

	9/30/2018	9/30/2017
Debt coverage = net borrowings/EBITDA	-0.4	-0.5
Interest coverage = EBITDA/net interest	32.3	26.1

Additional control measures related to liquidity risks are outlined in the Risk and Opportunity Report in the Combined Management Report.

### ANALYSIS OF LIQUIDITY AND FUNDING

The cash flow statement shows the cash flows within the Group. It highlights how funds are generated and used.

At € 203 million as at September 30, 2018, the net cash flow [Q Glossary, page 183](#) from operating activities was significantly below the prior-year level (€ 480 million). This was due in particular to higher inventories of precious metal-bearing raw materials as at the reporting date.

The cash outflow from investing activities totaled € 143 million (previous year: € 155 million). Investments in fixed assets in the fiscal year include payments for the Industrial Heat and Future Complex Metallurgy projects. The sale of investment property had a positive effect of about € 8 million on the cash flow from investment activities in the reporting period. The cash outflow in the previous year was influenced by a larger individual investment in connection with our long-term electricity supply agreement.

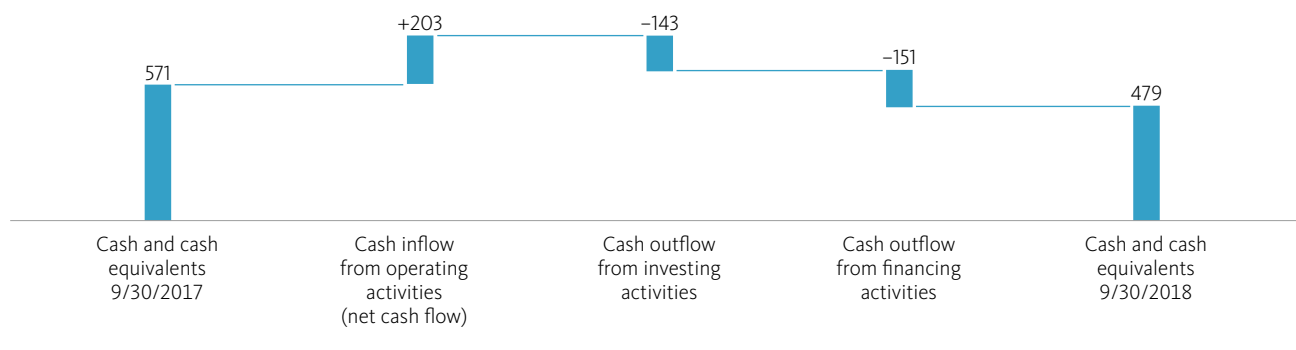
After deducting the cash outflow from investing activities of € 143 million from the net cash flow of € 203 million from operating activities, the free cash flow [Q Glossary, page 183](#) amounts to € 60 million (previous year: € 325 million).

The cash outflow from financing activities amounted to € 151 million (previous year: € 225 million) and primarily resulted – both in the fiscal year reported and in the previous year – from the redemption of bonded loans (Schuldscheindarlehen).

Cash and cash equivalents of € 479 million from continuing and discontinued operations were available to the Group as at September 30, 2018 (€ 571 million as at September 30, 2017). Cash and cash equivalents are utilized for operating business activities, investing activities, and the redemption of borrowings.

## Source and application of funds

in € million



The net surplus financial funds amounted to € 165 million as at September 30, 2018 (previous year: € 220 million).

## Net borrowings in the Group

in € million	9/30/2018	9/30/2017
Borrowings	314	351
– Cash and cash equivalents	479	571
<b>Net borrowings (minus = assets)</b>	<b>-165</b>	<b>-220</b>

In addition to cash and cash equivalents, the Aurubis Group has unutilized credit line facilities and thus has adequate liquidity reserves. Parallel to this, within the context of factoring agreements, the Group makes use of the sale of receivables without recourse as an off-balance-sheet financial instrument.

## Business performance in the Segments

### SEGMENT METAL REFINING & PROCESSING

#### Key figures

in € million	2017/18 operating	2016/17 operating
Revenues	10,407	9,866
EBIT	359	347
EBT	353	337
Capital expenditure	152	161
Depreciation and amortization	-118	-119
Operating ROCE	19.4%	20.9%
Capital employed	1,852	1,657
Number of employees (average)	4,473	4,423

#### BUSINESS PERFORMANCE AND EARNINGS TREND

The main factors driving earnings in Segment Metal Refining & Processing (MRP) are treatment and refining charges (TC/RCs) that are negotiated as deductions from the purchase price of the metals for converting raw materials and recycling materials into the exchange product – copper cathodes – and other metals. Additional earnings components include revenues from precious metal and sulfuric acid sales, as well as the metal gain. Furthermore, the Aurubis copper premium and the so-called product surcharge charged for processing copper cathodes into copper products are also significant earnings components.

During the fiscal year, Segment MRP generated operating earnings of € 353 million (previous year: € 337 million). Operating EBT during the previous year had been impeded to the tune of around € 15 million due to a scheduled maintenance shutdown carried out at the Hamburg site in Q1 2016/17.

Higher concentrate throughputs due to the Hamburg and Pirdop smelter sites' good performance, substantially increased refining charges for copper scrap with a good supply, higher sulfuric acid revenues owing to considerably higher sales prices, a higher metal gain with increased copper prices, considerably higher rod sales, and positive contributions from our efficiency improvement program all had a positive effect on the result in fiscal year 2017/18. The weaker US dollar had a negative impact on earnings.

Overall, Segment MRP raised its operating result by 4.8% in the reporting year, to € 353 million (previous year: € 337 million). The result was therefore at prior-year level and thus fulfilled the original forecast from the Annual Report 2016/17. Unscheduled maintenance shutdowns at the Hamburg and Lünen production sites in Q4 2017/18 negatively affected earnings and led to a slightly lower result than was expected when the Quarterly Report on the First 9 Months 2017/18 was released.

At 19.4% (previous year: 20.9%), the Segment's ROCE was at the very high level of the previous year and likewise fulfilled the full-year forecast from the Annual Report 2016/17.

Segment MRP generated total revenues of € 10,407 million during the reporting period (previous year: € 9,866 million). This increase in revenues is primarily due to higher copper prices.

#### RAW MATERIAL MARKETS

##### Satisfactory treatment and refining charges for copper concentrates

There was a continued good supply situation for copper concentrates in fiscal year 2017/18, due especially to higher output volumes from mines and isolated shutdowns at other copper smelters. The copper price, which has risen notably compared to the previous year, served in the reporting period as a strong incentive for the mining industry to maximize output and push additional mine expansions forward. Aurubis also benefited and was able to procure a sufficient supply of copper concentrates in the reporting year.

According to Reuters, a leading mining company and a larger Chinese copper smelter signed the first significant annual contract for 2018 at benchmark TC/RCs of US\$ 82.25/t / 8.225 cents/lb (previous year: US\$ 92.50/t / 9.25 cents/lb). Initially, a lower level was established for spot transactions in early 2018; toward the end of fiscal year 2017/18 in particular, spot TC/RCs then rose to levels above the benchmark TC/RCs for calendar year 2018. The main reasons for this were, on the one hand, the good copper concentrate supply situation due to high mine output and, on the other, the fact that discussions between mines and unions regarding collective agreements went smoothly and didn't lead to any significant strikes. Furthermore, demand for copper concentrates among smelters, especially in Asia, decreased due to standstills and limitations of production.



### Refining charges for copper scrap remain high

During fiscal year 2017/18, European refining charges for copper scrap were, in our opinion, at a relatively high level, with positive effects on our result accordingly. The following developments influenced the market: At the start of fiscal year 2017/18, refining charges for copper scrap in Europe were at a very good level. As the fiscal year continued, negative weather-related influences on refining charges and then higher demand from China for copper scrap with high copper contents were noticeable on the market. This was countered by the higher supply of recycling materials from the US in Europe due to the trade conflicts between the US and China. All together, these developments led to a slight tightening of the market. Because of our flexibility with respect to input materials, we nevertheless had a sufficient supply for our production facilities.

The availability of complex recycling materials, including industrial residues and electrical and electronic scrap, was stable despite intense competition for these materials.

## PRODUCTION

### Throughput slightly above the very good previous year

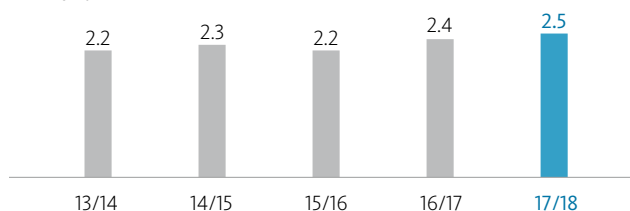
The good supply of copper concentrates, copper scrap, blister copper [Q Glossary, page 182](#), and recycling materials ensured that our production facilities were well utilized during the entire fiscal year 2017/18.

The good performance of both the Hamburg and Pirdop smelter sites led to concentrate throughput of 2,522,000 t, which was 4 % above the very good previous year. The optimization measures from the Fit for Future program took full effect in Pirdop for the first time.

Concentrate throughput in Hamburg in Q3 2017/18 was influenced by a scheduled repair standstill in the anode furnace. Moreover, unscheduled shutdowns at the Hamburg and Lünen production sites in Q4 negatively affected the result for the year. The prior-year concentrate throughput was strained by the scheduled maintenance shutdown at the Hamburg site in Q1 of that year.

### Concentrate throughput

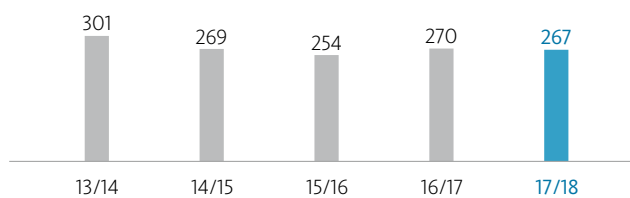
in million t



At the recycling plant in Lünen, the throughput in the Kayser Recycling System (KRS) [Q Glossary, page 182](#) was at the level of the good previous year as a result of our input mix and the availability of recycling materials.

