

ANNUAL REPORT

2017

KEY FIGURES 2017 | RHEINMETALL GROUP

		2017	2016	2015	2014	2013	2012	2011
RHEINMETALL GROUP								
Sales	€ million	5,896	5,602	5,183	4,688	4,417	4,704	4,454
Operating result	€ million	400	353	287	160	211	268	342
Operating result margin	%	6.8	6.3	5.5	3.4	4.8	5.7	7.7
EBIT	€ million	385	353	287	102	121	296	354
EBIT margin	%	6.5	6.3	5.5	2.2	2.7	6.3	7.9
EBT	€ million	346	299	221	22	45	216	295
Net income	€ million	252	215	160	21	22	173	225
Return on capital employed (ROCE) ¹	%	13.4	12.3	10.6	3.9	4.7	11.5	14.9
CASH FLOW								
Cash flow from operating activities	€ million	546	444	339	102	211	359	290
Cash flow from investments	€ million	(270)	(283)	(310)	(284)	(191)	(234)	(197)
Operating free cash flow	€ million	276	161	29	(182)	20	125	93
BALANCE SHEET								
Total equity	€ million	1,955	1,781	1,562	1,197	1,339	1,465	1,546
Total assets	€ million	6,186	6,150	5,730	5,271	4,866	4,899	4,832
Equity ratio	%	31.6	29.0	27.3	22.7	27.5	29.9	32.0
Cash and cash equivalents	€ million	757	616	691	486	445	501	535
Total assets less cash and cash equivalents	€ million	5,429	5,534	5,039	4,785	4,421	4,398	4,297
Net financial debt ²	€ million	(230)	(19)	81	330	147	98	130
Leverage ratio ³	%	(4.2)	(0.3)	1.6	6.9	3.3	2.2	2.9
Net gearing ⁴	%	(11.8)	(1.1)	5.2	27.6	11.0	6.7	8.4
HUMAN RESOURCES								
Employees (Dec. 31), according to capacity		21,610	20,993	20,676	20,166	20,264	21,767	21,516
Domestic		10,394	10,181	10,070	9,827	9,729	10,667	10,708
Foreign		11,216	10,812	10,606	10,339	10,535	10,100	10,808
RHEINMETALL AUTOMOTIVE								
Sales	€ million	2,861	2,656	2,592	2,448	2,262	2,458	2,369
Operating result	€ million	249	223	216	184	158	139	151
Operating result margin	%	8.7	8.4	8.3	7.5	7.0	5.7	6.4
Research & Development	€ million	151	142	126	112	114	103	91
Capital expenditure (Net investments)	€ million	154	149	167	158	142	142	148
RHEINMETALL DEFENCE								
Order Income	€ million	2,963	2,670	2,693	2,812	3,339	2,933	1,831
Order Backlog (Dec. 31)	€ million	6,416	6,656	6,422	6,516	6,050	4,987	4,541
Sales	€ million	3,036	2,946	2,591	2,240	2,155	2,155	2,335
Operating result	€ million	174	147	90	(9)	60	145	211
Operating result margin	%	5.7	5.0	3.5	(0.4)	2.8	6.7	9.0
Research & Development	€ million	73	74	73	65	74	74	83
Capital expenditure	€ million	89	95	96	76	62	90	102
SHARE								
Stock price (Dec. 31)	€	105.85	63.90	61.48	36.27	44.85	36.40	34.24
Earnings per share	€	5.24	4.69	3.88	0.47	0.75	4.55	5.55
Dividend per share	€	1.70	1.45	1.10	0.30	0.40	1.80	1.80

The key figures for 2012 and 2011 include the Aluminum Technology business unit, which has been operating since December 2014 as a joint venture with a Chinese partner in KS HUAYU AluTech GmbH.

¹ EBIT/average capital employed

² Financial liabilities less cash and cash equivalents

³ Net financial liabilities / total assets adjusted for cash and cash equivalents

⁴ Net financial liabilities / equity

RHEINMETALL GROUP 2017

ONE RHEINMETALL

2 CORPORATE SECTORS

6 DIVISIONS

146 CUSTOMER COUNTRIES

117 LOCATIONS WORLDWIDE

23,726 EMPLOYEES

5.9 SALES € billion

RHEINMETALL LOCATIONS

GERMANY

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Düsseldorf^{-Headquarters}, Aschau am Inn, Berlin, Bonn, Bremen, Dormagen, Düren, Flensburg, Gardelegen (Letzlingen), Gera, Hallbergmoos, Hartha, Harzgerode (Silberhütte), Heilbronn, Ismaning, Jena, Kassel, Koblenz, Kiel, Krefeld, Langenhagen, Lohmar, Munich, Neckarsulm, Neuenburg, Neuenstadt, Neuss, Oberndorf, Papenburg, Rostock, Röthenbach (Pegnitz), Schneizlreuth (Fronau), St. Leon-Rot, Stockach, Tamm, Trittau, Unterlüß, Walldürn, Wedel

EUROPE

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Brussels^{-Belgium}, Le Blanc Mesnil^{-France}, Meyzieu^{-France}, Nanterre^{-France}, Roissy (Villepinte)^{-France}, Thionville^{-France}, Domusnovas^{-Italy}, Ghedi^{-Italy}, Lanciano^{-Italy}, Livorno^{-Italy}, Rome^{-Italy}, Ede^{-Netherlands}, Nøtterøy^{-Norway}, Schwanenstadt^{-Austria}, Vienna^{-Austria}, Gliwice^{-Poland}, Warsaw^{-Poland}, Campia Turrzi^{-Romania}, Moscow^{-Russian Federation}, Stockholm^{-Sweden}, Altdorf^{-Switzerland}, Bern^{-Switzerland}, Lohn-Ammannsegg^{-Switzerland}, Studen^{-Switzerland}, Thun^{-Switzerland}, Urdorf^{-Switzerland}, Wimmis^{-Switzerland}, Zurich^{-Switzerland}, Abadiano^{-Spain}, Amorebieta^{-Spain}, Trmice^{-Czech Republic}, Ústí nad Labem^{-Czech Republic}, Chabařovice^{-Czech Republic}, Bristol^{-United Kingdom}, Isle of Wight^{-United Kingdom}, Kirtlington^{-United Kingdom}, Blackpool^{-United Kingdom}, London^{-United Kingdom}, Swindon^{-United Kingdom}

INTERNATIONAL

AFRICA

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Boskop-South Africa, **Maitland**-South Africa,
Potchefstroom (Boksburg)-South Africa, **Pretoria**-South Africa,
Somerset West-South Africa, **Wellington**-South Africa

AMERICAS

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Nova Odessa-Brazil, **Ottawa**-Canada,
St.-Richelieu-Canada, **Celaya**-Mexico, **Mexico-City**-Mexico,
Auburn Hills-USA, **Biddeford**-USA, **East Camden**-USA, **Greensburg**-USA,
Greenville-USA, **Marinette**-USA, **Stafford**-USA, **Wilmington**-USA

ASIA

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Chongqing-China, **Kunshan**-China, **Shanghai**-China,
Yantai-China, **Mumbai**-India, **Pune (Takwe)**-India,
Supa-India, **Hiroshima (Takaya)**-Japan, **Odawara (Kanagawa)**-Japan,
Malacca-Malaysia, **Riyadh**-Saudi Arabia, **Singapore**-Singapore, **Seoul**-South
Korea, **Ankara**-Turkey, **Istanbul**-Turkey, **Abu Dhabi**-United Arab Emirates,
Sharjah-United Arab Emirates

AUSTRALIA

03

Adelaide-Australia,
Brisbane-Australia, **Melbourne**-Australia

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Letter to shareholders

Supervisory Board of Rheinmetall AG

Shareholder representatives

Ulrich Grillo
Chairman

First appointed: May 10, 2016

Appointed until end of the
2021 Annual General Meeting

Dr.-Ing. Dr.-Ing. E.h. Klaus Draeger

First appointed: May 9, 2017

Appointed until end of the
2022 Annual General Meeting

Professor Dr. Andreas Georgi

First appointed: June 10, 2002

Appointed until end of the
2022 Annual General Meeting

Professor Dr. Susanne Hannemann

First appointed: May 15, 2012

Appointed until end of the
2022 Annual General Meeting

Dr. Franz Josef Jung

First appointed: May 9, 2017

Appointed until end of the
2022 Annual General Meeting

Detlef Moog

First appointed: July 8, 2010

Appointed until end of the
2021 Annual General Meeting

Klaus-Günter Vennemann

First appointed: May 10, 2016

Appointed until end of the
2021 Annual General Meeting

**Univ.-Prof. Dr. Marion A.
Weissenberger-Eibl**

First appointed: May 10, 2016

Appointed until end of the
2021 Annual General Meeting

Employee representatives

Dr. Rudolf Luz
Deputy Chairman

First appointed: January 26, 2001

Appointed until end of the
2022 Annual General Meeting

Roswitha Armbruster

First appointed: May 15, 2012

Appointed until end of the
2022 Annual General Meeting

Daniel Hay

First appointed: May 7, 2014

Appointed until end of the
2022 Annual General Meeting

Dr. Michael Mielke

First appointed: September 1, 2010

Appointed until end of the
2022 Annual General Meeting

Reinhard Müller

First appointed: May 9, 2017

Appointed until end of the
2022 Annual General Meeting

Dagmar Muth

First appointed: July 1, 2015

Appointed until end of the
2022 Annual General Meeting

Markus Schaubel

First appointed: July 1, 2014

Appointed until end of the
2022 Annual General Meeting

Sven Schmidt

First appointed: July 1, 2014

Appointed until end of the
2022 Annual General Meeting

Permanent committees

Strategy Committee

Ulrich Grillo

Dr. -Ing. Dr.-Ing. E.h. Klaus Draeger
Detlef Moog
Dr. Rudolf Luz
Dagmar Muth
Markus Schaubel

Personnel Committee

Ulrich Grillo

Professor Dr. Andreas Georgi
Dr. Rudolf Luz
Daniel Hay

Audit Committee

Professor Dr. Andreas Georgi

Ulrich Grillo
Professor Dr. Susanne Hannemann
Dr. Rudolf Luz
Roswitha Armbruster
Sven Schmidt

Mediation Committee

Ulrich Grillo

Univ.-Prof. Dr. Marion A.
Weissenberger-Eibl
Dr. Rudolf Luz
Reinhard Müller

Nomination Committee

Ulrich Grillo

Dr. Franz Josef Jung
Klaus-Günter Vennemann

Letter to shareholders

Report of the Supervisory Board



Supervisory Board of Rheinmetall AG

Left to right: Dr.-Ing. Dr.-Ing. E.h. Klaus Draeger, Dr. Rudolf Luz (Deputy Chairman), Professor Dr. Andreas Georgi, Univ.-Prof. Dr. Marion A. Weissenberger-Eibl, Reinhard Müller, Professor Dr. Susanne Hannemann, Ulrich Grillo (Chairman), Klaus-Günter Vennemann, Dr. Franz Josef Jung, Daniel Hay, Detlef Moog, Roswitha Ambruster, Dr. Michael Mielke, Markus Schaubel, Dagmar Muth, Sven Schmidt

Cooperation between the Supervisory Board and Executive Board

During the year under review, the Supervisory Board of Rheinmetall AG performed the tasks assigned to it in accordance with the law, the Articles of Association and its Rules of Procedure with commitment, responsibility, diligence and conscientiousness. We supervised the Executive Board closely, provided it with support and advice on all matters of importance to the company and monitored its management activities continuously. The Supervisory and Executive Boards worked together in an open atmosphere in a trustful and constructive manner. The Supervisory Board was directly involved at an early stage in all decisions of key strategic, operational and economic importance to the Rheinmetall Group.

Measures or transactions of the Executive Board requiring approval in accordance with legal and statutory provisions and the Rules of Procedure were submitted to us in good time for a decision to be made. After thorough analysis and detailed consultations, the Supervisory Board made its decisions and granted its approval for the applications made on the basis of thoroughly informative documents and detailed draft resolutions.

Between meetings, we were informed of the current situation of the Rheinmetall Group and its two sectors, Defence and Automotive, in writing on a quarterly basis. In addition to the Supervisory Board meetings, the CEO and the Chairman of the Supervisory Board engaged in a close exchange of information, ideas and opinions. At numerous face-to-face meetings or during telephone conversations, for example, current developments, pending decisions and significant transactions of importance to the assessment of the situation and the company's development were discussed.

Letter to shareholders

Report of the Supervisory Board

On the basis of extensive reports and in-depth presentations and the detailed information provided by the Executive Board, the Supervisory Board carried out a critical examination of the company's management. Based on our intensive work and reviews, we are convinced of the legality and propriety of management by the Executive Board and of the performance of the organization. This includes the functionality and effectiveness of the internal control system, the risk management system and the compliance management system.

Meetings and participation

The Supervisory Board held five meetings in fiscal 2017. We examined the company's situation, challenges, opportunities and prospects in detail. In the regular Supervisory Board meetings, the members of the Supervisory Board addressed in detail matters including the award of upcoming projects and large orders in the divisions, the course of business, the current earnings and financial position, general political, economic, business and technological conditions, the company's prospects and challenges when faced with competition from abroad and options, opportunities and risks in regional growth markets. Medium-term strategic and operational targets were discussed, along with their economic significance for Rheinmetall and their expected impact on the company's financial situation. Aside from the Group's corporate orientation and the structural development of the Automotive and Defence sectors, discussions focused on opportunities, options and measures to ensure the competitiveness and future viability of the company.

One member and two members respectively of the Supervisory Board announced in advance that they would be absent from the meetings on May 9 and August 31, 2017 respectively, explained the reasons for their absence and submitted their votes for the passing of resolutions in the Supervisory Board in good time. All members attended all other Supervisory Board meetings.

Key issues dealt with by the Supervisory Board

One agenda item at the annual accounts meeting which took place in Düsseldorf on March 22, 2017 was discussion of the single-entity and consolidated financial statements of Rheinmetall AG as of December 31, 2016, issued with an unqualified auditor's opinion by PricewaterhouseCoopers (PwC), together with the summarized management report for Rheinmetall AG and the Rheinmetall Group and the Executive Board's proposal for the appropriation of net income for the year. The Executive Board presented the Company's performance and results for fiscal 2016 in detail and also looked more closely at important individual issues in the Automotive and Defence sectors in this context. The auditors described the scope of their assignment, their audit methods and the main areas of the audit, and reported in detail on the material findings and results of their audits. Both the Executive Board and PwC provided comprehensive answers to the Supervisory Board's questions. After considering the company's financial situation and the expectations of shareholders and the capital market, we approved the Executive Board's proposal for appropriation of net income.

We also discussed the Supervisory Board's report to the Annual General Meeting and deliberated in detail on the draft proposals to be submitted to the 2017 Annual General Meeting, on which we passed a resolution. We approved the nominations of the Nomination Committee. The Executive Board also provided information on business performance during the first two months of the year under review and gave its outlook on results to be expected in the first quarter of 2017. Furthermore, we addressed the degree of achievement of targets by members of the Executive Board for fiscal 2016 and determined the Executive Board members' target agreements for 2017. The Executive Board also provided a progress report on the ONE Rheinmetall program. The aim of the program is to create an integrated group for leading technologies in the core business areas of mobility and security.

The second Supervisory Board meeting of the year was held in Berlin on May 8, 2017. In addition to preparations for the Annual General Meeting taking place the following day, the agenda included information on the economic performance of the Rheinmetall Group and business performance in the Automotive and Defence sectors in the first quarter of 2017. During its presentation on the business situation, the Executive Board explained the results of the analysis of the data on the company's shareholder structure in December 2016, which took place in January 2017, to us. We approved the Executive Board's motion to exercise the second option for a one-year extension of the revolving syndicated loan of €500 million concluded for five years in September 2015. The term of this credit facility will now end in 2022 rather than in 2020 as originally envisaged.

Following the Annual General Meeting on May 9, 2017, the Supervisory Board elected the new Supervisory Board Chairman and his Deputy Chairman in the inaugural meeting following the end of the period in office of its previous Chairman. A Strategy Committee was also set up and the membership of all the Supervisory Board's committees was decided, which consequently entailed adjustments to the Rules of Procedure of the Audit Committee and the Nomination Committee. Furthermore, we discussed matters concerning liability with respect to compliance processes.

On August 31, 2017, at the Supervisory Board meeting, which took place in Düsseldorf, the Executive Board explained the development of the business in the first half of 2017 as well as the business performance expected for 2017 as a whole and in this context also addressed key individual issues in the Automotive and Defence corporate sectors. The reports on the business situation of Rheinmetall Automotive also included the development of the joint venture, particularly in China, in addition to the activities in the e-bike sector and their future prospects compared to competitors in this business area. The Executive Board also provided information about the market prospects for Rheinmetall Defence in Australia, the status and chances of success in the Australian Land 400 program to equip the Australian army with new armored wheeled vehicles and about the significance of local value added in procurement processes and the advantages of Rheinmetall having a greater local presence in Australia, which can also be exploited for other projects in the Pacific region. In this connection, the Executive Board provided a comprehensive explanation of its investment request for the development of a local center of expertise for research and development activities and for the production of military vehicles in Australia, which the Supervisory Board approved subject to a condition after a detailed discussion of the pros and cons.

The Executive Board reported on the results of the annual audit relating to the European Market Infrastructure Regulation (EMIR). According to the certificate issued by the independent auditor from June 2017, the company's system for ensuring compliance with the requirements under section 20(1) of the *Wertpapierhandelsgesetz* (WpHG – German Securities Trading Act) was appropriate and effective overall and in all material respects during the period for which the audit was required from January 1 to December 31, 2016. As regards the reviews of efficiency, which were previously carried out in the form of self-evaluation, the Supervisory Board specified that it would call in an external consultant for the next scheduled review of efficiency. We also adopted the Rules of Procedure for the Strategy Committee. Furthermore, following detailed discussion, we adopted the resolution that the percentage of women in the Executive Board of Rheinmetall AG would be 0% until June 30, 2022. The compensation paid to members of the Supervisory Board was last adjusted in May 2012. We discussed the facts and the results of the investigation by an independent compensation expert on the appropriateness of the Supervisory Board's existing compensation and his recommendations. The consultations continued in the December meeting of the Supervisory Board.

The Executive Board presented its report for the third quarter of 2017 at the final meeting of the year, which was held in Düsseldorf on December 7, 2017. It informed the plenary assembly about the current business situation of the Rheinmetall Group and provided an outlook for the remaining months of the fiscal year. The medium term corporate planning from 2018 to 2020 including the financial, investment and human resources planning was presented to the Supervisory Board in detail and the assumptions made by the Executive Board for the corporate planning discussed in-depth.

Letter to shareholders

Report of the Supervisory Board

This also included the plausibility of the expectations presented as well as the opportunities and risks. We took notice of and approved the corporate planning from 2018 to 2020 and approved the investment master budget for fiscal 2018.

In addition, we resolved to mandate PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, Düsseldorf branch, which was elected at the Annual General Meeting on May 9, 2017, in writing to audit the single-entity and consolidated financial statements together with the combined management report for Rheinmetall AG and the Rheinmetall Group for fiscal 2017. The auditor submitted a declaration of independence in accordance with item 7.2.1 of the German Corporate Governance Code. The requirements of item 7.2.3 of the German Corporate Governance Code regarding the contractual relationship between the company and the auditor have been fulfilled.

In addition, after a thorough review, we passed a resolution to make adjustments to the compensation paid for serving on the Supervisory Board, which will become effective with effect from January 1, 2019. The proposed resolution for the corresponding amendment of the company's Articles of Association required for this is to be submitted to the Annual General Meeting on May 8, 2018.

Furthermore, we addressed matters concerning liability in connection with compliance, passed resolutions adopting the new version of the Rules of Procedure for the Supervisory Board and the Audit Committee in response to editorial changes. On the occasion of the introduction of a new employee share purchase program, the Executive Board provided an update on the statutory reporting duties in the context of managers' transactions.

Work of the committees

To enable it to prepare better for its consultations and decisions as well as to perform its monitoring duties efficiently, the sixteen-member Supervisory Board has established four committees in accordance with the company's Articles of Association, whose tasks include preparing a structure for complex and time-consuming topics prior to the plenary assembly's meetings and examining draft proposals in advance. In addition to the existing Personnel, Audit, Nomination and Mediation Committees, we set up a Strategy Committee on May 9, 2017. The committees – with the exception of the Nomination Committee, which consisted of two shareholder representatives until May 9, 2017 and has consisted of three shareholder representatives since the inaugural meeting of the Supervisory Board after the Annual General Meeting on May 9, 2017 – are based on joint representation, with two shareholder representatives and two employee representatives each (Personnel and Mediation Committee) or three shareholder representatives and three employee representatives each (Audit and Strategy Committee). The committees act within the framework of the law, the company's Articles of Association, the Rules of Procedure tailored to the tasks of the Supervisory Board and the Rules of Procedure for the respective committee. In appropriate cases, the Supervisory Board's responsibilities to adopt resolutions have been transferred, where legally possible, to individual committees. The Committee Chairmen inform the entire Supervisory Board about the work of the committees, the proposals adopted and the results achieved in the meetings. Information on the duties of the committees can be found in the corporate governance report on page 125 et seq. The membership of the committees is shown on page 2.

All members were present at the meetings of the committees, with the exception of one member of the Audit Committee who did not attend the meeting on August 2, 2017.

The **Personnel Committee** met in August and December in the year under review and discussed matters including the variable remuneration components of the salaries of Executive Board members and the target for the share of women in the Executive Board of Rheinmetall AG from July 1, 2017.

The **Audit Committee** met five times during the last fiscal year. It addressed the single-entity and consolidated financial statements and the Executive Board's proposal for the appropriation of net income and the dividend, as well as monitoring the accounting process and the effectiveness of the internal control system, the risk management system and the internal auditing system. Prior to publication, the quarterly and semi-annual results were discussed in detail with the Executive Board. At each meeting, the Executive Board reported on economic performance and key financial figures as well as on operating highlights in the divisions. The auditors of the annual financial statements participated in the meetings in March 2017 and December 2017.

We obtained the declaration of independence from the auditors required in accordance with the German Corporate Governance Code and prepared the Supervisory Board's proposal to the Annual General Meeting for the election of the auditor for fiscal 2017. Apart from the discussion of particular individual issues in the Automotive and Defence corporate sectors, other issues dealt with in the meetings included the growing significance of compliance systems in the area of taxes, the development of IT structures in the Rheinmetall Group and the positive results of the audit by the German Financial Reporting Enforcement Panel for the 2015 annual financial statements. We were also informed regarding the company's financing activities and situation. The Executive Board also presented its initial concept regarding the process for selecting and appointing the auditor of the annual financial statements for latest fiscal 2020 in accordance with the *Abschlussprüfungsreformgesetz* (AReG – German Audit Reform Act), which became effective on June 17, 2016.

In addition, on November 6, 2017, we resolved to mandate PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft, Frankfurt/Main, Düsseldorf branch, which was elected at the Annual General Meeting to audit the single-entity and consolidated financial statements together with the combined management report for Rheinmetall AG and the Rheinmetall Group for fiscal 2017.

At the December meeting, members of the Audit Committee were informed in detail and as scheduled of the auditing activities of Internal Audit in the year under review, the results of audits in 2017 and the planning of audits for 2018. In addition, the Chief Compliance Officer presented the compliance report for 2017, gave an overview of the status of the compliance organization and informed the committee of planned measures relating to the further development of the compliance management system. The Audit Committee also addressed the reporting requirements of the Executive Board and the audit duties of the Supervisory Board arising from the *CSR-Richtlinie-Umsetzungsgesetz* (German Act on Implementation of the EU CSR Directive), which became effective on April 19, 2017. The Executive Board reported on its decision to include the non-financial statement, which must be prepared for the first time for fiscal years beginning after December 31, 2016, in the 2017 combined Group management of Rheinmetall AG. We also decided the budget for the audits of the 2017 annual financial statements. Furthermore, the members of the Audit Committee adopted new Rules of Procedure for the committee.

Two members of the Audit Committee have particular knowledge and experience in the application of accounting principles and internal control processes (financial experts). They are independent and are not former members of the Executive Board of the company.

The newly created **Strategy Committee** met in August 2017 in the year under review. The existing situations, market trends, technological developments and innovations as well as perspectives, options and possible orientations for the Automotive and Defence sectors with their respective divisions presented by the Executive Board were discussed in detail and in-depth. The **Mediation Committee** did not convene in the past fiscal year. The **Nomination Committee** convened once in the year under review. Regarding the forthcoming election of shareholder representatives at the Annual General Meeting on May 9, 2017, nominations were made for candidates that were presented to the Supervisory Board as a whole for a resolution at the meeting on March 22, 2017.

Letter to shareholders

Report of the Supervisory Board

Corporate governance

In August 2017, the Executive and Supervisory Boards submitted their joint declaration of conformity in accordance with section 161 AktG, which is to be updated every year. Together with notes on deviations from the recommendations of the German Corporate Governance Code, this has been made permanently accessible on the company's website. It has also been reproduced from page 129 of this annual report. In accordance with item 3.10 of the current German Corporate Governance Code, further disclosures regarding corporate governance at Rheinmetall are provided in the joint corporate governance report produced by the Executive Board and the Supervisory Board on pages 120 to 130 of this annual report.

Conflicts of interest

Conflicts of interest among members of the Supervisory Board or Executive Board in connection with advisory activities or positions on the boards of other companies which would need to be disclosed to the Supervisory Board immediately and reported to the Annual General Meeting due to the matters underlying the conflicts of interest and the handling thereof were not reported in fiscal 2017 nor discovered in any other way. The members of the Supervisory Board declared in writing that there were no conflicts of interest within the meaning of item 5.5.2 of the Corporate Governance Code in 2017. No former members of the Executive Board of the company belong to the Supervisory Board.

Membership of the Supervisory Board

In accordance with sections 96(1) and (2) and 101(1) AktG in conjunction with section 7(1) no. 2 of the 1976 German Codetermination Act, the Supervisory Board of Rheinmetall AG comprises eight shareholder representatives and eight employee representatives, at least 30% of whom are women and at least 30% of whom are men. In the year under review, the Supervisory Board had four female members – two female employee representatives and two female shareholder representatives, which means that the regulation on a minimum quota for women and men on the Supervisory Board is complied with, having regard to the provisions of section 96(2) sentence 3 AktG.

At the end of the Annual General Meeting on May 9, 2017, the appointments of all members of the Supervisory Board in office at the time expired except for the mandates of Ulrich Grillo, Detlef Moog, Klaus-Günter Vennemann and Univ.-Prof. Dr. Marion A. Weissenberger-Eibl.

New elections for the employee representatives were held on March 31, 2017. Accordingly, employees are represented by five seats for operational employees, one seat for management and two trade union seats. Dr. Rudolf Luz, Roswitha Armbruster, Daniel Hay, Dr. Michael Mielke, Dagmar Muth, Markus Schaubel and Sven Schmidt were confirmed in their office. Reinhard Müller was elected to the Supervisory Board in place of Wolfgang Tretbar, who retired on July 31, 2017. The employee representatives' period in office in the Supervisory Board shall run until the end of the Annual General Meeting in 2022.

The Annual General Meeting on May 9, 2017 followed the proposals of the management and elected Professor Dr. Andreas Georgi and Professor Dr. Susanne Hannemann, and the new members Dr.-Ing. Dr.-Ing. E.h. Klaus Draeger and Dr. Franz Josef Jung, who succeeded Klaus Greinert and Professor Dr. Frank Richter as shareholder representatives on the Supervisory Board. Their period of office will run until the end of the Annual General Meeting that will resolve upon the approval of activities for the 2021 fiscal year.

We thanked the departing Supervisory Board members for their good teamwork on our Board and their professional, committed and solution-oriented work in the company's interests. Our particular thanks is due to Klaus Greinert, who has been a member of the company's Supervisory Board since 1997 and presided over it since 2002.

Particulars of the Executive Board

In the period under review, the Executive Board of Rheinmetall AG consisted of Armin Papperger as CEO, Helmut P. Merch, Horst Binnig and Peter Sebastian Krause, who was appointed to the Executive Board of Rheinmetall AG for the first time with effect from January 1, 2017 for a period of three years until December 31, 2019.

Single-entity and consolidated financial statements for 2017

The single-entity financial statements prepared by the Executive Board in accordance with German GAAP as of December 31, 2017 and the consolidated financial statements prepared on the basis of section 315a of the German Commercial Code (HGB) in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU, together with the combined management report, including the non-financial statement, for Rheinmetall AG and the Rheinmetall Group, including the accounts, were audited by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, Düsseldorf branch, in accordance with statutory regulations and were issued with an unqualified auditor's opinion. The auditor conducted the audit in accordance with German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany) (IDW).

The members of the Supervisory Board were issued with the single-entity and consolidated financial statements documentation, the draft proposal on the appropriation of net income and the audit reports submitted by the auditors in good time in order to ensure an in-depth, thorough review. This financial statement documentation was discussed in detail at the Audit Committee's meeting on March 12, 2018 and the Supervisory Board's annual accounts meeting on March 14, 2018 in the presence of the auditors and following the presentation of the auditors' report. They provided information on the scope, focal points and key results of their audit, answered all questions without reservations and also offered additional information.

We examined the single-entity and consolidated financial statements, the summarized management report and the proposal for the appropriation of net income for the year. There are no objections. We concurred with the results of the audit performed by the auditors. We approved the single-entity and consolidated financial statements presented by the Executive Board for the 2017 fiscal year. The single-entity financial statements have thus been adopted under the terms of section 172 AktG. We concurred with the Executive Board's proposal for appropriation of net income, which provides for the distribution of a dividend of €1.70 per entitled share for the year under review.

On behalf of my colleagues, we would like to thank all of our customers and shareholders for the confidence they have placed in Rheinmetall. We would like to thank the Executive Board, managers and employees for their hard work and great personal commitment during 2017. As a result, ambitious targets and exacting demands were once again translated into success and the best company result to date in recent corporate history achieved.

Düsseldorf, March 14, 2018

On behalf of the Supervisory Board
Ulrich Grillo
Chairman

Letter to shareholders

Letter from the Executive Board

Dear Shareholders,

Rheinmetall is looking back at a very successful fiscal year. Consolidated sales rose by around 5 % to approximately €6 billion, while operating earnings increased by 13.3% to €400 million. In our Automotive business we have further improved profitability with an operating margin of 8.7%. At the same time, we achieved a substantial surge in profits in the Defence sector, which led to an increase in the earnings margin there to 5.7%. Not least, incoming orders in both corporate sectors show that Rheinmetall is also well placed for fiscal 2018.

With our technologies, we serve megatrends of the 21st century: people want mobility and security throughout the world. Accordingly, at Defence, we benefit from many countries' increasing demand for a fundamental modernization of the equipment used by their armies and counter-terrorist security forces. A major order to supply around 2,300 state-of-the-art military logistics vehicles worth around €760 million acquired in our domestic German market in 2017 and a new order from the German armed forces to upgrade the Puma infantry fighting vehicle worth €97 million provide examples of this.

In the Automotive sector, we offer products for the continuous optimization of combustion engines and make innovative contributions to advancing both hybrid solutions and purely electric drives. We have identified future areas of growth at an early stage and are playing an active role in shaping the future of mobility today. This is impressively highlighted by incoming orders in electromobility of almost €500 million. One example of this is a major order received in 2017 from a German premium automotive manufacturer to produce components for battery boxes from die cast aluminum worth €65 million in total. Another example is the order received at the beginning of 2018 from the Californian vehicle manufacturer to supply coolant pumps for a luxurious plug-in hybrid vehicle, which is to be sold in the US and Canada.

The capital market has acknowledged our strategy of focusing both on profitable growth in the established business areas and on the development of new market segments in the mobility and security sectors. In the fourth quarter of 2017, our share price cleared the hurdle of €100 for the first time and maintained its positive basic trend to the end of the year. I view this confidence on the part of the capital market as confirmation of the fact that we are taking the Rheinmetall technology group in the right direction. However, we are aware of the fact that we cannot rest on the successes of the best year in our recent corporate history. The new strategic partnerships, which we concluded in 2017, will also play a key role here. Our ONE Rheinmetall program, with which we are intensifying and improving cooperation within and between our corporate sectors, is also of key significance for the future development of the Rheinmetall Group. With ONE Rheinmetall, we will evolve into a technology group that operates across the divisions and, in doing so, offers innovative solutions for two of the greatest challenges of our time: threat-appropriate security technology and environmentally friendly mobility. I again seek the trust of our customers and our shareholders in pursuing this course in the new fiscal year.



Armin Papperger

**ARMIN PAPPERGER**

Chief Executive Officer

Member since January 1, 2012
CEO from January 1, 2013**HELMUT P. MERCH**

Finance

Member since January 1, 2013

**HORST BINNIG**

Automotive

Member since January 1, 2014

**PETER SEBASTIAN KRAUSE**

Human Resources

Member since January 1, 2017

Letter to shareholders

Rheinmetall on the capital markets

Rheinmetall share basic information

	2017
Share class	Bearer shares
Securities identification number (WKN)	703000
International Security Identification Number (ISIN)	DE 0007030009
Stock exchange	Xetra and all German stock exchanges
Deutsche Börse admission segment	Prime Standard/Regulated Market
Sector	Industrial products
Indices	MDAX, EURO STOXX 600
Bloomberg ticker symbol	RHM
Reuters ticker symbol	RHMG
Designated sponsors	Commerzbank, Deutsche Bank
Announcements	Electronic Federal Gazette
First listed on the stock exchange	November 14, 1894

Rheinmetall share key figures

		2017	2016	2015	2014	2013
Equity as of year-end						
Shared capital	€ million	111.51	111.51	111.51	101.37	101.37
Issued shares	Thousands of units	43,559	43,559	43,559	39,599	39,599
Free float (incl. treasury stocks)	%	100	100	100	100	100
Treasury stock	%	1.6	2.0	2.4	3.1	3.9
Share price						
Share price at end of fiscal year (Xetra)	€	105.85	63.90	61.48	36.27	44.85
Performance over the year	%	+66	+4	+70	-19	+23
Highest closing price (Xetra)	€	108.65	70.61	63.19	57.87	46.04
Lowest closing price (Xetra)	€	64.13	51.47	34.60	30.69	35.01
Stock exchange data						
Stock market value of all shares as of year-end	€ billion	4.6	2.8	2.7	1.4	1.8
Average sales per trading day (Xetra)	Thousands of units	156	179	225	211	202
MDAX ranking at year-end of shares						
according to market capitalization		16	21	19	33	25
according to stock exchange turnover		23	23	22	20	23
Key figures						
Earnings per share	€	5.24	4.69	3.88	0.47	0.75
Equity per share	€	45.67	41.78	40.07	31.34	35.30
Cash flow per share	€	10.49	10.06	9.39	5.91	6.09
Dividend						
Total payout	€ million	72.9	61.9	46.8	11.5	15.2
Payout ratio	%	32	31	28	64	53
Dividend per share entitled to dividends	€	1.70	1.45	1.10	0.30	0.40
Dividend yield	%	1.6	2.3	1.8	0.8	0.9

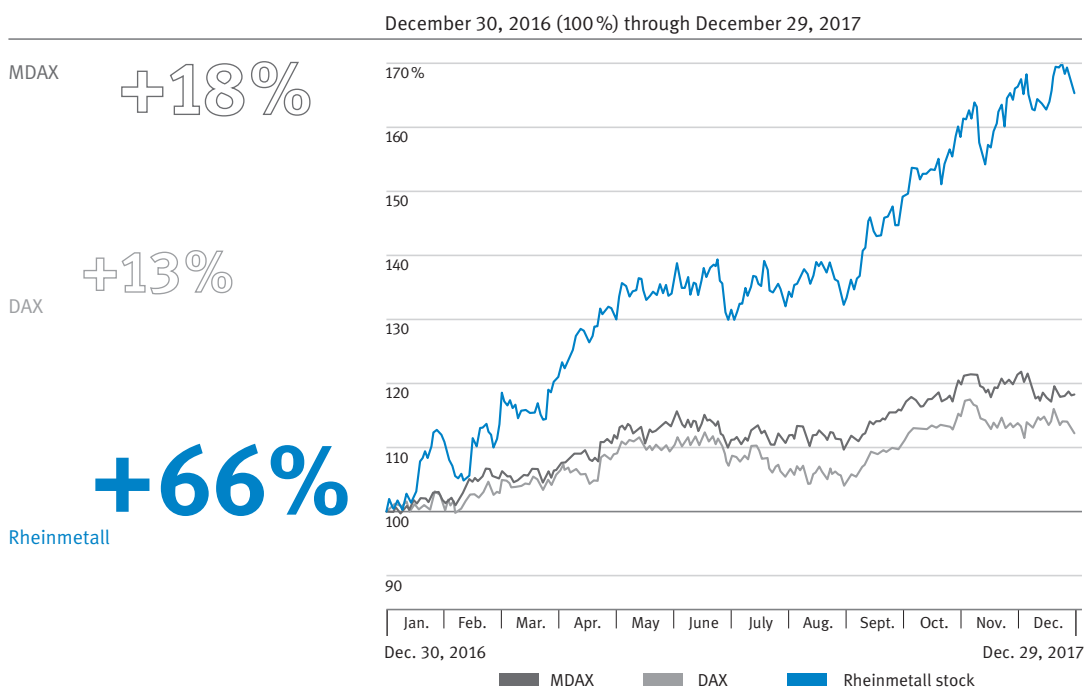
The 2017 trading year: stock markets benefit from stable conditions

Positive economic conditions characterize 2017: according to the forecasts of the IMF from October 2017, gross domestic product (GDP) in the US grew by 2.2% and in the euro region by 2.1%. All member states of the EU recorded positive growth rates. The German economy expanded by 2.0% and the French economy achieved the highest growth, at 1.6%, for six years. Even the UK economy, whose prospects are characterized by uncertainties regarding withdrawal from the EU, grew by 1.7%. China is also in good shape once more, reporting an increase in GDP of 6.8%. The European economies have therefore worked through adverse factors without any sustained negative impact. These include the rise of the euro against the US dollar, which was still at USD 1.04 to the euro at the beginning of 2017 but closed the year at USD 1.20 to the euro, and higher costs for crude oil, which has risen by 18% (Brent) to USD 66.82 per barrel.