### KRS throughput

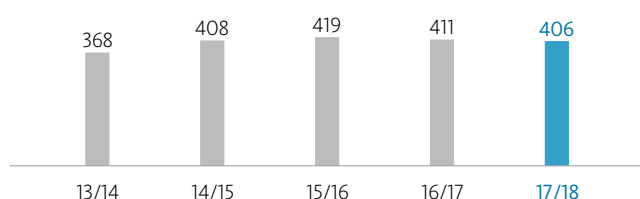
in thousand t



The Olen site also has recycling facilities and a tankhouse [Q Glossary, page 183](#) for the production of copper cathodes. During the reporting year, both recycling sites benefited from the good refining charges for copper scrap, blister copper, and other recycling materials. Overall, the group-wide input of copper scrap and blister copper in fiscal year 2017/18 remained at the good prior-year level.

### Copper scrap and blister copper input in the Group

in thousand t



### Sulfuric acid output at prior-year level

Corresponding to the concentrate throughput, the sulfuric acid output was 2,374,000 t, slightly above the prior-year level. The global market for sulfuric acid was characterized by consistently high demand. The overall availability of sulfuric acid was very limited, a situation that was reinforced by isolated smelter shutdowns, especially in Asia. This led to substantially higher prices on the spot market [Q Glossary, page 183](#) in the reporting period.

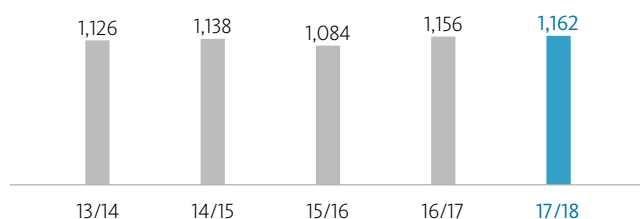
### Stable cathode output

The cathode markets recorded good ongoing demand with slightly improved spot premiums in reporting year 2017/18. At US\$ 86/t, the Aurubis copper premium for calendar year 2018 was the same as in the previous year. We were generally able to implement this premium for our products in the reporting period.

Copper cathode output in Segment Metal Refining & Processing was 1,162,000 t in the reporting year and was thus slightly above the prior-year level of 1,156,000 t.

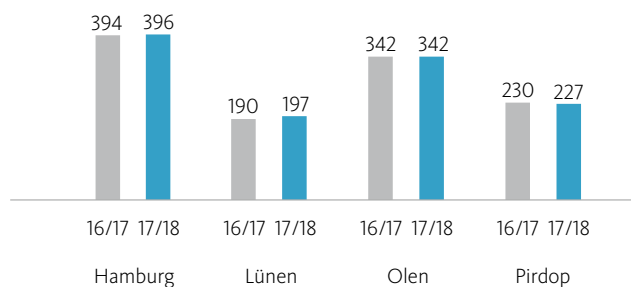
### Cathode output in the Group

in thousand t



### Cathode output in the Group by sites

in thousand t



### Our new, diverse approach: multi-metal

Within the scope of our multi-metal strategy, we have been reporting sales volumes for lead, nickel, tin, minor metals, and platinum group metals since the start of the fiscal year, in addition to gold and silver.

The recovery of our metals depends on the metal contents in the processed copper concentrates and recycling materials. A portion of the metals is sold in the form of intermediate products.

### Sales volumes of other metals

		2017/18	2016/17
Gold	t	48	42
Silver	t	877	1,026
Lead	t	19,527	19,624
Nickel	t	3,022	2,828
Tin	t	1,851	1,547
Minor metals	t	918	899
Platinum group metals (PGM)	kg	8,821	9,335

### Rod output significantly exceeds previous-year levels

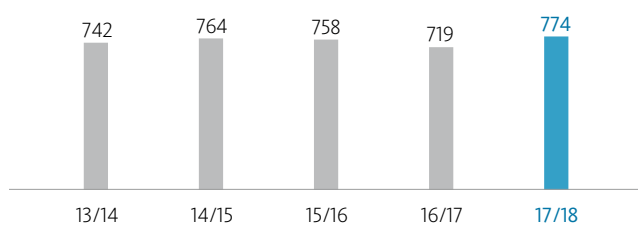
Continuous cast wire rod is used as a preliminary product for processing, especially in the cable and wire industry, as well as for special semi-finished products. Demand for rod reflected an ongoing positive trend in the reporting year. Total rod output in the European market grew by over 4% in the first half of 2018

compared to the previous year. Apart from catch-up effects from the previous year resulting from a change in cable sector standards, growth was supported by robust demand. The construction sector, the automotive industry, and the enameled wire industry provided demand momentum. There was also good demand for energy cable. In fiscal year 2017/18, there was stronger demand growth in our key European markets especially.

We gained additional market share in a good market environment. At 774,000 t, output from our rod plants significantly exceeded prior-year output (719,000 t) by 8%.

#### Continuous cast rod output

in thousand t

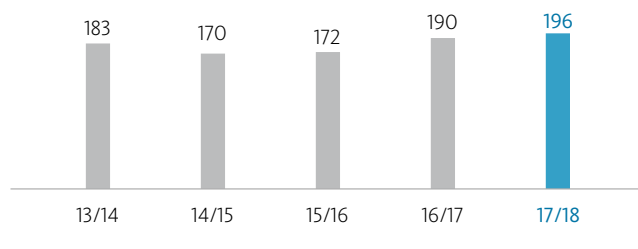


#### Continuous cast shapes output at a very high level

High European demand for flat rolled products led to a positive demand trend for high-purity shapes. At 196,000 t, shapes output in fiscal year 2017/18 was about 3% higher than in the previous year (190,000 t).

#### Continuous cast shapes output

in thousand t



#### Bars and profiles output considerably increased

The production volume for bars and profiles, which are produced exclusively at the Olen site, amounted to 14,600 t, exceeding the previous year by 2,100 t or 17% (previous year: 12,500 t). This increased sales volume was primarily attributable to the acquisition of new customers.

#### Capital expenditure

Capital expenditure in Segment MRP amounted to € 152 million (previous year: € 161 million). The main individual investments were infrastructure measures in Hamburg and Bulgaria, investments in the Industrial Heat project in the Hamburg neighborhood HafenCity East, and expansion measures in Bulgaria. The capital expenditure of the previous year was influenced by investments connected to long-term electricity sourcing.

#### SEGMENT FLAT ROLLED PRODUCTS

##### Key figures

in € million	2017/18 operating	2016/17 operating
Total revenue	1,452	1,348
EBIT	18	2
EBT	21	2
Capital expenditure	17	14
Depreciation and amortization	-11	-11
Operating ROCE	5.2 %	0.7 %
Capital employed	352	351
Number of employees (average)	1,768	1,746

#### BUSINESS PERFORMANCE AND EARNINGS TREND

Segment Flat Rolled Products (FRP) processes copper and copper alloys – primarily brass, bronze, and high-performance alloys – into flat rolled products and specialty wire. The main production sites are Stolberg (Germany), Pori (Finland), Zutphen (Netherlands), and Buffalo (USA). Furthermore, the segment also includes slitting and service centers in Birmingham (UK), Dolný Kubín (Slovakia), and Mortara (Italy), as well as sales offices worldwide.

Segment FRP generated operating earnings before taxes (EBT) of € 21 million (previous year: € 2 million). The significant earnings improvement on the previous year was mainly thanks to the ongoing efficiency enhancement program, higher production and sales volumes, and a good market situation. Segment FRP therefore achieved the forecast issued at the end of fiscal year 2016/17.

Operating ROCE was 5.2 % (previous year: 0.7 %). Segment FRP therefore exceeded the forecast issued at the end of fiscal year 2016/17.

At € 1,452 million, the Segment's revenues were notably above those of the previous year (€ 1,348 million). The higher revenues were primarily due to the increased sales volume and a higher average copper price for the products sold.

On March 29, 2018, Aurubis AG and Wieland-Werke AG signed a contract to sell Segment Flat Rolled Products. The final execution of the sales contract is subject to approval by the antitrust authorities. A final decision is expected in early 2019.

### PRODUCT MARKETS

The market for flat rolled products continued to develop positively in Europe in particular. Capacity utilization was good, while sales in the Segment increased by 3 % on the previous year. Growth momentum was especially evident among connector and cable manufacturers.

### RAW MATERIALS

The availability and conditions for input metals were good in fiscal year 2017/18. The considerably lower metal prices in Q4 of the fiscal year didn't lead to a bottleneck in the supply of input metals.

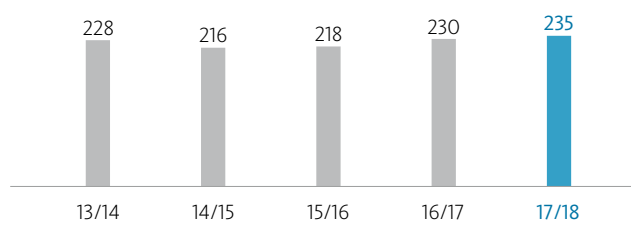
## PRODUCTION

### Flat rolled products output increased

Output of flat rolled products and specialty wire increased to 235,325 t due to demand (previous year: 230,180 t). The boost in output was concentrated in the European plants. All of the sites continued to work on implementing the programs to improve efficiency and to enhance productivity and quality.

### Flat rolled products and specialty wire output

in thousand t



## CAPITAL EXPENDITURE

Capital expenditure in Segment FRP amounted to € 17 million (previous year: € 14 million). This was primarily used for replacement investments.

## Executive Board assessment of the Aurubis Group during fiscal year 2017/18

In fiscal year 2017/18, the Aurubis Group achieved one of the best results in its history, moderately exceeding the previous year's result. We increased our operating earnings before taxes by about 10 %, to € 329 million (previous year: € 298 million). At 14.8 %, we achieved an operating ROCE at the very good prior-year level (15.1 %).

According to the forecast issued in our Annual Report 2016/17, we expected the Aurubis Group to record operating EBT at the previous year's level and operating ROCE slightly below the previous year's level in fiscal year 2017/18. In the Interim Report on the First 6 Months 2017/18, we adjusted this forecast, expecting a moderately higher operating EBT compared to fiscal year 2016/17, with ROCE at the prior-year level. All things considered, both operating consolidated EBT and operating ROCE in the reporting year were within the forecast.

Favorable developments in sub-markets and contributions to earnings from the efficiency improvement program contributed to this. Higher concentrate throughputs due to the Hamburg and Pirdop smelter sites' good performance, substantially increased refining charges for copper scrap with a good supply, higher sulfuric acid revenues due to significantly higher sales prices, a higher metal gain with increased copper prices, and considerably higher rod sales all had a positive effect on the result in fiscal year 2017/18. We achieved the fiscal year's efficiency improvement program target of € 30 million in project success.

The business development in Segment MRP was influenced by very good availability of input materials and a good supply situation. The supply of the facilities was always secure, with satisfactory treatment and refining charges. Concentrate processing in our primary smelters reached a new high of over 2.5 million t. During the reporting year, we benefited from the good refining charges for copper scrap, blister copper, and other recycling materials, as well as higher sulfuric acid revenues due to substantially higher sales prices. The cathode output was at the good prior-year level. Another factor relevant for Segment MRP's result was the higher metal gain with increased metal prices.

Segment FRP also benefited from positive effects brought about by the efficiency improvement program, as well as good availability and conditions for input materials in fiscal year 2017/18. Output of flat rolled products and specialty wire increased by 2 % owing to demand, to over 235,000 t. All of the sites continued to work on implementing the programs to improve efficiency and to enhance productivity and quality.

At € 203 million as at September 30, 2018, the operating net cash flow was below the prior-year level (€ 480 million), primarily due to the build-up of inventories, including higher inventories of precious metal-bearing raw materials as at the balance sheet date.

The equity ratio (operating) was 55.5 % as at September 30, 2018 (previous year: 52.5 %). Net surplus financial funds as at September 30, 2018 were at € 165 million (previous year: € 220 million). The Aurubis Group's balance sheet structure thus continues to be very robust.

## Results of operations, net assets, and financial position of Aurubis AG

### GENERAL INFORMATION

In order to supplement our Aurubis Group reporting, we explain the development of Aurubis AG in the following section. Aurubis AG is the parent company of the Aurubis Group and is based in Hamburg with production sites in Hamburg and Lünen. Apart from managing the Aurubis Group, the business activities of Aurubis AG also particularly include primary copper production and recycling, as well as copper product and precious metal production. The separate financial statements of Aurubis AG have been prepared in accordance with the requirements of the German Commercial Code (Handelsgesetzbuch, HGB) and the German Stock Corporation Act (Aktiengesetz, AktG). The primary differences from the Group financial statements prepared in accordance with IFRS principles are in the accounting treatment of fixed assets, the measurement of inventories, the measurement of financial instruments, and the accounting treatment of pension provisions.

The Aurubis Group is managed across all companies at Group level through Segments, using operating EBT and operating ROCE as the financial performance indicators. These indicators are also used for Aurubis AG's operating activities, which are a significant component of the Group. To this extent, the development and forecast of the financial performance indicators at the Segment and Group levels at the same time represent the development and forecast for Aurubis AG as an individual company.

The analysis of the development for the financial performance indicators outlined above during the fiscal year and the related forecast for the following year are provided in the Economic Report and the Forecast Report for the entire Group. Statements regarding the risk situation and opportunities can be found in the Group's Risk and Opportunity Report.

### RESULTS OF OPERATIONS

#### Income statement

in € million	2017/18	2016/17
<b>Revenues</b>	<b>7,968</b>	<b>7,511</b>
Changes in inventories/ own work capitalized	30	-42
Other operating income	82	76
Cost of materials	-7,474	-6,948
<b>Gross profit</b>	<b>606</b>	<b>597</b>
Personnel expenses	-245	-240
Depreciation of property, plant, and equipment and amortization of intangible assets	-51	-51
Other operating expenses	-163	-159
<b>Operational result (EBIT)</b>	<b>147</b>	<b>147</b>
Financial result	24	50
<b>Result of normal business activities (EBT)</b>	<b>171</b>	<b>197</b>
Taxes	-51	-48
<b>Net income for the year</b>	<b>120</b>	<b>149</b>

The business performance (gross profit) of Aurubis AG in fiscal year 2017/18 was positively influenced in comparison to the previous year by higher refining charges on the copper scrap markets, as well as by a higher metal gain. During the reporting year, the concentrate throughput was at prior-year level with satisfactory treatment and refining charges. Moreover, higher sulfuric acid revenues due to substantially higher sales prices positively impacted the result during the fiscal year.

Revenues increased by € 457 million to € 7,968 million during the reporting year (previous year: € 7,511 million). This development was primarily driven by higher sales revenues for copper products due to pricing.

With a cost of materials ratio (cost of materials/(revenues + changes in inventories)) at the prior-year level, and taking into account the change in inventories, own work capitalized, and other operating income, the gross profit increased slightly by € 9 million to € 606 million (previous year: € 597 million).

Personnel expenses increased in the past fiscal year by € 5 million to € 245 million (previous year: € 240 million). As was the case in the previous year, the increase was especially attributable to wage tariff agreement increases and an increased number of employees.

At € 51 million, depreciation and amortization of fixed assets remained at the prior-year level (previous year: € 51 million). Taking other operating expenses into account, the operational result (EBIT) amounted to € 147 million (previous year: € 147 million).

The financial result for the reporting year was € 24 million (previous year: € 50 million). In addition to dividends of € 52 million from subsidiaries (previous year: € 14 million), this included the net interest result of € -28 million (previous year: € -26 million) and write-ups of investment securities amounting to € 2 million (previous year: € 7 million). In the previous year, moreover, write-ups of equity interests amounting to € 55 million were also recognized.

After taking a tax expense of € 51 million (previous year: € 48 million) into account, net income for the year amounted to € 120 million (previous year: € 149 million).

## NET ASSETS

Fixed assets increased in the fiscal year by € 55 million to € 2,120 million (previous year: € 2,065 million), especially due to investments in property, plant, and equipment. These included

investments in connection with the Industrial Heat project, the construction of the new innovation and training center, and the Future Complex Metallurgy project. In addition, during the past fiscal year, Aurubis acquired the shares that Codelco Kupferhandel GmbH had held in Deutsche Giessdraht, so Aurubis now owns 100 % of the shares.

The € 69 million increase in inventories to € 822 million (previous year: € 753 million) resulted primarily from higher inventories of raw materials due to the build-up of complex, precious metal-bearing concentrates, as well as from an increase in precious metal-bearing intermediate products.

Overall, total assets rose by € 66 million, to € 3,809 million compared to the prior year. Thus, in comparison to the previous year, the share attributable to fixed assets was 56 % (previous year: 55 %), while inventories accounted for 22 % (previous year: 20 %) and receivables and other assets accounted for 12 % of total assets (previous year: 11 %).

Due to the result, equity increased by € 54 million to € 1,510 million (previous year: € 1,456 million). The equity ratio remained at the prior-year level of 40 %.

Provisions increased by a total of € 23 million to € 284 million. The growth was due to higher pension provisions and increased personnel and tax provisions.

Bank borrowings decreased by € 49 million to € 278 million (previous year: € 327 million) due to the redemption of two bonded loans (Schuldscheindarlehen).

Trade accounts payable decreased by € 64 million to € 469 million. Trade accounts payable disclosed at September 30, 2017 were at a slightly higher level due to blister copper deliveries that had not yet been paid for as at the balance sheet date. Payables to affiliated companies primarily comprise borrowings, which increased within the context of normal financial transactions, from € 1,012 million to € 1,129 million. Other payables remained unchanged at € 20 million.

**Balance sheet structure of Aurubis AG**

in %	9/30/2018	9/30/2017
Fixed assets	56	55
Inventories	22	20
Receivables, etc.	12	11
Cash and cash equivalents	10	14
	<b>100</b>	<b>100</b>
Equity	40	39
Provisions	7	7
Liabilities	53	54
	<b>100</b>	<b>100</b>

Aurubis uses assets under the terms of leasing agreements that are not recognized as assets in the balance sheet. Financial commitments deriving from leases amounted to € 9 million. Apart from this, financial commitments under long-term storage and handling agreements amounted to € 106 million.

**FINANCIAL POSITION**

Net borrowings were at € 744 million as at September 30, 2018 (previous year: € 638 million). They resulted from bank borrowings of € 278 million (previous year: € 327 million), receivables and payables to subsidiaries deriving from refinancing of € 890 million (previous year: € 830 million), and after deducting cash and cash equivalents of € 424 million (previous year: € 519 million).

**ANALYSIS OF LIQUIDITY AND FUNDING**

In the 2017/18 fiscal year, the net cash flow decreased by € 116 million to € 70 million. The main reason for this was the build-up of working capital as a result of higher inventories and lower trade accounts payable.

The cash outflow for investments in fixed assets was € 111 million (previous year: € 108 million). Investments of € 86 million in property, plant, and equipment mainly related to the Industrial Heat project, the construction of the new innovation and training center, and the Future Complex Metallurgy project. Investments of € 19 million in financial fixed assets derived from the acquisition of the remaining shares of Deutsche Giessdraht GmbH from Codelco Kupferhandel GmbH.

The cash outflow of € 49 million from financing activities (previous year: cash inflow of € 8 million) resulted from the € 71 million redemption of two bonded loans (Schuldscheindarlehen), as well as from a dividend payment of € 65 million. The take-up of loans from subsidiaries in the context of the existing cash pooling arrangements had a counter-effect.

Cash and cash equivalents at the end of the reporting period amounted to € 424 million (previous year: € 519 million). In addition to cash and cash equivalents, Aurubis AG had access to unutilized credit line facilities and thus has adequate liquidity reserves. Furthermore, within the context of factoring agreements, Aurubis AG sold receivables without recourse as a financing instrument.

**Capital expenditure**

In the past fiscal year, investments of € 111 million were made at the Hamburg and Lünen sites (previous year: € 108 million). The investments were made primarily in the following projects: the Industrial Heat project, the construction of the new innovation and training center in Hamburg, the Future Complex Metallurgy project, the training center in Lünen, and the acquisition of the remaining shares of Deutsche Giessdraht GmbH from Codelco Kupferhandel GmbH. In addition, investments were made in various infrastructure and improvement measures in the Hamburg and Lünen plants.



# Risk and Opportunity Report

## Integrated risk and opportunity management

Risks and opportunities are elements of our business activities and are essential to the company's success. As part of our operating business and our strategic management, we weigh opportunities and risks against one another and ensure that they remain balanced. We try to identify and evaluate opportunities as early as possible.

Aurubis AG's risk and opportunity situation depends significantly on the Aurubis Group's risk and opportunity situation. In this respect, the statements of the company's management on the overall assessment of risks and opportunities also serve as a summary of Aurubis AG's risks and opportunities.