Following a subdued start in January, the DAX started a strong upward surge, culminating in a historic high of 12,889 points on June 19. The MDAX followed a similar path, climbing to the unparalleled level of 25,696 points on June 2. A lull then occurred over the summer months, to which profit-taking and the disputes about the nuclear threat posed by North Korea contributed.

A dynamic recovery started at the end of August, which saw both indices rise by more than 10% within the space of two months. On November 3, the DAX reached a record high of 13,479 points and closed the year at 12,918 points, an increase of 13%. The MDAX rose to 27,027 points by November 30 and, closing at 26,201 points as of the end of the year, gained 18% over the course of the year.

Rheinmetall stock price trend in comparison to development of the DAX and MDAX



Letter to shareholders

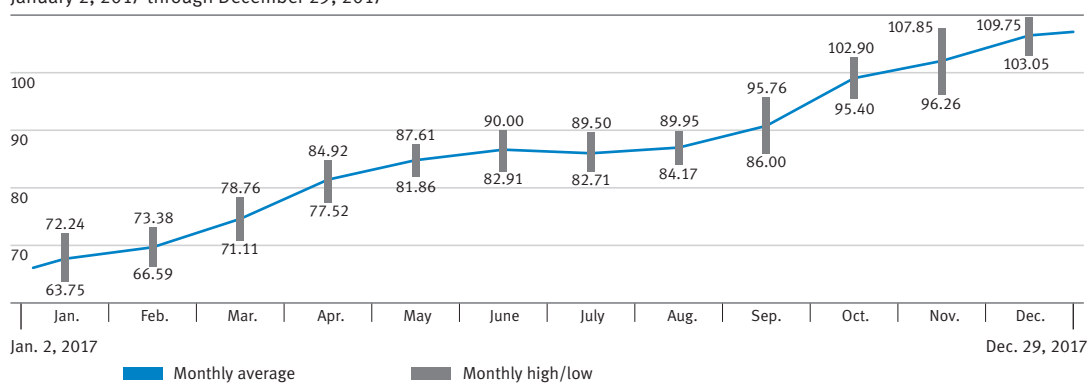
Rheinmetall on the capital markets

Rheinmetall's stock clearly outperformed the market

The performance of Rheinmetall's shares was much more dynamic than that of the two benchmark indices. The strong price rise began in the first half of the year and continued to above €70 for the first time in just under ten years on January 24, even going as far as €80 on April 6. During the lull experienced by the DAX and the MDAX in the summer months, the stock price trended sideways and also started a new rally in September. On September 8 the shares surged past €90 and even €100 on October 26. With a share price of €105.85 as of the end of the year, shareholders enjoyed a performance of 66%.

Rheinmetall share price performance €

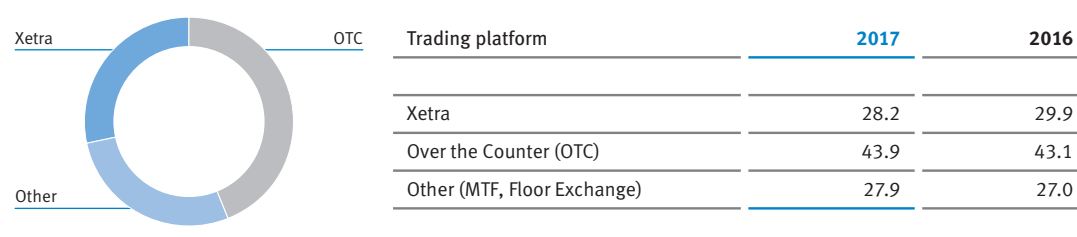
January 2, 2017 through December 29, 2017



Rheinmetall's share listing

Rheinmetall AG shares are traded via Xetra and all German stock exchanges. Alternative trading systems are playing an increasingly important role. These include multilateral trading facilities (MTF) that are similar to stock exchanges, such as Chi-X and Turquoise, which are governed by rules relating to admission, transparency in pricing, liquidity, transaction processing and certain control mechanisms. However, the shares are also traded off the floor on platforms that are referred to collectively under the term OTC (over the counter). These are not generally subject to stock market regulation and are less transparent than stock exchanges and MTF in terms of pricing and liquidity. Traders benefit from lower costs and are able to carry out larger transactions without other market participants noticing.

Rheinmetall shares processed on trading platforms %



Over the course of the year, the trend from previous years continued and there was a further increase in sales conducted outside established stock exchanges. Far more Rheinmetall shares were traded via OTC platforms than via Deutsche Börse's Xetra system.

Ranking in the MDAX

Deutsche Börse decides on a stock corporation's membership of an index primarily on the basis of two criteria: market capitalization and the order book turnover of shares.

The market capitalization is determined based on the free float of shares issued, measured at the respective share price. There are 43,558,850 Rheinmetall AG shares, 98.44% of which the stock exchange allocated to free float as of the end of the year. This resulted in a stock market value of relevance for the index calculation of €4.6 billion compared to €2.8 billion in the previous year. In the index ranking for the MDAX, the position of the Rheinmetall share improved from 21st place to 16th place.

In addition, Deutsche Börse takes account of the volume of shares traded and prepares a ranking of the order book turnover for this purpose. As of the end of the year, Rheinmetall's shares held the same place as in the previous year at 23. The underlying trading volume of the shares in relation to the previous twelve months amounted to €3.3 billion (previous year: €2.9 billion).

Ranking in the MDAX

	2017	2016	2015	2014	2013
Number of shares	43,558,850	43,558,850	43,558,850	39,599,000	39,599,000
Free float of shares	98.4%	98.0%	97.6%	96.9%	96.1%
Closing share price	€105.85	€63.90	€ 61.48	€ 36.27	€ 44.85
Market capitalization	€4,550 million	€2,754 million	€2,593 million	€1,329 million	€1,655 million
Ranking	16	21	19	33	25
Trading volume	€3,339 million	€2,888 million	€2,908 million	€2,373 million	€2,046 million
Ranking	23	23	22	20	23

Source: Deutsche Börse Stock Reports December

At 155,749 shares, the average number of Rheinmetall AG shares traded via Deutsche Börse's Xetra system each day was down on the level of the previous year (previous year: 179,241 shares) in 2017. This reflects the fall in trading via Xetra described above.

Dividend distribution for fiscal 2017

Our dividend policy is earnings-oriented and designed to ensure that our shareholders receive an adequate share in the Group's profit on an ongoing basis. The dividend amount is based on business performance and a payout ratio geared towards Rheinmetall AG's business results. We take care to ensure that the dividend is widely accepted by shareholders and that it represents an attractive investment criterion, especially for investors geared towards long-term investment.

At the Annual General Meeting on May 8, 2018, the Executive Board and Supervisory Board will propose a dividend payment of €1.70 per entitled share (previous year: €1.45). The total distribution amount will therefore be €73 million (previous year: €62 million). Subject to approval by shareholders, the dividend will be paid on the following day. Based on the closing price of the shares for 2017 of €105.85 (previous year: €63.90), this corresponds to a dividend yield of 1.6% (previous year: 2.3%). The distribution ratio, i.e. the dividend in relation to earnings per share, will be 32% for the year under review (previous year: 31%).

Letter to shareholders

Rheinmetall on the capital markets

Shareholder structure

At the end of 2017, an external service provider analyzed our shareholder structure – as had been done on a regular basis in previous years. The analysis was based on publications from investment companies and other institutional shareholders in addition to inquiries among investors. At 98% of all shareholders, the scope of the analysis was extended by three percentage points compared to the previous year. The percentage of institutional investors increased from 70% in the previous year to 73%. The majority of this segment is based in Europe, although their share decreased by 7% to 38%. The largest stakes, at over one million shares each, were held by European investors from Germany, the UK, France and Norway. Institutional investors from North America held 35% in Rheinmetall AG, 11% more than at the end of 2016. The percentage of North American investors had, however, fallen sharply in previous years. A further 27% of shares (previous year: 31%) are held by private investors, Rheinmetall AG itself and investors who were not identified during the survey. The 50 largest institutional investors hold 64% (previous year: 60%) of shares.

Shareholder structure as of December 31, 2017 %



Treasury stock

The Annual General Meeting on May 10, 2016 authorized the Executive Board to acquire treasury shares. This authorizes the Executive Board to acquire treasury bearer shares up to a maximum of 10% of the current share capital of €101,373,440 until May 9, 2021. The number of treasury shares was 870,788 shares or 2.0% of the share capital at the end of the 2016 reporting period. The company withdrew 92,978 shares from this (previous year: 90,633 shares) for the employee share purchase program and 98,101 shares (previous year: 74,364 shares) for the long-term incentive program (LTI) in the course of fiscal 2017. As Rheinmetall AG did not use this authorization to purchase treasury shares in fiscal 2017 either, the holding amounted to 679,709 shares or 1.6% at the end of the 2017 reporting period.

Acquisition and use of treasury shares

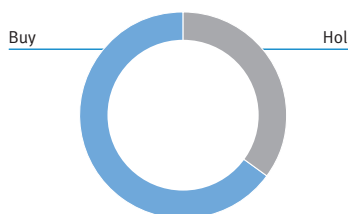
	2017	2016	2015	2014	2013
Acquisition of shares	-	-	-	-	-
Used for employee share purchase program	92,978	90,633	94,245	175,385	142,857
Used for long-term incentive program	98,101	74,364	95,481	123,337	214,557
Portfolio on December 31	679,709	870,788	1,035,785	1,225,511	1,524,233
Share of treasury stocks in Rheinmetall shares	1.6%	2.0%	2.4%	3.1%	3.9%

Research coverage

Analyses and comments by national and international brokers are important tools in helping institutional and private investors to make decisions. Rheinmetall's coverage by these organizations is still at a high level and confirms the high level of interest shown by the capital market in our company.

20 equity research analysts (previous year: 17) published their analyses of current development at the Rheinmetall Group and their assessments and recommendations regarding its shares at the end of 2017. 13 analysts gave Rheinmetall shares a "Buy" rating, while a further seven analysts recommended holding the shares. No analyst recommended selling the shares at this date.

Investment recommendations for Rheinmetall shares as of December 31, 2017

	Rating	Institution	Headquarters
	Buy	Agency Partners	London
		Alpha-Value	London
		Bankhaus Lampe	Düsseldorf
		Bankhaus Metzler	Frankfurt am Main
		Bank of America Merrill Lynch	London
		Berenberg	London
		CFRA (S&P Global)	London
		Commerzbank	Frankfurt am Main
		DZ Bank	Frankfurt am Main
		Equinet	Frankfurt am Main
		LBBW	Stuttgart
		Oddo BHF	Frankfurt am Main
		UBS	Frankfurt am Main
Hold	Hold	Citigroup	London
		Deutsche Bank	Frankfurt am Main
		HSBC	Düsseldorf
		Independent Research	Frankfurt am Main
		Kepler Cheuvreux	Frankfurt am Main
		MainFirst	Frankfurt am Main
		Warburg	Hamburg

Disclosures regarding the amount of the share of voting rights

The Federal Financial Supervisory Authority (BaFin) not only monitors the reporting thresholds for ownership of shares (section 21 WpHG), but also requests notification when financial and other instruments are acquired that entitle the holder to purchase shares (sections 25 and 25a WpHG). Rheinmetall AG notified the capital markets of this in accordance with section 26 WpHG and also informed the general public on its website.

Voting rights notifications in accordance with section 21 WpHG as of December 31, 2017

Shareholders	Reporting threshold	Total voting rights in %	Publication by Rheinmetall
The Capital Group Companies Inc., Los Angeles, CA, USA	3%	5.12%	27.10.2017
BlackRock, Inc., Wilmington, DE, USA	3%	4.36%	20.12.2017
Ministry of Finance/State of Norway, Oslo, Norway	3%	3.09%	02.01.2018
Dimensional, Austin, TX, USA	3%	3.01%	22.08.2014

Letter to shareholders

Rheinmetall on the capital markets

Regular dialog with the capital market

As a joint stock corporation where the shares are held entirely in free float, direct dialog and trusting relationships with institutional investors, private shareholders, potential investors and analysts are of considerable importance for Rheinmetall AG. Providing up-to-date information and ensuring continuity and transparency when preparing reports, as well as credibility and reliability, form the basis for our investor relations work. It is our aim to provide investors with a realistic estimate of the future development of the Rheinmetall Group and to lay the groundwork for a fair assessment of the Rheinmetall share.

The Executive Board and Investor Relations team maintain very close contact with capital market participants. We held almost 200 meetings with investors and analysts during the period under review. A large proportion of these took place at a total of 15 investor conferences and roadshows. We targeted major financial centers in Europe, including Frankfurt am Main, London, Paris and several financial centers in the US and Canada. Numerous individual meetings were also held during investor visits and telephone conferences. The investor relations team – in many cases with the direct involvement of the Executive Board – not only provided comprehensive information on the economic environment and the current business situation, but also discussed issues such as current trends, the potential of products and technologies, growth opportunities and risks and existing and future challenges for the Rheinmetall Group with national and international business partners.

More than 20 analysts and investors accepted the invitation to the Capital Markets Day in Bremen in November 2017. At this event, the Executive Board presented the future strategy of the Group and the corporate sectors. It also provided an overview of operational business and development on the markets. The participants seized the opportunity to hold in-depth discussions with the Executive Board.

Other important dates in the investor relations calendar included conference calls on the quarterly reports and the accounts and analyst conference on March 23, 2017, at which the Executive Board explained the results of the respective reporting period and fielded questions. The minutes of these meetings were subsequently made available on the Rheinmetall AG website. The Annual General Meeting was an important platform for dialog with private investors, who can also contact the Investor Relations department with questions by telephone, in writing or by e-mail all year round.

Our investor relations website provides an overview of capital market expectations for the Rheinmetall Group's key indicators. The assessments issued by financial analysts regarding the future performance of our company following evaluation of published business results are collated by an external service provider that is well known in the industry, to form a consensus that is updated at regular intervals.

Money and capital market financing

The €500 million bond issued in 2010 was repaid at its nominal value on maturity in September 2017. No additional financing has been raised in the capital market since then.

Scarcely any use was made of the €500 million commercial paper program that has been in place since 2002 in the past fiscal year. The few tranches that were issued were placed on extremely attractive terms. There was no commercial paper outstanding at the end of 2017.

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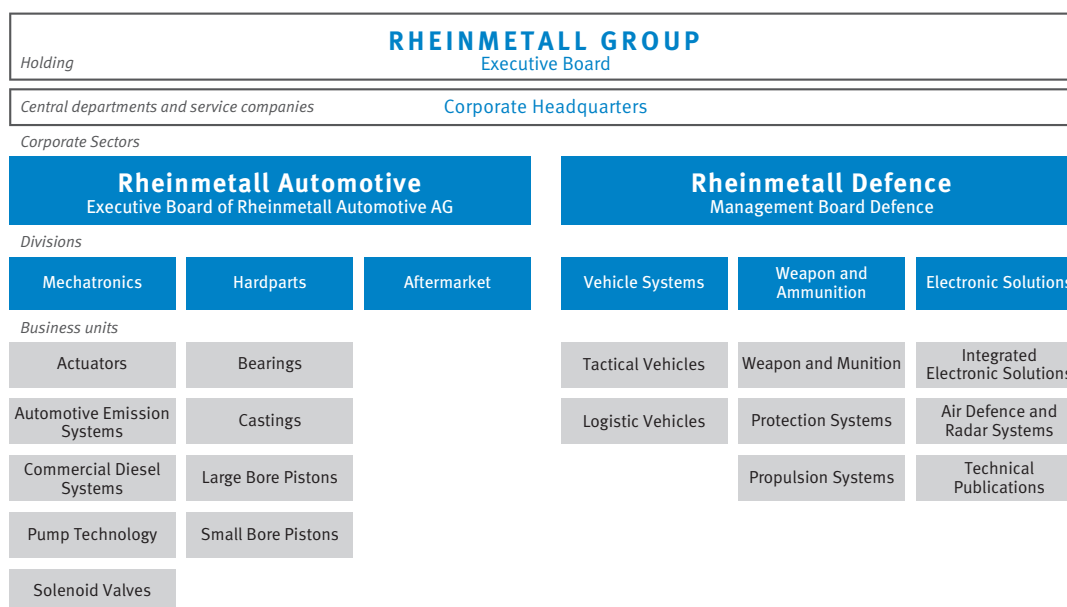
Basic information on the Rheinmetall Group

Corporate structure

Structure of the Rheinmetall Group

Rheinmetall Aktiengesellschaft (Rheinmetall AG), which is a listed stock corporation with its head office in Düsseldorf, is entered in the commercial register of the District Court of Düsseldorf under the number HRB 39401 and is the parent company of the Rheinmetall Group. The Articles of Association of the company were last amended May 10, 2016. The purpose of the company is to establish companies, to acquire and sell equity investments and rights similar to equity investments in companies concerned with mechanical engineering, the processing of metals and other materials, industrial electronics and related industries, to manage such companies and where appropriate to aggregate them under common management, as well as to acquire, sell, develop, use and manage land and buildings, including where this is not connected to the aforementioned companies.

Rheinmetall AG's corporate structure



As of December 31, 2017

Our market and customer-oriented approach is an important factor in our success. Lasting relationships with our customers have formed the basis of our business activities in the Automotive and Defence sectors for over a century. Our activities in the business areas of environmentally friendly mobility and threat-appropriate security are consistently aligned towards the three largest economic regions of Europe, the US and Asia. In the year under review we concluded sales with customers in 146 countries. We are represented at 39 locations in Germany, a further 39 in Europe (excluding Germany), 13 on the American continent, 17 in Asia, six in Africa and three in Australia.

The business activities of the companies in the Rheinmetall Group have a strong international focus. In 2017, the international share of sales was around 75.6%. We now employ 11,928 staff abroad (previous year: 11,508 employees), which represents 50.3% of our total workforce (previous year: 49.9%).

Rheinmetall AG has direct or indirect holding in 186 companies in Germany and abroad (previous year: 177) that belong to the Rheinmetall Group. A total of 149 companies (previous year: 143) are fully consolidated in the consolidated financial statements. 37 companies are carried at equity (previous year: 33). The consolidated group is presented in the notes to the consolidated financial statements on pages 195 to 199.

Basic information on the Rheinmetall Group

Corporate management and control

Corporate management and control

The Executive Board of Rheinmetall Aktiengesellschaft, which has consisted of four members since January 1, 2017, is the governing body of the Rheinmetall Group. The Executive Board is responsible for the Group's strategic orientation and development and for setting and monitoring corporate targets. Moreover, it is responsible for the introduction and further development of adequate management, control and monitoring processes, including the risk management system, internal control system, internal auditing and compliance management system and the allocation of resources.

The clearly defined core business areas of Automotive and Defence are equipped with all the necessary functions as independent sectors that operate in line with strategies, targets and guidelines determined by the Executive Board of the Group, each with responsibility for their global business operations and their own management. The respective divisions of Rheinmetall Automotive and Rheinmetall Defence are operated under the responsibility of the Executive Board of Rheinmetall Automotive AG and the Management Board Defence of Rheinmetall AG. The division heads report to the members of the sectors' executive boards on current business performance in regular review and strategy meetings and discuss operating and economic measures in addition to strategies and targets with them. The respective management bodies of the subsidiaries are responsible for operational management of their units. They are supported in their tasks by the service and support functions that have been set up within the management holding company.

The Supervisory Board, which consists of sixteen members and is based on joint representation in accordance with the provisions of the 1976 German Codetermination Act, appoints, advises and monitors the Executive Board. The Executive and Supervisory Boards work together closely, constructively and in an atmosphere of trust, with the aim of ensuring the continued existence of the company and creating sustainable value added.

Rules of procedure are in place for both boards, containing regulations on the composition, tasks, responsibilities and areas subject to approval. Further details can be found in the corporate governance report from page 120.

In the Rheinmetall Group, the Automotive and Defence sectors are controlled and the economic success of the operational entities is assessed using the key performance indicators of sales, operating result (EBIT before special items), EBIT and EBT. Profitability is measured by the management on the basis of ROCE calculated on an annual basis, which represents the ratio of EBIT to average capital employed (average values as of December 31 of the previous year and the year under review). Operating free cash flow is included in target agreements with managers as an additional control and management indicator.

Central management indicators

		2017	2016
Sales	€ million	5,896	5,602
Operating result	€ million	400	353
EBIT	€ million	385	353
EBT	€ million	346	299
Return on capital employed (ROCE)	in %	13.4	12.3
Operating free cash flow	€ million	276	161

In addition, the volume of capital expenditure, research and development expenditure and the headcount (FTEs) represent further indicators that are relevant to management. Further details are provided in the non-financial statement on pages 97 et seq.

Basic information on the Rheinmetall Group

Business model

Rheinmetall Group

Rheinmetall is an international group for leading technologies in the mobility and security segments. Urbanization, demographic change, migration flows, globalization, climate change and the increasing frequency and intensity of conflicts and military disputes mean that efforts to improve mobility and security are constantly increasing. With its two sectors, Automotive and Defence, Rheinmetall fulfills these basic key needs of modern society.

Operating activities of Rheinmetall Automotive

The Automotive sector with the management company Rheinmetall Automotive is one of the world's major automotive suppliers, particularly in the areas of air management, emissions reduction and pumps and in the development, production and supply of replacement parts for pistons, engine blocks and slide bearings. The core areas of expertise of companies in the Automotive sector lie in the reduction of emissions, pollutants and consumption, cooling and thermal management, downsizing and reduction of weight and friction in relation to combustion engines. This applies not only to passenger cars, but equally also to light and heavy commercial vehicles, off-road vehicles and large engines. Rheinmetall Automotive also works intensively on drives for the electric and hybrid vehicles of the future. Rheinmetall Automotive holds a tier 1 position in the value-added chain of automotive production, i.e. we supply most automotive manufacturers (OEM – original equipment manufacturers) directly and not via other suppliers or system integrators.

Corporate sector	Division	Areas of activity
Automotive	Mechatronics	Emissions reduction Actuators Solenoid valves Water, oil and vacuum pumps
	Hardparts	Pistons Engine blocks, structural components and cylinder heads Plain bearings and bushes
	Aftermarket	Global replacement parts business

Markets of Rheinmetall Automotive

Individual mobility is one of the global megatrends. Consequently, the international automotive industry is enjoying an upturn, which has now persisted for eight years. There are no signs of the growth abating in the near future.

Rheinmetall Automotive's business performance is largely determined by the development of our international customers' production and sales figures. This applies to existing customer contracts on the one hand, as well as to future projects relating to our customers' technological requirements on the other. Ongoing strong trends towards more efficient use of fuels, reductions in emissions and alternative drive technologies are having a particularly strong impact.

Sales in the Mechatronics and Hardparts divisions are defined by business-to-business transactions. We have a relatively low number of internationally operating automotive manufacturers as potential customers. Our customer structure is nevertheless diversified which is also the case from a regional perspective. With our production sites in the key economic areas of Western Europe, NAFTA and Asia, we are able to meet customer requirements for local or international production.

We have a presence in China, now the world's largest market for passenger cars with over 27 million units produced in 2017, with a regional holding company as well as joint ventures with a major Chinese partner and wholly owned subsidiaries.

Business-to-business transactions also dominate our relationships with buyers of products from our Aftermarket division. Various distribution channels are used for this. These include websites, call centers and catalogs, as well as training for mechanics. In addition to passing on technical expertise with the aim of strengthening customer loyalty, these further training courses also allow us to position ourselves as a provider of customized repair solutions.

The discussion about the future of diesel technology for use in car engines continues unabated. The public notion that this technology is harmful to the environment and health is stubbornly persistent. However, the problems of emissions of nitrogen oxides can be managed by means of technical processes. In Germany, which for years has been characterized by a high percentage of diesel cars, peaking at up to 48% of new registrations, the current debate over banning diesel cars in many city centers led to the percentage of diesel cars in new registrations falling below 39% in 2017. Similar trends are apparent in other European countries. It is currently unclear how this will play out in the future.

The automotive industry is facing far-reaching changes, including alternative drive system concepts in addition to networked and automated driving. The departure from exclusive use of the combustion engine as a drive system is particularly relevant for suppliers established in the area of drive trains today. The introduction of partially or fully electric drives is causing automotive manufacturers' requirements of their suppliers to change in terms of expertise and technology. Although the range of vehicles powered by electric batteries and plug-in hybrid vehicles has increased significantly in recent times, the absolute market volume is currently still modest. The European Automobile Manufacturers' Association (ACEA) counted 212,976 units for newly registered vehicles with alternative drives in the European Union in 2017, which equates to a 1.4% of the total number of new registrations. The combustion engine will therefore remain the main drive system for the transportation of passengers and goods for the foreseeable future.

In the "6th Global Top Automotive Suppliers 2016" study published by Berylls Strategy Advisors in May 2017, Rheinmetall Automotive was ranked 94th based on sales in fiscal 2016, after taking 89th place in the 2016 study based on sales in 2015.

Regulatory environment of Rheinmetall Automotive

The use of combustion engines means that mobility goes hand in hand with emissions of substances that are harmful to the environment and to health, which many countries counter by defining limits on emissions of pollutants and greenhouse gases both from passenger vehicles and light and heavy commercial vehicles. The focus here was on emissions of hydrocarbons (HC), nitrous gases (NOX), carbon monoxide (CO) and dioxide (CO₂) and particulates (PM) caused by road traffic.

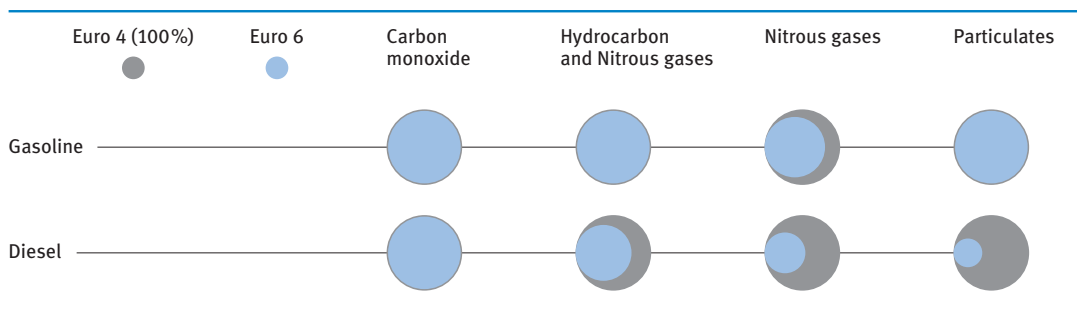
In the European Union, the limits on emissions of pollutants have gradually become stricter since the introduction of the Euro 1 standard in 1992. The level of permissible emissions for gasoline engines was largely set by the introduction of Euro 4 in 2006. No material reductions were associated with the introduction of the Euro 6 standard in 2015.

Basic information on the Rheinmetall Group Business model

The situation is different for diesel engines. Their emissions of nitrous gases and particulates have been and are increasingly a topic of discussion. As far as nitrous gases are concerned, the emissions of a Euro 4- level diesel vehicle may still be approximately three times that of a gasoline vehicle.

Euro 6 specifies that nitrous gases must be reduced to 32% of the Euro 4 limit. The nitrous gas emissions of a diesel engine may then only be around one third higher than those of a gasoline engine. The improvements required between Euro 4 and Euro 6 are even more stringent with respect to particulate matter. According to Euro 6, these may now amount to only 18% of the Euro 4 figure.

Limits on passenger car emissions: Comparison of the Euro 4 and Euro 6 standards



Source: Own diagram based on data from the German Federal Environment Agency (August 2016)

The Euro standards are being adapted by many countries worldwide and introduced simultaneously or with a time delay. Some countries, primarily the US and Japan, are issuing their own limits on emissions of pollutants. Standards around the world for reducing emissions of harmful substances will therefore continue to become gradually more stringent in the future.

For emissions of the greenhouse gas carbon dioxide (CO₂), an upper limit of average emissions of 130 g CO₂ per kilometer has applied since 2015 to all new cars in Europe, which corresponds to consumption of around 5.6 liters of gasoline or 4.9 liters of diesel per 100 kilometers. In the medium term, the European Commission has adopted a target of 95 g CO₂/km by 2021 (consumption of 4.1 liters of gasoline or 3.6 liters of diesel per 100 kilometers).

The maximum limit for light commercial vehicles in Europe was set at 175 g CO₂/km or a consumption of 6.6 liters of diesel per 100 kilometers by 2017. This limit will be reduced by 16% to 147 g CO₂/km by 2020 with a fuel consumption of around 5.6 liters of diesel per 100 kilometers.

Non-compliance with the CO₂ fleet values will lead to substantial financial penalties for manufacturers. Failure to meet the limits will be penalized with gradually increasing fines per excess gram. For the first gram, €5 must be paid for every car sold; this then increases to €15 for the second gram, €25 for the third gram and €95 per gram from the fourth gram upwards. From 2019, the fine will amount to €95 per excess gram, starting from the first gram exceeding the limit. According to information available from the International Council on Clean Transportation (ICCT), average CO₂ emissions of passenger cars sold in the EU in 2016 amounted to around 118 g CO₂/km, thus lying approximately 1% below the figure for the previous year and around 9% below the applicable limit.

In international terms, in the past the EU has assumed a pioneering role with respect to the limits on CO₂ emissions. Some large countries have now adopted limits equivalent to the EU target of 95 g CO₂/km. This includes the US and Canada, each with 97 g CO₂/km from 2025, as well as South Korea, also with 97 g CO₂/km but from as soon as 2020. China has set a limit of 117 g CO₂/km from 2020.

Since September 1, 2017, the values for fuel consumption and emissions of pollutants and CO₂ required for type approval in Europe have been determined in accordance with the new test procedure, the Worldwide Harmonized Light-Duty Vehicles Test Procedure (WLTP). As a successor to the New European Driving Cycle (NEDC), this should lead to more accurate figures for consumption based on more precise, up-to-date test conditions. The switch will lead to an increase in the figures reported for consumption and the emissions measured. Experts expect an increase of up to 20% in standard consumption.

Although the new WLTP standard is a modernized procedure, it is still a test under laboratory conditions, hence the results will not necessarily correspond to actual conditions on the road. As of September 2017, therefore, a supplementary “real driving emissions test” became mandatory to test real use on the road. With regard to emissions of nitrous gases, which are particularly problematic with diesel vehicles, the European Union has allowed the values for new vehicles being licensed to be 2.1 times higher than the upper limit until 2019 and 1.5 times higher thereafter.

Operating activities of Rheinmetall Defence

The Defence sector of the Rheinmetall Group is among the defence and security industry’s leading providers of innovative products for the German and international armed and security forces. Rheinmetall Defence provides system and partial system solutions as well as a broad portfolio of services for capability in the areas of mobility, reconnaissance, management, effectiveness and protection. It also offers customized training and simulation solutions.

As a leading European systems supplier for armed forces technology, Rheinmetall Defence has many years of experience and innovation in armored vehicles, weapons and ammunition and in the areas of air defence and electronics – including serving the requirements of the navy and air force and for internal security. Whether for requirements specific to different branches of the armed forces or overall requirements, whether for external or internal security, the sector has a wide product portfolio of platforms and components, which are offered as individual and networked system solutions. This makes Rheinmetall Defence a strong and reliable partner to the German armed forces, their allies and friendly armies, along with civil national security forces.

All development, production and service activities are geared towards ensuring the best possible protection for soldiers on deployment. Rheinmetall Defence continuously sets new technological standards here: from vehicle, protection and weapon systems, through infantry equipment and air defence, to the networking of function sequences, electro-optics and simulation.

Basic information on the Rheinmetall Group

Business model

Corporate sector	Division	Areas of activity
Defence	Vehicle Systems	Armored tracked vehicles NBC protection systems Turret systems Wheeled logistics vehicles Wheeled tactical vehicles
	Weapon and ammunition	Large and medium caliber weapons and their ammunition Weapon stations Protection systems Propellants and powder
	Electronic solutions	Air defence systems Soldier systems Command, control and reconnaissance systems Fire control systems Sensors Land simulation, flight simulation, maritime and process simulation

Markets of Rheinmetall Defence

The world of the 21st century occasionally faces very tense security situations as well as complex and new threats.

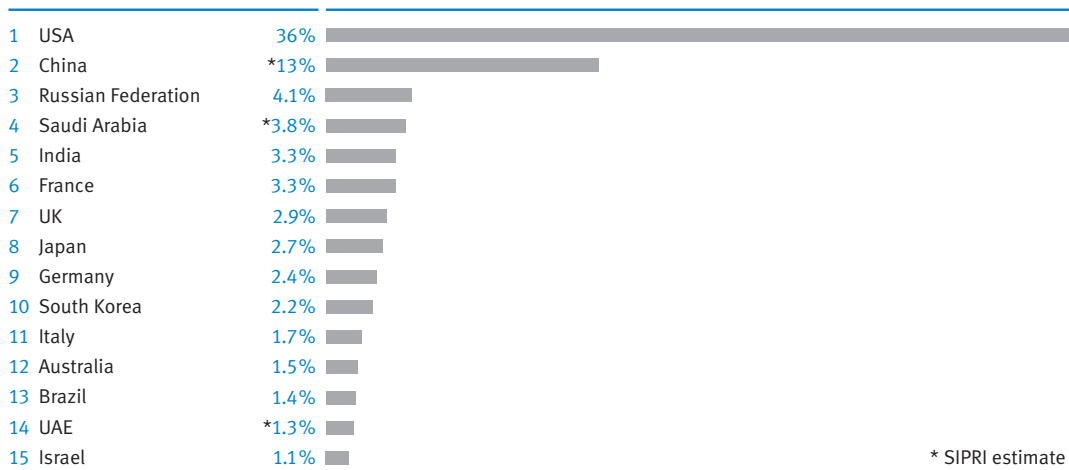
Blurred boundaries between peace and war, military interventions, latent trouble spots, the outbreak of new conflicts, uncontrolled and irregular migration flows on an unprecedented scale and the consequences of the collapse of state structures in countries in geopolitically sensitive regions call for new answers to the significantly heightened challenges and constant risks associated with external and internal security and new and/or extended and powerful capabilities for international efforts to maintain stability, security and peace.

The range of products and capabilities of Rheinmetall Defence is tailored to central defence technology requirements resulting nationally and internationally from many armed forces' substantial ongoing need for technical modernization and replacements on the one hand as well as from new military deployment scenarios requiring armies to have an increased ability to react and to take action as well as increased readiness for duty and deployability, for example in order to ensure the security of allies or engage in international peace-keeping missions, on the other.

The market potential for Rheinmetall Defence comes mainly from the defence budgets of customer nations. Rheinmetall Defence is still in an international growth market in the medium term, even though national defence budgets fluctuate to varying degrees, depending on the security situation.

The overall trend towards increased spending is due in part to complex existing and new geostrategic challenges in terms of security and defence policy, the continuing significant need for modernization in the armed forces of many emerging and developing countries, demand for new military applications, calls to increase governments' resilience to internal and external threats and ability to take military action and the need to guarantee stable and secure supplies in periods of peace and war, which are resulting in additional investment in equipment and materials.

Share of the 15 countries with the highest defence spending in worldwide defence spending in 2016



Source: SIPRI World Military Expenditures, April 2017

During the 2016 NATO Summit in Warsaw, the target adopted at the 2014 NATO Summit in Wales to invest more in defence budgets once more was confirmed. The aim is for each NATO member state to spend at least 2% of gross domestic product on defence by 2024. In turn, 20% of this is to be invested in new armaments and research projects.

Defence spending of selected NATO member states as a proportion of gross domestic product in 2017



Source: NATO, June 2017; forecast

This target could create additional opportunities for Rheinmetall Defence in the next few years, particularly with respect to procurement projects in the European and German market. The German defence budget will increase continuously and significantly over the next few years from €38.5 billion in 2018 to €42.4 billion in 2021, primarily in order to improve and supplement the German armed forces' material equipment.

We will also continue with the internationalization of the Defence sector, which has been successfully pursued for years. The sector's strategic priority still lies in expanding its local presence in promising growth regions. We continue to see particular potential in markets outside Europe, such as in the Middle East/North Africa Region (MENA), Asia and Australia. In fiscal 2017, we achieved around 54% of Defence sales with customers outside Europe. In the global rankings of the sector news service "Defense News" from July 2017, Rheinmetall Defence was ranked 26th in 2016 based on sales during the fiscal year, compared to 27th in the previous year.

Basic information on the Rheinmetall Group

Business model

Regulatory environment of Rheinmetall Defence

German military equipment exports are governed by the *Grundgesetz* (GG – German Basic Law), the *Ge-
setz über die Kontrolle von Kriegswaffen* (KrWaffKontrG – German War Weapons Control Act) and the *Außenwirtschaftsgesetz* (AWG – Foreign German Trade and Payments Act) in conjunction with the *Außenwirtschaftsverordnung* (AWV – German Foreign Trade and Payments Regulation).

The “Political Principles Adopted by the Government of the Federal Republic of Germany for the Export of War Weapons and Other Military Equipment” of January 19, 2000 and the Council Common Position of the EU defining common rules governing control of exports of military technology and equipment of December 8, 2008 provide the licensing authorities with guidelines.

Legal regulations on exports of military equipment – The Federal Republic of Germany has one of the strictest export control systems in the world. These strict rules apply in particular to companies in the security and defence industry.

Export law makes a distinction between the following types of goods, which should be understood to refer not only to products, but also to technology and software:

- Purely civilian goods
- Goods with two intended uses
(so-called dual-use goods, which can be used for both civil and military purposes)
- Military equipment

Purely civilian goods are not generally subject to any export restrictions. With a few exceptions, they can be exported without requiring a license.

The export of dual-use goods has been harmonized at the level of the European Union since 1995. Council Regulation (EC) No. 428/2009 of May 5, 2009 “setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items” (OJ of May 29, 2009, L 134, P. 1) applies here. A “common list of goods” lists all dual-use items that are subject to uniform control regulations in all EU countries. The transfer of these goods within the EU is free, apart from a few exceptions.

However, with respect to classic military equipment, there are essentially no harmonized regulations within the EU. There is a “Common Military List” for the EU, which more or less matches the corresponding lists of EU member states. However, there are no common legal regulations on exports of military equipment. This is linked to the Treaty on European Union (TEU). According to Article 346 TEU, all member states can “take measures they consider necessary for the protection of their essential security interests”. In particular, decisions on “the production of weapons, ammunition and war materials or trading in these” are up to the respective national lawmakers. Although there are signs of efforts to harmonize regulations in the “Common Foreign and Security Policy”, these have not yet been implemented on a large scale within the EU. For this reason, exports of military equipment to other EU countries continue to require a license.

German regulations on military equipment – With regard to defence equipment, the Federal Republic of Germany distinguishes between war weapons and other types of military equipment. Switzerland and Austria use a similar classification system. However, the term “war materials” as used there is not synonymous with “war weapons”.

Regulations on war weapons – The War Weapons Control Act (KrWaffKontrG) lays down particularly strict rules. These are based on Article 26(2) of the Basic Law. This states that the manufacture, transportation and marketing of war weapons requires a license from the German government.

Finally, an annex to the KrWaffKontrG, the War Weapons List, lists all items that are regarded as war weapons. War weapons include not only devices such as battle tanks, armored combat support vehicles and machine guns, but also certain types of ammunition such as tank or artillery ammunition. As well as complete devices and ammunition systems, certain assemblies and components such as the turret and chassis of a battle tank or the projectile, warhead or fuse for certain types of ammunition are defined as war weapons.

The KrWaffKontrG includes a comprehensive licensing system for war weapons. Almost every activity relating to these goods requires a license. A license is required for the production of war weapons, both during development and in series production. Transfer of the actual control over war weapons also requires a license, as does the purchasing of these weapons. The transportation of war weapons within a country is also subject to licensing. Above all, the importing, exporting and transit of war weapons requires a license. Two licenses are actually necessary for exporting war weapons, one license in accordance with the KrWaffKontrG and one export license in accordance with the Foreign Trade and Payments Act (AWG)/Foreign Trade and Payments Regulation (AWV). Moreover, the transportation of war weapons using German ships or aircraft outside German territory requires a license. Trading and brokerage transactions involving war weapons that are not intended to affect German territory are also subject to licensing.

Dealings in war weapons are strictly controlled. Each individual movement of war weapons must be entered in the “War Weapons Book”, which must be submitted to the supervisory authority, the Federal Office of Economics and Export Control (BAFA), for checking on a half-yearly basis. In addition, the BAFA conducts an external on-site audit every two years of each company that keeps war weapons, in which it checks not only whether inventories match the entries in the War Weapons Book, but also whether a corresponding receipt is available for each entry.

Regulations on other military equipment – Other types of military equipment are listed in Part I Section A of the Export List, an annex to the AWV. In particular, the export of these goods requires a license. Licenses are also needed for certain types of services and technical support and for some trading and brokerage transactions. It is generally possible to import other types of military equipment without a license.

Decision of the German government on exports of military equipment – The German government makes decisions on exports of military equipment based on its “Political Principles for the Export of War Weapons and Other Military Equipment”. A key component of these principles is the “European Union’s Code of Conduct for Exports of Weapons”. This contains eight test criteria (e.g. observance of human rights, internal situation, compliance with international obligations in the country of receipt) and operational regulations that apply to decisions on which countries military equipment may be exported to.

Basic information on the Rheinmetall Group Strategy

Profitable growth at the center of strategic development

We are pursuing our strategic development with a focus on profitable growth. As an international partner for mobility and security, we have considerable potential for organic growth in our two corporate sectors, Automotive and Defence. These growth opportunities result from expected positive developments in the respective markets, which – in relation to the product ranges in both sectors – are supported by the current regulatory and political framework, as well as the innovations we have initiated in our product portfolios in recent years at considerable expense.

In the medium to long term we also intend to achieve our company's growth with products that are not directly derived from the existing portfolio or that promote the transfer of technologies between the Automotive and Defence sectors. As a first step towards this aim, we called upon our employees worldwide to enter an ideas contest ("Intrapreneur Award") two years ago. The new product ideas developed in this context are backed by specific business plans. They currently encompass products and services in the fields of electric drive systems for pedelecs, 3D printing and sensor technology, for example.

The **Automotive sector's** growth prospects stem primarily from the global expansion of automotive production, which is continuing unabated. The sector is present in all the world's major automotive markets – Europe, the US, Japan, China and India – with not just its own manufacturing facilities but development expertise as well now. Analysts at IHS Markit currently assume worldwide production growth in the light vehicle segment (vehicles up to 6.0 t) of 1.9% to around 97.1 million vehicles in 2018. As in previous years, we wish to share in the forecast expansion of automotive production and realize sales growth at Rheinmetall Automotive that slightly exceeds growth achieved by the market as a whole. Taking into account the joint venture in China, we currently generate around a third of sales at Rheinmetall Automotive from outside Europe. We want to expand this share systematically, especially in the Mechatronics division. We will continue to focus on the markets in China and India in particular. Assuming that the global economy grows steadily as expected, we are aiming to stabilize Rheinmetall Automotive's operating earnings margin at around 8.5%, which we succeeded in doing in the fiscal years 2016 (8.4%) and 2017 (8.7%).

In addition to market growth driven purely by the number of units, our Automotive sector will also benefit from mandatory regulations on fuel consumption (CO₂ reduction) and the emission of pollutants, such as nitrous gases, since our products make a significant contribution to complying with legal requirements. These regulations will cause the number, complexity and value of our products that are installed per vehicle to increase.

We assume that there will be a need to optimize conventional combustion engines for many years still. We wish to make an important contribution to this through the development and improvement of our products around the drive train, such as our variable valve control system, for which we were awarded the development contract by an Asian automotive manufacturer in 2017. In addition, we expect the trend towards hybridization, i.e. a combination of conventional and electric drives, to accelerate and an increase – driven above all by China – in pure electromobility. With regard to hybrid drive technologies, we see good opportunities because they may smooth the way for the integration of additional products from our portfolio, such as electric pumps. As far as pure electromobility is concerned, we have again extended our product range in fiscal 2017.

In addition to housings for electric motors and thermomanagement systems, we presented a 90 kilowatt electric drive and a battery housing developed jointly with specialists for protection systems from the Defence sector at the IAA international automotive exhibition in Frankfurt amMain in September 2017. In 2017, we posted orders worth nearly €500 million for partially or fully electrically driven vehicles. In the medium term, the Automotive sector's research and development strategy is geared towards the minimization of risk. This means that we shall increasingly concentrate on those products with which we reduce dependence on certain types of drives (drive neutrality). In addition, we are making progress in making our product range less dependent on applications relating purely to engines and on classic automotive applications in general.

The development of the international security situation with an increasing number of military conflicts and political circumstances in general have led to a continuing turnaround in the structure and size of defence budgets, from which our **Defence sector** is benefiting. Experts anticipate a rise in defence spending in the coming years, and not only for countries in the MENA region and the Asia-Pacific region; growth in budgets is also expected again in Europe and in the US. There is new market potential for us, arising not least from the objective postulated by NATO member states in 2014 and 2016 to bring national defence spending up to the level of 2% of their respective gross domestic products within a decade and based on this to invest 20% of total spending in modernizing and expanding military equipment. In addition, NATO's refocusing on the necessities and responsibilities of defending alliances, which in some cases requires different equipment than that needed for stabilization missions abroad, has boosted the political will to modernize and expand the armed forces in many countries in the western defensive alliance. This is not only true of Germany, where the focus was again concentrated far more on national and alliance defence in the white paper published in 2016 and in current financial planning, which envisages increasing defence spending from €37 billion in 2017 to €42 billion in 2021.

Additional strategic opportunities for our Defence sector will also arise from the specific European initiatives to establish permanent structured cooperation in defence and armaments projects, which were agreed last year between 25 of 28 EU member states. This is particularly true of the projects agreed between Germany and France to develop joint military hardware for their land forces, in which we shall participate significantly. In addition to focusing on the European market, we shall also continue our internationalization strategy and increasingly establish a local presence on those markets that promise sustainable growth according to industry data and our own assessment. From today's perspective, those are countries in Asia as well as Australia, but also selected countries in Eastern Europe – especially those who are guided by the German armed forces' Framework Nations Concept in the development of their military capabilities. We will also take advantage of opportunities arising from the formation of partnerships with local suppliers in the future.

We expect annual sales growth of between 5% and 10%. This expectation for growth is based not least on a very high order backlog, which constitutes almost two years' sales. This growth, together with the effects of measures implemented in the last few years to improve cost efficiency, will lead to a gradual increase in profitability in the medium term. In the medium term we are aiming for an operating earnings margin of 6% to 7% in Defence business. In the year under review, the margin was 5.7%. As well as entering new international markets, we will continue to develop our product range in the light of changing threats, for example in the field of armored vehicles and armaments for them, or will incorporate new technologies, such as laser technology into our products. Furthermore, we will extend our range of products and services in the field of internal security and intensify marketing in this area.

Economic report

Executive Board statement on the general economic situation

In fiscal 2017, consolidated sales rose by €294 million or 5.2% year-on-year from €5,602 million to €5,896 million. Both the Automotive and Defence sectors posted rising sales and achieved improvements in operating earnings.

Rheinmetall Group – actual vs. forecast business performance in 2017

	2017	Forecast Q3/2017	Forecast Q2/2017	Forecast Q1/2017	Forecast 2017	2016
		November 2017	August 2017	May 2017	March 2017	
Sales growth compared to last year						
Sales	€5.9 billion	up around 6%	up around 6%	up 4-5%	up 4-5%	€5.6 billion
Operating result	6.8%	slightly above 6.5%	~ 6.5%	~ 6.3%	~ 6.3%	6.3%

Following consolidated sales of €5.6 billion in fiscal year 2016, in March 2017, we forecast organic sales growth for the Rheinmetall Group in the year under review of between 4% and 5%, whereby we assumed an increase in sales for Rheinmetall Automotive of between 3% and 4% and growth in sales for Rheinmetall Defence of 5% to 6%. At that time, we planned to achieve an operating margin of approximately 6.3% for the Group, with a figure of ≥8.0% or slightly above for Rheinmetall Automotive and a margin of between 5.0% and 5.5% for Rheinmetall Defence.

In view of our positive business performance in the first half of 2017, with sales up around 8% year-on-year at €2,808 million, in August 2017, we raised our forecast of consolidated sales for 2017 to around 6%. For the Automotive sector, we expected an increase in sales at the end of the year of 6% to 7%, while the target for the Defence sector of 5% to 6% was unchanged. Following an increase year-on-year of approximately 6.3%, the previous outlook for operating earnings of the Rheinmetall Group has now been raised to a slightly higher operating margin of around 6.5%. Earnings expectations for Rheinmetall AG have now been specified at around 8.4%, after a figure of 8% was quoted in August 2017, and, for Rheinmetall Defence, an operating margin of between 5.0% and 5.5% was forecast.

We closed the first nine months of 2017 with significant sales growth year-on-year of 6.9% to €4,174 million and an improvement in operating earnings of 27% to €231 million. The forecast of organic consolidated sales growth of 6% was confirmed. For the Automotive sector, the sales growth for 2017 was specified at the upper end of the forecast range between 6% and 7% and for Rheinmetall Defence at the lower end of the planned 5% to 6%. For the Automotive sector, we confirmed the slightly increased forecast for the operating margin of 8.4% announced in the semi-annual result in August 2017. We now surmised a further improvement in earnings in 2017 at Rheinmetall Defence and assumed an operating margin at the upper end of the previously forecast range of between 5.0% and 5.5%. Taking account of holding costs of between €20 million and €25 million, this resulted in a margin expectation for the Rheinmetall Group of just over 6.5% for the fiscal year.

Operating segments – actual vs. forecast business performance in 2017

	Sales			Operating result		
	2017	Target 2017	2016	2017	Target 2017	2016
Automotive	€2.9 billion	+ 3-4 %	€2.7 billion	8.7%	≥ 8.0%	8.4%
Defence	€3.0 billion	+ 5-6 %	€2.9 billion	5.7%	5.0 - 5.5%	5.0%

Economic report

General economic conditions

The upturn in the global economy has gathered pace

The economic upturn strengthened worldwide in the year under review. In its “World Economic Outlook Update” in January 2018, the International Monetary Fund (IMF) estimated global economic output in 2017 at 3.7%. Growth was therefore 0.1 percentage points up on the IMF forecast from October 2017. The increase in the pace of the upturn is particularly clear in comparison with the previous year: in 2016, global economic output had only risen by 3.2%. The IMF was particularly surprised by the developments in Europe and Asia. The fact that the upswing is broadly based throughout the world is also gratifying. For the mature economies as a whole, the Monetary Fund determined growth in economic output of 2.3% in 2017, which is a perceptible improvement on the previous year’s figure of 1.7%. In the euro region, the economic recovery made further progress notwithstanding the UK’s decision to leave the EU. Here, growth was 2.4% in 2017, compared to 1.8% in the previous year. In the UK itself, however, there were increasing signs that the impending withdrawal from the European Union is having an adverse impact on the UK economy: the IMF determined growth in gross domestic product of only 1.7% in the year under review compared to 1.9% in 2016. The German economy remains in good shape in 2017. Having grown by 1.9% in the previous year, the upturn gathered more momentum, peaking in growth in German gross domestic product of 2.5%. The president of the ifo institute based in Munich, Clemens Fuest, put the positive sentiment in a nutshell in December 2017 with the comment, “The German economy is humming.”

In the US, economic growth in the year under review amounted to 2.3%, having only grown by 1.5% in the previous year. Following a longer period of weakness, the recovery in the Japanese economy made significant progress with a rise in gross domestic product of 1.8% (2016: 0.9%).

For the emerging and developing countries, the IMF determined growth of 4.7% in 2017 compared to 4.4% in the previous year. Despite all the gloomy predictions, China proved itself as an economic engine yet again, slightly exceeding the previous year’s figure of 6.7% with growth of 6.8%. In contrast, the Indian economy was not quite able to pick up on the strong previous year (7.1%) with growth of 6.7%. Following the collapse in 2016 (-3.5%), there were signs of a turnaround in Brazil with growth of 1.1%, while the recovery in Russia has continued with an increase of 1.8%. In 2016, the Russian economy was still declining slightly, at -0.2%.

Mixed picture for major automotive markets with catch-up effects in parts of Europe, Brazil and Russia

Notwithstanding the fall in newly registered diesel vehicles, the Association of the German Automotive Industry (VDA) came to the conclusion in January 2018 that, as far as the industry as a whole was concerned, the automotive business “developed positively” throughout the world in 2017. However, the picture differs from region to region for the production of vehicles in the passenger car and light commercial vehicles up to 6.0 t segment, which is particularly relevant for Rheinmetall Automotive. According to calculations by analysts at IHS Markit, production of vehicles up to 6.0 t rose by 2.3% worldwide. Consequently, global automotive production increased to a new record of around 95.3 million vehicles (2016: 93.1 million units).

Economic report

General economic conditions

Regionally speaking, however, there were significant differences in some cases within and between the major automotive markets in North America, Europe and Asia. While the sector in China had to be satisfied with growth of 2.1% in 2017 following extremely strong years previously, production in the NAFTA region trended downwards again, at -3.9%, for the first time since the global economic crisis was overcome. In contrast, automotive production in Western Europe in 2017 rose by 2.6% year-on-year. IHS Markit determined a particularly marked growth surge for the French market, which continued its recovery with an increase of 8.0%. A clear upward trend was also apparent in Italy, with growth of 4.6%. In Germany, however, automotive production did not quite pick up on the strong previous years: production output was -1.5% down on the comparable figure from 2016.

The Japanese market, which was recently characterized by weakness in the automotive industry, has picked up speed again: growth here was 5.2% in 2017 according to IHS Markit. In 2017, there were signs of a particularly strong recovery in the crisis-riven automotive industry in Brazil, where production benefited from strong catch-up effects and posted robust growth of 26.1%. Russia, too, picked up momentum, recording significant growth of 19.1%. The Indian market also developed positively; automotive production there increased by 6% year-on-year in 2017.

Production of passenger cars and light commercial vehicles up to 6.0 t in selected countries million

	2017	2016
World	95.3	93.1
Western Europe	16.6	16.2
Eastern Europe	5.7	5.4
NAFTA	17.1	17.8
Brazil	2.6	2.1
Asia	51.4	49.8

Germany	5.9
Russian Federation	1.5
USA	11.0
Mexico	3.9
Japan	9.2
China	27.6
India	4.4

Source: IHS Markit, January 2018

Given the at times marked regional differences in market development, the consistent internationalization of its business and the broad, balanced customer portfolio have once again proved their worth for Rheinmetall Automotive. Once more, dependence on individual markets and brands has been avoided and specific opportunities for growth exploited. The regional distribution of our sales was as follows in 2017: in Europe (Western and Eastern Europe, including Germany), we generated 66% of our sales while 16% was attributable to the NAFTA region and 6% to China. The share of sales generated in Brazil totaled 3%, while the Indian market contributed 2%.

The commercial vehicle market is gathering speed worldwide

Besides the market development in the segment for passenger cars and light commercial vehicles up to 6.0 t, production of engines for heavy commercial vehicles over 6.0 t is also an important indicator of the business environment in which Rheinmetall Automotive operates. In the year under review, the global truck market reported a marked growth surge. According to IHS Markit, the production of engines for heavy commercial vehicles rose by 17.9% and consequently increased to around 3.3 million units. Notwithstanding the general upward trend, regional differences in the rate of growth were, however, also observed. Comparatively modest growth in Western Europe (+4.2%) and Germany (+4.7%) contrasted with far higher growth rates in the NAFTA region (+12.1%) and Asia (+22.4%). The truck markets in Brazil and China, where growth in the production of engines was 47.6% and 41.9% respectively, were particularly buoyant. Among the major market regions, production figures were only down in India (-4.6%) and Japan (-3.6%).

Production of engines for heavy commercial vehicles over 6.0 t in selected countries '000

	2017	2016
World	3,315	2,811
Western Europe	499	479
Germany	160	
Eastern Europe	112	97
Russian Federation	85	
NAFTA	466	416
USA	294	
Mexico	156	
Brazil	86	58
Asia	2,138	1,747
Japan	263	
China	1,381	
India	320	

Source: IHS Markit, January 2018

Rheinmetall Automotive is benefiting from the megatrend for environmentally friendly mobility

On the product side, Rheinmetall Automotive covers such a wide range with its expertise in drive system concepts that we are benefiting both from the sustained trend towards further optimizing the combustion engine – regardless of whether it is a gasoline engine or diesel – and from the growth market for electromobility. Although diesel is still competitive and future proof in terms of competitiveness and its carbon footprint, the figures of the Association of the German Automotive Industry (VDA) reflect considerable uncertainty among consumers: accordingly, around 13% fewer diesel vehicles were licensed between January and the end of November 2017 than in the same period in the previous year. The successful market development of Rheinmetall Automotive shows all the more that our broad technological positioning means we are well equipped even to deal with shifts between the drive concepts and can be flexible in exploiting the megatrend towards environmentally friendly mobility.

Economic report

General economic conditions

Trend towards higher arms spending continues

Changes to the threats facing us, geopolitical fractures and new technologies have brought the period of falling or stagnant arms spending to a close. Throughout the world, governments are investing in modernizing and reinforcing their armed forces. According to IHS Markit, global defence budgets totaled USD 1,710 billion in 2017 compared to USD 1,682 billion in the previous year. The increase in defence expenditure was attributable to different developments in the individual states. In addition to individual security policy challenges and the need for modernization, this is based, in particular, on national budget restrictions and austerity measures.

The US is still the world leader in investment in its armed forces, and the trend is rising. US defence expenditure increased from USD 646 billion in the previous year to USD 657 billion in 2017. This equates to more than three times the Chinese defence budget, which increased by USD 9 billion in the year under review to USD 202 billion. While China therefore retains its second place in global defence expenditure, India just overtook the UK for the first time, moving into third place. They were followed by the defence budgets of France, Saudi Arabia and Russia, although Russia reduced its defence expenditure considerably compared to 2016.

Defence budgets of selected countries billion

		Currency	2017	2016
Germany		€	37.0	35.1
World		USD	1,710.3	1,682.1
USA		USD	656.7	646.1
China		USD	201.8	193.1
India		USD	58.9	59.0
UK		USD	57.6	56.9
France		USD	52.5	52.1
Saudi Arabia		USD	52.1	50.2
Russian Federation		USD	50.9	56.7
Australia		USD	30.6	29.6
United Arab Emirates (UAE)		USD	18.8	18.8
Canada		USD	16.0	15.6
Poland		USD	10.5	10.2
Netherlands		USD	10.4	10.1
Algeria		USD	10.0	10.6
Norway		USD	6.2	6.2
South Africa		USD	3.9	4.0

Sources: Government draft of the federal budget 2018 and the financial plan until 2021, June 28, 2017 | IHS Markit, January 2018

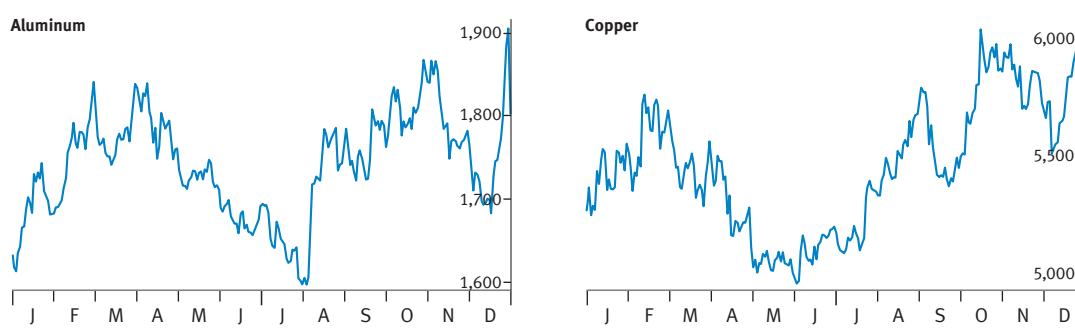
NATO members again spent more on defence in the year under review. According to the analysts at IHS Markit, the Baltic States in particular reinforced their armies in light of the persistent Ukraine crisis and due to the perceived threat from their Russian neighbor. The same is true of Poland, which invested in its own defence readiness in the event of possible aggression from its Russian neighbor.

Germany further increased its expenditure on the German armed forces in 2017. The German defence budget increased from around €35 billion in the previous year to €37 billion. Although Berlin is making scarcely any progress towards achieving NATO's two-percent target (2016: 1.19% of GDP; 2017 estimated: 1.22% of GDP) because of the growth in gross domestic product (GDP), the days of declining military expenditure are over for now. The German government countered the backlog that had built up over earlier years and the need for modernization with the allocation of additional resources.

Metal and energy markets in 2017

Metal prices also experienced rises in the year under review. Since the beginning of the year, the index of listed industrial metals on the London Metal Exchange (LME) posted an increase of 30% in value. Metal prices have risen sharply since the middle of the year. Key price drivers were good economic data in the most important consumer countries and regions for metals, with demand from China, in particular, being surprisingly positive. Supply in many markets was also inadequate to cope with strong demand. In addition, market participants' readiness to take risks and their interest in speculation have also increased, which boosted prices still further. The impact on our metal purchases in € was mitigated by the sharp rise in the € against the USD. Our long term price hedging strategy also helped ease the situation.

Aluminum and copper prices in 2017 €/t

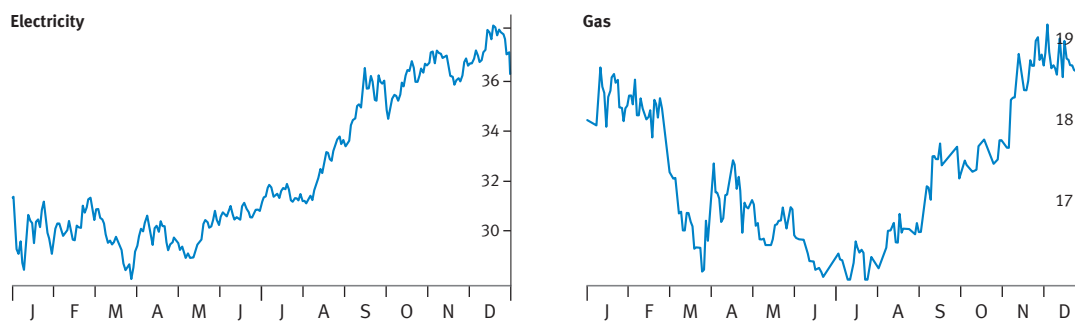


Source: Thomson Reuters Eikon

Energy prices also rose during 2017. The trend in prices was marked by considerable volatility. Half way through the year, oil prices initially hit a six-month low, however, they had risen by more than 17% by the end of the year. Coal had become far cheaper by spring 2017, but also cost a good 10% more at the end of the year than at the beginning of the year or as much as it did five years ago. The increases in the price of oil, coal and CO₂ certificates had a direct impact on the price of electricity. Forward prices for base-load electricity for supply in 2018 climbed by 23.5% over the course of 2017. The EEX price for supplies of natural gas in 2018 was €18.10 per MWh at the end of 2017, which was 1% higher than at the start of the year.

Within the context of our electricity and gas price hedging strategies, we take action several years in advance based on our medium-term planning, meaning that our energy purchases did not suffer the full impact of the increase in EEX prices in 2017.

Electricity and gas prices in 2017 €/MWh



Source: www.eex.com

KEY FACTS 2017

RHEINMETALL GROUP

5,896 SALES €million **400** OPERATING RESULT €million

248 CAPITAL EXPENDITURE €million **23,726** EMPLOYEES

6.9 ORDER BACKLOG €billion **3.8%** R&D INTENSITY

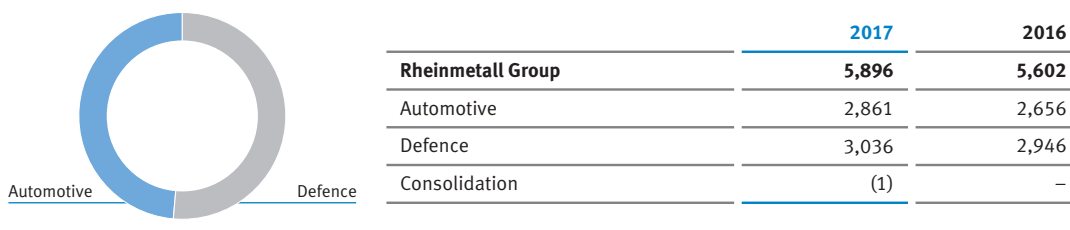
Economic report

Rheinmetall Group business performance

Consolidated sales up 5.2% at €5,896 million

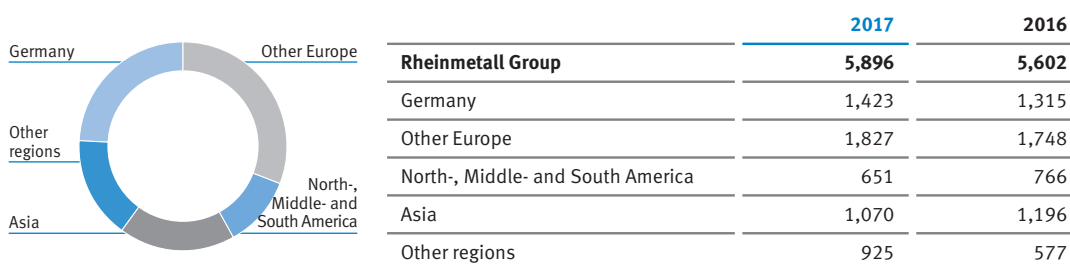
Rheinmetall AG achieved consolidated sales of €5,896 million for fiscal 2017. Sales were thus up 5.2% compared to the previous year's figure of €5,602 million, with growth of 5.2% after adjustment for currency effects.

Sales € million



Both sectors contributed to the growth in sales at the Group. The Automotive sector increased its sales by 7.7% to €2,861 million. The Defence sector achieved sales of €3,036 million in the past fiscal year, an increase of 3.1% on the previous year's figure. At 75.9%, the international share of consolidated sales in fiscal 2017 was on par with the previous year (76%).

Sales by region € million



Consolidated operating earnings: €400 million

Operating earnings (EBIT before special items) climbed by 13.3% to €400 million in fiscal 2017 after €353 million in the previous year. The operating margin rose to 6.8% (previous year: 6.3%). The Defence sector achieved an operating result of €174 million, 18.4% above the previous year's figure of €147 million. Rheinmetall Automotive also increased its operating earnings by 11.7% year-on-year to from €223 million to €249 million. The operating result for Others/Consolidation includes the result for Rheinmetall AG.

Operating result € million

	2017	2016
Rheinmetall Group	400	353
Automotive	249	223
Defence	174	147
Others/consolidation	(23)	(17)

Operating earnings in 2017 were adjusted for special items of € -15 million in 2017, €9 million of which relating to the gain on the sale of a property under other companies. There were no extraordinary effects in 2016.

Economic report

Rheinmetall Group business performance

Special items 2017 € million

	Operating result	Corporate transactions	Restructuring	Others	Special items	EBIT
Rheinmetall Group	400	(10)	(24)	19	(15)	385
Automotive	249	-	(22)	-	(22)	227
Defence	174	(10)	(2)	10	(2)	172
Others/consolidation	(23)	-	-	9	9	(14)

Consolidated net income € million

	2017	2016
EBIT	385	353
Net interest	(39)	(54)
EBT	346	299
Income taxes	(94)	(84)
Group net income	252	215
of which:		
Minority interests	28	15
Rheinmetall AG shareholders	224	200
Earnings per share from continuing operations (€)	5.24	4.69

Net interest income was negative at €-39 million, below the previous year's figure (€-54 million). The Rheinmetall Group's earnings before taxes (EBT) were €346 million after €299 million in the previous year. Earnings after taxes increased by 17.2% from €215 million in 2016 to €252 million in the year under review. Including earnings attributable to non-controlling interests, earnings per share were 11.7% higher at €5.24 (previous year: €4.69).

Order intake follows sales growth

At €5,884 million (previous year: €5,720 million), incoming orders for fiscal 2017 again matched the level of sales. Incoming orders in the Automotive sector rose from €2,670 million in 2016 to €2,922 million in the year under review. Incoming orders in the Defence sector amounted to €2,963 million, slightly lower than the previous year's figure of €3,050 million.

Order intake € million

	2017	2016
Rheinmetall Group	5,884	5,720
Automotive	2,922	2,670
Defence	2,963	3,050
Others/consolidation	(1)	-

Order backlog

At €6,936 million, the Rheinmetall Group has booked business slightly below the level of the previous year (€7,114 million).

Order backlog € million

	2017	2016
Rheinmetall Group	6,936	7,114
Automotive	520	458
Defence	6,416	6,656

Capital expenditure

As in previous years, the Rheinmetall Group made targeted investments in areas offering growth opportunities and enabling it to strengthen its profitability on a sustained basis, to increase its international competitiveness and to secure technological expertise in the business areas. Furthermore, to strengthen operating performance capacity and to improve efficiency, investments were made in the expansion and modernization of infrastructure, facilities, equipment, processes and manufacturing capacity. The Rheinmetall Group's capital expenditure on property, plant and equipment and intangible assets amounted to €248 million after €258 million in the previous year. This is equivalent to 4.2% of consolidated sales (previous year: 4.6%). Capital expenditure was offset by depreciation and amortization of €241 million (previous year: €228 million).

Capital expenditure € million

	2017	2016
Rheinmetall Group	248	258
Automotive (Net investments ¹)	154	149
Defence	89	95
Other	5	14

¹ Total capital expenditure less payments received from customers of €22 million (previous year: €25 million).

Employees

Rheinmetall had 23,726 employees at the end of the 2017 reporting period, compared to 23,044 in total on December 31, 2016. 20.8% of employees were female (previous year: 19.8%). 51.7% of the Group workforce were employed in the Automotive sector (previous year: 51.7%), while 47.3% were employed in the Defence sector (previous year: 47.5 %) and around 1% at Rheinmetall AG and in the service companies respectively (previous year: 0.8%).

In the year under review, just over half of the workforce (50.3%; previous year: 49.9%) was employed at Rheinmetall companies outside Germany. Employees abroad were concentrated in Europe, at 5,539 employees (previous year: 5,498), while there were 1,293 employees working in South America (previous year: 1,168) and 2,242 employees in North America (previous year: 2,171). 1,347 employees were attributable to Africa (previous year: 1,290) and 185 employees to Australia (previous year: 168). In Asia, the number of employees rose to 1,322 (previous year: 1,213). In 2017, 769 employees at our German companies were foreign nationals (previous year: 755). In addition, 75 German employees were posted to Rheinmetall Group locations outside Germany (previous year: 82) in the period under review. In the year under review, Rheinmetall's German companies employed 9,226 staff covered by collective wage agreements (previous year: 8,797), 1,401 staff with contracts not covered by collective wage agreements (previous year: 1,351) and 223 managerial staff (previous year: 230).

Generally, the Defence and Automotive sectors are preferred by men, who predominantly tend to choose technical or scientific subjects for study and professional training. For these reasons, the percentage of women occupying management positions in our technology group is lower than in other industries. In the year under review, the Rheinmetall Group employed 2,423 managers across its first four levels below the Executive Board (previous year: 2,459), of whom 215 or 8.9% were women (previous year: 247 or 10.0%). The average age of managers in the German Rheinmetall companies amounted to 49.1 years (previous year: 49.3); the average tenure with the company among this group of people was 16.4 years (previous year: 17.0). The ratio of women among the senior management staff of 273 people in the year under review (previous year: 282) was 5.5% (previous year: 3.6%).

Economic report

Rheinmetall Group business performance

Employees

	2017	2016	2015	2014	2013
Employees	23,726	23,044	22,640	22,065	23,082
Men	18,791	18,476	18,066	17,636	18,669
Women	4,935	4,568	4,573	4,429	4,413
Trainees	770	747	822	838	911
Germany	401	392	480	495	561
Abroad	369	355	342	343	350
Part-time staff	969	938	898	813	800
Interns (in the course of the year)	141	289	380	289	319
Graduates (in the course of the year)	68	133	127	127	126
Disabled persons Germany	457	493	552	539	625
Foreign employees in Germany	769	755	705	694	895
Length of service in years	13.1	13.7	13.7	14.0	14.0
Average age in years	43.5	42.7	43.7	43.7	44.0

Employees in Germany and abroad

	2017	2016	2015	2014	2013
Total	23,726	23,044	22,640	22,065	23,082
Germany	11,798	11,536	11,323	11,024	11,815
Abroad	11,928	11,508	11,317	11,041	11,267
Europe excl. Germany	5,539	5,498	4,102	3,762	3,694
North America	2,242	2,171	1,321	1,299	1,363
South America	1,293	1,168	2,176	2,310	2,533
Asia	1,322	1,235	1,167	1,119	1,064
Africa	1,347	1,268	1,132	1,160	1,121
Australia	185	168	119	98	56
Ratio abroad	50.3	49.9	50.0	50.0	48.8

Female employees by area

	Automotive		Defence		Holding + Service Companies		Rheinmetall Group	
	Number	%	Number	%	Number	%	Number	%
2017	2,845	23.2	2,000	17.8	90	41.5	4,935	20.8
2016	2,558	21.7	1,900	17.3	80	41.5	4,568	19.8
2015	2,662	22.2	1,833	17.5	78	42.2	4,573	20.2
2014	2,619	22.1	1,735	17.3	75	44.6	4,429	20.1
2013	2,524	19.7	1,814	18.0	75	46.3	4,413	19.1

Additional key figures

		2017	2016	2015	2014	2013
Employees (Ø headcount capacity)		21,374	20,910	20,565	20,286	21,542
Personnel expenses	€ million	1,548	1,465	1,390	1,272	1,308
Personnel expenses/employees	€ '000	72	70	67	63	61
Sales/employees	€ '000	276	268	252	231	214
Personnel expenses ratio	%	26	26	27	29	28

Research and development

€224 million was spent on research and development throughout the Group in 2017, following €216 million in the previous year. €209 million (previous year: €185 million) of this was recognized immediately as an expense and €15 million (previous year: €31 million) was capitalized as development costs. The Rheinmetall Group's innovation ratio was 3.8% (previous year: 3.9%), 5.3% (previous year: 5.4%) in Automotive and 2.4% (previous year: 2.5%) in Defence.