## Risk management system

Our objective in risk management is to manage and monitor the risks associated with our business with the help of a risk management system (RMS) suited to our activities. Identifying and observing risk development early on is of major importance. Furthermore, we strive to limit negative effects on earnings caused by risks by implementing appropriate and economically sound countermeasures.

Risk management is an integral component of the centralized and decentralized planning, management, and monitoring processes and covers all of the Aurubis Group's main sites, business sectors, and central functions. The planning and management system, risk reporting, open communication culture, and risk reviews at the sites create risk awareness and transparency with regard to our risk situation.

Risk management officers have been appointed for all sites, business sectors, and central functions, and they form a network within the Group. The Group headquarters manages the network. The RMS is documented in a corporate policy.

Standard risk reporting takes place bottom-up each quarter using a uniform, group-wide reporting format. Within this format, the identified risks and risks beyond a defined threshold are explained and evaluated on the basis of their probability of occurrence and their business significance. Measures to manage them are then

outlined. The risks registered with Group headquarters are qualitatively aggregated into significant risk clusters by Corporate Risk Management and reported to the entire Executive Board. The report, together with external risk reporting, serves as the basis for the report to the Audit Committee.

## Potential effect on earnings

in € million	> 1	> 5	> 20	> 50
<b>Likelihood</b>				
high	medium	medium	high	high
medium	low	medium	medium	high
low	low	low	medium	medium
unlikely	low	low	low	medium

In the report to the Executive Board and the Audit Committee, the qualitatively aggregated risk clusters are assessed with due regard to risk management measures (net perspective) based on their probability of occurrence and the potential effect on earnings pursuant to the spreads included in the table, and are classified as low, medium, or high.

## Independent monitoring

The RMS is subject to routine monitoring and review. Internal Audit monitors risk management and compliance with the internal control system using systematic audits. As a process-independent authority, it contributes to the correctness and improvement of the business processes, and to the effectiveness of the installed systems and controls.

In addition, the auditors review our early risk detection system to ensure that it adheres to legal requirements. They report the audit results to the Executive Board and the Supervisory Board (Audit Committee).

Furthermore, the Audit Committee deals intensively with risk management issues. The risk management officer regularly informs the committee and the Executive Board about current developments.

## Explanation of relevant risks

In the following sections, the risks associated with our business are explained according to our risk clusters. The main measures and instruments we use to counter these risks are also described here. We have separately indicated risks and risk-relevant issues that we currently classify as potentially medium to high.

### SUPPLY AND PRODUCTION

The ability to keep the production facilities supplied with raw materials and the availability of these facilities are of central importance for the Aurubis Group. We limit the associated risks by implementing a range of specific measures:

For example, to ensure the supply of copper concentrates for our facilities, we have entered into long-term agreements with a number of concentrate suppliers from various countries. In this way, we are able to reduce the risk of production interruptions caused by possible delivery failures. The risk of volatile treatment and refining charges on the spot market is also limited by the long-term nature of the agreements.

Overall, the recycling facilities were well supplied during the past fiscal year, thanks to our extensive international supplier network. From today's standpoint, we also expect a full supply situation and full utilization of the facilities for fiscal year 2018/19. There are ongoing refining charge volatilities due to the general metal price trend, the collecting behavior and inventory management of the metal trade, the international economic situation, and competition for the secondary raw materials relevant for Aurubis.

A key means of countering risks within the supply chain is Business Partner Screening. This instrument analyzes existing and potential business partners to assess their integrity in relation to social and ecological criteria, among other factors. The focus of our interest is on topics such as compliance, corruption, human rights violations, and environmental aspects. The decision to enter into a contract with business partners with increased risk is only made after extensive review, and in consultation with the Sustainability and Compliance departments.

The material for the facilities producing copper products mainly comes in the form of copper cathodes manufactured within the Group. This allows us to simultaneously generate higher added value and control the quality of copper products during the entire process. We also procured a sufficient volume of copper-bearing raw materials for the production plants belonging to Segment Flat Rolled Products. In this case, we also expect a similar situation for the coming fiscal year.

Overall, plant availability was satisfactory. There were smaller, unscheduled shutdowns in the course of the fiscal year.

We took organizational measures to handle potential incidents that could result from events such as flooding or fire. These included alarm plans and routine drills for the purpose of training our employees. We also addressed the risk of malfunctions with regular maintenance work and by keeping critical replacement parts on hand.

Taking into account the measures described above, we regard the risk of insufficient supply as "medium" and the risk of strongly limited availability of our production facilities as "low."

We deal with logistics risks by implementing a thorough, multi-step selection and evaluation process for service providers, by avoiding single sourcing as far as possible, and by preventively developing back-up solutions. We also have an international network of qualified service providers at our disposal. This helps us to, for example, prevent weather-related risks in the transport chain by contractually arranging a selection of appropriate transport alternatives.

## SALES

In addition to supply and production risks, the Aurubis Group also faces sales risks, which we classify as “medium.”

Generally speaking, risks can arise from negative deviations from our predictions of the markets' economic development, which we have outlined in the Forecast Report. In particular, a weakening of the overall economy in Europe can negatively impact demand for our products. This applies to our sales of copper products such as wire rod, shapes, and the portfolio of Segment Flat Rolled Products, as well as sulfuric acid.

With economic analyses and estimates regarding economic trends, we are in a position to adjust our individual sales strategies to changing conditions as needed, thus countering any risks that arise.

Cathodes that Aurubis did not process further internally are sold on the international copper cathode market.

Business partners on the sales side are also assessed using Business Partner Screening. The statements made in the previous section “Supply and production” can be referenced in this regard.

## ENERGY AND CLIMATE

Energy prices increased in the past fiscal year. We have safeguarded electricity prices in the long term at an internationally competitive level through our electricity contract, which has been in effect since 2010. This covers most of our electricity demand across the most important German sites. We also deal with fundamental supply security, as well as the potential and limitations of more flexible energy sourcing, which is becoming increasingly necessary due to the rising, volatile feed-in of renewable energies.

Burdens resulting from changes in potential cost drivers such as the German Renewable Energies Act (EEG), the emissions trade, grid charges, and the eco-tax are difficult to quantify reliably because of the ongoing uncertainty of the legal situation and the changing political conditions. We expect the tax burden to increase in the medium term due to the amendments to the

German Renewable Energies Act (EEG) and the Combined Heat and Power Generation Act (KWKG) in 2017, as well as the Grid Fee Modernization Act (NEMoG). The European Commission's decision of May 28, 2018 in relation to the state aid investigation into network charge exemption in previous periods negatively affected Aurubis, entitling the German state to reclaim around € 3 million plus interest, which we recognized in the income statement in the fiscal year reported by setting up a provision.

Of particular political relevance is the copper-producing industry's retention, as of 2021, of the special carbon leakage status with regard to the allocation of emission trading allowances. The completion of the decision-making process is still pending. The situation regarding the allocation rules that are to apply as of 2021 is currently difficult to predict. However, taking into account the political goals of the Paris Agreement, we expect a decline in the free allocation of allowances for companies at risk of carbon leakage. The CO<sub>2</sub> price increased substantially in the past year. The supply of CO<sub>2</sub> certificates is set to be significantly reduced in the coming trading period, which should raise prices considerably. The political decision-making process regarding the form and amount of compensation for indirect CO<sub>2</sub> costs in electricity starting in 2021 will only start in the middle of the coming year. We also expect rules to tighten in this area, too, which could lead to a reduction in the compensation granted. On the whole, we expect considerable cost increases in the medium term as a result of the EU emissions trading system. These are likely to put significant strain on the company.

On the customer side, increasing demands for transparent goals and strategies related to effective production processes, energy, and CO<sub>2</sub> efficiency could influence future copper product sales, particularly when it comes to customer acquisition and retention. We are countering this with steps such as annual climate reporting and evaluations of such reporting conducted by the CDP (formerly the Carbon Disclosure Project).

In the future, the topic of energy and the associated risks, currently classified as “medium,” will continue to be very important for Aurubis as an energy-intensive company.

## FINANCE AND FINANCING

Metal price and exchange rate fluctuations represent a potential risk in the buying and selling of metals. Foreign exchange and metal price hedging substantially reduce this risk. Metal backlogs are hedged daily with financial instruments such as spot and forward contracts. Similarly, spot and forward exchange contracts are used to hedge foreign currencies and, on a daily basis, to minimize foreign exchange risks arising from exchange rate fluctuations affecting foreign currency metal transactions. We only select creditworthy firms as counterparties for hedging transactions to minimize the credit risk.

We hedge expected receipts from foreign currencies, especially the US dollar, with options and forward exchange transactions in some cases. We will continue this in the future as well and expect that we can reduce the risks from metal price and exchange rate fluctuations to a reasonable level with these measures.

Credit risks from trade accounts receivable are largely hedged by commercial credit insurances. Internal risks are only permitted to a very limited extent and after review. The development of the outstanding receivables is monitored closely. During the reporting period, there were no significant bad debts. We also do not foresee any increased risks for the future.

The liquidity supply, which is very important for the Aurubis Group, was secured during the past fiscal year. The credit lines at the banks were also sufficient. The Aurubis Group has a stable financial situation in the new fiscal year as well and can finance possible fluctuations from operating business through its credit lines. Overall, we classify the finance and financing risks as "medium."

## ENVIRONMENTAL PROTECTION AND OTHER ASPECTS

There is always a risk that environmental or regulatory provisions could become more stringent, leading to added costs or limitations in product fabrication and marketing. For example, there is a risk that increasingly strict environmental legislation will restrict the marketing of iron silicate. We want to achieve greater flexibility on the sales market by expanding our granulation capacities, among other things.

In addition, environmental risks resulting from the possible failure to comply with thresholds and from violations of requirements can have legal consequences. We ensure the environmentally sound operation of our production facilities, in part to prevent these situations. We are an international leader in environmental protection, which is confirmed by annual certifications in accordance with DIN EN ISO 14001 and EMAS, for example. We consider ourselves to be well positioned for the future in this regard. Nevertheless, operational incidents that could have an adverse impact on the environment cannot be completely ruled out. Overall, we classify the environmental risks as "medium."

In a plant with complex processes, employees' specialist knowledge is an important factor for ensuring performance quality. We have established different measures that are intertwined with each other so that Aurubis can continue to count on employees' knowledge. Among these are partnerships with universities, through which we establish ties with qualified young people, and qualification measures, through which we foster the development of professionals and managers within the company.