Research and development € million

	2017	2016
Employees in research and development	3,318	3,220
Employees in research and development as % of total workforce	14.0	14.0
R&D: Expenses	224	216
of which capitalized	15	31
Innovation ratio (research and development expenses in relation to sales)	3.8	3.9

Statement of cash flows

Thanks to higher earnings after taxes and the improved development of working capital, the cash flow from operating activities climbed by € 102 million from € 444 million to € 546 million. As in the previous year, €30 million was paid into an external fund (CTA) to cover provisions for pensions and partial retirement obligations.

Operating free cash flow – defined as cash flow from operating activities less capital expenditure on intangible assets, property, plant and equipment and investment property – amounted to €276 million (previous year: €161 million).

Taking into account the proceeds from the sale of assets and divestments, in addition to the payments for acquisitions, the free cash flow amounted to € 357 million (previous year: € 8 million), € 349 million higher than in the previous year.

Statement of cash flows € million

	2017	2016
Net income	252	215
Amortization, depreciation and impairments	241	228
Payment into external Fund (CTA)	(30)	(30)
Changes in Working Capital and others	83	31
Cash flows from operating activities	546	444
Investments in property, plant and equipment, intangible assets and investment property	(270)	(283)
Operating free cash flow	276	161
Cash receipts from the disposal of property, plant and equipment, intangible assets and investment property	3	1
Net cash outflow from financial investments in/divestments of consolidated subsidiaries and other financial assets	8	(14)
Payments for the purchase of short-term commercial papers	70	(140)
Free Cash Flow	357	8

Economic report

Rheinmetall Group business performance

Asset and capital structure

The Rheinmetall Group's total assets rose by €36 million or 1% to €6,186 million in fiscal 2017. Non-current assets accounted for 44% of total assets as of December 31, 2017 after 45% in the previous year. They declined by €50 million to €2,712 million. This essentially resulted from the reductions of intangible assets and deferred taxes by €40 million and €51 million respectively. Current assets increased by €86 million overall year-on-year to €3,474 million. €141 million of this increase was attributable to cash, while cash equivalents were down by €71 million.

Asset and capital structure € million

	Dec. 31, 2017	%	Dec. 31, 2016	%
Non-current assets	2,712	44	2,762	45
Current assets	3,474	56	3,388	55
Total assets	6,186	100	6,150	100
Equity	1,955	32	1,781	29
Non-current liabilities	1,905	31	1,629	26
Current liabilities	2,326	37	2,740	45
Total equity and liabilities	6,186	100	6,150	100

The equity ratio is 32%, following 29% in the previous year. The equity of the Rheinmetall Group rose by or 10% or €174 million to €1,955 million in fiscal 2017. This increase mainly resulted from earnings after taxes (€252 million). This was offset by the dividend distribution of €62 million. The €276 million increase in non-current liabilities to €1,905 million is essentially as a result of the payment of the €250 million loan agreed in the previous year by the European Investment Bank. Current liabilities were down by €414 million, mainly on account of the repayment of the €500 million bond.

In terms of the total assets adjusted for cash and cash equivalents, the equity ratio was 36% after 32% in the previous year. Financial liabilities decreased by 18% or €141 million year-on-year to €646 million. As of the end of the reporting period, cash and cash equivalents totaled €757 million after €616 million at the end of the previous year. An additional €119 million was held in commercial paper as the liquidity reserve (previous year: €190 million). Net financial liabilities for the 2017 reporting year totaled €-230 million after €-19 million in the previous year. The share of net financial liabilities in relation to adjusted total assets was -4% in the fiscal year, compared to 0% in the previous year.

Capital structure € million

	Dec. 31, 2017	%	Dec. 31, 2016	%
Equity	1,955	36	1,781	32
Current financial debts	74	1	567	10
Non-current financial debts	572	11	220	4
Total financial debts	646	12	787	14
Near-cash assets	(119)	(2)	(190)	(3)
Cash and cash equivalents/financial resources	(757)	(14)	(616)	(11)
Net financial debts	(230)	(4)	(19)	-
Total assets adjusted for cash and cash equivalents	5,429	100	5,534	100

Value added

The Rheinmetall Group generated value added of €1,952 million in fiscal 2017, outperforming the previous year's figure of €1,832 million. The Group's total operating performance was €6,385 million, compared to €5,999 million in the previous year. The ratio of value added to the Group's total operating performance was 31%. Value added per employee rose by 3% from €88 thousand to €91 thousand. At 79%, most of the value added benefited the employees in fiscal 2017. 5% related to Treasury. Interest payable to lenders was 3% in the year under review. The shareholders of Rheinmetall AG received 4% of value added at €73 million. The Rheinmetall Group retained €179 million, compared to €153 million in the previous year.

Source and use of value added € million

	2017	%	2016	%
Source				
Group's total operating performance	6,385	100	5,999	100
Input	(4,192)		(3,939)	
Amortization and depreciation	(241)		(228)	
Value added	1,952	31	1,832	31
Use				
Employees	1,548	79	1,465	80
Treasury	104	5	93	5
Lenders/banks	48	3	59	3
Shareholders	73	4	62	4
Companies	179	9	153	8
Value added	1,952	100	1,832	100

The Group's total operating performance comprises all income, i.e. total operating performance, other operating income, income from equity holdings, interest income and other financial income. Input includes all expenses except personnel expenses, interest and taxes.

Liquidity

Cash and cash equivalents rose by €141 million to €757 million in the reporting year. An additional €119 million was held in commercial paper as the liquidity reserve (previous year: €190 million).

KEY FACTS 2017

RHEINMETALL AUTOMOTIVE

2,861 SALES €million **249** OPERATING RESULT €million

154 CAPITAL EXPENDITURE €million **12,277** EMPLOYEES

520 ORDER BACKLOG €million **5.3%** R&D INTENSITY

Economic report

Business performance of Rheinmetall Automotive

Sales grow by 7.7% to around €2.9 billion

Rheinmetall Automotive is looking back at a very successful year in 2017. With sales of €2,861 million, year-on-year growth of €205 million or 7.7% was achieved. After adjustment for currency effects, the increase amounted to 7.9%, well above the growth in the global production of light vehicles of 2.3%.

Sales € million

	2017	2016
Rheinmetall Automotive	2,861	2,656
Mechatronics	1,621	1,491
Hardparts	968	921
Aftermarket	359	323
Others/consolidation	(87)	(79)

2016 figures restated

The activities of Rheinmetall Automotive at the location in Lanciano, Italy, were reclassified from the Mechatronics division to the Aftermarket division at the start of 2017, hence the figures for fiscal 2016 were restated.

All three divisions contributed to the year-on-year improvement in sales. The growth in the Mechatronics division of 8.7% in the year under review to €1,621 million was based on continuing strong demand for products to reduce emissions and pollutants. Sales by the Hardparts division increased by 5.1% to €968 million, which was attributable, among other factors, to a slight recovery in demand in large-bore piston business. Retail business in the Aftermarket division increased by 11% to €359 million.

The divisions' share of sales is virtually unchanged on the previous year. As in the previous year, the Mechatronics division was the division that generated the highest share of sales with 55% (previous year: 54%). The Hardparts division's share of sales fell slightly by one percentage point to 33% (previous year: 34%). As in the previous year, the Aftermarket division represented 12% of unconsolidated sales.

The sales distribution by region was also virtually unchanged year-on-year in fiscal 2017. In fiscal 2017, the share of Rheinmetall Automotive's sales generated with customers abroad was 81% compared to 80% in the previous year. Accordingly, a slightly lower share of sales of 19% was generated with customers in Germany. Once again, the majority of our business abroad, accounting for 47%, was concentrated in Western and Eastern Europe (previous year: 47%), followed by North and South America with a share of sales of 20% (previous year: 19%). Business with customers in the NAFTA economic region, consisting of the US, Canada and Mexico, included therein equated to an unchanged share of 16%. The share of sales attributable to customers in Asia was also unchanged year-on-year, at 13%, of which 6% (previous year: 5%) was attributable to customers in China. Customers in all other countries again accounted for 1% of total sales.

The sales of our joint ventures in China and in Germany, which are not included in the sales of the Automotive sector because they are carried at equity, totaled €1,163 million in fiscal 2017, which corresponds to year-on-year growth of 4.4%, or 7.6% after adjustment for currency effects.

Economic report

Business performance of Rheinmetall Automotive

Further growth in operating earnings

The operating result of the Automotive sector reached €249 million in the past fiscal year, a year-on-year increase of €26 million or 11.7%. The previous year's good level of 8.4% was exceeded with an operating sales margin of 8.7%.

Operating result € million

	2017	2016
Rheinmetall Automotive	249	223
Mechatronics	176	141
Hardparts	60	62
Aftermarket	33	28
Others/consolidation	(20)	(8)

2016 figures restated

While the Mechatronics and Aftermarket divisions exceeded the previous year's operating result, the divisional result achieved by Hardparts was slightly down on the previous year's figure. In the Mechatronics division, the rise in earnings of 25% to €176 million was primarily attributable to the increase in sales. Essentially, this also applied to the Aftermarket division's 18% increase in earnings to €33 million. The decline in the operating earnings of the Hardparts division of around 3% to €60 million mainly reflects a lower result at equity of the casting joint venture KS HUAYU AluTech.

Others/Consolidation reported a result €-20 million (previous year: €-8 million). This relates to Rheinmetall Automotive AG and other holding, financing and real estate companies. Beside consolidation measures, additions to provisions for environmental risks and expenses for electromobility-related research and development projects were included here.

Taking account of a non-recurring effect from the closure of the piston plant in Thionville, France, of € 22 million, EBIT of €227 million was generated (previous year: €223 million).

Capital expenditure

In fiscal 2017, Rheinmetall Automotive companies invested a total of €154 million in intangible assets and property, plant and equipment, having invested €149 million in the previous year. The increase in net capital expenditure was due, on the one hand, to a higher volume for infrastructure measures, especially the expansion of the castings building in Neckarsulm. On the other hand, the companies invested in production facilities to increase capacity for existing projects, especially in the Mechatronics division, and in machinery and equipment for new projects in the Mechatronics and Hardparts divisions. In the past year, at €4 million, the level of development costs capitalized was far lower than in the previous year (previous year: €13 million). The investment ratio as the ratio of capital expenditure to sales decreased to 5.4% (previous year: 5.6%).

Capital expenditure¹ € million

	2017	2016
Rheinmetall Automotive	154	149
Mechatronics	81	80
Hardparts	68	56
Aftermarket	4	12
Others/consolidation	1	1

¹ Total capital expenditure less payments received from customers of €22 million (previous year: €25 million); 2016 figures restated

The Mechatronics division reduced its share of the Automotive sector's capital expenditure by one percentage point year-on-year to 53% (previous year: 54%). At 44%, a higher share of total capital expenditure was attributable to the Hardparts division than in the previous year (previous year: 38%). Owing to the previous year's structural investment, the Aftermarket division participated far less, at 3%, in Rheinmetall Automotive's capital expenditure than in the previous year (previous year: 8%).

Capital expenditure in 2017 was divided between Germany and the rest of the world at a ratio of 38% (Germany) to 62% (rest of world), compared to 45% to 55% in the previous year. The fall in the German portion resulted from lower capital expenditure at the German sites of all divisions, but the Mechatronics division was particularly affected. As in the previous year, capital expenditure in Western and Eastern Europe outside Germany, constituted the regional focal point, with a share of 30% in total, of capital expenditure outside Germany (previous year: 25%). Capital expenditure was increased at the sites in Spain and the Czech Republic in particular. In 2017, North America accounted for a higher share of capital expenditure, at 15%, than in the previous year (previous year: 12%). Investing activities in the US, in particular, were up on the previous year. Our Brazilian companies received more of the Group's capital expenditure, at 5%, than in the previous year (previous year: 3%). In 2017, Asia represented a 12% share of capital expenditure, compared to 15% in the previous year. While capital expenditure and consequently the shares of our companies in China and Japan increased slightly or remained virtually unchanged, capital expenditure in the Indian companies was reduced slightly.

Employees

The companies of Rheinmetall Automotive employed 11,166 people (capacity) as of December 31, 2017, after 10,835 as of the end of the previous year (up 3.1%).

Employees Capacity

	2017	2016
Rheinmetall Automotive	11,166	10,835
Mechatronics	4,429	4,233
Hardparts	5,759	5,688
Aftermarket	817	773
Others/consolidation	161	141

2016 figures restated

Economic report

Business performance of Rheinmetall Automotive

There were no material changes in the percentages of the total workforce attributable to each division compared to the previous year. While the share of the Mechatronics division, at 40%, increased slightly by one percentage point (previous year: 39%), Hardparts' share decreased to the same extent to 52% (previous year: 53%). As in the previous year, 7% of the employees were employed in the Aftermarket division. The share of employees in the Other division, determined by the companies Rheinmetall Automotive AG and KSPG (China) Investment Co., Ltd. is also unchanged, at 1%.

In the 2017 reporting year, 61% of the workforce (previous year: 58%) was employed at Rheinmetall Automotive companies outside Germany. The increase in the percentage employed abroad was mainly attributable to a rise in the number of employees at our companies in the Czech Republic and India.

Research and development

The international automotive industry is faced with major challenges, which result from the ever present tension between the megatrend of increasing individual mobility and the international consensus to make this climate-neutral and, above all, free from emissions of substances that are harmful to health. As a result, the established technology of the combustion engine is coming under ever greater pressure and electromobility is becoming increasingly important. This is of particular importance for Rheinmetall Automotive. We already supply a large number of electric auxiliary units for combustion drive systems as for alternatives. However, we also wish to act as a supplier of products for energy storage and electric traction in the future. Our development activities are therefore focused, firstly on the development of advanced solutions for the efficient electrification of the drive train and solutions for a sustained reduction in emissions through minimized friction and efficient light construction, and, secondly, on solutions for sustainable and intelligent electric drive systems.

At the 2017 international automotive exhibition in Frankfurt am Main, Rheinmetall Automotive presented a selection of new technologies for gasoline, diesel and electric engines. These included a broad range of externally cooled exhaust gas recirculation systems for reducing emissions from car and commercial vehicle diesel engines within the engine. Without this technology, the use of diesel will no longer be conceivable in the future. Products for exhaust gas recirculation were also shown for gasoline engines in addition to secondary air systems and products for particle regeneration. The use of these external EGRs will reduce consumption significantly.

Prototypes of a battery pack and an electric traction engine were also presented for e-mobility/electrification. In addition, a large number of electrified auxiliary units, such as electric coolant pumps and valves for optimizing thermal management, i.e. to manage the heat flow. For the battery packs, Rheinmetall Automotive has surmised that future electric vehicles and hybrids too will largely have underfloor batteries. They do not compromise the vehicle's loading capacity materially and also offer benefits regarding weight distribution and possible integration in the vehicle structure. The basic structure of battery packs developed for these uses by Rheinmetall Automotive consists of aluminum. Bespoke customer-specific battery modules can be incorporated therein.

The battery packs have their own cooling systems and are protected against intrusion by a fiber composite structure, which was developed by an affiliate within the Rheinmetall Group that specializes in protection applications. The concept is characterized in particular by a very high energy density in relation to its weight and the fact that it requires very little space means that it can be used extremely flexibly and widely in electrified vehicles.

For its new traction engine, Rheinmetall Automotive has opted for a synchronous engine equipped with permanent magnets and will use the expertise acquired over many years of high-volume production in its manufacturing technique. The high-voltage engine with 90 kW output uses a polyphase system and has a concentrated coil for the purposes of optimizing the installation space. Output and torque characteristics can be tuned to the respective purpose. It is aimed at smaller vehicle classes in its current configuration. However, the scalability of the system means that it can also be used in larger vehicles.

Research and development € million

	2017	2016
Rheinmetall Automotive	151	142
Mechatronics	123	113
Hardparts	24	28
Aftermarket	–	–
Others/consolidation	4	1

In fiscal 2017, the Automotive segment increased research and development expenses to €151 million (previous year: €142 million). As in the previous year, the research and development ratio (ratio of research and development costs to sales) was 5.3%.

As of December 31, 2017, a total of 1,070 employees were employed in the research and development departments of the Automotive companies (previous year: 1,090). Approximately one in eleven employees is therefore still entrusted with research and development tasks.

Employees in research and development

	2017	2016
Rheinmetall Automotive	1,070	1,090
Mechatronics	773	802
Hardparts	291	272
Aftermarket	–	13
Others/consolidation	6	3

Economic report

Business performance of Rheinmetall Automotive

Mechatronics division

Key figures

		2017	2016
Sales	€ million	1,621	1,491
Operating result	€ million	176	141
Operating margin	in %	10.9	9.5
Capital expenditure	€ million	81	80
Employees (Dec. 31)	Capacity	4,429	4,233

2016 figures restated

Sales – The high rate of growth achieved by the Mechatronics division continues unabated. Sales increased by 8.7% year-on-year to €1,621 million in 2017. Thanks to undiminished strong demand from automotive manufacturers for solutions for the reduction of CO₂ emissions and fuel consumption and the division's future-oriented product portfolio, growth once again significantly exceeded the increase in global light vehicle production. The growth was mainly achieved outside Europe, meaning that the percentage of non-European sales was increased from 16% in the previous year to 20% in the past fiscal year.

Sales were particularly successful in the Commercial Diesel Systems and Solenoid Valves product ranges. Double-digit growth was achieved in both ranges. The 27% increase in sales in Commercial Diesel Systems was primarily attributable to exhaust gas recirculation valves (EGR) and EGR radiator modules. For Solenoid Valves, where we still see ourselves as the market leader, the growth in sales also amounted to 14%. Higher sales were achieved with all valve types and with all customers but especially with Chinese customers. The Pump Technology product range represented a key growth driver for the division with growth in sales of 7%. However, the picture is mixed when the trend in sales is analyzed by product group. Applications that react flexibly to the requirements of the engine, such as electric or mechanical variable pumps, achieved significant sales growth while the mechanical oil, water and vacuum pumps recorded a slight drop in sales. However, the Automotive Emission Systems and Actuators product ranges also grew by 6% and 2% respectively despite the negative effects from the fall in demand for diesel engines.

Operating earnings – the Mechatronics division's operating earnings rose by 25% in 2017 to €176 million. This was largely due to higher sales of high-margin product ranges. This more than compensated for price reductions on the customer side and cost increases resulting from the advancement of indirect employees, especially in development. Following the investment in the expansion of sites in the NAFTA region and in Asia, these are now making substantial contributions to the division's comprehensive income. The division's operating margin rose from 9.5% to 10.9%.

Capital expenditure – the Mechatronics division invested a total of €81 million in 2017, €1 million more than in the previous year. The investment ratio fell slightly because of the increase in sales to 5.0% (previous year: 5.4%). The considerable advance payments from previous years are paying off here. The capital expenditure was triggered, on the one hand, by the need to expand capacity for series products because of rising demand from customers in the case of existing projects and the acquisition of additional customer projects.

On the other hand, the purchase of machinery and equipment created the preconditions for the production of new products such as electrical oil and vacuum pumps, fifth generation divert-air valves, water valves and exhaust gas recirculation valves, which are characterized by their compact design and suitability for use in the low pressure segment.

Capacity for a front cover of the engine with an oil and water pump is currently being developed for a global automotive manufacturer (OEM). The OEM will install this module in one of its world engines. The complete module will be produced at our Brazilian site in Nova Odessa and supplied to the customer. The European market will be served from our production facilities in Italy although the water pump will be manufactured at the French site in Thionville. There will be investment in assembly equipment, in mechanical processing and at our suppliers of pre-components.

Mechatronics is the market leader for divert-air valves (DAV) in Europe and is making increasing use of its expertise in this product to open up the markets in NAFTA and Asia. Demand is surging meaning that local capacity in these markets is being increased on an ongoing basis. Besides additional capacity for current product families, new capacity is being created at present for our fifth generation of a DAV at the sites in Neuss, Germany, in Fountain Inn, USA, and in Kunshan, China. The solenoid valves are produced at highly automated plants to comply with our customers' quality requirements. Production of copper coils is also being installed in China for the fifth generation DAV, resulting in an increase in the percentage of components produced in China.

Employees – At the end of 2017, the number of employees (FTEs) in the division totaled 4,429, compared to 4,233 employees at the end of the previous year. The increase of 4.6% in the number of employees is less than the growth in sales of 8.7% achieved. Personnel numbers increased at the companies outside Europe, in particular, in the US, Brazil, China and India, in response to the strong impetus emanating from these regions.

Research and development – €123 million was spent on research and development in the division after €113 million in the previous year. As in the previous year, research and development expenses accounted for 7.6% of sales. Worldwide, 773 employees (previous year: 802 employees) were employed in research and development at the end of 2017.

Development in the Mechatronics division was focused on application development for new projects, customer support with current products, development of existing product families and increased percentages of predevelopment for the development of new projects in electric and hybrid drive systems.

Automotive Diesel Systems and Commercial Diesel Systems added components and systems for air-conditioning vehicles in their business areas. The product range was specifically extended for the fast-growing segment of hybridized and fully electrically driven vehicles through the development of an electric air-conditioning compressor and the development of a heat pump module. In an initial order, small, electrically driven city buses produced by a well-known European vehicle manufacturer were equipped with heat pump modules. The system used takes over air-conditioning and supports the thermal management of the battery system and the entire vehicle.

Economic report

Business performance of Rheinmetall Automotive

To manage various coolant circuits in the vehicle intelligently, Mechatronics is developing new compact electromotive actuators and electromagnetic water valves, which can switch the coolant circuits on or off. While the demand for energy is increasing for many engine components, the supply of energy in the vehicle is decreasing at the same time. For instance, the supply of heat from engines with direct fuel injection and from electric engines is low meaning that compensatory measures are needed to ensure comfort functions such as heating or air-conditioning work in all ambient temperatures. In contrast, the increased performance levels of many engine models often mean that demand for cooling increases – for example in the case of components such as electronics, charge air, exhaust gas recirculation or the battery. The demands on an intelligent and efficient cooling system will therefore rise significantly. The electromotive actuators can also be used to replace pneumatic actuators in hybrid and electric vehicles.

In various operating conditions, modern turbocharged gasoline engines no longer necessarily have the vacuum needed in the intake manifold for the brake booster. The vacuum brake boosters used today are inexpensive but require an efficient source, which is accessible at all times, for the necessary vacuum. Mechanical vacuum pumps, which are linked directly to the combustion engine are inexpensive but have the disadvantage that they run constantly, even if not needed, when the vehicle is being operated – even at high revs depending on operating conditions - and consequently increase fuel consumption. To resolve this conflict, the electric vacuum pump is being developed, which is individually switched off when the driver is not braking. Accordingly, fuel consumption and consequently emissions are reduced. In hybrids, electric vacuum pumps make it possible to drive using electricity only while the combustion engine is switched off, at the same time full braking force support is maintained. These pumps also permit the use of “sailing” mode. This is a mode in which the drive system is switched off and decoupled, resulting in additional energy savings because of the reduced resistance in the drive train (extended stop/start operation).

Hardparts division

Key figures

		2017	2016
Sales	€ million	968	921
Operating result	€ million	60	62
Operating margin	in %	6.2	6.7
Capital expenditure	€ million	68	56
Employees (Dec. 31)	Capacity	5,759	5,688

Sales – Sales of the Hardparts division increased by 5.1% year-on-year to €968 million in 2017. In so doing, the sales of the business units exceeded the respective figures for the previous year. Relatively speaking, the sales of the Large Bore Pistons business unit have improved most, with a double-digit growth rate (+ 11%), which was due to a global market recovery and a resulting increase in demand for large engines. Sales at the Small Bore Pistons business unit grew by 3% in total, profiting from a rise in call-offs in European business, which was apparent at the German and the Czech company, in particular. Having bottomed out in 2016, the Brazilian market started to recover significantly in 2017, which led to sales growth at our Brazilian company. Sales at the Bearings business unit exceeded the figure for the previous year (+7.8%). Growth at the companies in India and North America as well as higher copper prices in continuous casting were the most important factors here, however, the latter did not affect earnings, as higher copper prices affected both procurement and sales simultaneously.

Operating result – The Hardparts division generated an operating result, i.e. EBIT of €60 million in fiscal 2017 before the costs of closing the piston plant in France (previous year: €62 million). This decline in earnings performance was largely due to the European castings sector. There, start-up problems with new products in the non-engine sector and the discontinuation of the exemption from the Renewable Energy Sources Act levy at two German companies led to the earnings of the joint venture carried at equity falling short of the previous year's figure. Otherwise, increased sales led to improved operating results at the relevant business units. The division's operating margin fell year-on-year by 0.5 percentage points to 6.2%.

Capital expenditure – Capital expenditure by the Hardparts division rose by €12 million year-on-year to €68 million in 2017. This figure included investment in the amount of €7 million for a new foundry in Neckarsulm, which was constructed for the Castings joint venture and is also let to it long term. The remaining increase of €5 million in the consolidated business units resulted solely from the Small Bore Pistons business unit. Capital expenditure was focused on capacity for steel pistons and preparation for new aluminum programs in the US and Brazil.

The development of additional capacity for a European automotive manufacturer's steel piston program at our plant in the Czech Republic was by far the biggest individual project. Following construction of the building last year, development of machining capacity was on the agenda in 2017. Production started at the end of 2017.

Employees – As of the end of 2017, the number of employees in the division totaled 5,759, 71 or 1.2% more than at the end of the previous year. The growth in employee numbers was less than the reported growth in sales of 5.1%. The labor force at the Pistons business unit increased by 1.9% in total. More employees were needed than in the previous year to achieve higher sales at the pistons companies in the Czech Republic and in Brazil in particular. For sales-related reasons, the companies in the US and Mexico reported a reduction in the number of employees. In the Bearings business unit, the number of employees at the 2017 reporting date matched the level of the previous year.

Research and development – the Hardparts division's expenses for research and development amounted to €24 million (previous year: €28 million), representing a share of sales of 2.5% (previous year: 3.0%). Worldwide, 291 employees (previous year: 272 employees) were employed in research and development as of the end of 2017.

The Hardparts division's development focus included the further optimization of our components and systems for both automotive and industrial combustion engines. For example, the new piston design LiteKS-4, which is optimized to achieve maximum weight and friction reduction, was presented successfully on the market for the first time and is currently in development projects for consumption-optimized gasoline engines provided by customers. Furthermore, new customer projects at major international automotive manufacturers were secured with a new steel piston design optimized to achieve the highest degree of robustness and functionality.

In parallel, development activities for new products and market segments that are independent of the combustion engine, were stepped up as these will have an increasingly positive impact on sales over the next few years. For example, the business involving aluminum structural components in chassis applications was expanded, while at the same time the successful acquisition of new customer projects in the area of e-mobility components (e.g. engine housings for electric engines) proceeded. Further growth in business was also achieved in warehouse applications in the industry segments through new material groups and improved market cultivation and the first projects for further innovation-driven medium and long-term diversification of the Hardparts division were initiated as part of the "Invent25+" project.

Economic report

Business performance of Rheinmetall Automotive

Aftermarket division

Key figures

		2017	2016
Sales	€ million	359	323
Operating result	€ million	33	28
Operating margin	in %	9.2	8.7
Capital expenditure	€ million	4	12
Employees (Dec. 31)	Capacity	817	773

2016 figures restated

Sales – The Aftermarket division increased its sales by €36 million or 11% year-on-year to €359 million in 2017. In particular, products from the division's own brands, Kolbenschmidt and Pierburg, proved to be growth drivers in the Independent Aftermarket (IAM) and Original Equipment Supplier (OES) entities. Strong demand and an expanded product program boosted sales at OES business. From a geographical perspective, the business performance of the European and Asian sales regions particularly stood out. By contrast, business from customers in the countries of the Near East was adversely affected by the crises and combat operations in that region, leading to a decline in sales.

Operating result – The Aftermarket division's operating earnings amounted to €33 million in 2017. This represented growth of 18% against the previous year. The increase in profit contributed by additional sales realized by German companies was countered in particular by increased expenses for reworking. Higher sales also led to an improvement in the earnings situation at the companies in Brazil and China compared to the previous year. Increased costs resulted from the start-up of pistons production in the Czech Republic, which more than offset the operational improvements achieved in the fiscal year. The company was therefore unable to report a break-even result, meaning that the division's result was adversely affected. Nevertheless, the Aftermarket division's operating margin rose to 9.2% after 8.7% in the previous year.

Capital expenditure – At €4 million in 2017, investment by the Aftermarket division was well down on the previous year. The fall was primarily attributable to the structural investment in a new logistics center completed last year, an automated small parts store in Germany and the development of piston production in the Czech Republic. Investment in 2017 related to machinery, equipment and tools in the production plants as well as suppliers' tools, warehouse equipment and software.

Employees – The companies in the Aftermarket division employed 817 people (capacity) as of December 31, 2017, after 773 as of the end of the previous year. This means that sales growth of 11% was achieved with a far smaller increase in the number of employees of 5.7%. The management company plus the central warehouse in Germany and the companies in China and Brazil reported a sales-related increase in employees. The ramp-up of production at the Czech production company also resulted in an increase in the number of employees.

Joint ventures with Chinese partners

Sales – The sales of the joint ventures in China carried at equity were not included in the consolidated sales of Rheinmetall Automotive. With sales of €845 million, these companies achieved year-on-year growth of 2.4% or 6.8% adjusted for currency effects. By comparison, production of passenger cars and light commercial vehicles in China increased by only 2.1%.

Key figures € million

100%-Basis	Joint Ventures in China		KS HUAYU Alu Tech Group Germany	
	2017	2016	2017	2016
Sales	845	825	318	289
Net income	49	43	–	11

Kolbenschmidt Pierburg Shanghai Nonferrous Components Co., Ltd. develops, produces and supplies products such as engine blocks and cylinder heads among others and increased sales year-on-year, as did Kolbenschmidt Shanghai Piston Co., Ltd. with its small piston product range. Pierburg Huayu Pump Technology Co. Ltd. was still very successful – albeit with a relatively low level of sales – increasing its sales of pumps by a third year-on-year. The joint venture Pierburg Yinlun Emission Technology (Shanghai) Co., Ltd., established in September 2017, is to produce exhaust gas recirculation modules from 2018 and therefore reported no sales for fiscal 2017.

Rheinmetall Automotive's casting business in Germany is also carried at equity and is therefore not included in the consolidated sales of the Automotive segment. The KS HUAYU AluTech Group's sales amounted to €318million in 2017 compared to €289 million in the previous year (+10%).

Net income – Earnings after taxes of the joint ventures in China totaled €49 million (up 14%). This figure included increased contributions from Kolbenschmidt Pierburg Shanghai Nonferrous Components Co., Ltd. and Pierburg Huayu Pump Technology Co., Ltd. The additional sales realized also led to improved earnings at Kolbenschmidt Shanghai Piston Co., Ltd., however, these were more than offset by the costs of the new plant in Chongqing, meaning that earnings after tax fell overall. The first expenses resulting from the start of business operations were incurred at the joint venture Pierburg Yinlun Emission Technology (Shanghai) Co., Ltd., leading to minor start-up losses after taxes as these were not yet covered by sales.

The KS HUAYU AluTech Group only broke even after taxes in 2017 (previous year: €11 million), as high start-up costs for new products not related to drive systems and the discontinuation of the exemption from the Renewable Energy Sources Act levy had to be offset.

New piston plant in China – We have been producing pistons in China at our joint venture Kolbenschmidt Shanghai Piston Co., Ltd. since 1997. With an annual production volume of 21 million pistons, the joint venture has evolved into one of the key passenger car piston producers for the Chinese domestic market. In the twentieth year of its existence, the joint venture added a further production facility to its site structure in the automotive center in south west China in the metropolis of millions, Chongqing. Around €65 million was invested in the new location as the first step in the expansion. The plant currently has a production area of 34,000 square meters. Equipped with the latest technology, it will have an annual production capacity of 5 million pistons and employ 230 employees.

KEY FACTS 2017

RHEINMETALL DEFENCE

3,036 SALES €million

174 OPERATING RESULT €million

89 CAPITAL EXPENDITURE €million

11,232 EMPLOYEES

3.0 ORDER INCOME €billion

6.4 ORDER BACKLOG €billion

2.4% R&D INTENSITY

Economic report

Business performance of Rheinmetall Defence

Rheinmetall Defence achieves sales growth of 3.1%

Sales in the Defence sector amounted to €3,036 million in the period under review. It therefore increased by €90 million or 3.1% compared to the previous year's figure of €2,946 million. When adjusted for currency effects, the growth was 3.0%. The sales increase was achieved among other things by a delivery of marine ammunition (primarily trading sales) to an international customer as well as by deliveries of trucks for the major Land 121 project with our customer Australia. Increasing series production of the Puma infantry fighting vehicle for the German armed forces also made a substantial contribution to the rise in sales. These projects concern the Weapon and Ammunition and Vehicles Systems divisions, which both reported considerable sales growth in the year under review, while sales by the Electronic Solutions division were 7.2% or €54 million down on the previous year's figure. In addition to the German market (28.6%; previous year: 26.5%), sales were mainly generated in the regions of other European countries (17.4%; previous year: 16.7%), followed by the Middle East and Asia (21.5%; previous year: 29.3%) and North America (6.1%; previous year: 6%) and Australia/Oceania (13.2%; previous year: 8.3%). As in the previous year, other regions accounted for 13.2% of sales. The international share of sales fell by 2.1 percentage points as against 2016 to 71.4%.

Sales € million

	2017	2016
Rheinmetall Defence	3,036	2,946
Vehicle Systems	1,480	1,392
Weapon and Ammunition	1,175	1,112
Electronic Solutions	691	745
Others/consolidation	(310)	(303)

Order intake at a high level

Rheinmetall Defence acquired orders worth €2,963 million in the period under review, compared to €3,050 million in the previous year. This represents a slight fall of €87 million or 2.9% against the previous year. Order intake was heavily influenced by the acquisition of several major projects. The book-to-bill ratio was thus slightly lower than 1 (0.98) in 2017. This was largely due to projects involving foreign customers being deferred and to the delays in forming a government in Germany.

Order intake € million

	2017	2016
Rheinmetall Defence	2,963	3,050
Vehicle Systems	941	956
Weapon and Ammunition	1,089	1,171
Electronic Solutions	1,077	1,015
Others/consolidation	(145)	(91)

Economic report

Business performance of Rheinmetall Defence

Order backlog of over €6.4 billion

The order backlog was €6,416 million as of December 31, 2017, down €240 million or 3.7% compared to the previous year's figure of €6,656 million. The biggest individual orders in the order backlog are the Land 121 program for Australia (military trucks), Puma infantry fighting vehicles for Germany and vehicle components for the Fuchs in Algeria, which are in the delivery phase.

Order backlog € million

	2017	2016
Rheinmetall Defence	6,416	6,656
Vehicle Systems	3,021	3,577
Weapon and Ammunition	1,692	1,817
Electronic Solutions	1,914	1,579
Others/consolidation	(211)	(317)

Significant increase in operating earnings

Operating earnings (EBIT before special items) amounted to €174 million in fiscal 2017 after €147 million in the previous year, an increase of 18.4%. The operating margin rose by 0.7 percentage points from 5.0% to 5.7%.

Operating result € million

	2017	2016
Rheinmetall Defence	174	147
Vehicle Systems	53	29
Weapon and Ammunition	117	108
Electronic Solutions	20	25
Others/consolidation	(16)	(15)

As in the previous year, this significant improvement in results was achieved thanks to the positive performance of the Weapon and Ammunition and Vehicle Systems divisions, in particular. In particular, this was due, among other factors, to high-margin ammunition sales as well as continuing good capacity utilization in the Vehicle Systems business.

2017 was adversely affected by three non-recurring effects totaling €2 million, resulting in EBIT of €172 million in the reporting period. Non-recurring effects in the Electronic Solution division related to non-operating insurance income of €10 million, while the Vehicle Systems division incurred restructuring expenses of €2 million for the Ede location and losses on the sale of shares in the joint venture Rheinmetall International Engineering GmbH, Geisenheim.

Capital expenditure

In 2017, Rheinmetall Defence invested a total of €89 million (previous year: €95 million) in property, plant and equipment and intangible assets. The investment ratio (ratio of capital expenditure to sales) was therefore 2.9% after 3.2% in the previous year. €11 million (previous year: €18 million) of the capital expenditure volume related to capitalized development costs from ongoing key technology projects. In addition to the development of new and further technologies, capital expenditure focused primarily on the development, expansion and modernization of production capacity, production facilities and sites.

Employees

The Defence sector employed 10,251 people (capacity) as of December 31, 2017. The comparable figure for the previous year was 10,002 employees. While the Vehicle Systems and Weapon and Ammunition divisions recorded an increase in personnel of 6.6% and 3.1% respectively year-on-year, the number of employees in the Electronic Solutions division fell by 2.8%, meaning that employee capacity at Rheinmetall Defence rose by a moderate 2.5% in total.

Employees Capacities

	2017	2016
Rheinmetall Defence	10,251	10,002
Vehicle Systems	2,983	2,797
Weapon and Ammunition	4,343	4,211
Electronic Solutions	2,845	2,927
Others/consolidation	81	68

Research and development

Rheinmetall Defence specializes in the development and production of components and systems for protecting people, vehicles, aircraft, ships and assets and, in its role as an equipment supplier to the German armed forces, NATO and other responsible nations, helps to protect armed forces involved in military operations. The Defence sector is committed to capability-oriented innovation and is continuously setting new technological standards: from vehicle, protection and weapon systems, through infantry equipment and air defence, to the networking of function sequences and in the areas of simulation and training. It systematically gears its research and development activities to the main areas of national capability stipulated by the German armed forces and to mission requirements profiles of international armed forces facing the growing challenges and complex threats of the 21st century. They are often fighting at very great risk to preserve security and freedom. In addition to multinational deployments to prevent crises and deal with conflicts, attention is increasingly focusing on the tasks of national and alliance defence once more. Modern equipment that uses cutting edge technology and is adequate to the task can lead to vital improvements in ability to lead, stamina, mobility, effectiveness and ability to survive in the deployment scenarios faced by soldiers.

Research and development € million

	2017	2016
Rheinmetall Defence	73	74
Vehicle Systems	10	10
Weapon and Ammunition	33	25
Electronic Solutions	30	39

In 2017, Rheinmetall Defence invested a total of €73 million (previous year: €74 million) in self-financed research and development projects. The research and development ratio as the ratio of expenses to sales decreased slightly by 0.1 percentage points to 2.4% (previous year: 2.5%). There were 2,243 employees in total in the research and development departments of the Defence companies as of December 31, 2017 (previous year: 2,130).

Employees in research and development

	2017	2016
Rheinmetall Defence	2,243	2,130
Vehicle Systems	526	447
Weapon and Ammunition	605	591
Electronic Solutions	1,112	1,092

Economic report

Business performance of Rheinmetall Defence

Vehicle Systems division

Key figures

		2017	2016
Sales	€ million	1,480	1,392
Order intake	€ million	941	956
Order backlog	€ million	3,021	3,577
Operating result	€ million	53	29
Operating margin	in %	3.6	2.1
Capital expenditure	€ million	20	25
Employees (Dec. 31)	Capacity	2,983	2,797

Sales – The Vehicle Systems division reported an increase in sales of 6.3% to €1,480 million in 2017. Once again, the sales volume achieved is significantly impacted by the settlement of major orders. Since the order of a total of 2,540 armored and non-armored medium to heavy military logistics vehicles for the Australian land forces, more than 1,028 vehicles have been supplied in total between 2013 and the end of December 2017. The tranche of 915 transport vehicles supplied in 2017 generated the largest amount of sales in the modernization program, which is currently expected to run until 2020. The delivery of 33 Puma infantry fighting vehicles to the German armed forces also contributed to the division's positive sales performance in the year under review. Another major project in 2017 related to the supply of kits to manufacture Fuchs wheeled armored vehicles to Algeria. Kits are configured at the Kassel site and then supplied to the customer for assembly. This was countered by falling sales from the order from the Netherlands to produce the Boxer wheeled armored vehicles, which is expiring.

Order intake – The Vehicle Systems division's incoming orders amounted to €941 million in the year under review after to €956 million in the previous year. Incoming orders in 2017 were significantly impacted by two major orders. These comprised the framework agreement concluded for seven years to supply a total of 2,271 state-of-the art, non-armored military transport vehicles to the German armed forces, of which the first batch of 558 vehicles (including special tools and training services) worth €200 million was posted in 2017. To boost the performance of the Puma infantry fighting vehicle in key areas, among other things, the German armed forces commissioned an expansion package, which includes, for example, the development of the new turret-independent secondary weapon system, the installation of modernized vision equipment and displays as well as the provision of new training resources. The value of the order attributable to the division was around €100 million.

Operating result – The Vehicle Systems division improved its operating result by €24 million from €29 million in fiscal 2016 to €53 million in the year under review (EBIT before the costs of restructuring the site at Ede, Netherlands, of €2 million). The operating margin thus rose from 2.1% in 2016 to 3.6% in fiscal 2017. The sales-related increase in the division's operating result was heavily influenced by the major Land 121 order with Australia. In the logistics vehicle segment, a higher proportion of more profitable vehicle categories had a positive impact on the trend in earnings in addition to improved capacity utilization at the Vienna plant.

Capital expenditure – The Vehicle Systems division invested a total of €20 million in 2017, compared to €25 million in the previous year. In the area of tactical vehicles, capital expenditure mainly focused on the development of a new generation of the Lynx infantry fighting vehicle with a transport capacity of three plus eight soldiers. Lynx belongs to a Rheinmetall family of modular vehicles, which is characterized by a large number of standardized parts that enable the vehicle classes to be configured for various purposes.

In addition to deployment as an infantry fighting vehicle, Lynx can also be deployed as a command vehicle, a combat reconnaissance vehicle, a combat damage repair vehicle or an armored medical evacuation vehicle. This infantry fighting vehicle is characterized by its four core capabilities of firepower, protection, manageability and agility. The Lynx is equipped with the Rheinmetall LANCE tower and an airburst-capable automatic cannon that can engage targets on the move with high precision and effectiveness at up to 3,000 m. With regard to logistics vehicles, capital expenditure focused on enhancing a new modular generation of military trucks in the HX 2 series. The HX family is characterized by a comprehensive standardized part concept from 4x4 to 10x10 and a very high degree of robustness, load capacity, mobility and all-terrain capability. New requirements and user insights from the civil and military sectors flow continuously into further development.

Employees –The Vehicle Systems division employed 2,983 people as of the end of the fiscal year (previous year: 2,797).

Research and development – Improvised explosive devices (IEDs) pose a major threat to soldiers on operations as a means of asymmetric warfare. Rheinmetall offers the route-clearance system to open transport routes and keep them open by reconnoitering and clearing explosive ordinance such as mines and remotely triggered booby traps, which consists of the Fuchs crew vehicle in its weapon reconnaissance and identification version, the remote control Wiesel 1 as the detector vehicle, the unmanned manipulator vehicle and the transport vehicles. It is highly efficient in locating explosive devices in the ground and consequently makes it far safer to travel on frequently used routes such as when traveling in convoy. In carrying out this dangerous mission, the remote control Wiesel detector vehicle, which has a dual sensor with integrated ground penetrating radar and a metal detector, has the task of detecting and exposing mines, explosive devices and remotely controlled bombs on the road or segment of the route being searched. To counter the increasing threat of IEDs more effectively and to be equipped even more effectively and efficiently for future deployments, detection needs to be improved by using cutting-edge technologies.

Work started in collaboration with a public sector customer on defining the requirements for a new remote controlled detector vehicle to be used in search operations in 2016. Factors such as reduced manning levels, increased protection requirements as well as ergonomic workstations in conjunction with improved data capture and analysis were taken into consideration. The basic requirement for the detector vehicle was also to be able to follow the convoy independently. In addition to developing initial concepts, new technological approaches to improve the features of the ground radar used and the metal detector were systematically investigated in the year under review. Potential for the greatest possible achievable detection depth and width while simultaneously improving ease of use were identified. Furthermore, the connection between the detector and the carrier vehicle as well as the structural set-up, the configuration and equipment of the detector vehicle itself were considered. The studies carried out to date form the basis for the new convoy-capable detection vehicle equipped with a protected cabin for route clearance missions, which is to be introduced as standard to the German armed forces in the next few years. The new detector vehicle selected with the German customer is to be adjusted with a partner to the findings gathered and the specific requirements of the intended purpose. Construction of a functional demonstrator, which will then be subjected to exhaustive tests, is planned for 2018.

Economic report

Business performance of Rheinmetall Defence

NATO has been pursuing the development of a NATO generic vehicle architecture (NGVA) for military land vehicles for some years. An international standard for vehicles and technological components aims not only to guarantee that different manufacturers' mission system components are highly compatible but that there is general interoperability in communications and force. Among other projects, Rheinmetall is working on the definition of data models and on the configuration of various user interfaces tailored to various purposes. For example, plug-and-play functions are integrated in the vehicle so that the soldier can rapidly switch between individual operating modules without missing a step. He can, for instance operate unmanned air vehicles (UAV) attached to the vehicle and following it from the interior of the armored vehicle by remote control and navigate or use all round views in real time, which can be displayed on monitors, projection screens and 3D headsets (virtual reality) for better reconnaissance. In conjunction with tracking the operator's head position, 3D headsets therefore achieve a "glass" vehicle. Other sectors relate to driving solely by means of camera monitor images combined with drive-by-wire and force-feedback steering systems. All these functionalities provide the basis for future unmanned remote-controlled, partially autonomous or even autonomous vehicle systems.

Weapon and Ammunition division

Key figures

		2017	2016
Sales	€ million	1,175	1,112
Order intake	€ million	1,089	1,171
Order backlog	€ million	1,692	1,817
Operating result	€ million	117	108
Operating margin	in %	10.0	9.7
Capital expenditure	€ million	46	37
Employees (Dec. 31)	Capacity	4,343	4,211

Sales – The Weapon and Ammunition division achieved sales of €1,175 million (previous year: €1,112 million). As in fiscal 2016, major deals included deliveries of marine munitions (essentially trading sales) to an international customer. Furthermore, sales were achieved from the supply of 155 mm caliber artillery ammunition and DM63A1 tank ammunition for large caliber weapons, which is based on Wolfram technology and is currently the latest KE (kinetic energy) ammunition for smooth-bore cannon weapon systems with a caliber of 120 mm. Increased sales for armored cabs were also billed from intra-Group supplier business for the Vehicle Systems division, which produces military transport vehicles, both non-armored and armored, for the Australian land forces.

Order intake – At €1,089 million, order intake in the Weapon and Ammunition division was €82 million or 7.0% down on the previous year's figure of €1,171 million. In the year under review, Rheinmetall received a framework agreement covering the supply of various types of ammunition from the German armed forces. As a first step, for example, 5,000 shells of type DM11 ammunition worth €38 million were ordered. The division has also been tasked with the delivery of new type L55A1 weapon systems for the 68 Leopard 2A4, which is to be modernized. In terms of weaponry, this battle tank will then have the technical requirements for firing the next generation of armor piercing ammunition in the higher pressure range. All 104 Leopard 2A7V were adapted to use Rheinmetall's new programmable multi-purpose ammunition DM11. An international customer placed several major orders of more than €90 million for ammunition and two mine clearing systems that fires rockets to create a ladder-like demolition zone, capable of cutting a broad avenue through a potential minefield.

Operating earnings – The Weapon and Ammunition division's operating earnings increased by €9 million in the fiscal year to €117 million (previous year: €108 million). The operating margin improved slightly to 10.0% after 9.7% in the previous year.

Capital expenditure – Funds totaling €46 million were invested in the Weapon and Ammunition division (previous year: €37 million). This related, in particular, to measures to expand capacity at the sites in Unterlöss and Oberndorf and repairs to highly specialized lathes for the production of ammunition components and artillery conduits and pre-turning armored conduits. When investing in lathes for the production of ammunition components, account is taken not only of standardizing/rationalizing production processes through multiple machine operability and improved throughput times but this capital expenditure also leads to synergies in terms of tools required and employee qualification. In Unterlöss, funds were also invested in functional new buildings and traffic areas as well as in the construction of a new guardhouse and a central alarm system. The new traffic areas, in particular, have now optimized the separation of logistics and visitor traffic. In addition to an administrative building with up to 140 workstations, the new buildings also include a state-of-the-art canteen. Furthermore, the construction of a standalone filling system for polymer-bonded explosives (PBX) and the expansion of mixing and filling capacity, which began in Italy in 2016, was continued. The total volume of capital expenditure on this modern PBX equipment will be in the double-digit millions and will peak in 2018. In Boksburg, South Africa, the expansion and rationalization program spanning several years was continued with investments in production and infrastructure facilities. In particular, investments were made in the expansion of capacity for test, qualification and acceptance shelling. Furthermore, the sites in Aschau (Germany) and Wellington (South Africa) continued investing in the expansion of their plants to restore production capacity following fire damage in 2015.

Employees – The Weapon and Ammunition division employed 4,343 people as of the end of the fiscal year (previous year: 4,211).

Research and development – In Germany, there have been no further performance upgrades, since delivery of the Leopard 2A6 battle tank with the 120 mm L55 smooth-bore cannon weapon system and DM63 tank ammunition to the German armed forces in 2001. Very recently there has been growing recognition that military threats or conflicts, at least along Europe's southern and eastern borders, are a possibility again, prompting many countries to change their thinking. The "battle tank for national security" scenario is experiencing a renaissance. As the developer and manufacturer of all the 120 mm smooth-bore Leopard 2A6 weapon systems in use and a specialist in upgrade programs for this battle tank, Rheinmetall Defence's objective is to offer its customers threat-appropriate performance improvements by enhancing the 120 mm caliber weapon system. The first parties to express an interest in this technical approach are Leopard 2 user countries who wish to upgrade parts of their fleet to incorporate the higher performance L55A1 barrel. The plan is to achieve a significant improvement in penetration power compared to modern protection systems by no later than 2018 using a performance-enhanced 120 mm L55 weapon system and the next generation of KE ammunition. A performance improvement of the Leopard 2 weapon was qualified in 2017. The new 120 mm L55 A1 weapon system now allows ammunition to attain higher velocities. Work is currently ongoing on the optimization of the 120 mm KE ammunition, which can exploit the higher velocity.

Economic report

Business performance of Rheinmetall Defence

Designs for a successor system to the Leopard 2 are being developed with the German contractor. A self-financed test firing device was commissioned in 2017. The data recorded as a result will be used to calculate the configuration of a new tank weapon, which will have a larger caliber than the 120 mm type ammunition currently used. This will ensure the battle tank also retains its superiority in a one-on-one battle in the future.

There has been scarcely any sweeping progress with ammunition fuses in Europe – despite increased requirements – in the last 20 years. Rheinmetall Defence has responded to this unsatisfactory situation and established a center of development expertise for fuses. A new complex fuse, which includes several programmable functions before firing is to go into series production in 2019. Plans are in place for 2018 to develop a miniaturized fuse in test series, which will offer a function that is currently unparalleled worldwide for the envisaged caliber. Ammunition with significantly improved performance can then be provided for flying platforms in particular.

Electronic Solutions division

Key figures

		2017	2016
Sales	€ million	691	745
Order intake	€ million	1,077	1,015
Order backlog	€ million	1,914	1,579
Operating result	€ million	20	25
Operating margin	in %	2.9	3.4
Capital expenditure	€ million	22	32
Employees (Dec. 31)	Capacity	2,845	2,927

Sales –Electronic Solutions division’s sales reached €691 million in 2017, compared to €745 million in the previous year. The reduction of 7.2% is essentially due to expiring projects with a customer in the MENA region and the German armed forces.

Relevant sales were generated from state-of-the-art air defence systems supplied to the Thai army in 2017. The scope of supply includes four Oerlikon Skyguard 3 systems and eight 35 mm Oerlikon GDF007 twin guns.

Notable Air Defence sales were also achieved with another international customer. This order from 2016 to modernize Skyguard systems also includes, for instance, new X-TAR3D tactical acquisition radars, which must be supplied until 2020.

Additional significant sales resulted from the construction of a modern training center in Mexico, where operating staff for extraction and production platforms owned by the state-owned oil and gas conglomerate PEMEX are to receive training and further development. In addition to modern simulators for oil/gas production and training processes, the training center will also have full-mission simulators for various crane types and replicas of technical systems for training in the use of equipment.

Order intake – Electronic Solutions reported incoming orders of €1,077 million in fiscal 2017, compared to €1,015 million in 2016. A major order valued at €310 million for the delivery of 68 platoon systems of the cutting-edge infantry soldier system “Future Soldier System – Expanded System” (IdZ-ES), with which over 2,460 soldiers can be equipped, was particularly interesting. IdZ-ES integrates the “complete infantry system” (infantry or mechanized infantry platoon with their vehicles and the base stations installed therein) in network-enabled operations.

Two major military air defence orders totaling €220 million were also acquired. We acquired a country as a new customer for two Oerlikon Skyguard 3 air defence systems, which are optimized for close-range air defence of key properties and equipment and designed for current and future threat situations. Another country is already a long-standing customer and ordered additional new 35 mm Skyguard 1 fire units. The German armed forces also commissioned the modernization of 104 Leopard-2 tanks, which were upgraded to the latest A7V standard. In so doing, obsolescences relating to the fire control computer and the control panel were rectified, a new eye-safe laser range finder was installed and a new thermal imaging device incorporated.

Operating result – At €20 million, the Electronic Solutions division’s operating earnings in 2017 were down €5 million on the figure for the previous year of €25 million. The operating margin fell to 2.9% (previous year: 3.4%). The expiry of projects involving customers in the MENA region and from Asia led to lower sales, which impacted both earnings and the operating margin.

Capital expenditure – The total capital expenditure volume of the Electronic Solutions division amounted to €22 million in the period under review (previous year: €32 million). Besides modernization measures, the division largely focused capital expenditure on developing and continuing new technological products and systems. As far as pure development was concerned, the areas of focus in 2017 included continuing a project in the area of laser-supported single-use simulators for handguns used in field exercises as well as developing IT security products in order to be able to tap future markets in the area of cyber security. The design of a civil protection simulator was still a further area of focus. This new civil product makes it possible to train public and private civil protection agencies and improves collaboration within the civil protection system. As in previous years, the focus of activities at the Rome site was on the further development of airspace radar technology to expand the product range. As regards capital expenditure on modernization and expansion, at the Bremen site work on upgrading fire protection technology for the simulation technology development, testing and production area, which began in 2016, continued. Implementation of this comprehensive fire protection concept, which includes the installation of extensive sprinkler systems in addition to lightning protection, the installation of fire protection walls and doors as well as the installation of escape corridors and tunnels, will be continued until 2019.

Employees – The Electronic Solutions division employed 2,845 people as of the end of the fiscal year (previous year: 2,927).

Economic report

Business performance of Rheinmetall Defence

Research and development – the tactical communication of the German armed forces' land forces is to be extensively digitalized in the next few years. Their entire communication equipment and the networking of tens of thousands of German armed forces' vehicles and platforms will be converted in the medium term. The range of the project is to extend from the command post to the infantry soldier. To implement this complex change, the army is relying on the central major modernization programs "Mobile Tactical Communication Infrastructure (MoTaKo)" and "Mobile Tactical Information Network (MoTIV)".

In this connection, Rheinmetall has started the research project "Close Air Integration for Mobile Army Networks (CAIMAN)" together with the Federal Office of the German armed forces' Equipment, Information Technology and In-Service Support. CAIMAN concentrates on the integration of ground-based air support in the land forces. Helicopters are paramount here. In the current system, data cannot be exchanged digitally between helicopters and vehicles. CAIMAN aims to close this capability gap and produce a solution that leads to a fully functional demonstrator. For this purpose, Rheinmetall has initiated a collaboration with Airbus Helicopters and Rohde & Schwarz, to be able to map the entire spectrum jointly. This prototype will consist of a helicopter in addition to four military vehicles and radios available on the market and is expected to be commissioned in 2019. In addition to networking participants, the program will also examine innovative, previously non-existent processes, which can offer German armed forces significant added value in operational terms. Helicopters and land forces are to operate efficiently in a fully networked system in the future.

As a provider of highly effective protection and vehicle equipment, Rheinmetall Defence are aware at all times of the acute dangers facing commanders and personnel in military vehicles. In addition to protection equipment, which ranges from actual armor to the active hard-kill system, in today's operations, a reduction in the crew's reaction time is increasingly a critical factor for their surviving on operations. With the aim of making optimal use of the military vehicle's protection during missions, materially improving the crew's overall view and discovering threats at a far earlier stage, a prototype of the new product "PanoView" was presented at the internal Rheinmetall research and development competition in 2016. PanoView technology, which relies on virtual reality and augmented reality among other things, lets the outside walls of the vehicle "virtually" disappear to a certain extent and, as a result, allows the vehicle commander to have a perfect all round view of the exterior at all times – without having to leave the protection of the vehicle interior – with the help of cameras mounted on the outside and a virtual reality headset. Data from command and information systems and connected sensors are shown clearly, meaning that his overall grasp of the situation improves and the assessment of threat scenarios becomes more reliable. In the year under review, the division focused on determining the basic feasibility of PanoView in various studies and in demonstrating that the approach chosen is already feasible in test series and demonstrations. The investigations also aimed to determine the added value in operational terms and to analyze and assess actual operational scenarios through simulations.

Economic report

Financing

Principles and aims of financial management

Rheinmetall AG bears central responsibility for the financial management of the Group and in this role defines the general conditions in the form of guidelines. It ensures external Group financing, coordinates the best possible liquidity balance internally among the Group companies (cash pooling) and monitors conformity with internal and external compliance issues. The structured defence against money laundering risks or protection against fraudulent attacks linked to financial transactions is of increasing significance in this connection.

Ensuring the Rheinmetall Group is solvent at all times is the top priority for financial management. To this end, as part of liquidity management, it ensures that Rheinmetall has access to liquidity at all times, whether in the form of freely available cash and cash equivalents, firmly committed credit facilities from banks or direct access to the money and capital markets. It also ensures that it has all the services needed to settle operating activities via a well diversified portfolio of banks. Dependencies on individual service providers or lenders are avoided by developing parallel structures.

The recording, assessment and management of all market price risks represents another focal area of financial management. The key influencing factors in this context are commodity prices in the areas of energy and metal, as well as currency rates and interest rates on the capital markets. Potentially negative effects are precluded as far as possible through appropriate contractual structures and the remaining risks reduced to a minimum using financial derivatives.

Financing in the Rheinmetall Group

The financing of Rheinmetall takes place via a mix of existing liquidity as well as short and long term financing instruments to guarantee access to liquidity at any time on a sustained basis. At the same time, dependencies on individual lenders or financing programs, which restrict Rheinmetall's flexibility, must be avoided.

Following repayment of the €500 million bond in September 2017, the promissory note loans totaling €243 million and the development loan from the European Investment Bank (EIB) for €250 million represent the key elements of long term financing. While the EIB loan is to be repaid with a bullet repayment in 2023, the total volume of promissory note loan comprises several individual tranches with staged maturities between 2019 and 2024. Maturities are concentrated in 2022, at €121.5 million.

The commercial paper program of €500 million and bilateral credit facilities of €2.9 billion are available for short term financing and, in particular, for providing the guarantees needed in the Defence sector. At the end of the last fiscal year, the latter was utilized in the amount of €1.2 billion for guarantees and €54 million in cash. As of December 31, 2017, neither the commercial paper program nor the syndicated credit facility, which essentially serves as backup, were being utilized.

Besides the traditional financing programs, Rheinmetall regularly uses its asset-backed securities program, through which trade receivables are sold without recourse, in order to minimize its customer default risk and optimize its liquidity position. The volume of receivables sold under the asset-backed securities program was €164 million as of December 31, 2017.

Economic report

Financing

Financing instruments € million

	Term	Nominal	Financing source
Promissory notes	2019-2024	243	International financial institutions
Development loans Research and development	2017-2023	250	European Investment Bank (EIB)
Commercial paper (CP)	Indefinite	500	Money market investors
Syndicated loan	2022		13 banks (back-up line for the commercial paper program)
Bilateral credit facilities (Cash and guarantee credit)	2017-2018	2,918	Banks and insurance companies
Asset-backed securities program	2019	170	Money market investors and banks

Financing activities in 2017

The realignment of the long term financing, which began in 2014, was completed on redemption of the bond due in September 2017. The various transactions ensured that Rheinmetall still had sufficient financial scope for current business after redemption of the bond and was also well prepared for the company's anticipated growth. The essence of the financing strategy was to diversify the individual financing instruments more widely in terms of maturity, volume and lender, than in the past, in which the high-volume bond in the amount of €500 million represented a possible cluster risk for refinancing.

In the second and third quarter of 2017, additional promissory note loans totaling €121.5 million, maturing up to 2022, were raised from international banks. €57 million of this related to transactions to replace existing, variable-interest positions, as a result of which a lower interest rate and a longer term were achieved for the entire promissory note portfolio.

The loan agreed with the EIB in 2016 was disbursed in August 2017. Through this loan, the EIB is promoting the Automotive sector's research and development expenditure of €250 million over a contractual term of six years. The loan will mature in 2023.

The second renewal option for the syndicated €500 credit line concluded in 2015 was exercised in September 2017. Essentially, the credit line serves as a back-up line for the commercial program of the same amount. The line's new maturity date is now September 2022 rather than the original 2020.

Rheinmetall continued its strategy of gradually building up trust assets to service payments arising from its occupational pension scheme in Germany and endowed a further tranche of €30 million to the total amount of €60 million in January 2017.

The mix of promissory note, bank and development loans achieved gives Rheinmetall, in conjunction with the short term financing options of the commercial paper market and the good liquidity position, the security and flexibility it aspires to for the next few years.

Rheinmetall's rating

The Rheinmetall Group's has had a credit rating of Ba1 from Moody's since 2013, and was given a stable outlook in April 2016. At this date, Moody's acknowledged that Rheinmetall had made serious progress in improving the long term business prospects.

The positive business performance in 2017 resulted in a further improvement in the accounting and profitability figures that are key to the rating agency's assessment, meaning that it raised the outlook from "Stable" to "Positive" on August 28, 2017. This renewed upgrade reflects Moody's assessment that the results of Rheinmetall will continue to develop positively on a sustained basis and consequently move closer to an investment grade rating, as held by Rheinmetall between 2000 and 2013. In its comments, Moody's also highlight Rheinmetall's conservative financial policy as a positive factor.

Rheinmetall's rating

	2017	2016	2015	2014	2013
Agency	Moody's	Moody's	Moody's	Moody's	Moody's
Long-term rating	Ba1	Ba1	Ba1	Ba1	Ba1
Outlook	Positive	Stable	Negative	Negative	Stable
Since	August 28, 2017	April 6, 2016	December 19, 2014	December 19, 2014	October 9, 2013

Economic report

Risks and opportunities

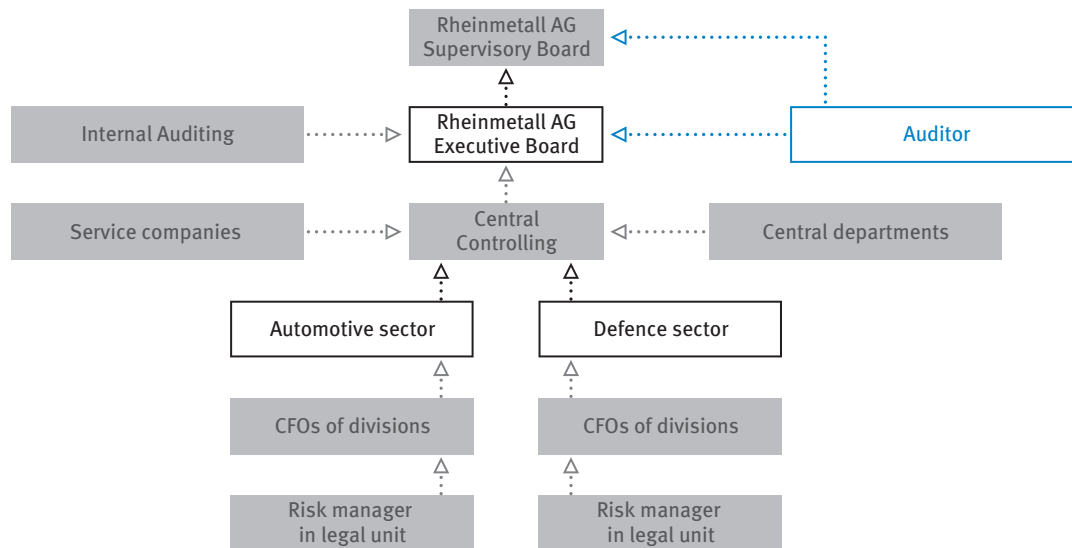
Risk management system

The standardized risk management system that has been introduced throughout the Group for the early recognition of material risks and risks that could jeopardize the continued existence of the Group is based on risk policy principles stipulated by the Executive Board of Rheinmetall AG, which are geared towards financial resources and strategic and operational planning and which specify guidelines, responsibilities and the treatment and documentation of identified risks, as well as thresholds. This ensures that corporate decisions and business activities are monitored on an ongoing basis and are actively managed, and enables any necessary action to be determined as required in order to comply with legal requirements.

In order to identify, analyze and assess potential risks, the risk inventory is revised once a year during corporate planning. This contains all the most important risks potentially impacting the corporate targets and sub-targets, probabilities of occurrence, the potential level of damage, early warning indicators, responsibilities and suitable countermeasures. On this basis, the operating units and central functional departments record, process and communicate the risks associated with their current business situation and future development each month in accordance with prescribed standardized parameters, along with the probabilities of occurrence and financial impact of these risks.

These detailed reports, which are an integral part of the integrated planning, management and information process, inform the Executive Board and managers of the status of and significant changes to important ventures subject to reporting requirements, and the status of countermeasures that have already been introduced. The measures introduced to ensure appropriate management of identified risks are monitored on an ongoing basis and adjusted to a new risk assessment where necessary. If necessary, adequate additional measures are taken in order to further limit and reduce identified potential risks. The Executive Board of Rheinmetall AG is regularly informed by Group Controlling of developments in the Rheinmetall Group's overall risk situation. Unexpected material risks and undesirable developments with significant consequences are reported to the Executive Board on an ad hoc basis.

Risk organization



Material risk areas

Overview of key corporate risks

Risk type	Probability of occurrence	Level of impact
Strategic risks		
Macroeconomic risks	Possible	Significant
Market risks	Possible	Significant
Competition risks	Possible	Moderate
Operational risks		
Technology and development risks	Possible	Significant
Investment risks	Possible	Significant
Production risks	Possible	Significant
Procurement risks	Not very probable	Significant
Project risks	Possible	Significant
Quality risks	Possible	Significant
IT risks	Possible	Significant
Personnel risks	Not very probable	Moderate
Pension risks	Not very probable	Low
Acquisition and integration risks	Possible	Significant
Environmental requirements	Not very probable	Moderate
Legal and compliance risks		
Legal risks	Possible	Moderate
Compliance risks	Possible	Significant
Regulatory risks	Possible	Significant
Tax risks	Not very probable	Low
Financial risks		
Credit risks	Not very probable	Low
Liquidity risks	Not very probable	Significant
Currency risks	Probable	Moderate
Interest rate risks	Not very probable	Low
Commodity price risks	Probable	Moderate

Risk classes

Major Harmful effects on business, earnings, financial situation, and assets	≥ EUR 50 million	Medium risk	High Risk	High Risk	High Risk
Significant Considerable effects on business, earnings, financial situation, and assets	≥ EUR 20 million	Medium risk	Medium risk	High Risk	High Risk
Moderate Some effects on business, earnings, financial situation, and assets	≥ EUR 5 million	Low risk	Low risk	Medium risk	High Risk
Low Limited effects on business, earnings, financial situation, and assets	< EUR 5 million	Low risk	Low risk	Medium risk	Medium risk
		Not very probable ≤ 25%	Possible > 25% to ≤ 50%	Probable > 50% to ≤ 75%	Extremely probable > 75%
		Low risk	Medium risk	High Risk	High Risk

Economic report

Risks and opportunities

Macroeconomic risks

It is not possible to completely avoid risks that arise due to economic cycles. A deterioration in statutory, regulatory and/or general economic conditions in the sales regions can adversely impact the sales and earnings situation of the Rheinmetall Group. Geopolitical or economic crises can affect regional markets or individual industries. The consistent alignment of business towards the major economic areas in Europe, the US and Asia reduces dependence on individual customer countries, thereby distributing the risk. The diversified product portfolio of the divisions and consistent internationalization of the Automotive and Defence sectors help to ensure that temporary economic fluctuations can be offset in part by more favorable developments in other regions and markets.

Market risks

In times of advancing globalization and growing competition and market transparency, market risks are becoming more prevalent. Potential outcomes include fluctuations in prices, volumes and margins. Focusing on technologically demanding market segments, product innovations, process improvements, production and capacity adjustments and strict cost management all contribute to strengthening competitiveness in each of the company's industries and securing and building on the profitability of the Rheinmetall Group. In view of the technological progress in our industries we continue to strive to develop new markets and customer groups in the mobility and security segments. Thanks to our broad international presence, we can respond to market and demand fluctuations and balance out developments in individual regions.

Competition risks

The risk profile of Rheinmetall can also be negatively affected by the presence of new suppliers or trends towards consolidation on sales markets. Furthermore, where competition is fierce we cannot rule out the possibility of being unable to implement our margin targets.

Technology and development risks

Innovative strength is a key success factor. The future earnings situation of the Rheinmetall Group also depends on the ability to identify technological trends in good time, correctly assess their impact on operational business and promptly develop new, marketable applications, products and systems and launch them on the market. The sometimes long development lead times, continuously refined technologies and intense competition are key factors contributing to uncertainty regarding the economic success of current or future products. Misjudgments as regards future market developments or in the development of products, systems or services that are not taken up by the market as expected as well as fundamental changes in customer demand that were not foreseen or responded to adequately, increased startup costs for new products or delays in launching innovations on the market can lead to a deterioration in our competitive and economic situation.

However, intensive market and competitor monitoring and analyses, the market presence and customer proximity associated with international distribution structures as well as regular discussions with customers and suppliers make it possible for us to identify trends on the sales markets in good time and to align product strategies consistently towards new requirements.

Feasibility studies, profitability analyses, modern project management aimed at reviewing the criteria for technical and economic success, the involvement of customers in the definition, design, development and testing of new products and safeguarding our technological position through patents reduces potential R&D-specific risks such as mis-developments and budget overruns.

Despite compliance with the processes described and the use of modern project management, monitoring and controlling measures, the development of new products and launching these onto the market as well as changes to the existing product portfolio harbor cost risks. These exist not only in the actual design and development phase, but also during market launch, where startup costs may be higher than expected or unscheduled delays may arise. Risks can also arise following market launch due to the potential need for technical improvements, which will only come to light following use in real-life situations or through continuous operation.

Quality risks

Our quality management systems have been certified in accordance with ISO 9001 and ISO/TS 16949 for many years now. In addition, methods including Six Sigma, lean management and failure mode and effects analysis (FMEA) are used to prevent quality risks.

Investment risks

We review investment decisions carefully over several stages. Investments that exceed a defined limit are presented to the Executive Board for approval after undergoing a review. Nevertheless, unforeseen changes in general conditions can lead to higher investment costs or cause delays to facilities being commissioned.

Production risks

We counter potential production risks by applying high technical and safety standards. The availability of production plants is ensured through preventative maintenance with ongoing checks, constant modernization and targeted investment. For potential damage and associated interruptions to operations or production downtime and for other conceivable loss occurrences and liability risks, insurance cover has been taken out as financially reasonable to ensure that the financial consequences of potential risks are contained or completely ruled out. Although the existing insurance cover is regularly reviewed in terms of covered risks and insured sums and adjusted if necessary, it may prove insufficient in individual cases.

Project risks

The scope and complexity of projects can entail risks in planning, calculating, implementing and processing. These include not only uncertainty in calculations, but also unexpected technical problems, underestimations of the level of complexity, cost increases, capacity and supply bottlenecks as well as quality problems with business partners or suppliers, unforeseeable developments during assembly and deferred dates of acceptance and settlement. These risks can be minimized, though not excluded altogether, through professional project management, project milestones, verification levels for each project stage, comprehensive quality management measures and the appropriate formulation of contracts.

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Acquisition and integration risks

Acquisitions, strategic alliances and joint ventures remain an important element of the Group's ongoing internationalization and growth strategy, in order to increase its market share, improve its market positions, supplement existing business or penetrate new segments. Potential companies are, according to guidelines, subjected to a careful analysis of opportunities and risks through standardized processes such as extensive due diligence procedures and are assessed on the basis of yield/risk considerations. Following approval proceedings carried out over several stages, the Executive Board and, where the transaction volume exceeds defined value thresholds, the Supervisory Board of Rheinmetall AG decides on the acquisition project. However, it is possible that the objectives, potential synergies and cost savings that the Group is pursuing with the acquisition may not be achieved or may not be achieved to the planned extent.

The integration of technologies, products, processes and employees harbors risks. The integration process could prove to be more difficult, time-consuming and cost-intensive than assumed. Risks can arise in connection with the activities of newly acquired companies that were either not previously known or not considered significant.

Procurement risks

Risks can arise in connection with the purchasing of raw materials, parts and components in the form of unexpected supply shortages, delays or bottlenecks in delivery, quality problems or price increases. This is countered through ongoing market monitoring, structured procurement concepts and the avoidance of dependence on individual suppliers. International purchasing activities, careful selection of suppliers, annual supplier reviews, quality and reliability checks on suppliers, alternative suppliers, medium- and long-term supply contracts and appropriate safety stocks also reduce potential risk. Cost escalation clauses are also agreed in contracts where possible, to minimize negative effects from increases in purchase prices to a large degree.

An inadequate energy supply for companies of the Rheinmetall Group under cost-efficient conditions constitutes a risk for competitive production at the sites. It is not possible to ensure complete hedging of fluctuations in the price of energy sources or to guarantee that increases in energy prices will be passed on to customers. Rising energy costs are addressed by bundling procurement volumes and through coordinated invitations to tender, long contract durations and optimization of the electricity price via the European Energy Exchange in Leipzig.

Germany's energy turnaround is expected to lead to expansion of electricity grids and a significant increase in the share represented by renewable energies. We believe constantly rising electricity prices and the growing EEG levy represent a risk – a development that can jeopardize the ability of energy intensive industrial companies, like some companies in the Automotive sector, to compete in the international marketplace.

IT risks

Information and data are exposed to a range of growing threats with regard to availability, confidentiality and integrity. The networking of sites and complex systems in organizational and IT terms entails risks. Disruptions to IT systems, IT applications and infrastructure components that are critical to operations can severely compromise the management of business and production processes and cause serious harm to the business.

Networks can fail, disturbances and interruptions to operations can occur, and data can be falsified, destroyed, subject to spying or stolen as a result of program or user errors, manipulation or external influences. Potential risks relating to information technology are limited through modern IT infrastructure standards, IT security rules, IT security training and adequate precautions to protect against the loss of data, unauthorized access to data or misuse of data. Regular investment and security updates ensure that the software and hardware installed uses state-of-the-art technology. Appropriate back-up and recovery procedures are also implemented, along with virus scanners and firewalls to avert risks. Together with competent service providers certified to ISO 27001, the technical configuration, functional security structures and efficient operation of the IT architecture are reviewed on a regular basis and continuously improved.