Occupational safety and health protection are high-priority areas for us. We focus on individual responsibility, detailed hazard assessments, and training, as well as on short-term and medium-term goals with the objective of achieving our Vision Zero – that is, no accidents.

The violation of laws can have serious consequences for both Aurubis as a group and for its employees and business partners. We therefore consistently follow all legal requirements. Significant compliance risks are identified, analyzed, and addressed by Compliance Management. We counter legal and tax risks with organizational procedures and clear management structures. We closely follow political discussions on tax issues, for example on the financial transaction tax and capital tax, as well as their possible effects.

Aurubis is additionally subject to IT risks that can impact areas such as supply, production, and sales. These risks were taken into consideration in the company's risk assessment. From the current perspective, however, these do not pose a significant threat due to the risk minimization measures described in the following.

We handle risks related to the availability of our IT systems with continuous monitoring, redundant infrastructure, and continuous adjustments to the state of the art in IT. We counter the risks of possible incidents or disasters with the redundant design of our IT infrastructure, as well as data recovery and continuity plans. We minimize the risks that can result from unauthorized access to company data, as well as cybercrime, by restricting access rights, carrying out security reviews, and using modern security technologies.

Furthermore, selected risks are largely covered by insurance policies. We rely on the expertise of an external insurance broker for this purpose.

### NON-FINANCIAL RISKS WITHIN THE SCOPE OF THE NON-FINANCIAL REPORT

Non-financial risks were assessed in accordance with the CSR Directive Implementation Act. In the process, no non-financial risks were identified that were very likely to cause serious negative impacts on employee and environmental matters, on respect for human rights, on the prevention of corruption and bribery, or on social matters within the meaning of Section 289c (3) of the German Commercial Code (HGB). Nevertheless, it is important to us to handle non-financial risks even if they are evaluated as non-material according to the strict definition of the CSR Directive Implementation Act. We have developed and implemented related management approaches to address these non-financial risks.

### Internal control system relating to the consolidated accounting process

(Report pursuant to Section 289 (4) and Section 315 (4) of the German Commercial Code (HGB))

The objective of the internal control system (ICS) for the accounting process is to ensure that financial statements are

prepared in compliance with regulations. Aurubis has an internal control and risk management system in which structures and processes related to the accounting process are defined and implemented in the organization. This ensures that the Group accounting procedures are reliable and performed correctly, that business transactions are thoroughly reported in a timely manner as prescribed by law and the Articles of Association, and that legal norms and internal guidelines on accounting are observed. Amendments to laws and accounting standards are continuously analyzed to establish their relevance for the consolidated financial statements, and resulting changes are incorporated into the Group's internal processes and systems.

### PRINCIPLES OF THE INTERNAL CONTROL SYSTEM AS RELATED TO ACCOUNTING POLICIES

As the parent company, Aurubis AG prepares the Aurubis Group's consolidated financial statements. The financial reporting of the consolidated Group companies that are included in the consolidated financial statements takes place prior to this process. These Group companies prepare their financial statements locally and transfer them to the Corporate Accounting department via a defined uniform group-wide data model. The Group companies are responsible for compliance with the valid group-wide guidelines and procedures, as well as for the correct and timely execution of the accounting-relevant processes and systems.

The internal control system includes the following main principles:

- » Ensuring standardized accounting procedures in the preparation of the separate financial statements of Aurubis AG by systematically implementing control measures that are supported by manual accounting measures and other authorization and approval procedures (separation of functions, access regulations and limitations, the use of the dual control principle, guidelines on payment transactions).
- » Ensuring uniform group accounting procedures in accordance with IFRS through the application of uniform accounting regulations and policies, central audit of reporting packages, analysis of deviations from the budget, and quarterly reporting as part of centralized discussions on earnings.
- » Compiling external accounting and internal reporting by all Group companies in a uniform consolidation and reporting system.

- » Overall consolidation of the consolidated financial statements by Corporate Accounting, which is responsible for the centralized consolidation, coordination, and monitoring of the standards related to the schedule and the process.
- » Supporting the Group companies in accounting procedures through central contacts in Corporate Accounting.
- » Clarifying special technical questions and complex issues related to specific cases with an external consultant.

#### **INTERNAL AUDIT AS PROCESS-INDEPENDENT RISK OBSERVATION**

Internal Audit examines the reliability of the accounting practices at local and corporate level, among other things. In particular, it assesses existing internal process policies and the degree to which they are adhered to in practice. In its audits, Internal Audit provides information about risks that arise from identified deviations, as well as recommendations with regard to the adjustments to be made.

### **Opportunity management system**

In addition to risk management, opportunity management is an important element of the Aurubis Group's centralized and decentralized planning, management, and control processes. Its objective is the early identification of internal and external opportunities that could positively impact our economic success. These opportunities are assessed and weighed against the risks associated with them. The next step is to define initiatives and measures to help tap this potential. The process of identifying and assessing opportunities is part of our annual integrated strategy and planning process.

In order to promptly recognize opportunities that arise, we continually monitor and analyze the supply and demand aspects of our markets, the competitive landscape, and global trends. Identifying potential opportunities is a daily management responsibility – on the level of both the operational areas and the Group.

### **Explanation of relevant opportunities**

#### **RISING GLOBAL DEMAND FOR COPPER AND METALS FOR TECHNOLOGY**

Copper is one of the most important metallic raw materials. Demand for copper is aligned with global economic growth, especially in the electrical, electronics, construction, and automotive industries. Global trends such as increasing energy scarcity, rising urbanization, the growth of the world's middle class, digitalization, and electric vehicles will continue to not only increase copper demand in the long term, but also the demand for technology metals such as tellurium, nickel, platinum, and palladium. If the economy and the demand for our products develop more favorably than currently expected in the markets relevant for us, this could have a positive influence on the Aurubis Group's earnings.

#### **POSITIVE TREND IN TREATMENT AND REFINING CHARGES AND MARKET PRICES FOR OUR PRODUCTS**

The Aurubis Group's earnings situation is largely determined by the treatment and refining charges for copper concentrates, copper scrap, and recycling materials, as well as by the market prices for our products, such as sulfuric acid. If treatment and refining charges and market prices for our products develop more positively than currently forecast, this could positively impact the Aurubis Group's earnings.

#### **INCREASING SIGNIFICANCE OF SUSTAINABILITY AND RESOURCE EFFICIENCY**

Aurubis is the world's leading recycler of copper and complex secondary raw materials. In light of the rising importance of resource efficiency with regard to sustainability, we expect demand for recycling solutions to continue growing. This is also supported and promoted by increasingly strict national and international legislation. Thanks to our multi-metal recycling activities and proximity to our copper product customers, we consider ourselves to be in a position to offer expanded closing-the-loop solutions. If national and international recycling regulations broaden and demand for recycling solutions in our markets grows more strongly than expected, this could positively affect the Aurubis Group's procurement situation and therefore its earnings.

### **FURTHER DEVELOPMENT OF EXPERTISE IN COMPLEX RAW MATERIAL PROCESSING**

Both primary and secondary raw materials are becoming increasingly complex as their copper content falls and the concentrations of accompanying elements and impurities in them rise. One of Aurubis' particular strengths already consists in processing complex primary and secondary raw materials. The FCM project contributes to achieving efficient and resource-friendly production processes for the raw materials of the future. If we build up additional expertise in this area, this could positively influence the Aurubis Group's earnings.

### **CONTINUOUSLY IMPROVING PROCESSES AND COST POSITION AND ACHIEVING SYNERGIES**

Our markets are globally competitive. Operating excellence is therefore exceedingly important for us. We continuously work on optimizing our processes and improving our cost position. Furthermore, we are always identifying and implementing the synergy potential arising from our position along the value chain. If we go beyond the targets connected to initiated improvement measures, this could have a positive impact on the Aurubis Group's earnings.

### **CAPACITY EXPANSION LINKED WITH INTERNATIONALIZATION**

We see additional growth potential in an expansion of our processing capacities in regions with favorable conditions and in proximity to our procurement and sales markets. We will continue investing in our existing sites but will also strive to expand our supplier and production networks further. If we are in a position to expand our capacities even more and, better still, do so with lower capital expenditure than expected, this could positively affect the Aurubis Group's earnings.

### **DEVELOPMENT OF SOLUTIONS FOR INDUSTRIAL CUSTOMERS AND SUPPLIERS**

We work closely with our suppliers and customers at all levels of our value chain. This includes developing products for individual customers, providing additional services, processing specific raw materials, and offering additional closing-the-loop solutions. If the demand of our customers and suppliers for our solutions is stronger than forecast, this could have a positive effect on the Aurubis Group's earnings.

### **INNOVATIONS FROM FUTURE RESEARCH AND DEVELOPMENT ACTIVITIES**

In the scope of our research and development activities, we work on innovations to create a competitive advantage for ourselves in the future. For example, we are currently working on making our processing methods more resource-efficient and on expanding our expertise in processing complex materials and extracting additional metals.

## **Assessment of the Aurubis Group's risk and opportunity situation**

No substantial risks arose in the reporting year. There were no particular structural changes in the Group's risks. According to our current assessment, there are no risks that endanger the company's continued existence.

Both the Audit Committee and the auditors ascertained that the Executive Board and Supervisory Board have taken the measures prescribed by Section 91 (2) of the German Stock Corporation Act (AktG) in an appropriate manner and that the legally required early risk detection system fulfills all requirements.

For a complete overview of company activities, the opportunities of the Group have to be considered in addition to the risks. The Aurubis Group's current opportunities are comparable to those of the previous year. We are confident that we will be able to utilize the opportunities presented by our business portfolio, our expertise, and our ability to innovate. At the same time, these factors put us in a position to counter existing risks successfully. Furthermore, we are convinced that we have the appropriate processes, measures, and instruments in place to identify important opportunities and manage relevant risks.

# Forecast Report

The statements made in the Forecast Report are based on our assessments of the overall economic conditions, of global copper market trends, and of Aurubis' raw material and product markets. These assessments are based on analyses by economic research institutes, organizations, and industry associations, as well as on internal market analyses. The forecasts for the future business performance shown here take into account the segment targets, as well as the opportunities and risks posed by the expected market conditions and competitive situations in the forecast period of October 1, 2018 to September 30, 2019. The opportunities and risks affecting the Aurubis Group are explained in detail in the Risk and Opportunity Report. Our forecasts are regularly adjusted. The following statements are based on our knowledge in December 2018.