Personnel risks

The achievement of our ambitious, growth-oriented corporate targets and the long-term economic success of the Rheinmetall Group depend to a large extent on qualified and committed employees. We are improving the company's reputation and positioning Rheinmetall as an attractive employer through various HR policy initiatives and campaigns. Losing competent employees as well as shortages and being unable to fill vacant posts adequately could pose a risk, which is counteracted through, for example, interesting areas of responsibility, a motivating work environment, performance-related remuneration, systematic employee development measures and individual career planning. In view of demographic change and the potential resulting skills shortage, age structure analyses are carried out at regular intervals and the results are taken into account when organizing work and structuring the organization, as well as in staff and succession planning and qualification measures.

Rheinmetall Automotive is faced with tough competition from other companies in attracting qualified employees. New mobility concepts and, above all, new drive concepts for cars, mainly hybridization and all-electric drive systems, will change the requirements for the available expertise in research and development as well as production. This applies equally to automotive manufacturers and their suppliers. Our companies are already discovering that it is becoming more difficult to attract engineers with specialist knowledge of electrical engineering throughout the world. Generally, this situation will get worse as the pressure to innovate in the industry as a whole will increase.

Pension risks

The Rheinmetall Group's companies in Germany, Switzerland and other countries have awarded their employees defined benefit plans as part of company pension plans. These pension plans grant eligible staff lump sum payments or lifelong pensions, depending on how the plan is designed, which are subject to increases that are fixed, variable or linked to inflation. The development of inflation, the level of interest rates and longevity represent risks. Existing obligations under pension plans are covered by separate assets (e.g. real estate, bonds or shares) to differing degrees. The value of these pension assets is subject to risks, especially interest rate, market and share price risks. Investment strategies for pension assets take account of the maturity structure and funded status of the covered obligations, in particular.

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Environmental requirements

A large amount of land owned by the Rheinmetall Group has been subject to industrial usage for decades. For this reason, it cannot be ruled out that pollution has also been generated during this time as a result of production that Rheinmetall is not yet aware of. Sufficient provisions have been recognized for necessary measures to safeguard against or clean up identified pollution. It is possible that the relevant authorities may issue regulations that require costly clean-up measures.

We counter potential environmental risks by implementing statutory environmental standards, professional and safe storage of hazardous substances and environmentally friendly disposal of waste and hazardous substances. The tightening of environmental protection provisions and environmental standards could lead to additional unplanned costs and liability risks over which Rheinmetall would have no influence.

Legal risks

Legal risks can arise due to legal disputes with competitors, business partners or customers and as a result of changes to the legal framework in the relevant markets. When making decisions and designing business processes, the Group is not only supported by detailed advice from its own specialists but, in certain cases, also calls in renowned outside experts and specialists. Potential losses, damage and liability resulting from ordinary operations are appropriately covered by insurance policies or accounting provisions.

Following the squeeze-out of external shareholders at Aditron AG in 2003, investors initiated legal proceedings in order to review the adequacy of the cash compensation of €26.50 per share offered. In its decision of December 15, 2016, the Düsseldorf Higher Regional Court set the appropriate amount of cash compensation per common share of Aditron AG at €30.87. Rheinmetall was notified of this decision on January 11, 2017, and the company published it in the Federal Gazette in accordance with section 14 of the *Gesetz über das gesellschaftsrechtliche Spruchverfahren* (SpruchG – German Act on Company Law Award Proceedings) on January 17, 2017. The subsequent payment of €4.37 per share plus interest to external shareholders was settled on March 6, 2017.

In March 2012, Rheinmetall Air Defence was blacklisted, in our opinion unfairly, by the Indian Ministry of Defence. In September 2012, Rheinmetall Air Defence went before the Delhi High Court to contest this order and its consequent exclusion from the Indian market. Proceedings are ongoing.

Appropriate provisions have been established based on the known facts for the risks arising from the legal proceedings described above and other proceedings as far as is considered necessary and economically viable. However, it is naturally difficult to predict the outcome of pending legal proceedings. Costs can arise on the basis of court or official decisions or the conclusion of settlements that are not covered or not fully covered by allowances or insurance policies and thus exceed the provisions that have been made. However, after a thorough review, we do not believe this will occur.

Regulatory risks

Regulatory and legislative changes at national or European level may involve risks that could negatively affect our earnings situation. For example, this applies to new or extended laws and other amended legal frameworks, e.g. export controls. Embargos, economic sanctions or other forms of trade restriction could be imposed on countries in which we operate by the European Union, the US or other countries or organizations. We could be exposed to claims from customers due to the termination of such business activities in such countries.

Compliance risks

Compliance cases can cause many different types of damage and can have serious consequences, such as the discontinuation of business relationships, exclusion from orders, negative assessments on capital markets, imposition of fines, the absorption of profits, claims for damages as well as civil or criminal proceedings. There is also the risk of significant and lasting damage to the Group's reputation. Customers, shareholders, employees and also the general public could lose trust in our company. In itself, the examination and clarification of alleged cases can result in considerable internal and external costs.

The compliance organization is designed to ensure proper modes of conduct and behavior on the part of a company and its employees and to make sure that potential or actual infringements of external or internal regulations are responded to appropriately. This is supposed to prevent any liability risks, risks of a penalty or a fine and reputation risks, in addition to other financial disadvantages, loss or damage that the company may incur as a result of misconduct or violations of the law. The regular execution of a Group-wide compliance risk assessment (top-down and bottom-up) helps to identify systemic and company-specific compliance risks. Measures to introduce or improve international or local structures, guidelines, processes, IT systems and training content are derived from the results.

However, despite extensive and multi-level inspection and control mechanisms, the possibility of risks arising from unlawful activities of individual parties cannot be ruled out. Alleged cases are investigated actively. In investigative proceedings we cooperate with the relevant authorities. Proven misconduct results in consequences for those involved as well as adjustments in the organization. However, the financial impact of compliance cases on the Group's results is very difficult to estimate. Depending on the case and the circumstances, a considerable range is to be assumed.

Tax risks

Tax risks can result from changes in the legal or tax structure of the Rheinmetall Group or from assessment periods which are still open. The differing assessment of circumstances during audits can lead to claims on the part of the tax authorities. There is also the risk that the tax burden for the Rheinmetall Group could increase as a result of changes to tax legislation or court decisions.

Financial risks

The profitability of ongoing business activities and the assets of Rheinmetall are sometimes significantly influenced by financial risks arising from ongoing business operations. The material financial risks for Rheinmetall comprise the liquidity risk, counterparty risk and market price risks resulting from changes in interest rates, exchange rates or commodity prices.

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By liquidity risk Rheinmetall means the risk that existing or future payment obligations will not be met or will not be met when due. In order to control this risk, all cash transactions of the Group are identified and assessed as part of rolling twelve-month planning. The values ascertained in this manner are compared to the available financial scope to identify potential financing gaps at an early stage. These simulations also include worst-case scenarios such as payment defaults or unexpected working capital requirements. When determining its financial scope, Rheinmetall takes care to ensure that adequate reserves are held for potential deviations from planning at all times.

Rheinmetall's liquidity requirements are currently covered in the long term by the €500 million syndicated credit facility that is due to run until September 2022 and the promissory note loans for €243 million in total issued in 2014, 2016 and 2017. In addition, in October 2016, Rheinmetall took up a development loan with favorable terms from the European Investment Bank, which was disbursed in summer 2017. To cover peaks in liquidity throughout the year, Rheinmetall has direct access to the money market with its €500 million commercial paper program and its flexible asset-backed securities program. Various bilateral credit facilities have also been firmly agreed. Financing requirements are therefore covered on a broadly diversified basis, both on the money and capital markets and via individual banks or several banks.

Prepayments represent another key element in managing liquidity risks, particularly in project business in the Defence sector. Guarantees must regularly be provided for these. Once again, requirements are derived here from project plans and care is taken to ensure that the necessary credit lines are generally utilized at a rate of between 50% and 70%, to allow adequate scope for future or unplanned guarantee requirements.

Counterparty risks exist in connection with deposits, financing commitments and other financial receivables such as positive fair values arising from hedging transactions. Rheinmetall counters these risks by awarding commercial banking business on a broadly diversified basis and subject to creditworthiness. Financial transactions are performed only with bank or insurance partners with an investment grade rating from a recognized rating agency. Given Rheinmetall's customer mix, credit risks arising from operations are negligible. These risks are assessed on an individual basis in connection with long-term orders and reduced or hedged by means of prepayments, credit insurance, guarantees or letters of credit. The Rheinmetall Group is not dependent on any customers or countries that could jeopardize the Group's continued existence as a going concern in the event of negative development.

Rheinmetall reduces risks arising from changes in market prices, such as exchange rates, interest rates or raw materials, as far as possible through appropriate contractual agreements. With regard to currency, this essentially involves cost escalation clauses, in which long-term price agreements refer to specific rates and are adjusted over time. To estimate any additional potential impact on earnings, Rheinmetall simulates simple scenarios and derives hedging strategies on the basis of these, which reflect the different business structures of the corporate sectors. Interest rate risks arise from changes in interest rates on the money and capital markets and occur in two forms: variable-interest financial instruments are subject to a cash flow risk, as future interest payments can fluctuate in terms of their amount; in the case of fixed-interest financial instruments, valuation effects occur that are of relevance to earnings, as a result of fluctuations in fair values depending on interest rates.

Both of these effects are of only minor importance to Rheinmetall as the promissory note loans are largely fixed by contract or through derivatives in the interest rate. As these figures are recognized at amortized cost, fluctuations in fair value affect neither earnings nor equity. The cash flow risk from variable interest on money market programs is offset to a high degree by corresponding opposite cash positions in the Group.

Commodity price risks are limited by agreeing price variation clauses in customer and supplier contracts. In cases where this is not possible or is possible only to a limited extent, these risks are hedged financially using derivatives. This is regularly the case for industrial metals and in the energy sector. For the management of all market price risks, hedging decisions are made and documented in regular committee meetings and only standard instruments with counterparties with impeccable credit ratings are used.

Opportunity management in the Rheinmetall Group

Our business policy is geared towards maintaining and expanding our current business liberties and financial flexibility. The goal is to ensure the long-term and economically successful existence of Rheinmetall for the benefit of all stakeholders. The opportunities that arise must be seized on to the exploit potential for success. Market, industry and technology trends are monitored before being analyzed and assessed in terms of their strategic and economic significance.

The operating units are responsible for the identification and initial assessment of opportunities and the potential for success. They are supported in this by various functions at Group level, such as Corporate Development.

Opportunities for the current fiscal year are managed firstly in review sessions between the Executive Board and the heads of the divisions and central departments. They discuss the economic, market and sales development, competitive situation and operating performance of the units assigned including the associated opportunities. Secondly, the opportunities that arise are logged and evaluated as part of the forecast produced three times a year.

Opportunities and potential for success deemed strategically important are, on the one hand, included in the three-year medium-term corporate planning and, on the other, strategy meetings for periods beyond this horizon, where they are assessed in terms of their significance to future development and assigned a budget if necessary.

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Risks and opportunities

Risks in the Automotive sector

Any change with regard to customers, e.g. relocation of production sites, termination of customer relationships, sale of companies, insolvencies, declines in demand and changes in customer requirements, can lead to fluctuations in prices, quantities and margins, which can result in a decline in operating activities and/or reduce the value of investments.

Vehicle manufacturers are engaged in fierce international competition with each other as a consequence of which they are exposed to tough innovative and, especially, cost reduction constraints, which they attempt to pass on to their suppliers. Companies in the Automotive sector are combating the impact of this trend by investing in new products, deploying modern manufacturing processes, cost-saving technologies and new materials and realizing potential savings in corporate functions.

Declines in automotive demand worldwide and in certain countries are countered by the expansion of our international presence and by marketing products outside the automotive industry. Advantageous economic parameters for new locations and the expansion of existing production capacities are exploited. Additionally, the diversified customer structure allows fluctuations in the production figures of individual automotive manufacturers to be balanced out. Thanks to the broad product range and low reliance on individual customers, it is possible to cushion price risks, weak demand and insolvency risks. Despite all measures taken in relation to sales, production and the product portfolio to ensure capacity is utilized at the sites, the need to adjust capacity even to the extent of closing certain sites may arise.

Furthermore, Rheinmetall Automotive's risk profile may be influenced by structural market risks such as the emergence of new suppliers, product substitution, delivery bans and protectionist trade barriers such as punitive tariffs as well as consolidation trends on sales markets. For example, in the case of combustion engines diesel drive systems are a topic of intense debate due to their high level of nitrous gas and particulate emissions in passenger car applications. In 2017, the first automotive manufacturer announced that it would not be developing any new diesel engines. This is not yet to be seen as the industry abandoning diesel technology, however, we cannot rule out announcements of this kind from other automotive manufacturers in the near future. Upheaval is expected in the automotive and automotive supply industries due, among other things, to new drive concepts. Hybridization and electromobility require new vehicle components, making it necessary to redefine the classic technology and supply chain relationships between manufacturers and suppliers.

Bottlenecks in supply and sharp fluctuations in prices for energy and raw materials involve significant risks. Price risks for raw materials, particularly aluminum, copper and nickel, are countered with cost escalation clauses in contracts on the sales side. When procuring raw materials that are traded on the stock market, the sector's central Commodities Office manages the timing of purchases and the volume purchased in consultation with the operating units, making use of financial hedging instruments.

The potential insolvency of suppliers represents a further risk on the procurement side. This risk is countered by carefully selecting subcontractors, spreading the risk by distributing the purchase volume across further suppliers and supporting suppliers in emergency situations if necessary.

Appropriate insurance cover is in place for warranty, product liability and recall risks, which is reviewed periodically and adjusted where necessary.

In the automotive industry, manufacturers and suppliers are closely linked in working together to develop and produce vehicles. When selecting suppliers or even preselecting suppliers, the evaluation of whether the respective sustainability standards, which include, among other things respect for employment and social standards as well as internationally recognized human rights, are complied with in the delivery chain is increasingly significant for automotive manufacturers. A large number of manufacturers, including virtually all well-known European and North American manufacturers, oblige their suppliers to submit annual self-assessment questions, which enable them to rate performance and progress regarding sustainability. There is a risk that Rheinmetall Automotive does not sufficiently comply with OEM requirements and therefore cannot be considered when contracts are awarded.

Rheinmetall Automotive has had a comprehensive set of compliance-related rules in the form of guidelines plus company directives and operating instructions that ensure staff comply with legislation at all times and prevent violation of applicable legislation and guarantee staff act appropriately and correctly in their day-to-day business. However, despite multi-level inspection and control mechanisms, the possibility of risks arising from unlawful activities of individual parties cannot be ruled out. Provisions are created for any possible compliance cases.

Opportunities in the Automotive sector

Experts generally predict a positive development for the international automotive market. Thus, for example, in their January 2018 forecast for the next five years, IHS Markit anticipate an average increase in the production of passenger cars and light commercial vehicles of 2.1% per year. We also see further opportunities for us.

Technological opportunities through the optimization of conventional drive systems – The combustion engine will remain the dominant drive system for individual mobility in the short to medium term. However, the engines used will have to comply with increasingly stringent international regulations with regard to emissions of pollutants, particularly carbon dioxide, which affects the climate. As a result of the introduction of the new test procedure, the Worldwide Harmonized Light-Duty Vehicles Test Procedure (WLTP) in Europe and regional adjustments in other countries and regions throughout the world, this is becoming ever more demanding for vehicle manufacturers.

Development engineers influence consumption and emissions in diesel and gasoline engines both directly, through technical measures relating to mixture control and gas exchange, and through applications that will indirectly help to minimize friction losses and utilize auxiliary units according to individual needs. Rheinmetall Automotive already offers a wide range of innovative and competitive components and systems in both areas. These include divert-air valves, wastegate actuators and pressure control valves for exhaust gas turbochargers as well as specially coated pistons, plain bearings and engine blocks and variable oil, coolant and vacuum pumps. We have been able to book our first order for our new “UpValve” variable valve control system, which was developed for use in turbocharged gasoline engines and achieves consumption benefits of up to 5% depending on the reference cycle. Building on this high level of technological expertise, Rheinmetall Automotive will further exploit its capacity for innovation.

Technological opportunities through new drive concepts – The role of the combustion engine will change. The proportion of vehicles that rely solely on a combustion engine will decline in the medium to long term, while the use of hybrid vehicles as a bridge technology to electromobility as well as electric vehicles and vehicles with fuel-cell drives will increase.

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As a specialist in the field of drive systems we see far more opportunities than risks in any extended portfolio. For example, we have already developed cast components for battery trays in electric vehicles and complex cooled aluminum housings for electric drives and have received the first series orders from well-known automotive manufacturers. An e-traction engine, which is characterized by high levels of efficiency and low levels of energy loss combined with minimized size, is under development. This drive system will offer numerous applications since speed and torque are extremely scalable.

Added to this are all-electric auxiliary units such as electric vacuum pumps that ensure comfort and safety, for example during braking, even when the combustion engine is switched off or there is no combustion engine. The efficient use of energy is a key capability, especially in electrically powered vehicles.

This also requires effective thermal management, which is why Rheinmetall Automotive has extended its portfolio to include system components for conditioning the passenger compartment or vehicle components in the form of electric coolant switch and control valves. Furthermore, in the future there will be a requirement for systems for extending the range of electric vehicles which can, for example, be created with heat pump components, for which orders for prototypes have already been received from several customers, or in an extreme case by using range extenders developed by Rheinmetall Automotive. Another key starting point for future vehicle concepts is light construction, which we are addressing with aluminum structural components and chassis components.

Opportunities through diversification – Policies on pollutants and greenhouse gases set targets not only for passenger cars and light commercial vehicles, but also for heavy commercial vehicles. Particularly stable, highly-developed and innovative drive systems must therefore also be introduced for heavy commercial vehicles. Rheinmetall Automotive uses its extensive specialist knowledge, developed in connection with advanced drive technologies for passenger cars, for these vehicles as well. We also have long-standing close relations with manufacturers of heavy commercial vehicles, which we have developed as a key pistons supplier in this segment. We were therefore also able to supply products from the Mechatronics division to these customers and manufacturers of heavy construction site vehicles and agricultural machinery, such as exhaust gas recirculation valves, exhaust gas recirculation cooling modules and exhaust gas mass sensors, and to win related contracts. We also used our specialist technological expertise from the Hardparts division for products outside the automotive industry, for example in order to develop large-bore pistons and plain bearings specifically for electricity generation, heavy construction site vehicles, mining equipment, locomotives, shipbuilding and agricultural machinery.

Geographical opportunities – Rheinmetall Automotive intends to continue optimizing its business activities from a geographical viewpoint in the future, according to the needs of the automotive markets. In particular, the emerging economies of India and China are expected to offer automotive manufacturers and their suppliers growth potential in the coming years, due firstly to rising demand for passenger vehicles and light and heavy commercial vehicles, and secondly to the introduction of increasingly strict requirements to reduce emissions of pollutants and carbon dioxide.

Our aim is to benefit from these megatrends through the prudent expansion of our existing production capacities in China and India and the deployment of our expertise from the major automotive markets in NAFTA and Western Europe. In concrete terms, we will build on our market presence in China, for example, in order to exploit expected medium-term to long-term growth in this region, in particular by expanding our existing 100% subsidiaries and concluding strategic joint ventures. We also wish to increase our market share in India with the aid of our production facilities in Pune and Supa.

Risks in the Defence sector

Defence's business areas are not directly dependent on the state of the economy. However, risks lie in dependence on spending patterns for public budgets in Germany and foreign customer nations. This continues to lead to shifts and cuts in state budgets, which can also affect defence. Political, economic, commercial and regulatory influences and changes in the armaments technology requirements of customer nations, along with budget restrictions or general financing problems on the part of customers, can result in risks in the form of delays in the awarding of contracts, time extensions or even the cancellation of orders. Risks also arise from increasing transatlantic competition. Moreover, there is tough international competition on export markets to which the Group has access. Higher pre-financing due to worsening conditions for prepayments and possible financial investments in projects also constitute risks.

Unforeseen difficulties with the implementation of projects can also lead to unplanned charges. As well as uncertainty in calculations, these include altered economic and technical terms and conditions following the conclusion of a contract, unplanned changes or additional customer requirements, unexpected technical difficulties or faults, problems with business partners or suppliers and deferred dates of acceptance and settlement. By means of professional project management and comprehensive quality management measures, as well as the appropriate formulation of contracts, it is possible to limit these risks, but not to exclude them altogether.

The expansion of international business activities harbors the risk that, in some regions of the world, due to the industry-specific practices in place in the countries in question, delays may arise in order processing or risks arising from the payment practices of customers or business partners that are customary in these regions may increase. As a matter of principle, Rheinmetall Defence works with contractual parties with good creditworthiness. Risks are limited as far as possible by means of compliance checks on business partners in line with the business partner guideline we introduced in the year under review, professional project management, comprehensive project controlling and suitable formulation of contracts. However, despite ongoing monitoring, delayed payments or even payment defaults on the part of contractual parties may unexpectedly arise.

The business activities of Rheinmetall Defence have a strong international focus. Approximately 71% of sales are achieved with customers outside Germany. New laws or changes to general legal and regulatory conditions, in procedural matters with existing directives or in the licensing practice for military equipment exports can negatively impact the development of our Defence business and thus the earnings situation at the Rheinmetall Group.

Opportunities in the Defence sector

Opportunities thanks to the modernization of armed forces – In most western industrialized nations, there is an ongoing need for extensive modernization of military equipment, especially in terms of armed forces technology. Current threats and foreseeable potential risks in foreign military deployments mean that ongoing investment is still needed in improving equipment and protecting soldiers.

The companies in this corporate sector specialize in the development and production of components and systems for the protection of people, vehicles, aircraft, ships and assets. They are a strong partner to the German armed forces, their allies and friendly armies, along with civil national security forces, and protect the forces involved in foreign operations.

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Risks and opportunities

Opportunities for the business units in the Defence sector, which since January 2016 has been divided into the three divisions of Weapon and Ammunition, Electronic Solutions and Vehicle Systems, are tied to the changing military requirements of the German armed forces and other armed forces from around the world. The range of products and capabilities of Rheinmetall Defence is tailored to central defence technology requirements resulting internationally from the ongoing need for substantial modernization of armed forces and new military deployment scenarios. Reference projects commissioned by the German armed forces, such as the series contract for the Boxer protected transport vehicle, the Puma infantry fighting vehicle and the Gladius infantry project, are key factors in winning further orders abroad.

Opportunities thanks to political developments – Foreign deployments of UN and NATO troops, crisis intervention, peace keeping missions, as well as the increasing importance of defending alliances: Owing to constant changes in national and international security and defence policy, brought about, for example, by geopolitical realignment of economically strong nations, political upheaval, new hot spots and escalating conflicts, the armed forces of the 21st century are facing new challenges in national security, as well as in the planning, implementation and securing of military deployments abroad.

Huge threats to external and internal security arise from unstable nations and dictatorial regimes as well as terrorists and radical activists. Effective protection systems are of central importance in the deployment scenarios of today and the future, in order to offer a maximum level of safety to soldiers.

The Defence sector may benefit from ad hoc procurements triggered by the deployment of forces in crisis regions.

Opportunities from European and German programs – We see additional opportunities arising for our company over the next few years from the NATO states' voluntary commitment in September 2014 and July 2016 to each scale up their defence budgets to the guideline of 2% of their respective gross domestic products within a decade to, firstly, achieve their NATO capability objectives and, secondly, to close gaps in NATO's capability. According to a NATO forecast from June 2017, defence expenditure by the 28 NATO members will account for a 2.43% share of GDP in 2017 (previous year: 2.42%), while a figure of 1.46% is assumed for NATO countries not including the US (previous year: 1.43%).

Defence expenditure as a percentage of GDP has fallen to less than half since 1990 (1990: 2.8%; 2017 estimated: 1.22%). Numerous hotspots, expectations that Germany will play a more active role in foreign and security policy as well as demands arising from national and alliance defence demand a change of thinking and a trend reversal. Armed forces that are ready for operations and capable of reacting require sufficient resources and equipment, both in terms of personnel and material, that is correctly structured and adequate for the task.

Opportunities through further internationalization – Despite a recent moderate rise in defence budgets, including those of countries that have traditionally been important Rheinmetall customers, Defence's strategic priority lies in tapping into new growth markets. We believe Asia and Australia represent particularly attractive growth opportunities.

Opportunities thanks to consolidation – Other growth opportunities may arise for us as a result of the expected ongoing consolidation process in the European defence market. This may occur as a result of targeted acquisitions of products and/or technology or on the basis of company acquisitions which allow more rapid regional market access.

Internal accounting-related control and risk management system

The internal control and risk management system related to the accounting process at the Rheinmetall Group includes all principles, procedures and measures which ensure, by both organizational and technical means, that all business processes and transactions are recorded in the accounting system promptly, accurately and consistently. In addition to defined control mechanisms, e.g. manual coordination processes and technical coordination processes for systems, this includes the separation of administrative, executive, settlement and approval functions together with guidelines and operating instructions. Changes to the economic, legal and regulatory environment of the Rheinmetall Group are analyzed to determine whether adjustments to the accounting-related control and risk management system are necessary.

Accounting guidelines – The IFRS accounting guidelines cover all IFRS regulations that are of relevance to Rheinmetall AG. They explain the IFRS regulations and specify accounting procedures. The guidelines must be observed by all companies included in the consolidated financial statements, thereby ensuring standardized accounting. The IFRS accounting guidelines are adapted to changes in IFRS at least once a year. Companies are informed about specific changes to guidelines. The content of the guidelines is the responsibility of the main Accounting department of Rheinmetall AG.

Accounting processes in companies included in the consolidated financial statements – It is the responsibility of the management of the respective companies to prepare the financial statements of companies included in the consolidated financial statements. The accounts and financial statements are prepared using SAP-based accounting systems (SAP-FI). Procedures are implemented in the accounting process to ensure the correctness of the accounts and financial statements. The management of each Group company monitors compliance with IFRS accounting guidelines and other guidelines and operating instructions in force across the Group. The management must confirm the correctness of the financial statements in a corresponding declaration.

Consolidation and Group accounting process – The main Accounting department of Rheinmetall AG is responsible for central management of the Group accounting process. It stipulates the schedule for the consolidated financial statements and monitors compliance with deadlines.

The consolidated financial statements of Rheinmetall AG are drawn up with the aid of the consolidation software SAP SEM-BCS. A standardized, binding chart of accounts is incorporated into this system, which covers virtually all the information required for the IFRS consolidated financial statements of Rheinmetall AG. The individual companies record the financial statements prepared in accordance with IFRS accounting guidelines in the consolidation software. After this IFRS single-entity financial statement data is recorded, it then undergoes an automatic plausibility check and system-based validation. If error or warning messages are displayed during this process, these are to be analyzed and dealt with by the person responsible for the single-entity financial statements. Employees in the main Accounting department then perform additional automatic and manual checks. The manual and automated consolidation measures undergo system-based checks and automatic plausibility checks.

The consolidated financial statements are also audited on the basis of standardized reports using comparisons of target and actual performance, trend and deviation analyses and detailed evaluations. A check is carried out every quarter to ensure the completeness of the scope of consolidation.

Economic report

Risks and opportunities

Auditing and monitoring – As a central department that is independent in terms of instructions and processes in line with a guideline promulgated by the Executive Board, Internal Audit examines workflows, structures and policies for their correctness, security and economic efficiency on the basis of an audit plan adopted by the Executive Board. The audit plan establishes the focal areas for the risk-oriented audit activities and the scope of the audits to be performed. These are then implemented by Rheinmetall employees or auditing companies as mandated by Rheinmetall AG. If necessary, the Executive Board will also commission Internal Audit to conduct special audits. Risks identified and weaknesses discovered during audits are promptly eliminated by those responsible in each case. The Executive Board and Audit Committee of the Supervisory Board are regularly informed of the results of the audit and of the implementation status of improvement measures.

The auditors examine the consolidated financial statements and the summarized management report to determine whether they comply with applicable accounting regulations and other relevant provisions. They check the IFRS accounting guidelines and make these available to the auditors of companies included in the consolidated financial statements. The auditors of these companies check whether the IFRS accounting guidelines have been applied in full to the financial statements prepared for consolidation purposes and establish the correctness of the annual financial statements prepared in accordance with applicable accounting principles. The audits performed by these auditors also include an assessment of the effectiveness of the accounting-related internal control system based on spot checks in subdivisions.

Assessment of the general risk situation

Potential risks for companies in the Rheinmetall Group include on the one hand factors that cannot be influenced, such as the national and international economy and the general economic situation, and on the other hand risks that can be influenced directly, which are generally operational risks.

The aforementioned risks are not necessarily the only risks to which the Rheinmetall Group is exposed. Risks that have not yet been identified or that are still assessed as insignificant can materialize under altered circumstances, hinder business activities and adversely impact the assets, financial situation and earnings of the Group. The auditor, PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, examined the early risk identification system of the Rheinmetall Group to ensure that it complies with the provisions of stock corporation law as part of its audit of the consolidated annual financial statements and confirmed that it fulfills all legal requirements in accordance with section 91(2) AktG and is suitable for identifying developments that could jeopardize the continued existence of the Group at an early stage.

In accordance with the basis outlined for the assessment of risk factors and taking into account the overall risk situation, major asset, financial and earnings risks jeopardizing the Rheinmetall Group on a long-term basis were not identifiable during the past fiscal year. The overall risk situation in the Rheinmetall Group did not change substantially in fiscal 2017 compared to the previous year.

The assessment of the overall risk situation is the product of consolidated consideration of all individual material risks. We are confident that the risks presented are limited and manageable. In our opinion, no risks exist from today's perspective on an individual basis, in combination with other risks or as a collectivity that may significantly jeopardize the continued existence of Rheinmetall AG and the Rheinmetall Group as a going concern in the foreseeable future.

Economic report

Notes on Rheinmetall AG

Result of operations

The single-entity financial statements of Rheinmetall AG for fiscal 2017 have been prepared in accordance with the accounting regulations of the German Commercial Code (HGB) and the additional provisions of the German Stock Corporation Act (AktG), and have been issued with an unqualified auditor's opinion by the auditor, PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, Düsseldorf branch.

In addition to the results of subsidiaries, the earnings situation of Rheinmetall AG is determined to a large extent by expenses and income in central Group financing.

Income statement of Rheinmetall AG in accordance with HGB (condensed version) € million

	2017	2016
Investment income	136	178
Net interest	(9)	(11)
Sales	59	56
Other operational income	65	49
Personnel expenses	40	33
Other expenses	109	149
EBT	102	90
Taxes on income and revenue	(28)	(22)
Net profit for the year	74	68
Changes in retained earnings	-	(3)
Net earnings	74	65

Net investment income of €136 million was generated in fiscal 2017 after €178 million in the previous year. The Defence sector accounted for €29 million of this (previous year: €95 million). The Automotive sector reported net investment income of €107 million (previous year: €83 million).

Net interest income from central financing improved by €2 million from €-11 million to €-9 million.

In connection with the performance of the duties of a holding company, net other operating income and expenses of €-44 million (previous year: €-100 million) were incurred, together with personnel expenses of €40 million (previous year: €33 million). The net year-on-year reduction of €73 million essentially results from write-downs on financial assets of €68 million recognized in the fiscal year. There were no write-downs on financial assets in the past fiscal year.

Earnings before taxes amounted to €102 million (previous year: €90 million). Tax expenses amounted to €28 million in the year under review (previous year: €22 million). After deducting taxes, net income of €74 million remained for fiscal 2017 (previous year: €68 million). After appropriations to retained earnings, net earnings of €74 million (previous year: €65 million) were reported.

Proposed dividend

At the Annual General Meeting on May 8, 2018, the Executive Board and the Supervisory Board of Rheinmetall AG will propose that the net earnings be used to pay a dividend of €1.70 per share, whereby the treasury shares held by Rheinmetall AG (December 31, 2017: 679,709; previous year: 870,788) are not entitled to a dividend.

Economic report

Notes on Rheinmetall AG

Net assets and financial position

The asset situation of Rheinmetall AG is largely defined by its holding function, i.e. by the management of investments and the financing of Group activities. This is reflected above all in the amount of the investments held and in the receivables due from and liabilities owed to Group companies. The total assets of Rheinmetall AG declined by €64 million to €2,506 million. Financial assets include shares in affiliated companies in the amount of €1,081 million (previous year: €1,019 million). This represents 43% total assets (previous year: 40%). Receivables from and liabilities to affiliated companies amounted to €665 million (previous year: €900 million) and €1,013 million (previous year: €949 million) respectively. They account for 27% and 40% of total assets respectively. The total assets of €2,506 million (previous year: €2,570 million) are financed by equity of €870 million (previous year: €842 million) as of December 31, 2017. The equity ratio climbed from 33% to 35% in the year under review. In equity, the decline of €62 million due to the dividend payment for 2016 and the reduction in treasury shares by €7 million were offset by net income for the year of €74 million. Liabilities decreased by €70 million year-on-year to €1,529 million as of December 31, 2017. The bond of €500 million repaid in September was offset by the issue of further promissory note loans of €122 million and the payout of the EIB loan of €250 million.

Balance sheet of Rheinmetall AG in accordance with HGB (condensed version) € million

	Dec. 31, 2017	Dec.31, 2016
Fixed assets		
Intangible assets, property, plant and equipment	45	38
Financial assets	1,089	1,033
	1,134	1,071
Current assets		
Receivables from affiliated companies	665	900
Other receivables, other assets	294	238
Cash in hand	413	361
	1,372	1,499
Total assets	2,506	2,570
	Dec. 31, 2017	Dec.31, 2016
Equity	870	842
Provisions	107	129
Liabilities		
Bond	–	500
Liabilities due to banks	493	122
Liabilities to affiliated companies	1,013	949
Other liabilities	23	28
	1,529	1,599
Total liabilities	2,506	2,570

Economic report

Report on expected developments

Upturn in the global economy continues but initial warnings of an end to the boom

According to the assessment of the International Monetary Fund (IMF), the economic upturn will not merely continue in 2018 but will gather further momentum. “The global economy is accelerating”, explained IMF Chief Economist Maurice Obstfeld at the World Economic Forum in Davos. In its latest World Economic Outlook Update from January 2018, the IMF forecasts global economic growth of 3.9% – 0.2 percentage points more than its last forecast in October 2017. In addition to sustained positive development in Europe and Asia, the experts at the Monetary Fund also expect the US government’s tax reform to stimulate the economy in the short term.

Growth in economic output of 2.3% is expected for the mature economies in 2018. The IMF expects the tax-cutting plans of the US administration to produce growth in gross domestic product of 2.7%. This represents a correction to the October 2017 forecast of plus 0.4 percentage points. Growth forecasts were also raised for the euro area (up 0.3 percentage points) and Germany (up 0.5 percentage points). Accordingly, economic output in the euro area is to increase by 2.2% in 2018, while the German economy is expected to grow by 2.3%. In contrast, against the backdrop of the Brexit vote, the IMF currently only expects modest growth of 1.5% for the UK economy, which would imply growth weakening for the second time in succession. Rather low growth – by international standards – of 1.2% is also expected for Japan.

A clear upward trend was also apparent in the developing and emerging countries in 2018: Overall the IMF expects growth in economic output for these countries of 4.9%, with China (+6.6%) and India (+7.4%) again featuring as the strongest economic engines. The fact that the recovery in Brazil and Russia is making further progress is another positive factor: the IMF expects growth of 1.9% for the Brazilian economy, while Russian gross domestic product is to rise by 1.7%.

Despite the generally positive outlook, the International Monetary Fund warns against excessive optimism regarding the economy. At the World Economic Forum in Davos, the IMF Chief Economist Maurice Obstfeld commented as follows in January 2018 regarding a possible end to the boom: “The next recession could be closer than we think and we have less ammunition to combat it than we had a decade ago – especially because countries are far more indebted than they were then.”

Global automotive market remains on track for growth in 2018 albeit at a slightly more moderate pace

According to the assessment by both the Association of the German Automotive Industry and the forecast by the analysts at IHS Markit, the global automotive market is still on track for growth in 2018. However, momentum must be expected to weaken slightly and regional development will differ significantly in some cases. IHS Markit expects growth of around 1.9% to around 97.1 million units for global production of passenger cars and light commercial vehicles up to 6.0 t. Accordingly, the NAFTA region and western Europe will only achieve growth of 1.6% and 0.8% respectively in 2018. The experts at IHS Markit are also expecting growth to slow in the previous growth engine China, with production expanding by 1.3%. In contrast, strong growth is expected for Brazil (+12.2%), Mexico (+7.2%) and India (+7.5%).

The following table provides an overview of the forecast for 2018 in the regions that are relevant to us.

Economic report

Report on expected developments

Production of passenger cars and light commercial vehicles up to 6.0 t in selected countries million

		2018	2017
World		97.1	95.3
Western Europe		16.7	16.6
	Germany 5.8		
Eastern Europe		6.0	5.7
	Russian Federation 1.5		
NAFTA		17.4	17.1
	USA 11.1 Mexico 4.2		
Brazil		3.0	2.6
Asia		52.0	51.4
	Japan 8.8 China 28.0 India 4.8		

Source: IHS Markit, January 2018

While the course adopted by President Trump and the consequences of Brexit, in particular, caused irritation in the year under review, attention is concentrated, above all, on technological developments in 2018. The threatened ban on diesel vehicles continues to cause uncertainty in the industry and among consumers. The Internet of things (IoT), artificial intelligence (AI) and big data will exercise a significant influence over the automotive industry as key cross-sector issues. Despite low levels of market acceptance so far, the automotive manufacturers have recognized electromobility as a commercial challenge of high priority, which is likely to intensify competition still further. However, this technology is still battling with substantial costs, low range and a lack of charging points. Nevertheless, Rheinmetall Automotive has created the technological requirements to be well equipped for the anticipated shift towards far more hybrid and electric vehicles in good time. This is evidenced, not least, by order intake of close to €500 million.

Conservative prognosis for truck engine production

Following the strong previous year, the analysts at IHS Markit are more cautious in their forecast for 2018 as regards the large truck markets. Strong double-digit growth in the markets of India, Eastern Europe and the US is offset by a slowdown in the order situation in Asia; the outlook for China and Japan, in particular, is negative. Following the growth in 2017, production levels remain high in Western Europe. Overall, IHS Markit forecasts a reduction of 4.5% for global engine production for heavy commercial vehicles over 6.0 t, which corresponds to a fall of 3.315 million units to 3.165 million units.

Production of heavy commercial vehicles over 6.0 t in selected countries '000

		2018	2017
World		3,165	3,315
Western Europe		501	499
	Germany 159		
Eastern Europe		124	112
	Russian Federation 94		
NAFTA		507	466
	USA 330 Mexico 160		
Brazil		91	86
Asia		1,926	2,138
	Japan 253 China 1,127 India 363		

Source: IHS Markit, January 2018

Rheinmetall Automotive supplies technology for today's drive systems and those of tomorrow

The trend among regulators towards cutting emissions in all areas of mobility is persisting. An EU resolution from fall 2017 envisages a reduction in carbon dioxide of 30% up to 2030. Emissions must be cut to 95 g/km by 2021. In large cities and emerging countries, there is increasing pressure to reduce CO₂ emissions. In Germany, courts decided to ban diesel vehicles in downtown areas for the first time in spring 2018. In addition, the EU Commission wishes to ensure that 30% of new cars coming onto the roads are equipped with electric or alternative drive systems by 2030 if possible. To this end, it is providing €800 million to expand charging stations for electric cars throughout Europe. Rheinmetall Automotive will make a considerable contribution to cutting emissions and complying with the more stringent emissions standards for conventional engines with new developments that are ready for series production such as the LiteKs-4 range of pistons.

Apart from further optimizing the combustion engine, Rheinmetall Automotive will align its production portfolio even more heavily with electromobility in the coming years. By as soon as the start of the next decade, more than half of sales are to come from electrification of the drive train. Numerous innovative components for hybrid and fully electric drives are currently being developed and tested, such as a recently developed modular battery pack and a 90 kilowatt electric drive system.

Besides electrification of the drive train, autonomous driving entails major technological challenges. In this field Rheinmetall Automotive can benefit from the expertise of the Defence sector, for example in the areas of cyber security and 360° virtual reality, as well as a cooperation agreed with Paravan GmbH, the global market leader in drive-by-wire technology, in fall 2017. This is the basis for future autonomous driving at the highest level (level 5), where a driver is no longer required. The cooperation is a crucial step for the development of remote-controlled, automated and autonomous systems at Rheinmetall Automotive.

Economic report

Report on expected developments

Modernization trend in the defence sector continues in 2018

The global trend towards increasing defence expenditure will continue in the current fiscal year. According to specialized analysts at IHS Markit, the global military budget will grow by 3.4% to USD 1,769 billion in 2018. It is not just the US, as the global number one for defence expenditure, that will provide additional funds for the military under the leadership of President Trump. In particular, the other NATO members are taking Trump's comments seriously and are no longer relying solely on the military reinsurance provided by the US.

For example, the Canadian government recently announced that it would increase military expenditure massively in the next ten years and will spend USD 24 billion on defence in the future. This would bring the Canadians close to the 2% target agreed in 2014 and, at the same time, reinforce their role within the military alliance. IHS Markit estimates Canada's defence budget for 2018 at USD 16.9 billion compared to USD 16.0 billion in the previous year. France is pursuing similar policies. At the beginning of 2018, President Macron announced that the defence budget would gradually be increased from currently 1.8% to 2% of gross domestic product by 2025. The French defence budget will increase by USD 1.1 billion to USD 53.6 billion in 2018.

In response to the new course adopted in Washington, Europe plans to work together more closely on defence in the future. In mid-November 2017, the foreign and defence ministers resolved on the initial steps towards establishing an EU defence union. 25 of the 28 member states have joined the initiative to date. It aims to achieve closer coordination of security and defence policy and implement specific military cooperation projects.

Here, the EU is exploiting new options, under German-French leadership, resulting from Brexit, as the UK was traditionally skeptical with regard to closer military cooperation and increasing integration in this area.

Defence budgets of selected countries billion

	Currency	2018	2017
Germany	€	38.5	37.0
World	USD	1,768.7	1,710.3
USA	USD	689.5	656.7
China	USD	214.3	201.8
India	USD	62.4	58.9
UK	USD	58.4	57.6
France	USD	53.6	52.5
Saudi Arabia	USD	56.0	52.1
Russian Federation	USD	46.6	50.9
Australia	USD	31.4	30.6
United Arab Emirates (UAE)	USD	18.8	18.8
Canada	USD	16.9	16.0
Poland	USD	11.2	10.5
Netherlands	USD	10.5	10.4
Algeria	USD	9.6	10.0
Norway	USD	6.7	6.2
South Africa	USD	3.8	3.9

Sources: Government draft of the federal budget 2018 and the financial plan until 2021, June 28, 2017 | IHS Markit, January 2018

Following the elections to the Bundestag in September 2017, the process of forming a government has proved far more difficult than in previous years. At the beginning of February 2018, the leaders of the CDU/CSU and SPD agreed on a coalition agreement to relaunch the Grand Coalition and declared in the chapter entitled “Germany’s responsibility for peace, freedom and security in the world”: “Our country will, together with our neighbors in Europe, have to assume more autonomous responsibility for its security and defence capability in the future”. To this end, the agreed NATO capability targets are to be achieved and gaps in capability closed, according to the coalition agreement. Germany will “also make an appropriate contribution to maintaining the deterrent and defensive capability of the (NATO) alliance and to a strong European defence in the future”. At the same time, the CDU/CSU and SPD confirm that the German government will invest further in the modernization of the German armed forces. Under the item “modern German armed forces”, it states that, “so that the German armed forces can properly execute the tasks assigned to them in all dimensions, we shall give soldiers the best possible equipment, training and support – this applies particularly to their personal equipment. To this end, we shall continue the trend reversals initiated in terms of personnel, material and finance in the German armed forces consistently”. According to the budget planning currently in force, an increase in the German defence budget from €38.5 billion in 2018 to €42.4 billion by 2021 is already envisaged.

Opportunities in Germany, in the NATO alliance and in friendly nations

As a leading European systems supplier for armed forces technology and a long-standing industrial partner of the German armed forces, Rheinmetall Defence is in a good position to compete for new orders. Thanks to our internationalization strategy pursued in recent years, we are also in a position to exploit market opportunities on a targeted basis outside Germany and NATO. We can therefore benefit from the sustained trend, both nationally and internationally, to modernize and reinforce the armed forces. At the same time, we are aware of our responsibility. In all our activities throughout the world, we comply with the general conditions of foreign policy and security policy set by the German government. For Rheinmetall Defence we see potential for further international growth, in particular, in NATO states such as the United Kingdom, Poland and the Baltic States, for example, as well as in friendly nations such as Australia and in the MENA region.

Executive Board statement on expected development in 2018

Rheinmetall remains on a growth course – We assume that the growth course of the Rheinmetall Group will also continue in fiscal 2018. Measured against the previous year’s figure of €5.9 billion, consolidated annual sales are set to rise organically by between 8% and 9% in 2018. We are anticipating sales growth in both corporate sectors. We expect that sales growth in the Automotive sector will again slightly outstrip the rise in global automotive production currently forecast by experts for 2018. In February 2018, forecasts by IHS Markit experts in respect of light vehicles (vehicles up to 6.0 t) predicted that international production will grow by 1.9% year-on-year to total around 97.1 million vehicles in 2018 as a whole. With an increase in the global defence budget forecast of 3.4% to €1,769 billion anticipated by IHS Markit experts, the Defence sector will also perform above average and should experience a substantial growth phase in 2018.

Economic report

Report on expected developments

Sales – 2018 forecast

		Forecast 2018		2017
Rheinmetall Group	Year-on-year growth in %	8-9	€ billion	5.9
Automotive	Year-on-year growth in %	3-4	€ billion	2.9
Defence	Year-on-year growth in %	12-14	€ billion	3.0

Sales performance in the Automotive sector is strongly influenced by economic development in the key automotive markets of Europe, North and South America and Asia. On the basis of current expert forecasts for global automotive production in the current year, we expect sales growth for Rheinmetall Automotive this year of between 3% and 4%.

For the Defence sector, we anticipate a double-digit growth in sales in the current fiscal year of between 12% and 14%. These sales expectations for 2018 are largely assured based on relatively high coverage through the existing order backlog.

Further improvement in earnings expected in 2018 – Assuming stable economic development, we expect an absolute improvement in the operating result and an operating margin of around 8.5% for Rheinmetall Automotive in fiscal 2018. In the Defence Sector, we also expect an improvement in the operating result in 2018 and currently anticipate an operating margin between 6.0% and 6.5%.

Operating result – 2018 forecast

		Forecast 2018		2017
Rheinmetall Group	%	around 7	%	6.8
Automotive	%	around 8.5	%	8.7
Defence	%	6.0 - 6.5	%	5.7

Taking into account holding costs and including expenses in the low double-digit millions for the realization and marketing of new technologies, we forecast a margin of around 7%. Positive net income slightly higher than the previous year's level is forecast the Rheinmetall AG management holding in fiscal 2018 (2017: €74 million).

Increase in Group EBT and EBT margin – On the basis of the forecast improvement in Group EBT and an improvement in the net interest result, we expect a further improvement in the pre-tax earnings (EBT) and the EBT margin in the Group.

Stable return on capital employed (ROCE) – On the basis of the forecast business performance, we expect a moderate increase in capital employed in fiscal 2018. If Group EBIT increases as forecast, we expect the return on capital employed to remain at around the previous year's level (2017: 13.4%).

Non-financial aspects of business activities

Reporting on aspects of sustainability

Following approval from the Bundesrat on March 31, 2017, the law to enhance companies' non-financial reporting in their management reports and Group management reports (CSR Directive Implementation Act) adopted by the Bundestag on March 10, 2017, has been passed. On April 19, 2017, this act implementing Directive 2014/95/EU (CSR Directive on the disclosure of non-financial and diversity information) was implemented in national law and became effective. As a result, the reporting of certain sustainability issues is regulated for the first time in Germany. Certain minimum aspects and associated disclosures that a company should discuss were defined for the content of the non-financial statement in section 289c(2) HGB. They relate to five topics: environmental, employee and social concerns, respect for human rights and combating corruption and bribery.

The CSR directive aims to boost the confidence of investors and consumers in companies, by ensuring that certain large companies, including Rheinmetall, provide more information on the non-financial aspects of their activity than was previously the case. The significance of disclosing information on social and environmental factors is to be increased with the aim of highlighting risks to sustainability. The new regulations must be observed for fiscal years commencing from December 31, 2016.

The Rheinmetall Group has been reporting on its sustainability activities on its website in the "Responsibility" section since October 2011. In May 2017, we also published our first comprehensive report on Corporate Social Responsibility in the Rheinmetall Group, which is based on the current guidelines of version 4.0 of the Global Reporting Initiative based on the "core" option.

In terms of content, the focal areas of our sustainability reporting stem from the materiality analysis carried out at the end of 2016, with which we identified the significance of various sustainability aspects and the areas of action for our companies with the aim of being able to improve our sustainability management continually.

Results of the materiality analysis

Very material	Material	Less material	Immaterial
Customers	Sustained value creation	Corporate citizenship	Biodiversity and conservation
Technology and innovation	Compliance	Diversity and equality of opportunity	Corporate volunteering
Competitiveness	Internationality	Work-life balance	Sustainable construction
	Product quality and safety		
	Capital expenditure		
	Supply chain		
	Energy efficiency		
	Fair remuneration		
	Employee satisfaction		
	Training and development		
	Attractive employer		

Business model

Rheinmetall AG operates in the markets for environmentally friendly mobility and threat-appropriate security technology. The Automotive sector occupies a leading position worldwide as an automotive supplier for engine-related modules and systems. As a leading European systems supplier for armed forces technology, Rheinmetall Defence is a reliable partner to the national and international armed forces and security forces. The Rheinmetall Group's business model is described in detail on pages 22 to 29.

Non-financial aspects of business activities

Stakeholders

Management approach

If we know the needs, interests, attitudes, concerns and opinions of our key stakeholders, we can focus our commercial decisions more effectively in line with their expectations. We therefore attach great importance to open and transparent discussion and regular dialog. With 186 companies in 30 countries, we have a very prominent presence in our markets and enjoy continual and lively dialog with various stakeholders, which include customers and business partners, shareholders and investors, employees, suppliers, the media, representatives of the worlds of science and research, society, politicians and authorities as well as associations and organizations. This allows us to establish and develop a trustful relationship as well as to receive inspiration and specific proposals at an early stage. As part of our holistic approach, we use a variety of external and internal formats and channels for communicating with our stakeholders, which we discuss in more detail on page 117 of our Corporate Social Responsibility Report 2017.

Customers

To be present in the relevant markets, to live and work there, to understand customers' needs and satisfy them, that is Rheinmetall's philosophy. Trusting, close and successful business relationships with customers are a key criterion for being able to develop products and processes. They are informed of development projects at an early stage and included in the development. The results from personal contact are critical to facilitating optimal product solutions and technical innovations. A substantial presence at major industry trade-fairs and the provision of informative customer events allow us to keep in touch with customers and develop new contacts. In 2017, Rheinmetall Automotive and Rheinmetall Defence were represented at 15 and 40 trade-fairs respectively in Germany and abroad. To keep our customers informed of all aspects of mobility and security, we also provide multimedia presentations, promotional films and animations, in addition to brochures, posters, product and service information sheets.

Shareholders and investors

As a joint stock corporation where the shares are held entirely in free float, direct interchange and trusting relationships with institutional investors, private shareholders, potential investors and analysts are of considerable importance for Rheinmetall AG. It is our aim to provide investors with a realistic estimate of the future development of the Rheinmetall Group and to lay the groundwork for a fair assessment of the Rheinmetall share through our investor relations activities.

Employees

To keep our employees continually informed and for an open dialog and productive exchange, we use various communication channels and formats: discussions with line managers, staff meetings and town hall meetings, site newsletter, the Intranet, CEO's letter, video message from the CEO and, since January 2018, also the Rheinmetall app "Inside" with central and local contributions and news, to cite just a few examples. We carried out the first Group-wide employee survey between June and August 2017. Around 13,000 employees seized the opportunity to express their opinions anonymously and provide feedback on the strengths and weaknesses of Rheinmetall. The participation rate of 56% underlines the interest and willingness of the workforce to participate actively in the development of the Rheinmetall Group. The results of the survey were analyzed professionally, areas for action and measures have now been identified.

Suppliers

The quality of our products is significantly affected by the quality of the raw materials, parts and components supplied. We report on relationships with our suppliers on page 107 et seq.

Non-financial aspects of business activities

Technology and innovation

Management approach

Our corporate responsibility is apparent in our products. Innovative strength and technological competence are key measures of competitiveness in the rapidly changing world of business. Tradition and innovation – the Rheinmetall technology group can draw on more than 125 years of specialist knowledge and industry experience in the Defence and Automotive sectors. Continuous and targeted research and development work is essential if we want to actively help shape technological change and successfully transact business over the long term in a diverse range of technologically demanding markets.

Technology and product developments open up growth opportunities

Highly qualified engineers and technicians use their expertise, skill and experience to fulfill ambitious customer requirements. Rheinmetall invests large sums year after year in research and development in order to increase its technological expertise, expand its market positions and secure the basis for the company's future success.

Market, industry and technological trends are systematically observed before being analyzed and assessed in terms of their strategic and economic significance. Thanks to close collaboration between Sales, Development, Production, Service and Marketing as well as intensive project work in partnership with our customers, new requirements of products, systems, processes and applications are quickly identified and acted upon with the shortest possible development periods. Product lines are continuously improved and expanded, while new or associated business areas are gradually developed further thanks to innovative products, future-oriented systems and customized services.

In the medium to long term we also intend to support our company's growth with products that are not directly derived from the existing portfolio or that promote the transfer of technologies between our Automotive and Defence sectors. The best product ideas from the Rheinmetall Intrapreneur Award 2016 are backed with specific business plans and provided with venture capital. These activities may also be supplemented by participations in our existing start-up companies.

Our own application-related research and development work is supplemented through studies into the latest scientific findings from basic research programs. Another key pillar of our research work is collaboration with industrial partners, renowned scientists and skilled experts who support the transfer of knowledge from research into practice. Rheinmetall Automotive endowed a junior professorship at RWTH Aachen for research and development of mechatronics systems in combustion engines in 2014. This professorship also conducts research into virtual engine development and the development of hybrid drives. Rheinmetall Automotive also promotes young scientific staff at an international level with the professorships for light construction components, vehicle power train technology and vehicle engine technology at the prestigious Tongji University in Shanghai, China.

We provide more information on our research and development activities in the past fiscal year and the expenses associated therewith in our comments on business performance.

Risks

We provide information on avoiding or reducing technology and development risks on page 74 et seq.

Non-financial aspects of business activities

Employees

Management approach

A customer-focused corporate culture, based on the values of respect, trust and openness, in which the performance and commitment of each individual is appreciated and is free from prejudice and discrimination is one of the requirements for being attractive as an employer. Companies in the Rheinmetall Group are faced with increasingly tough competition from other companies to gain qualified personnel. Acquiring skilled employees for these companies is therefore a key task in our HR work. In addition to performance-based remuneration and progressive benefits, we attach importance to diversity and equal opportunities and, in particular, to a wide spectrum of career opportunities in the Automotive and Defence sectors, interdisciplinary career paths, deployment opportunities in the international Group companies and attractive training opportunities for individual professional and personal development.

New IT platform to control HR processes

Besides the processes for analyzing potential, for managing by objectives and for e-learning, which were previously controlled via various management tools, additional functions, such as key function analysis, succession planning, performance assessment and seminar management can be depicted concisely on an internationally accessible IT platform using the “Empower” platform, which was introduced at the beginning of 2018. This means, for example, that strategic HR processes can be controlled directly, the expansion of personnel development programs planned, the individualized career planning for strategically important persons managed and the quality, efficiency and transparency of HR processes improved overall.

Recruiting and employer branding

In addition to traditional and modern means of recruitment, Rheinmetall also relies on its own training and development of junior employees and is also in close contact with universities, colleges and research institutes in order to get to know suitable science, technology and business graduates at an early stage.

In the period under review, recruitment in Germany, which had previously been organized on a local basis, was centralized in a recruitment center with locations in Bremen, Düsseldorf and Neckarsulm, which – divided into two teams each, namely Engineering/IT and Commercial, for the Automotive and Defence sectors – is responsible for the internal and external recruitment of managers and employees with the exception of trainees, students on dual courses, high school interns and contract workers at the 39 Rheinmetall sites in Germany and is therefore responsible for end-to-end applicant management. Among other things, the establishment of this recruiting center has standardized the recruiting process, improved quality and speed when filling jobs and will achieve cost savings in the medium term through synergies and economies of scale. The Internal Guidelines on Recruiting, which have been applicable since January 1, 2018, contain general principles, clearly defined responsibilities and requirements for recruitment, selection and placement for the Rheinmetall Group in Germany. The services to be supplied by the Recruiting Center are also specified. In fiscal 2017, 639 vacancies at German Rheinmetall companies were filled through the Recruiting Center and 40,169 applications processed by our application platform TalentLink (previous year: 31,172). In the year under review we recorded a total of 2,995 people joining and 1,846 people leaving the Rheinmetall Group as a whole (previous year: 2,574 people joining and 2,027 people leaving).

In 2017, various employer branding measures were also implemented to strengthen the Rheinmetall employer brand. For instance, there is now a recruitment app, which allows applicants not just to access information on the company and its locations but also to access the online jobs portal directly.

A recruitment campaign featuring advertisements using the new Rheinmetall Group layout was also started, in which twelve Rheinmetall employees talk about their very different roles at Rheinmetall. The content provided on social media as well as on employer and job portals has also been standardized and made more attractive with a new layout. Our recruiters were also represented for the first time under a uniform employer brand for the Rheinmetall Group in a separate area entitled “Career Prospects” at the Defence and Security Equipment International (DSEI) trade fair in London and at Rheinmetall Automotive’s IAA stand in Frankfurt/Main.

The attractive employer profile and target-group-specific appearances at university fairs, graduate conferences, recruitment events, on social media portals and online job sites are increasingly bearing fruit. The “trendence study” once again calculated the attractiveness of German companies as employers in the year under review. Rheinmetall was again rated as one of Germany’s 100 most attractive employers in the “Engineering Edition”, coming in 51st place (previous year: 56th). In the Universum rankings (Germany Top 100 Ideal Employers) in the field of engineering student, Rheinmetall improved its standing once again in the year under review, reaching 38th place (previous year: 44th).

Further training as an investment in the future

In the face of tough international competition, the development of employees, talented management trainees and experienced specialist and managerial staff in line with current and future requirements is a key factor in the successful achievement of the Rheinmetall Group’s ambitious growth targets. A range of training opportunities, including individual opportunities, allow Rheinmetall employees to improve their performance in their field of work and expand their knowledge and skills beyond the requirements of their current position.

Specific demand for staff development measures is determined at regular intervals on the basis of the Rheinmetall competence model, broken down according to employees paid in line with collective pay scales, managers and employees not covered by collective wage agreements, either in accordance with a collective agreement for qualification or as part of potential analyses or the “Management by Objectives” program. Training objectives can also be derived from strategic objectives (e.g. through increased internationalization of the Group).

Managers must be adequately prepared for strategic and operational tasks and must be able to adapt quickly to new challenges and respond flexibly to changes. This is not just about professional qualifications, but also calls for first-class leadership qualities and management skills. The Rheinmetall Academy focuses on entrepreneurship and leadership in the development of managers; it successively prepares employees at various stages in their careers for assuming leadership or specialist roles. Along with external seminars and events, high-quality in-house training and qualification events were offered in the year under review in the areas of strategy, leadership, innovation, negotiation and change management. These training courses, programs and workshops geared towards various hierarchical levels and functions constitute a platform for employees to exchange overall knowledge, ideas, experience and opinions.

In the year under review, 1,037 employees (889 men, 148 women) attended 81 (previous year: 75) single- or multi-day events at the Rheinmetall Academy, compared to 992 (908 men, 84 women) in the previous year. Approximately 53% of the participants came from the Defence sector, with 33% from companies in the Automotive sector. The percentage of female participants increased to 14.3% (previous year: 8.5%). In 2017, Rheinmetall invested €6.4 million (previous year: €5.7 million) in specialized, interdisciplinary and management-related training programs in Germany alone. 10,234 male and 2,435 female participants (12,669 persons; previous year: 11,690 employees) benefited from 3,866 training activities in 2017 (previous year: 3,996) over 21,705 days (previous year: 20,177).

Non-financial aspects of business activities

Employees

A strong commitment to professional training

As well as university graduates, the operational units need qualified skilled workers. We continue our strong commitment to multifaceted training comprising qualifications and practical experience, that includes the opportunity to complete a dual course of study with a technical or commercial focus. In 2017, 770 young people (previous year: 747) in Rheinmetall companies in Germany and abroad received vocational training, 401 of whom were based in Germany (previous year: 392). In the year under review, 69% of the young people in the Rheinmetall Group received industrial technical training, 16% received training for commercial careers, while 15% completed a dual course of study.

The share of female trainees in the Rheinmetall Group was 14.9% (previous year: 12%), while the ratio in Germany was 19.2% (previous year: 14.3%). The apprenticeship ratio was 3.9% of the workforce for the German locations (previous year: 4.0%) and 3.7% for the Rheinmetall Group as a whole. In 2017, 455 people started their training in the Rheinmetall Group (previous year: 375), of whom 149 people (previous year: 146) were at Rheinmetall companies in Germany. In the same year, 106 trainees (previous year: 155) took up temporary or permanent employment after successfully completing their training. Within the wide spectrum of 44 industrial technical and ten commercial training courses as well as 36 dual courses of study on offer during the fiscal year, industrial mechanic, machining mechanic, mechatronics engineer, machining mechanic and industrial business manager represented some of the most important professions for trainees at locations within Germany, as in the previous year. 669 of the 770 trainees (previous year: 649 of 747) receive training in industrial technical professions. Rheinmetall invested €12.1 million (previous year: €11.7 million) in training at sites in Germany in 2017.

Attractive remuneration systems

Appropriate, fair and standard market pay systems are a key aspect in recruiting and retaining dedicated staff at the company. Rheinmetall offers attractive contractual terms. In addition to the category of work, these are based on the content of the role and the amount of responsibility and are linked to market rates. In addition to fixed remuneration components in line with market requirements, performance-related bonuses and variable salary components are also paid.

The “Management by Objectives” concept is linked to variable salary components for managers and employees not covered by collective wage agreements. An individual variable portion of income is paid in accordance with the achievement of individually agreed targets and depending on the company’s performance. Depending on the extent to which targets are achieved, this amounts to between 0% and 200% of variable target income. The fact that these income components are based on targets provides incentives for employees to act independently and to take on challenges.

Division heads, managers and executives receive a long-term incentive in addition to this short-term component. This is geared towards long-term corporate success and includes payment of 40% of the long-term incentive amount in Rheinmetall shares, which are subject to a four-year lockup period. The number of shares granted is based on a reference share price which corresponds to the average price on the last five trading days in February of the subsequent fiscal year. 60% of the long-term incentive amount is paid in cash and is also used to pay tax on the Rheinmetall shares immediately.

The company’s success benefits employees in two ways, including staff covered by collective wage agreements in Germany: Firstly, employees receive an annual bonus subject to the performance of their business unit or sector and, secondly, the increase in the value of the company achieved is paid out in a success-oriented component in the company pension, thus leading to improved support in old age.

Diversity

The international nature of our business activities means that people from many countries, cultures, religions and ways of life are employed in our company. They shape not only the profile, the reputation and the distinctiveness of our company, it is also they who meet the diverse requirements of our customers, investors, suppliers and other stakeholders in their day-to-day professional lives. We view our employees' diversity as a strategic factor for success. They make us attractive to customers and applicants. There is great potential for further growth by the Rheinmetall Group in this diversity and the opportunity to attract and retain the best talents. With locations on six continents, supply relationships in 146 countries in 2017, 11,928 employees abroad, 75 expatriates and 70 nationalities represented at Rheinmetall in Germany, internationality and diversity have long been routine in the Rheinmetall Group and are key factors in why we remain successful together in our global business activities despite all dissimilarities.

Diversity is to be strengthened in the companies of the Rheinmetall Group in the next few years. In an initial step, the Executive Board of Rheinmetall Automotive established a new "Diversity Management" function, which is simultaneously responsible for Rheinmetall Defence. The divisional management will be supported by Diversity Officers from the six divisions. Appropriate participation of women in management is one of the focal points of diversity activities.

A Diversity Guideline was also adopted for the Rheinmetall Group in April 2017. In the principles of social responsibility negotiated with the European Works Council in 2017 but not yet published at present, the parties stress the importance of human and cultural diversity for working together, for an inclusive and respectful corporate culture and for being tolerant in dealing with each other. By Rheinmetall joining Charta der Vielfalt e.V. in April 2017, we emphasize that diversity is not an end in itself for us but an element to boost our capacity for innovation and capacity for internationalization.

Women in management positions

The Defence and Automotive sectors have traditionally been dominated by men, who predominantly tend to choose technical or scientific subjects for study and professional training. The automotive and defence industries are generally favored by men. For these reasons, the percentage of women occupying management positions in our technology group is lower than in other industries.

The Rheinmetall Group understands the employment of women, in management positions in particular, as self-evident, but also as an important and material part of its diversity and sees this as an opportunity for development. Women in executive management and other management roles are to be encouraged more in the future. When filling vacant positions, internal candidates are to be chosen primarily if possible. Experience shows that these people work longer and more successfully for the Rheinmetall Group on average and consequently turnover in management positions and the temporary disruption associated therewith can be avoided. Suitable women are, therefore, to be prepared increasingly for management responsibilities via the internal support and development programs for junior staff in the medium and long term. At the same time, the internal management development programs will set the respective line managers ambitious targets for the participation of suitable women in these programs. However, notwithstanding this, vacant positions must continue to be filled by the most qualified candidate, professionally and personally speaking, regardless of gender. It is also in the company's interest to ensure continuity in terms of staffing in key positions in the most senior management. Change to these positions cannot therefore be brought about solely on the basis of gender.

Details of the implementation of the legally required diversity goals can be found from page 127. The diversity concept for the Supervisory Board and Executive Board is described from page 121.

Non-financial aspects of business activities

Employees

Inclusion

There were 7.6 million severely disabled people living in Germany at the end of 2015. They therefore represent 9.3% of the total population. Inclusion in the labor market is making progress thanks to the large number of initiatives and measures adopted in recent years. Today, around 1.2 million employees with severe disabilities work in German companies, more than ever before. We also consciously encourage the participation of disabled people in working life and create the conditions needed for this purpose. As long ago as 2002, we formulated key principles and inclusion targets with the Group representative body for severely disabled employees in a framework integration agreement.

Rheinmetall employees with disabilities or health problems are integrated into the working life of the company and are able to bring their skills and ideas to the table. Once again, the focus here is on developing existing strengths and potential. An important prerequisite for this is workstations individually adapted to the type and degree of disability, which allow the employees concerned to achieve work of the same quality as that of colleagues without disabilities. In the year under review, the German-based Rheinmetall Group companies employed 457 severely disabled people (previous year: 493), who are represented by the Group representative body for severely disabled employees.

In November 2017, as part of an event on inclusion at Rheinmetall, an action plan for people with disabilities and an accompanying training plan was presented for the first time, with which the development of standards tailored to the requirements of the disabled are to be encouraged and legal and operational requirements are to be implemented with the same success at all Rheinmetall Group sites, so that a positive contribution is made to the equal treatment of all disabled employees in the Group is made.

Work-life balance

Career success depends, among other things, on how content an employee is outside of their working hours. Many employees want to take greater account of individual life stages and specific life situations in their working life and wish to create a more healthy balance between their professional goals and their family and private interests through more flexible working hours.

For us, it is important to support our employees with a family-friendly HR policy. Options including working hour models with varying weekly working hours and a range of part-time options as well as flexitime on trust allow employees a more flexible timeframe and, in turn, greater freedom. There are also agreements on remote working in some German companies of the Rheinmetall Group. Rheinmetall also offers parents financial support in helping them to find individual childcare solutions for their child or children at German sites. Furthermore, we provide a family service throughout Germany to support employees in matters concerning career and children and career and care through advice and assistance.

In 2017, 105 employees (previous year: 319) were on parental leave in the German companies (70 female employees, 35 male employees; previous year: 109 female employees, 210 male employees). In the year under review, one female employee (previous year: 15 people; six female, nine male) made use of the opportunity to be temporarily released from work, either fully or partly, in order to care for close relatives.

Demographic change

In Germany and other developed countries, the companies are facing new challenges in response to demographic change. The population structure is changing as birth rates decrease and life expectancy rises to unprecedented levels. This trend also impacts the composition of workforces: competition for suitable junior staff becomes tougher, the number of employees aged between 40 to 49 decreases and the focus gradually shifts to those aged over 50. Our challenge involves identifying available potential in the Rheinmetall Group, recruiting and training junior staff and (further) developing our employees' skills further in order to ensure a smooth transition.

On the basis of data from 2017, around 10,600 employees (previous year: around 10,600) will be aged 55 or older in ten years. Through detailed structural analyses and simulations, interdisciplinary teams are developing new personnel programs that take into account the different existing situations and trends at the national and international sites as well as their impact on the age structure of the employees. In particular, these site-specific measures include the targeted transfer of knowledge and experience from older colleagues to their younger counterparts, the creation of mixed-age teams, the systematic training of junior employees as well as a more intensive, target-group-specific recruiting and HR marketing drive. This strategy also includes adapting work and organizational processes as well as additional measures and offerings aimed at promoting good health, to ensure that long-standing employees' ability to work and learn, motivation and physical and mental agility are maintained.

In the year under review, 13.7% of the employees were aged 29 or younger (previous year: 13.1%), 65.4% were aged between 30 and 54 (previous year: 65.5%) and 21.3%, as in the previous year, were aged 55 or older. In 2017, the average age of employees (excluding trainees and interns) in the Rheinmetall Group was 43.5 (previous year: 42.7). The average age in the German companies was 45.3 in 2017, as in the previous year, while it was 41.7 in the Rheinmetall companies outside Germany (previous year: 40.2).

In the year under review, the average tenure with the company was 13.1 years in the Automotive sector (previous year: 12.8) and 13.1 years in the Defence sector (previous year: 14.8). In the holding/service companies this was 10.3 years (previous year: 10.9), while the average within the Rheinmetall Group in 2017 was 13.1 (previous year: 13.7). On average, employees in the Rheinmetall companies outside Germany worked at the company for 10.8 years (previous year: 12.5), while those in the German companies averaged 15.4 years (previous year: 14.9). In the past fiscal year, 422 people (previous year: 766) had worked for the Rheinmetall Group for more than 40 years

Occupational health and safety and workplace health promotion

Rheinmetall is conscious of its responsibility towards its employees and attaches importance to a safe, healthy and clean working environment. The Group ensures occupational safety and health protection at the workplace in line with the national regulations applicable at the respective sites. Workstations are set up in accordance with statutory and generally recognized safety and occupational health rules in order that work can be performed without accidents or stress. Each individual Rheinmetall Group employee has a responsibility and is required to know all the safety regulations applicable to them and to take the utmost care to apply them consistently in their own area of work – in their own interests as well as in the interests of the company. In the reporting year, 317 accidents at work and 70 commuting accidents (previous year: 636 and 99 respectively) were reported at German Rheinmetall companies.

Non-financial aspects of business activities

Employees

Rheinmetall endeavors to minimize as much as possible any risks and hazards that could potentially compromise the safety and health of employees and third parties. Rheinmetall maintains and promotes its employees' health, performance and work satisfaction through continual improvements to the work environment, appropriate resources such as ergonomic aids and protective equipment and a variety of preventive programs and health-promoting measures. During the year, employees also benefit from a range of prevention programs in addition to medical checkups. The programs cover free vaccinations and regular preventive checkups, in-house and external sporting activities as well as support services and medically coordinated occupational rehabilitation following lengthy illness. The sickness rate at the German Rheinmetall companies was 4.6% in the year under review (previous year: 5.6%).

Constructive dialog for fair working conditions

Corporate co-determination is a long-standing tradition at Rheinmetall. We respect the concerns of our employees and protect their fundamental right as part of the freedom of association to join trade unions and to be represented by them internally and externally on the basis of national laws and regulations. In the Code of Conduct agreed in October 2003, Rheinmetall declared its willingness to observe and guarantee the generally accepted core labor standards of the International Labor Organization (ILO).

Working with the employee representative organizations and trade unions we strive to treat each other fairly and to achieve a trustful and constructive exchange of views to reconcile the interests of the company and the employees. The Group's Works Council and the European Works Council are key partners in this respect. Workforce representation is based on local works councils or general works councils. They represent the rights of employees to the managers of the companies of the Rheinmetall Group. Matters, which are of relevance for a cross-company division or a corporate sector, are dealt with in the Sector Works Council or the Automotive Sub-Works Council. Topics, which can only be dealt with uniformly for all Group entities in Germany, are discussed in the Group Works Council. While the co-determination of employees in Germany is regulated by law, in other countries it is based on the respective national laws and regulations. In the case of cross-border issues, the European Works Council, which has been in existence since April 2000, looks after employees' rights to information, consultation and advice. The Rheinmetall sites in EU Member States, in states of the European Economic Area and in Switzerland send employee representatives to the European Works Council.

We keep the Economic Committees of the Group Works Council and the general works councils informed about the economic situation and changes in the Rheinmetall Group. In the Supervisory Board of Rheinmetall AG, which is based on joint representation, the employees are also represented by two trade union representatives, five elected employee representatives and one representative for the managerial staff.

Risks

We provide information on avoiding or reducing personnel risks on page 77.

Non-financial aspects of business activities

Procurement and supply chain

Management approach

The quality of our products is significantly affected by the quality of the raw materials, parts and components supplied. We expect a high quality assured by internationally recognized standards such as ISO 9001, IATF 16949 und AQAP 2110/2210 from our suppliers. Our suppliers are selected on the basis of the quality, reliability, performance, suitability and price of the products or services offered. Compliance with the exacting requirements and standards is ensured through international purchasing activities, annual supplier reviews, quality and reliability checks on suppliers, and possible alternative suppliers.

Purchasing organization non-production material

In January 2018, the new purchasing organization for non-production material (NPM), which is responsible for the whole Rheinmetall Group, started its work, which is managed by the Purchasing Council NPM. By NPM we mean all products and services that are purchased by the Rheinmetall Group but do not become part of the final products. This includes, for example, production equipment, processing tools, packaging, office material, freight but also consultancy services and travel management. The task of the new purchasing organization is to improve Rheinmetall's market position vis-à-vis suppliers and to achieve better purchasing conditions. This ranges from lower prices to more favorable, standardized payment and delivery conditions.