From our current perspective, there are numerous factors with the potential to influence the Aurubis Group's markets. These include the slow-down in global economic growth and the political situation in the US, where the fiscal policies being pursued and trade relations with China could have particular effects on the markets. This, in turn, could influence China's further economic growth trend. In Europe, monetary policy, Italy's fiscal policy, and Brexit, that is, the British people's vote to leave the EU, with the accompanying events and consequences, could also have an impact. Increasing protectionism around the world and the political crises in the MENA region (Middle East and North Africa) could also have a bearing on the market situation.

## Overall economic development

The IMF estimates that the global economy will grow by 3.7 % in 2019. The forecast is just slightly below this year's earlier estimates, and significantly higher than in the period from 2012 to 2016. The organization at the same time suggests that there are continued risks related to the uncertainty of political developments in particular. First and foremost, these include increasing protectionism, as well as trends moving away from multilateral trade relations based on fixed rules.

Newly industrialized and developing countries will once again record the strongest growth in 2019. The IMF forecasts a 4.7 %

growth rate for this group of countries. The IMF attributes the decline in growth expectations compared to earlier forecasts to the negative influences of the trade conflicts between the US and China. Furthermore, the US has renewed sanctions against Turkey and Iran. The economic outlooks for larger Latin American economies such as Argentina and Brazil have also recently dampened. The upward trend in Asian countries may be slightly below the prior-year level in 2019, with 6.3 % growth. This trend includes China, which is important for the copper market.

In contrast, the outlook for developed countries is more subdued overall, which can be seen in a reduced growth forecast of 2.1 %. At 2.5 %, economic growth in the US in 2019 is predicted to be lower than the previous year, due in particular to ongoing trade conflicts and the gradually weakening effect of corporate tax breaks. In the euro zone, the IMF sees 2019 economic growth at prior-year level, forecasting 1.9 %. The IMF estimates that the German economy will grow by 1.9 % in 2019 accordingly. The concrete impact of Brexit continues to be a significant risk factor in the European Union.

Individual sectors such as the electro-technical industry, the automotive industry, and the construction sector are important consumers of copper products. The following economic developments expected here are as follows:

The German Electrical and Electronic Manufacturers' Association, in its last forecast for the global electrical and electronic products market dating from mid-2018, confirmed its sector forecast of 5 % and 4 % growth for the years 2018 and 2019, respectively. This forecast was based on 53 countries, which together comprise approximately 97 % of the global market. Europe accounts for 16 % of the global market, and growth of 3 % is expected there for 2019. This growth rate also applies for Germany.

According to the European Automobile Manufacturers' Association, demand for automobiles in the EU increased by 2.5 % in the first nine months of 2018, with more than 12 million new car registrations. In fall 2018, demand fell slightly, in the European automotive sector in particular. The switch to the new test procedure for cars, WLTP (Worldwide Harmonized Light Vehicles Test Procedure), has led to temporary risks for



future growth in vehicle production. We consider this a transitional effect and expect a good demand and sales situation for fiscal year 2018/19. We also expect positive growth momentum from the intensifying discussion regarding electric vehicles.

According to the German construction industry, the economic situation in the sector developed better than expected in 2018. For the entire year 2018, a 6% nominal revenue increase is anticipated in the main construction trades. The industry association expects an increase at the same level for 2019. Positive driving forces include the acute demand for additional housing and increasing local investments.

Based on these forecasts, we expect stable to good economic development in 2019 in the three most important sectors for copper applications. However, political and economic developments could strongly influence the respective market situation.

The influences from European and German energy and environmental policy are important for us but difficult to forecast in detail.

## Sector development

The fundamental situation on the copper market offers analysts good reason to assume that a high copper price level can also be expected for 2019. According to a survey of market experts carried out by Thomson Reuters, the average copper price in 2019 should be at a level of US\$ 6,699/t.

Much will again depend on the developments in copper smelters' production. China is still the central focus. According to the news service CRU, 2019 will see further ramp-ups of smelter projects in China, though some of them will replace older smelting capacities. CRU reports that the expansion of smelter capacities in China will level off in the coming years. Stricter environmental conditions in China are making it more difficult to implement planned smelter projects as well. It should also be noted that the ramp-up phase generally takes a long time before full capacity utilization is achieved.

The International Copper Study Group (ICSG) anticipates a further increase of 2.7% in the global output of refined copper for 2019 (2018: 2.7%). The ICSG attributes this in part to a restart of production, which had been temporarily halted in some cases. Shutdowns on the smelter side – especially in Asia – had a reverse effect.

Good demand for refined copper can be expected for 2019, as the metal is an essential material for economic development in key sectors such as the electrical and automotive industries and construction. Solid economic growth in countries with the strongest demand, among them China, the US, and European countries, set the agenda in this respect.

China will account for about half of global copper demand in 2019 (2019e: 49.8%). A majority of this demand comes from investments in infrastructure projects, among them energy grid projects requiring copper. The Chinese government's "One Belt, One Road" program should be emphasized especially. In the development of the Chinese machinery and transport sector, there is also growth potential for copper applications. The ICSG expects China's copper demand to increase by around 3% in 2019.

According to the ICSG, the global market for refined copper is expected to have a slight production deficit overall in 2019. This should amount to 65,000 t and, against the backdrop of a 24-million-ton market, amounts to a largely balanced situation. As in the past, unforeseen developments can lead to major changes. From today's perspective, however, the expectation of a slight production deficit appears to be justified in light of foreseeable developments on the production and demand side. Other market experts, such as the International Wrought Copper Council (the international industry association for copper and copper alloy products) and the research companies CRU International and Wood Mackenzie, also view the 2019 copper market as largely balanced or expect a slight production deficit.

## Raw material markets

### COPPER CONCENTRATES

On the concentrate markets, new projects are expected in 2019 to some extent. Mines will likely utilize their full production capacities, especially on the basis of the forecasts for the average copper price in 2019. A series of successful wage negotiations between mines and unions in 2018 have reduced the likelihood of disruptions due to strikes in 2019 compared to the previous year. Supported by our position on the market and our supplier diversification, we are confident that we will be able to secure a good supply once again. We continue to anticipate good availability of copper concentrates on the global market. The expected treatment and refining charges will likely be at a satisfactory level.

### RECYCLING

Following a temporary tightening of the copper scrap market at the start of fiscal year 2017/18 resulting from higher demand from China, this market was more favorable again at the end of the fiscal year. The copper price, which remains high, means that copper scrap collection in Europe is sufficient. The higher metal and copper prices that analysts expect in some cases could nevertheless lead to an improved supply.

The development of the copper scrap and blister copper supply can't be gauged, however. Business in this area, particularly for copper scrap, is conducted with short timelines and is therefore dependent on influences that are difficult to forecast. Falling metal prices could lead to a market change with declining refining charges in the short term. Our broad market position absorbs supply risks in this case. In the first quarter of 2018/19, we are supplied with sufficient material with good refining charges.

## Product markets

### MARKETS FOR COPPER PRODUCTS

Adequate statements about the development of the copper product business in the new fiscal year are only possible to a limited extent since the negotiation season for 2019 sales contracts hasn't ended yet.

One factor that is already clear is the copper premium Aurubis has established for European wire rod and shapes customers for the coming calendar year. Aurubis set this premium at US\$ 96/t for its European customers (2018: US\$ 86/t). The higher copper premium reflects the significantly higher demand, and the expected demand, of our European customers.

In light of the good economic situation in the relevant sectors, we expect to conclude the negotiation season for copper products with contracts that are positive for us, supported by good customer relationships in our key markets. We will also continue expanding our business with new customers.

### CATHODES

Sales of free cathode volumes on the market are based on the processing plans for our cathode output in the Group.

### COPPER WIRE ROD

Wire rod business is generally somewhat weaker in the first quarter of a new fiscal year due to seasonal factors. However, we expect stable to slightly improved demand in Europe for the rest of the fiscal year. The economic situation in the key customer industries should remain at a good level. We expect cable producers' good demand to continue. Our acquisition of the remaining shares in Deutsche Giessdraht GmbH in fiscal year 2017/18 will positively impact our output volumes.

### COPPER SHAPES

With regard to the market development for copper shapes, we expect slightly higher product demand than in the previous year. This is partly driven by higher demand from our customers in the industrial tube and flat rolled product sectors. From the current perspective, the positive demand trend for lower-oxygen and higher-alloyed materials will continue.

## SPECIALTIES

The situation is stable in the specialty product division, which includes bars and profiles. We expect stronger competitive pressure for standard products in 2019, but sales of specialty applications and alloys will continue to be good.

## FLAT ROLLED PRODUCTS

For flat rolled products, we see the following trends:

The US economy, whose development is crucial for our plant there, is expected to remain robust in 2019. This could support the copper business there. In the European market for flat rolled products, we expect stable demand at a high level, with further opportunities for growth in important sub-markets. In fall 2018, demand fell slightly, in the European automotive sector in particular. We view this as a temporary development and expect a good demand and sales situation for the entire fiscal year 2018/19. We continue to expect additional growth momentum from the connector market, as well as from an increase in electric vehicles.

## SULFURIC ACID

Sulfuric acid sales are dependent on short-term developments, a fact that is reflected in the duration of the contracts. In addition, sales opportunities are very different from region to region, with conditions varying accordingly. Aurubis supplies the global sulfuric acid market, with a focus on Europe, North America, and North Africa. The relationship between local sales and exports fluctuates depending on market circumstances.

Following a tightening of the sulfuric acid market with higher prices in fiscal year 2017/18, market observers such as ICIS and CRU expect that this tightened market could continue in 2019. The current insights for the first quarter of 2018/19 also signalize a stable situation with very good prices.

## Business and earnings expectations for the Aurubis Group

### BUSINESS EXPECTATIONS

In fiscal year 2017/18, we kicked off different initiatives and individual measures within the Group to strengthen Aurubis. These are contained in the ONE Aurubis transformation program and the strategy Growth, Efficiency & Responsibility, with which we want to achieve our Vision 2025. Aurubis is currently the market leader in many areas – these positions will be further developed over the long term.

The largest internal growth step is the project Future Complex Metallurgy. It is a key component of the new multi-metal approach and involves major investments. Moreover, the company plans to continue growing in the future through acquisitions. In the coming years, Aurubis will develop from a copper group into a multi-metal group. In this regard, we have been reporting the sales volumes of gold, silver, lead, nickel, tin, platinum group metals, and minor metals since Q2 2017/18, in addition to information about our copper products.

On March 29, 2018, Aurubis AG and Wieland-Werke AG signed a contract to sell Segment Flat Rolled Products. The final execution of the sales contract is subject to approval by the antitrust authorities. A final decision is expected in early 2019. For more information, see the Subsequent Events section in the Notes to the Consolidated Financial Statements.

For fiscal year 2018/19, the following maintenance shutdowns are planned:

At our Lünen site, we will carry out two scheduled maintenance shutdowns lasting 17 and 25 days in March and September 2019, respectively. The shutdowns will have a total impact of approximately € 8 million on our EBT, according to our current plans.

In May and June 2019, we will carry out an 18-day legally mandated maintenance shutdown at our site in Pirdop (Bulgaria). According to our current plans, this will have a roughly € 12 million impact on our EBT.

## EARNINGS EXPECTATIONS

Our earnings are subject to quarterly fluctuations because of the nature of our business model. This is due to seasonal factors, but may also be caused by disruptions in equipment or operating processes. The business performance of the first quarter of a fiscal year in particular is shaped by special features related to the period, including subdued customer orders and changes in raw material deliveries.

The future development and forecast of Aurubis AG coincides with the general statement on the Aurubis Group.

The outlook for fiscal year 2018/19 is based on the following premises:

- » We expect stable-to-good copper product demand based on industry forecasts.
- » For 2019 annual contracts, the market conditions for copper concentrates weren't final at the time of reporting.
- » In fiscal year 2018/19, the market trend for copper scrap and sulfuric acid continues to be difficult to forecast due to the short-term nature of the business.
- » The copper premium for 2019 has been set at US\$ 96/t for 2019 (previous year: US\$ 86/t).
- » A significant portion of our revenues is based on the US dollar. We reduce the resulting risks with our hedging strategy.
- » We anticipate additional project success of € 60 million from the efficiency improvement program, compared with the base year 2014/15. The target of this program is to continue optimizing all of our sites.
- » In fiscal year 2018/19, we expect plant availability to be slightly lower than in the previous year owing to scheduled shutdowns in particular, as well as facility downtimes due to wear and tear, which we will remedy in the course of scheduled maintenance measures.

Overall, we expect moderately lower operating EBT and a slightly lower operating ROCE for the Aurubis Group in fiscal year 2018/19 compared to the previous year.

In Segment Metal Refining & Processing, we expect moderately lower operating EBT and a slightly lower operating ROCE in fiscal year 2018/19 compared to the previous year.

In Segment Flat Rolled Products, we anticipate significantly higher operating EBT and a slightly higher operating ROCE in fiscal year 2018/19 compared to the previous year.

## Expected financial situation

At the end of fiscal year 2017/18, Aurubis had € 479 million in available cash (September 30, 2017: € 571 million). The company has additional liquidity through lines of credit amounting to € 350 million from a syndicated loan agreement running until 2023. Aurubis therefore has sufficient liquidity that is not at risk from today's perspective.

We expect the stable financial situation from the operating business to continue in the coming fiscal year. We intend to settle the scheduled payments due during fiscal year 2018/19 with the existing liquidity. No bonded loan payments are due in the coming fiscal year.

## General statement on the future development of the Aurubis Group

Overall, we assume that we will be able to continue the successful development of the reporting year in fiscal year 2018/19. As the remarks about the overall economic trend and the developments on our raw material and product markets indicate, the Aurubis Group's fiscal year 2018/19 will, from our current perspective, once again be influenced by a good market environment. Overall, we expect moderately lower operating EBT and a slightly lower operating ROCE for the Aurubis Group in fiscal year 2018/19 compared to the previous year.

### Qualified comparative forecast according to Aurubis' definition for operating ROCE

	ROCE delta as a percentage
At prior-year level	$\pm 0$ to 1.0
Slight	$\pm 1.1$ to 4.0
Significant	$> \pm 4.0$

### Qualified comparative forecast according to Aurubis' definition for operating EBT

	Change in operating EBT
At prior-year level	$\pm 0$ to 5.0 %
Moderate	$\pm 5.1$ to 15.0 %
Significant	$> \pm 15.0$ %

### Forward-looking statements

This document contains forward-looking statements about our current forecasts of future events. Words such as "anticipate," "assume," "believe," "predict," "expect," "intend," "can/could," "plan," "project," "should," and similar terms indicate such forward-looking statements. These statements are subject to a number of risks and uncertainties. Some examples include unfavorable developments in the global economic situation, especially political developments in the US, Europe, and China; a tightening of the raw material supply; and a decline in demand in the main copper sales markets. Further risks include a deterioration of our refinancing options on the credit and finance markets; unavoidable events beyond our control such as natural disasters, acts of terror, political unrest, and industrial accidents, and their effects on our sales, purchasing, production, and financing activities; changes in exchange rates; a drop in acceptance for our products resulting in impacts on the establishment of prices and the utilization of processing and production capacities; price increases for energy and raw materials; production interruptions due to material bottlenecks, employee strikes, or supplier bankruptcies; successful implementation of measures to reduce costs and enhance efficiency; the business outlook for our significant holdings; the successful implementation of strategic cooperation and joint ventures; amendments to laws, ordinances, and official regulations; and the outcomes of legal proceedings and other risks and uncertainties, some of which are described in the Risk and Opportunity Report in this Annual Report. If one of these uncertainties or difficulties occurs, or if the assumptions underlying the forward-looking statements prove to be wrong, the actual results could deviate considerably from the results mentioned or implicitly expressed in these statements. We do not intend, nor do we assume the obligation, to update forward-looking statements continuously, as these statements are based solely on the circumstances on the day of publication.

# Legal Disclosures

## Declaration on corporate governance pursuant to Section 289f and Section 315d of the German Commercial Code (HGB)

The declaration on corporate governance and the compensation report are part of the Combined Management Report. Both are printed at the beginning of this Annual Report and are available on the company's website.

## Takeover-related disclosures and explanations

**Explanatory report by the Executive Board of Aurubis AG, Hamburg, in accordance with Section 176 (1) sentence 1 of the German Stock Corporation Act (AktG) on disclosures of takeover provisions pursuant to Section 289a (1) and Section 315a (1) of the German Commercial Code (HGB) as at the balance sheet date of September 30, 2018.**

The following disclosures as at September 30, 2018 are presented in accordance with Section 289a (1) and Section 315a (1) of the German Commercial Code (HGB).

### COMPOSITION OF THE SUBSCRIBED CAPITAL

The subscribed capital (share capital) of Aurubis AG amounted to € 115,089,210.88 as at the balance sheet date and was divided into 44,956,723 no-par-value bearer shares, each with a notional value of € 2.56 of the subscribed capital.

Each share grants the same rights and one vote at the Annual General Meeting. There are no different classes of shares.

## SHAREHOLDINGS EXCEEDING 10% OF THE VOTING RIGHTS

One indirect shareholding in Aurubis AG exceeds 10% of the voting rights as at the balance sheet date (September 30, 2018):

Salzgitter AG, Salzgitter, notified the company in accordance with Section 33 (1) of the German Securities Trading Act (WpHG) on April 11, 2018 that its voting interest in Aurubis AG had exceeded the threshold of 20% of the voting rights on April 11, 2018 and amounted to 20.0000009% of the voting rights (representing 8,991,345 votes). Of this total, 20.0000009% of the voting rights (representing 8,991,345 votes) are attributed to Salzgitter AG via Salzgitter Mannesmann GmbH, Salzgitter.

Accordingly, one direct shareholding in Aurubis AG exceeds 10% of the voting rights as at the balance sheet date (September 30, 2018). According to the notification of Salzgitter AG, Salzgitter, dated April 11, 2018, Salzgitter Mannesmann GmbH, Salzgitter, has held 20.0000009% of the voting rights (representing 8,991,345 votes) since April 11, 2018.

## APPOINTMENT AND REMOVAL OF EXECUTIVE BOARD MEMBERS AND AMENDMENTS TO THE ARTICLES OF ASSOCIATION

The appointment and removal of members of the Executive Board of Aurubis AG are covered by Sections 84 and 85 of the German Stock Corporation Act (AktG) and Section 31 of the German Codetermination Law (MitbestG) in conjunction with Section 6 (1) of the Articles of Association. Amendments to the Articles of Association are subject to the approval of the shareholders at the Annual General Meeting. The resolution at the Annual General Meeting is passed by a majority that must comprise at least three quarters of the subscribed capital represented in the vote; Section 179 et seq. German Stock Corporation Act (AktG) applies. In accordance with Section 11 (9) of the Articles of Association, the Supervisory Board is authorized to pass amendments to the Articles of Association that only relate to their wording. Furthermore, the Supervisory Board is

authorized to adjust Section 4 of the Articles of Association after the complete or partial execution of a subscribed capital increase in accordance with the respective claim to the authorized capital and after the authorization expires. It is also authorized to adjust the wording of Section 4 (1) and (3) of the Articles of Association in accordance with the respective issuing of new no-par-value bearer shares to the holders or creditors of convertible bonds and/or bonds with warrants, profit participation rights, and/or participating bonds (or combinations of these instruments), which are issued by Aurubis or by companies in which it has an indirect or direct majority interest in return for a cash contribution and as a result of the authorization passed at the Annual General Meeting on March 2, 2017 under item 6 of the agenda. It is also authorized to grant a conversion or option right to new no-par-value bearer shares in the company or to establish a conversion obligation. The same applies if the authorization to issue bonds with warrants or convertible bonds is not exercised after the authorization period expires or if the conditional capital is not utilized after the deadlines for exercising option or conversion rights or for fulfilling conversion or option obligations have expired.

#### POWER OF THE EXECUTIVE BOARD TO ISSUE SHARES

In accordance with Section 4 (2) of the Articles of Association, the Executive Board is authorized, with the approval of the Supervisory Board, to increase the company's subscribed capital in the period until February 23, 2021 by issuing up to 22,478,361 new no-par-value shares in exchange for a cash contribution and/or a contribution in kind, once or in several installments, by up to € 57,544,604.16. The shareholders shall always be granted a subscription right. The new shares can also be acquired by one or more credit institutions with the obligation of offering them to shareholders for subscription. However, the Executive Board is authorized, subject to the approval of the Supervisory Board, to exclude shareholder subscription rights once or on several occasions. Such exclusion is only possible

- a) inasmuch as it is necessary to exclude subscription rights for possible fractional amounts.
- b) up to an arithmetical face value totaling € 23,017,840.64 if the new shares are issued for a contribution in kind.
- c) for capital increases against cash contributions up to an arithmetical nominal value totaling € 11,508,920.32 or, if this amount is lower, by a total of 10 % of the subscribed capital (the "maximum amount") existing when this authorization was exercised for the first time (in each case taking into account the possible use of other authorizations to exclude the subscription right in accordance with or in commensurate application of Section 186 (3) sentence 4 of the German Stock Corporation Act (AktG)), if the issuing price for the new shares is not significantly lower than the price of company shares with the same terms on the stock exchange at the time when the issuing price is ultimately fixed.

The subscribed capital allotted to the shares that are issued or have to be issued to fulfill convertible bonds and/or bonds with warrants that are issued after February 24, 2016 in commensurate application of Section 186 (3) sentence 4 of the German Stock Corporation Act 8 (AktG) excluding the subscription rights or that are sold after February 24, 2016 in commensurate application of Section 186 (3) sentence 4 of the German Stock Corporation Act (AktG) must be included in this maximum amount. It shall not be included if authorizations to issue convertible bonds and/or bonds with warrants pursuant to Section 221 (4) sentence 2 and Section 186 (3) sentence 4 of the German Stock Corporation Act (AktG) or to sell own shares pursuant to Section 71 (1) No. 8 and Section 186 (3) sentence 4 of the German Stock Corporation Act (AktG) are granted again at the Annual General Meeting after exercising such authorizations that have led to inclusion.

- d) up to an arithmetical face value totaling € 23,017,840.64, inasmuch as it is necessary to grant holders or creditors of bonds with warrants or convertible bonds issued by the company relating to shares a subscription right for new shares to the same extent as they would be entitled after exercising their option or conversion rights.

In the resolution dated February 9, 2016, the Executive Board of Aurubis AG declared in the scope of a voluntary commitment that it would only make use of the authorizations to exclude shareholders' subscription rights during the duration of the authorization provided in Section 4 (2) of the Articles of Association insofar as the shares to be issued may not exceed 20% of the subscribed capital, neither at the point in time when the authorization becomes effective nor at the time of utilization. At the 20% threshold previously mentioned, until the issue of new stocks without granting subscription rights, hypothetical own shares shall be taken into account that are sold excluding subscription rights, as well as such shares that are to be issued with a conversion and/or option right or conversion obligation for the purpose of servicing bonds, provided the bonds are issued excluding the preemptive rights of shareholders. If and to the extent that the shareholders at the Annual General Meeting reissue this authorization to exclude subscription rights after an authorization to exclude subscription rights has been exercised, leading to offsetting against the 20% limit previously mentioned, the offsetting that has been carried out is no longer included.

This voluntary commitment was made accessible on Aurubis AG's website for the duration of the authorization.

## POWER OF THE EXECUTIVE BOARD TO REPURCHASE SHARES

With a resolution of the Annual General Meeting on March 1, 2018, the company was authorized until February 28, 2023 to repurchase its own shares up to a total of 10 % of the current subscribed capital. Together with other own shares held by the company or attributable to it in accordance with Section 71a et seq. of the German Stock Corporation Act (AktG), the shares acquired by the company based on this authorization shall at no time exceed 10 % of the company's current subscribed capital. The acquisition of shares for the purpose of trading with own shares is excluded. The Executive Board is authorized to use shares in the company that are purchased on account of this authorization for all legally permitted purposes, and in particular also for the following purposes:

- a) Own shares that have been acquired can also be sold in a way other than a sale via the stock exchange or by means of an offer to all of the shareholders, if the shares are sold in return for a cash payment at a price that is not materially lower than the stock market price of the company's shares with the same terms at the time of the sale. The definitive trading price for the purpose of the arrangement previously mentioned shall be the average closing price of the company's shares with the same terms in Xetra trading (or a comparable successor system) over the last five trading days of the Frankfurt Stock Exchange before the commitment to sell the shares was entered into. The shareholders' subscription right is excluded. This authorization shall however only apply on the condition that the shares sold excluding the subscription right may not, in accordance with Section 186 (3) sentence 4 of the German Stock Corporation Act (AktG), exceed 10 % of the subscribed capital, either at the time this becomes effective or at the time of exercise of this authorization (the "upper limit"). Shares that are issued during the term of this authorization from authorized



capital pursuant to Section 186 (3) sentence 4 German Stock Corporation Act (AktG) excluding subscription rights are to be credited towards this upper limit. Furthermore, this upper limit shall take into account those shares that are issued or are to be issued in order to service convertible bonds and/or bonds with warrants (or profit participation rights, or participating bonds with a conversion right, option right, or conversion obligation, or the company's right to offer), which were issued during the term of this authorization due to an authorization to issue convertible bonds and/or bonds with warrants (or profit participation rights, or participating bonds with a conversion right, option right, or conversion obligation, or the company's right to offer) in commensurate application of Section 186 (3) sentence 4 of the German Stock Corporation Act (AktG) excluding subscription rights. An inclusion that has been carried out is canceled if authorizations to issue new shares from authorized capital in accordance with Section 186 (3) sentence 4 of the German Stock Corporation Act (AktG) or to issue convertible bonds and/or bonds with warrants (or profit participation rights, or participating bonds with a conversion right, option right, or conversion obligation, or the company's right to offer) in commensurate application of Section 186 (3) sentence 4 of the German Stock Corporation Act (AktG) are granted again at the Annual General Meeting after exercising such authorizations that have led to inclusion.

- b) Own shares that have been acquired can also be sold in a way other than a sale via the stock exchange or by means of an offer to all of the shareholders. This is provided that such sale is carried out in return for a contribution in kind by a third party, especially in conjunction with the acquisition of business entities, parts of business entities, or participating interests in business entities by the company itself or by a business entity dependent on it or majority-owned by it, and in conjunction with business combinations, or to fulfill conversion rights or obligations of holders and/or creditors relating to conversion or option rights issued by the company or Group entities of the

company (or profit participation rights, or participating bonds with a conversion right, option right, or conversion obligation, or the company's right to offer), especially – but not exclusively – due to the authorization to issue convertible bonds and/or bonds with warrants, profit participation rights, and/or participating bonds (or combinations of these instruments) decided under item 6 of the Agenda for the Annual General Meeting on March 2, 2017. The shareholders' subscription right is excluded in each case.

- c) Own shares that have been acquired can be withdrawn entirely or in part without a further resolution at the Annual General Meeting. They can also be withdrawn in a simplified procedure without a reduction in capital by adjusting the proportionate notional share of the remaining no-par-value shares in the subscribed capital of the company. The withdrawal can be limited to a portion of the acquired shares. If the withdrawal takes place using the simplified procedure, the Executive Board is authorized to adjust the number of no-par-value shares in the Articles of Association.

The own shares collectively sold under the authorization mentioned previously, pursuant to items a) and b) excluding the subscription right, may not exceed 20% of the share capital, neither at the time the authorization becomes effective nor at the time it is exercised. The 20% limit must include (i) new shares that are issued, excluding the subscription right, during the term of this authorization up to the sale of the own shares from authorized capital, without subscription rights, and (ii) those shares that are issued in order to service convertible bonds and/or bonds with warrants (or profit participation rights, or participating bonds with a conversion right, option right, or conversion obligation, or the company's right to offer), if the bonds were issued during the term of this authorization up to the sale of the own shares, excluding shareholder subscription rights. If and to the extent that the shareholders at the Annual General Meeting reissue the relevant authorization to exclude subscription rights after the authorization

leading to offsetting against the 20 % limit previously mentioned has been exercised, the offsetting that has already been carried out is no longer included.

The complete text of the resolution dated March 1, 2018 has been included under agenda item 8 in the invitation to the Annual General Meeting 2018 published in the German Federal Gazette on January 22, 2018.

#### **POWER OF THE EXECUTIVE BOARD TO ISSUE CONVERTIBLE BONDS AND SHARES FROM CONDITIONAL CAPITAL**

The company's subscribed capital shall be conditionally increased by up to € 57,544,604.16 by issuing up to 22,478,361 new bearer shares without a nominal amount (no-par-value shares), each with notional interest in the subscribed capital of € 2.56 (Conditional Capital 2017). The conditional capital increase will only be carried out to the extent that the holders or creditors of conversion and/or option rights from convertible bonds, bonds with warrants, profit participation rights, or participating bonds (or a combination of these instruments) that are issued against cash by the company or by its affiliates until March 1, 2022 due to the authorization passed by the shareholders at the Annual General Meeting on March 2, 2017 exercise their conversion or option rights, or to the extent that holders or creditors of the convertible bonds (or profit participation rights or participating bonds with a conversion obligation) issued by the company or by its affiliates until March 1, 2022 due to the authorization passed by the shareholders at the Annual General Meeting on March 2, 2017 fulfill their conversion obligation or shares are offered, and to the extent that own shares or other forms of fulfillment are not utilized for this purpose. The new no-par-value bearer shares shall be entitled to participate in the profits from the beginning of the fiscal year in which they come into existence through the exercise of conversion or option rights, through the fulfillment of conversion or option obligations, or through the exercise of rights to offer. To the extent legally permitted, the Executive

Board can, subject to the approval of the Supervisory Board, establish the profit participation of new shares in a way that deviates from Section 60 (2) of the German Stock Corporation Act (AktG).

The complete text of the resolution dated March 2, 2017 has been included under agenda item 6 in the invitation to the Annual General Meeting 2017 published in the German Federal Gazette on January 17, 2017.

#### **SIGNIFICANT CONDITIONAL AGREEMENTS CONCLUDED BY THE COMPANY**

In the event that a single person or a group of persons acting together should acquire more than 50 % of the shares or the voting rights in Aurubis AG, every syndicate lender from the agreement with a banking syndicate ("the Syndicated Loan") on a credit line totaling € 350 million, which primarily serves to finance the working capital of the Group, shall be entitled to cancel his or her participation in the Syndicated Loan and to demand immediate repayment of the amounts owed to him or her.

Within the scope of various bonds totaling € 229 million, every lender has an extraordinary right of cancellation if control over the borrower changes.