Rheinmetall Automotive

The "Supplier Portal: SupplyOn" tool has been introduced throughout the world for Rheinmetall Automotive in close collaboration between the Automotive divisions, Mechatronics, Hardparts and Aftermarket. SupplyOn is the shared supply chain collaboration platform of a growing number of globally active companies, most notably from the Automotive and Aerospace sectors, which makes business processes between customers and suppliers more transparent and more secure. In an initial step, three modules (Business Directory, Sourcing and Project Management) were configured and implemented, with which optimized purchasing processes can be transmitted in an online format. Possible extensions, such as into logistics and quality (complaints process and supplier assessment) are currently under consideration.

Rheinmetall Defence

Supply chains in the defence industry are characterized by very complex structures: supply chains in this industry easily comprise up to eight stages for the needs of Rheinmetall Waffe Munition and Rheinmetall Landsysteme, for instance. The high proportion of specific materials and processes combined with a broad product range leads, as is generally the case in this industry, to a high proportion of single and sole-sourcing, also because only a few companies throughout the world completely manufacture or command the very specific products and processes. In the defence technology industry, switching to new suppliers is very costly, both from a financial and time-related perspective. The qualification of products carried out by military authorities is linked not only to the performance of the product itself but also to the manufacturing process, manufacturing location and suppliers. A change of suppliers therefore automatically results in costs for re-qualification or even new shelling campaigns, for instance. Procurement business in the area of ballistic protection has the characteristics of a project, i.e. it is characterized by intermittent production by our suppliers. This requires a high level of quality assurance measures. Furthermore, specific legislation, such as the War Weapons Control Act, the Foreign Trade and Payments Act, the International Traffic in Arms Regulations (ITAR), to cite just a few, must be taken into consideration for procurement in the Defence sector. Only a relatively small group of suppliers can comply with these sector-specific peculiarities and requirements.

Non-financial aspects of business activities

Procurement and supply chain

Transparency in the supply chain

We also wish to anchor our values and principles in our supply chains and therefore expect our business partners to share our principles regarding responsible and fair conduct to employees, customers, suppliers and the public and demonstrate this responsibility accordingly. We therefore support and explicitly encourage our business partners to apply the principles laid down in our Supplier Code of Conduct, which was adopted in November 2017, in their own corporate policy or to take account of them and view them as an advantageous basis for further business relationships.

In September 2016, the Association of the German Automotive Industry published a recommendation on guiding principles for the automotive industry for improving sustainability in the supply chain with the aim that all partners of the automotive industry maintain these standards and pass them on along their supply chain. These describe the minimum expectations regarding ethical business conduct, environmental standards, working conditions, human rights as well as harassment and discrimination. With the Supplier Code of Conduct of the Rheinmetall Group, Rheinmetall Automotive not only complies with these requirements but also passes them onto its suppliers.

Transparency in the automotive supply chain

The automotive industry consists of a complex network of globally active players. A distinction is made between original equipment manufacturers (OEMs), first tier suppliers and second and third tier suppliers.

Manufacturers and suppliers are closely linked in working together to develop and produce vehicles. Automotive manufacturers have been working for some time to align their production ever more closely with the principles of sustainability. The issue here is anchoring economic, ecological and social objectives vertically, i.e. across all stages of the value added chain. Therefore, when selecting suppliers or even preselecting suppliers, the evaluation of whether the respective sustainability standards, which include, among other things respect for employment and social standards as well as internationally recognized human rights, are complied with in the delivery chain is increasingly significant. A key instrument here is the questionnaire containing standardized questions on aspects of sustainability for suppliers.

In 2014, ten automotive manufacturers (BMW Group, Daimler, Ford Motor Company, Jaguar Land Rover, PSA Peugeot Citroën, Scania, Toyota Motor Europe, Volkswagen, Volvo Group und Volvo Cars) formed the European Automotive Working Group on Supply Chain Sustainability.

Under the leadership of CSR Europe, the European Business Network for Corporate Social Responsibility, this group is working on improving corporate social responsibility and sustainability in the automotive supply chain. For this purpose, it developed a standardized, structured self-assessment question (SAQ) with 23 positions on six topic areas (Company Management, Social Sustainability, Business Conduct and Compliance, Environmental Sustainability and Supplier Management and Special Areas), for its suppliers based on its own guidelines (Automotive Industry Guiding Principles to Enhance Sustainability Performance in the Supply Chain) which are to be understood as minimum standards in the areas of commercial ethics, environmental standards as well as working conditions and human rights.

In December 2017, the above Automotive Industry Guiding Principles to Enhance Sustainability Performance in the Supply Chain were updated and extended by Automotive Industry Action Group (AIAG) and Drive Sustainability, an offshoot of CSR Europe, together with the OEMs BMW Group, Daimler, Fiat Chrysler Automobiles Group, Ford Motor Company, General Motors, Honda, Jaguar Land Rover, Nissan, Scania, Toyota, Volkswagen Group, Volvo Cars, and Volvo Group and a practical guide was prepared.

The new self-assessment questionnaire to be completed annually is currently used by all the above-mentioned OEMs apart from Ford Motor Company and Groupe PSA, which for their part carry out questionnaires on sustainability and compliance issues via the platforms AIAG and Ecovadis.

Suppliers of BMW Group, Daimler, Scania, Volkswagen and Volvo Cars can use the platform for sustainability in the automotive industry operated by NQC Ltd. for the administration of SAQs to answer the self-assessment questionnaire and, as a result, share it with several suppliers at no extra cost.

Rheinmetall Automotive holds a first tier position in the value-added chain of automotive production, i.e. we supply the automotive manufacturers directly and not via other suppliers or system integrators. The self-assessment questionnaire completed in full and updated each time must be submitted by the European Rheinmetall Automotive plants at regular intervals, so that the OEMs can analyze and assess the services and progress in terms of sustainability and determine the degree to which their requirements have been met.

Individual OEMs are refining their corporate social responsibility activities in the supply chain and are planning, for example, to introduce their own sustainability ratings or are already announcing pilot projects to review sustainability criteria from the areas environment, social and integrity by means of an on-site check, which includes, among other things, a site visit and interviews with employees at the production site.

The “Sustainability” working group set up by the Association of the German Automotive Industry (VDA) is also looking at the option of on-site checks and supports their being standardized to keep the additional costs for suppliers as low as possible. A recommendation from the VDA on the approach to be adopted for and on the execution of on-site checks is to be adopted in the first half of 2018.

Risks

We provide information on reducing or avoiding procurement risks on pages 76 and 82 et seq.

Non-financial aspects of business activities

Compliance

Management approach

The reputation of Rheinmetall, the success of the business and the trust of customers, investors, employees and the general public depend not only on the quality of our products and services, but also to a large degree on good corporate governance and, in particular, on effective compliance processes. In line with our values and rules, we are committed to impeccable conduct characterized by responsibility, integrity, respect and fairness. We are an honest, loyal and reliable partner to our stakeholders.

Rheinmetall stands for clean business. We would rather not do business than breach the law. Compliance serves to safeguard our business success on a lasting basis. The members of the Executive Board and managers, executives and employees naturally have an obligation to comply at all times with all the applicable laws, guidelines and regulations, to conduct themselves correctly in business dealings, to preserve the company's tangible and intangible assets and to avoid anything that can result in operational or financial disadvantages or damage to the image of individual companies or the Rheinmetall Group. The Executive Board takes a zero-tolerance approach to illegal and/or unethical behavior and to corrupt business practices, no matter what the circumstances.

International business activities

In the day-to-day business of an international company, the different national political and legal systems as well as cultural values, customs and societal norms of different cultural groups have to be taken into account. In addition to the applicable legislation of the countries of exportation, European Union regulations as well as anti-corruption laws such as the US Foreign Corrupt Practices Act, the UK Bribery Act and the French Sapin II Anti-Corruption Act must be strictly observed. The requirements that our companies have to fulfill are therefore many and varied. More than ever, management and employees need guidance when it comes to national and international business and in relations with business partners, office holders, authorities and other state bodies in order to avoid potential errors and any resulting reputational, business or liability risks.

According to the 2017 Corruption Perceptions Index from Transparency International, which ranks 180 (previous year: 176) countries in terms of the degree of perceived corruption in the public sector, in the year under review (as in the previous year) we generated around 70% of our sales in countries with a very low or low corruption risk.

Compliance organization

Illegal conduct can cause many different types of damage and can have serious consequences, such as the discontinuation of business relationships, exclusion from orders, negative assessments on capital markets, imposition of fines, the absorption of profits, claims for damages as well as civil or criminal proceedings. There is also the risk of significant and lasting damage to the Group's reputation and thus a detrimental effect on its market position. Compliance at Rheinmetall is therefore taken very seriously and has for a long time been an integral part of the corporate culture.

To provide its employees with guidance and allow them to conduct business with confidence, the company took a holistic approach and set up a compliance organization very early on providing standardized general conditions and clear guidelines for legal and rule-compliant, ethically correct and fair conduct in day-to-day business.

In addition to his direct employees at holding level, the two Compliance Officers for Automotive and Defence and the Compliance Officers from the six divisions are assigned on a technical level to the Chief Compliance Officer, who reports directly to the CEO of Rheinmetall AG. In addition, Compliance Officers from the sales regions Europe, Brazil, India, China, Japan and the NAFTA region (Rheinmetall Automotive) or from the management companies (Rheinmetall Defence) undertake preliminary work for the six aforementioned Compliance Officers.

We have gradually increased the number of staff in the compliance organization in subsequent years since it was restructured in 2014. In the year under review, additional staff were appointed to the Compliance organization of the Defence sector in addition to the Corporate Compliance Office of Rheinmetall Holding. This makes it even more certain that employees have a direct point of contact in their immediate work environment for all matters concerning compliance and can seek support and guidance.

The scope and level of detail in the reporting on compliance were expanded in the past fiscal year. The target audience was also expanded: the Heads of the six Automotive and Defence divisions will now be kept informed monthly by Corporate Compliance of current developments in the area of compliance, new rules, planned training measures or of possible compliance infringements and the status of possible investigations.

The Chief Compliance Officer, who regularly reports to Executive Board meetings on compliance issues, keeps the Executive Board and Supervisory Board's Audit Committee constantly informed of the status and effectiveness of the compliance management system and of the latest developments. In serious cases, the committees are informed immediately.

Compliance management system

Compliance is taken into account as an aspect of risk in decision-making processes, not only when it comes to considerations regarding the strategic and operational alignment of the Rheinmetall Group, but also in day-to-day business. The central compliance management system, which focuses on the protection of fair competition, corruption prevention and export control, is firmly anchored in Group-wide management and control structures and includes all instruments, processes, guidelines, instructions and extensive measures intended to ensure that procedures in the companies of the Rheinmetall Group comply with the applicable country-specific legislation, general legal conditions, regulatory provisions and the company's own guidelines. It also creates an organizational structure that allows the applicable standards to be publicized across the divisions. If binding legal regulations in individual countries deviate from the rules set out in the compliance management system, the stricter regulation shall apply.

The compliance management system is updated at regular intervals, not only in line with the applicable legal requirements but also in the light of new findings from reporting, comparisons with other compliance systems and the assessment of external specialists. It is also reviewed on an ad-hoc basis if any breach of compliance regulations is suspected or discovered. Implementation of the compliance management system is monitored by monthly reports prepared by the Compliance Officer for the Corporate Compliance Office and by routine and special audits conducted by Internal Audit and the compliance organization.

Compliance Officers also monitor important transactions in the companies, such as mergers and acquisitions, the establishment of joint ventures, pre-employment checks and the integration of sales brokers, thereby supporting the respective departments in their work. In addition, Compliance Officers advise the people responsible in the operational units on how to take compliance into account in operational business processes.

Non-financial aspects of business activities

Compliance

In the area of sales support, there is a platform containing information on over 90 countries and regions. Moreover, the tender process in the Defence sector is structured to the effect that in the course of the bid/no bid decision a compliance audit using defined criteria is obligatory for projects over a certain value threshold.

The preparation of a compliance management system manual to provide a full description of the Group-wide compliance structures and compliance activities began in 2017. This is based on the seven-pillar model of the audit standard IDW PS 980 promulgated by the Institut Deutscher Wirtschaftsprüfer (Institute of Public Auditors in Germany).

To establish uniform compliance and corporate social responsibility standards along the entire value-added chain, the existing Business Partner Code of Conduct was updated accordingly, taking into account the Supplier Code of Conduct applicable from January 1, 2018.

Rheinmetall supports certain institutions and projects through donations and sponsorship. To avoid conflicts of interest and to guarantee a transparent and uniform presence on the market for the Rheinmetall Group, uniform guidelines for dealing with donations and sponsorship, which are applicable Group-wide, are essential. A new Group-wide donation and sponsorship directive was enacted in May 2017, which defines binding instructions for benefits in the form of donations and sponsorship.

As frequent criminal offenses after the fact of bribery and fraud, combating money laundering and the financing of terrorism is a key component of our compliance program and a material factor for the success of our comprehensive anti-corruption strategy. Specifically, the ban on money laundering covers the concealment of the origin of illicit funds (placement), the distribution of illicit funds, which mainly takes place abroad (layering) and the integration of illicit funds in the legal economic cycle. The new Anti-Money Laundering Guideline was adopted by the Executive Board for the Rheinmetall Group in April 2017. As part of the development of this guideline, a money laundering threat analysis was also carried out throughout the Group.

In addition, a center of expertise for business partner audits was established in the year under review at the level of the Rheinmetall Group, which will carry out all compliance due diligence checks for new and existing business partners from February 2018. The focus will be concentrated on determining whether the commitment is legally permissible, whether all attributable people can be identified and excluding conflicts of interest, and determining the general capacity and integrity of the business partner. The local Compliance organization will continue concentrating on assessing the transaction-specific compliance risk associated with the commitment of a business partner at company level. The center of expertise will be integrated in day-to-day operational business through various technical and procedural interfaces. The selection, management and supervision of sales partners, in particular, will be fundamentally improved through the implementation of a business partner database, which started at the same time.

A new Code of Conduct governing compliance and social standards across the Group, which contains requirements for the behavior of Rheinmetall employees, will be adopted in the first quarter of 2018.

Training and advice

To make employees at all hierarchical levels aware of compliance risks, numerous seminars and workshops are held, some of which are tailored to specific functions such as management, buyers or sales staff. Legislation and important regulations are explained, further content is provided. Attention is also drawn to internal compliance requirements, risks and possible sanctions and, based on case studies, practical advice is given on correct conduct in specific situations during everyday work. These classroom training sessions, which also serve as a practical forum for discussions, are accompanied by interactive online programs. Each year, as part of Compliance Awareness training, employees at sites in Germany and abroad not only receive training in general compliance topics but also in the prevention of corruption, money laundering and CEO fraud, export control and antitrust and competition law. The content of the training is adjusted in accordance with the needs of the participants or supplemented with country-specific or regional peculiarities.

In fiscal 2017, 1,770 people and 839 people respectively participated in face-to-face training on compliance awareness and on the War Weapons Control Act and the Foreign Trade and Payments Act respectively as well as on weapons law. In addition, 3,418 employees completed compliance training via e-learning platforms in the year under review.

Handling information

If employees have information on questionable activities that have been observed, specific breaches of regulations or business practices that may be prohibited, they can contact their line managers or various other offices within the company directly or they can contact an independent, external ombudsman who is a lawyer by profession and consequently avert losses for the company. Whistleblower systems have also been established in different formats at various Rheinmetall Group sites (including in the US, Brazil, China and South Africa). The introduction of a uniform whistleblower platform for all companies in the Rheinmetall Group is currently under consideration.

Protection is guaranteed for all whistleblowers, who need not fear discrimination. Employees involved in investigations into possible breaches of compliance will be assumed to be innocent until proven otherwise. Any information that is received will be systematically analyzed. Systematic follow-up checks will be carried out on the basis of established schedules and appropriate measures will be taken to properly clarify the facts that have been reported, with the involvement of external specialists if necessary. Confidentiality and discretion take top priority here. If necessary, we will involve the relevant authorities and cooperate with them to resolve the matter. Proven misconduct is sanctioned and entails organizational measures and, for the employees who committed the offense(s), consequences under labor law, civil law and criminal law.

Work on the introduction of an investigation directive for dealing with compliance cases in a standardized manner is also currently ongoing. This aims to guarantee that the handling of information is also independent, transparent and fair as well as being subject to high standards that are comparable across the Group. It also offers legal certainty when carrying out investigations, meaning that appropriate account can be taken of the interests of employees and employers.

Non-financial aspects of business activities

Compliance

Conflicts of interest

Each employee is committed to the best interests of the company. Personal interests and company interests must be kept strictly separate. In accordance with the compliance guidelines, employees of the Rheinmetall Group are required to avoid conflicts of interest between their personal and business relationships at all costs. Only objective criteria shall count in business relationships and HR-related decisions. In the event of suspected or actual conflicts of interest, employees are obligated to inform their line managers.

We report on the duties of members of the Executive Board and Supervisory Board on page 127.

Insider information

As a listed company, Rheinmetall AG is subject to particular obligations in dealing with information about circumstances that are not known publicly and are capable of having a considerable influence, if announced, on the market price of the Rheinmetall share or the share of a (potential) business partner. Insider information may neither be disclosed to unauthorized third parties outside Rheinmetall nor used to obtain an unfair personal advantage when buying or selling shares. The existing Insider Directive, which is updated annually, clarifies the legal requirements and prohibitions, sets specific rules of conduct, regulates processes and nominates points of contact to provide clarification in the event of doubt.

The Clearing Office decides on behalf of the Executive Board whether information is classified as insider information for which disclosure is required or not. If so, the disclosure procedure is initiated in accordance with the rules of the EU's Market Abuse Regulation and the Securities Trading Act.

Rheinmetall AG maintains an insider directory in accordance with the requirements of Article 18 of the Market Abuse Regulation and the Federal Financial Supervisory Authority of such people, who work for it and have access to insider information. They are instructed by Rheinmetall AG on their rights and obligations in accordance with Article 18(2) of the Market Abuse Regulation and about the duties arising from the laws and regulations. Breaches of insider laws may be punished with fines or custodial sentences.

National and international discussion of compliance issues

In the past fiscal year, the exchange with non-governmental organizations such as Transparency International was continued. We also play a part at a national and international level in associations and networks, such as the German Institute for Compliance, in the Professional Association of German Compliance Managers, TRACE International or attend meetings of the Aerospace and Defence Industries Association of Europe (ASD).

Risks

Information on reducing or avoiding compliance risks is provided on page 79.

Non-financial aspects of business activities

Social responsibility

Management approach

Social acceptance is an important requirement for economic success. Many Rheinmetall companies can look back on a long tradition. They have been connected with their sites for many years and are strongly rooted in the local community – after all, this is where their customers, employees and business partners live. Rheinmetall is a living, breathing part of society and participates actively in it and not just in a financial sense. We get involved in the areas of education, sport and culture and also provide direct support for local social projects and charitable organizations.

By adding value locally, we also contribute to regional development. Flourishing production sites do not only mean attractive, highly skilled jobs and training places close to home but also orders for local suppliers and service providers. Educational and cultural facilities around them also benefit, as do sports clubs and churches from the voluntary commitment of our employees. In addition, a large part of the sales generated by the companies returns to the respective economies via the employees, public sector and the shareholders. Capital expenditure in future growth is financed via the value added remaining in the Rheinmetall Group. We also make major contributions to society as an employer and client as well as with our products and the transfer of knowledge. We report on the creation and application of added value in 2017 on page 45.

Respect for human rights

Within its sphere of influence, Rheinmetall respects and supports the protection of internationally recognized human rights. We publicly committed to observe human rights in our Code of Conduct in October 2003. In the principles of social responsibility negotiated with the European Works Council in 2017 but not yet published at present, the United Nations' Universal Declaration of Human Rights was recognized in its entirety. Our commitment is also affirmed once more in the new Code of Conduct for employees of the Rheinmetall Group.

We also appeal to all our business partners, in particular, our suppliers to follow our social principles. Our expectations of this stakeholder group are described in the Supplier Code of Conduct adopted in November 2017.

Corporate citizenship

Social engagement is a long-standing tradition at Rheinmetall. It goes beyond the plant boundaries. We play a part in areas such as education and support but also provide direct support for local cultural and social projects as well as charitable organizations.

The decision about which project to support is incumbent upon the respective management of the companies or the Executive Board of Rheinmetall AG, as the requirements at the locations in which we operate differ considerably. In the year under review, the Rheinmetall Group spent around €640 thousand on sponsorship and donated €822 thousand in total.

Rheinmetall is also committed to promoting interest in technology, science and craft in the areas where it is located. Understand technology and try it out for yourself. This is the slogan under which young people are given the opportunity – as part of school partnerships, for example – to get to know technology through hands-on tasks and develop a better understanding of links between technology and commerce by gaining an early insight into the industry.

Non-financial aspects of business activities

Social responsibility

The Rheinmetall Group companies also participate in Germany-wide action days and offer internships in a wide range of disciplines to school students or in the context of new vocational training or retraining for adults. Over the course of 2017, a total of 273 interns (previous year: 289) gained their first experiences of day-to-day company life.

With the Rheinmetall Scholarship Program, we are involved in the Deutschlandstipendium, a scholarship set up by the German Federal Ministry of Education and Research (BMBF). With this, we are pursuing the aim of attracting young high potentials from various disciplines to Rheinmetall and provide grants for 20 students at five German universities (previous year: 16). The students are looked after under the newly launched talent retention program “Next Generation Talents”, which includes mentoring and support programs in addition to company-specific training modules.

We were also moved by the difficult situation facing people, who have fled to Germany from great distress. This is why we are contributing to the integration of refugees in society. As a company, we can do this most effectively by offering young people, who would largely have no change of finding employment without help from the business community, the prospect of training and a professional future. In realizing the project, we had recourse to our long-standing experience in international professional training. The range of training courses (passenger car mechatronics engineer, industrial mechanic, machinery and plant operator, specialist in metals technology, electronics engineer for automation technology) and qualification measures (such as professional training as a welder) aims to train refugees not just for employment with Rheinmetall but also for the free market and to give them important professional and social skills, which will have a positive impact on their future (professional) lives. Since the preparation of the qualification programs in May 2016, EUR 1,744 thousand was invested in the refugee project by December 31, 2017.

It is not just employees that give companies a face – it is also their locations. These are perceivable and linked to their environment through countless relationships. In recent years, we have invested millions in, among others, in Düsseldorf (entrepreneur city), Neuss (Niederrhein plant) and Unterlüss (innovation and training center) and, in doing so, also made a clear commitment to Germany as a location: to the performance and expertise of our employees, to the attractive framework conditions locally and not least to our social responsibility for the respective region.

Non-financial aspects of business activities

Environmental protection and conservation

Management approach environmental protection and conservation

Business activities and, in particular, production processes are associated with the consumption of natural resources. From our perspective, environmental protection and conservation play a major role in ensuring we have a sustainable future that is worth living. The careful use of natural resources is part of the Rheinmetall Group views itself. Using raw materials and energy economically and avoiding environmental damage in business and production processes are also among the key foundations on which the Group companies' business activities are based, as is dealing with residual materials and emissions responsibly. It is of key importance here that environmental protection – in keeping with a holistic approach – is considered an integral part of the management system in the Rheinmetall companies.

Environmental protection

Accordingly, our employees' sense of responsibility towards the environment is encouraged at every level of the value-added chain. We make every effort to further minimize its environmental load with the best available, economically viable technology. The careful use of natural resources is supported through the use of modern technology and contemporary process technologies which help to prevent emissions and waste. Handling materials, energy, water and waste in a considered manner not only protects the environment, but also reduces costs at the same time. We continue to strive to use resources even more efficiently and to prevent the accumulation of hazardous substances. Safe and modern facilities at certified production sites ensure resource-conserving and low-emission production processes as far as possible. Country-specific regulations and the requirements of international standards for quality (ISO 9001, IATF 16949 and AQAP 21102210), environmental protection (ISO 14001) and energy management systems (ISO 50001) are observed and processes certified accordingly. Regular audits ensure transparency in terms of the status quo and provide objective confirmation of high quality standards. In Rheinmetall Automotive, 28 companies/sites are certified in accordance with ISO 14001 and eight are certified in accordance with ISO 50001. In the Defence sector, twelve companies/sites are currently certified in accordance with ISO 14001 and 17 companies/sites are certified in accordance with ISO 50001.

Conservation – encouraging biodiversity

Our responsibility also includes preserving the diversity of natural habitats, especially for future generations. We are convinced that industrial use does not have to conflict with active conservation. On the contrary. Rheinmetall Defence has tested its products on heathland near Unterlüss in Lower Saxony for over a hundred years. The company's own site – a restricted zone except for one small area – encompasses 3,400 hectares of forest and 800 hectares of heathland. 90% of the area is managed in keeping with the typical original character of the landscape and the fauna and flora maintained for hunting in accordance with the strict rules for integrated conservation. Active landscaping creates individual habitats for the unique animal and plant life. The result is an unusually rich array of flora, which in turn attracts a rare diversity of insects and birds and also provides a habitat for large wild animal populations.

Our South African subsidiary Rheinmetall Denel Munition is also engaged in protecting nature and species at risk of extinction at three of its four production sites. Similar to in Unterlüss, large, demarcated safety areas far from residential areas enable rare animals to expand their habitats unimpeded. We develop partnerships locally to preserve these conservation areas along with their great biodiversity and rare species.

Non-financial aspects of business activities

Energy management

Management approach energy

We need a sufficient energy supply, which is associated with corresponding CO₂ emissions, to manufacture our products, operate our buildings and infrastructure. The reduction of energy-related payments is therefore a key component of corporate policy in the Rheinmetall Group.

It is a material objective for us to reduce energy consumption as far as possible through stringent processes in day-to-day operations within the context of that which is technically feasible and economic circumstances. Our responsibility in dealing with energy resources requires the achievement and review of specific targets for energy savings, where it is technically and organizationally feasible and where it makes economic sense, in addition to the systematic determination, analysis and measurement of the energy aspects of significance for our business models.

Development of an energy management system

A central energy management system is gradually being developed in the Rheinmetall Group, starting with Germany, in which, besides the Holding site in Düsseldorf, other Rheinmetall Defence sites, which are certified in accordance with the energy management system DIN ISO 50001 or undergo energy audits in accordance with DIN EN 16427, were included.

In addition to the systematic recording, analysis and measurement of energy flows, energy management includes the setting of energy conservation targets, the deduction and implementation of energy saving measures and the continuous monitoring of all activities, which can help to increase energy efficiency.

As of December 31, 2017, nine of the 24 German Rheinmetall Defence sites in addition to three companies at the Düsseldorf site were part of an energy network. Plans are in place to include the German sites of Rheinmetall Automotive, which have had their own energy management system for years, in the overall standardized Rheinmetall energy management system in several stages.

Energy management working group

An Energy management working group was established, in which the Automotive and Defence sectors are represented, to control energy management under the direction of the central energy manager, Rheinmetall Group. In addition to developing the energy strategy, it addresses the development, specification and testing of processes and measures for a Rheinmetall Group energy management system. Control, documentation and measurement instruments are also developed, which firstly allow energy efficiency to be compared and secondly provide objective justification for investment decisions and demonstrate their economic efficiency.

Processes and measures to improve energy efficiency are tested at the five pilot locations selected for representative purposes, namely Düsseldorf (Rheinmetall AG), Neuss (Automotive plant Niederrhein), Neckarsulm (KS HUAYU AluTech) and Unterlüss (Rheinmetall Waffe und Munition, Rheinmetall Landsysteme) and Bremen (Rheinmetall Electronics) under real operating conditions before being introduced and executed at other sites.

Targets for energy savings

Increases in energy efficiency can be achieved in day-to-day operations, for instance, through the use of cogeneration, cold and heat recovery, exchanging inefficient illuminants, using compressor waste heat and ensuring that ventilation systems are the correct size.

A reduction in the activity-based energy consumption based on the energetic baseline of 2% per year was set as an initial target for the Rheinmetall Defence companies that are already certified under an energy management system. A cut in the specific electricity consumption per attendance hour and the reduction of the specific heating energy consumption per heated area of 10% in each case was also set for these companies as a medium-term goal to be achieved by the end of 2022.

Consumption data and CO₂-equivalents

		2017	2016
Energy consumption			
Total	MWh	3,352,742	3,667,618
Electricity (purchased from third parties)	MWh	931,983	955,319
District heating	MWh	123,717	83,571
Heating oil	MWh	40,186	87,680
Natural gas	MWh	1,167,735	1,526,454
Coal	MWh	128,488	125,111
Liquefied petroleum gas	MWh	13,413	12,978
Renewable energies	MWh	947,220	876,505
CO₂-equivalent			
Electricity (purchased from third parties)	t CO ₂	540,550	554,085
District heating	t CO ₂	35,507	28,498
Heating oil	t CO ₂	10,730	23,410
Natural gas	t CO ₂	234,715	306,817
Coal	t CO ₂	43,043	41,912
Liquefied petroleum gas	t CO ₂	3,165	3,063

82 of the Rheinmetall Group's 183 companies were included in recording consumption data in 2017. The data in these tables were determined on the basis of internal processes. They come from existing management systems and are based on meter readings or invoice amounts (if available in each case) and estimates by the companies. The data are requested in the operating units, collected with great care and processed. Nevertheless, errors cannot be entirely ruled out in the collection, processing or transmission.

Corporate governance

Corporate governance report

In the following chapter, the Executive Board and Supervisory Board will report on corporate governance in the Rheinmetall Group in accordance with item 3.10 of the German Corporate Governance Code. The corporate governance declaration in accordance with section 289f HGB and 315d HGB can also be found [here](#).

Corporate governance

Rheinmetall has traditionally been committed to a responsible, fair and reliable corporate policy which is geared towards the use and expansion of entrepreneurial potential, achieving medium-term financial targets and increasing the value of the company on a systematic and sustainable basis. The law on stock corporations, capital market law and the right of co-determination, the company's Articles of Association and the German Corporate Governance Code, which is based on internationally recognized standards, form the basis for the organization of management and monitoring at the company, with the aim of making structures transparent and thus strengthening the trust of national and international investors, business partners, analysts, media, employees and the public in Rheinmetall AG's business policy, management and supervision and securing it in the long term.

Shareholders and Annual General Meeting

Shareholders of Rheinmetall AG exercise their rights of determination and control within the framework of the options provided by law or the company's Articles of Association before or during the Annual General Meeting, which is convened by the Executive Board or Supervisory Board as prescribed by law, or when it appears necessary in the interests of the company.

The Annual General Meeting is convened, the agenda items on which a vote will be taken are announced, and the conditions of participation and rights of shareholders are explained within the deadlines prescribed by law and the company's Articles of Association. All documents and reports required by stock corporation law, supplementary information on the Annual General Meeting and explanations of shareholder rights will be made available on the company's website, on which any counter motions or nominations from shareholders will also be published. Each share grants one vote in ballots. This does not include treasury shares held by the company.

The company's Annual General Meeting took place on May 9, 2017 in Berlin. During voting, 52.29% of the share capital was represented (previous year: 56.45%). Shareholders and shareholder representatives voted with significant majorities of between 85.13% and 99.9% in favor of the five draft proposals from management on the agenda. Information about attendance and the results of votes were published online on Rheinmetall's website after the Annual General Meeting.

Dual management system

Rheinmetall AG is subject to the provisions of German stock corporation law, of the One-Third Participation Act and the capital market regulations as well as the provisions of the company's Articles of Association and the Rules of Procedure for the Executive Board and the Supervisory Board. With its Executive Board and Supervisory Board, Rheinmetall AG has a two-tier management and monitoring structure. The Executive Board and Supervisory Board are responsible for and feel responsible for the interests of the shareholders and the well-being of the company. They work together closely and trustfully in the interests of Rheinmetall.

Diversity in the Supervisory Board and Executive Board

The Supervisory Board and Executive Board of Rheinmetall AG must be filled with personalities who provide a balanced mix of all the qualifications, knowledge, skills and personal characteristics needed for the management and supervision of a capital market-oriented, large company operating in the global Automotive and Defence industry.

The members of the Supervisory Board should possess, individually and collectively, the necessary prerequisites and experience, which are appropriate to the type, scope and complexity of the business as well as the risk structure of the company so that they can act as constructive supervisors and competent advisors to the Executive Board.

In accordance with sections 96(1) and (2) and 101(1) AktG in conjunction with section 7(1) No. 2 of the 1976 German Codetermination Act, the Supervisory Board of Rheinmetall AG comprises eight shareholder representatives and eight employee representatives, at least 30% of whom are women and at least 30% of whom are men.

In the year under review, the Supervisory Board had four female members – two female employee representatives and two female shareholder representatives, which means that the regulation on a minimum quota for women and men on the Supervisory Board is complied with, having regard to the provisions of section 96(2) sentence 3 AktG.

In the Supervisory Board of Rheinmetall AG, which is based on joint representation, the employees are represented by two trade union representatives, five elected employee representatives and one representative for the managerial staff. In each case, three employee representatives are elected to the Supervisory Board from the Automotive and Defence sectors.

The shareholder representatives are determined by the Annual General Meeting. The nominations to the Shareholders' Meeting are based on the recommendations of the Nomination Committee, which take account of balance and the differences in the knowledge, skills and experience of the shareholder representatives proposed for election to the Supervisory Board.

In its Rules of Procedure, the Supervisory Board has stipulated that, as a rule, consideration cannot be given in the nominations to people, who have reached the age of 75 at the date of the election. It takes the view that a mixed age structure in the Supervisory Board serves the interests of the company more effectively. On average, the members of the Supervisory Board were 56.7 years old in the year under review, whereby the youngest and oldest members were aged 38 and 69 respectively.

The Supervisory Board has decided not to stipulate any regulatory limit on membership of the Supervisory Board. It is convinced that a rigid regulatory limit on membership of the Supervisory Board, without looking at the respective individual Supervisory Board members, is not a suitable means of ensuring the further improvement and professionalization of the work of the Supervisory Board. The members of the Supervisory Board had been members of that body for an average of 58 months on December 31, 2017.

The targets for the composition and membership of the Supervisory Board resolved in the Supervisory Board meeting in December 2010 in accordance with item 5.4.1 of the German Corporate Governance Code, which form the basis for a diversity concept, were supplemented and made more specific by a comprehensive skills profile, comprising various parameters, for the shareholder representatives.

Corporate governance

Corporate governance report

As a whole, the composition of the Supervisory Board of Rheinmetall AG serves to ensure that qualified individuals advise the Executive Board and monitor its management activities effectively. Individually and as a group, the members of the Supervisory Board have the necessary qualifications, knowledge, skills and professional experience to perform their advisory and monitoring duties properly in an international technology group. They are sufficiently independent and reflect the international activities of Rheinmetall Aktiengesellschaft. Supervisory Board members have in-depth knowledge of the branches of industry, sectors and areas of operation that are key to the company. They have managerial experience in a corporate or operational context and complement each other in terms of their different educational and professional background, their age structure, professional career, their experience of life, their expertise and their perspectives.

In accordance with Article 6(1) of the Articles of Association, the Executive Board of the company is composed of at least two persons. The number of members is determined by the Supervisory Board. In the year under review, the Executive Board of Rheinmetall AG comprised four members. The responsibilities of the members are shown on page 123.

For the moment, the Executive Board of Rheinmetall AG does not have any female members. This is due – in addition to a continuing lack of supply of external female managers in the Automotive and Defence sectors – to the still insufficient number of women in the management levels of the Rheinmetall Group.

The Supervisory Board supports the Executive Board's objective of promoting female managers to positions in top management on a sustained basis. Various measures and activities as part of career planning and career development have already been adopted with the aim of preparing women for management positions, both in terms of content and on a personal level, in the medium and long term to ensure that, unlike in the past, more women will be available in the future as candidates to assume management responsibility. Nevertheless this target is to be achieved without abandoning previously equally important membership principles: when filling management positions, the best professional and personal qualifications will be decisive regardless of gender.

The Supervisory Board of the company is therefore of the opinion that the current members of the Executive Board of Rheinmetall AG have proven both professionally and personally, considering the respective requirement profile and in the light of their training, professional qualifications, expertise, management qualities, experience and success, the best choice for the company and are the most appropriate appointments for the respective areas. The Supervisory Board also considers continuity in terms of staffing in the individual areas for which Executive Board members are responsible a key component for the economic success of Rheinmetall AG, which was again the case in 2017 and is reflected in, among other things, the operating result and the performance of the share price.

Armin Papperger, Helmut P. Merch, Horst Binnig and Peter Sebastian Krause, all aged between their mid-fifties and their early sixties and on average 57.5 years old at the end of the reporting period, were systematically prepared for more demanding management roles in various functions and hierarchical levels in the Rheinmetall Group and have constantly assumed more responsibility for larger entities during their career in the Group. They know the Automotive and Defence industry, the industry cycles of the entities and the challenges to which an international technology group is exposed today, and are confronting future issues such as innovation and digitalization.

In view of this, the meeting of the Supervisory Board in August 2017 set the target for the share of women in the Executive Board of Rheinmetall AG at 0% by June 30, 2022, which is unchanged on the first reporting period from July 1, 2015 to June 30, 2017.

Composition of the Executive Board

In accordance with Article 6(1) of the Articles of Association, the Executive Board of the company is composed of at least two persons. The number of members is determined by the Supervisory Board. In the year under review, Armin Papperger, Helmut P. Merch, Horst Binnig and Peter Sebastian Krause were appointed as members of the Executive Board.

Responsibilities of members of the Executive Board of Rheinmetall AG

Armin Papperger	Helmut P. Merch	Horst Binnig	Peter Sebastian Krause
SECTORS			
Defence		Automotive	
CENTRAL DEPARTMENTS			
Corporate Communications	Accounting	IT	Human Resources
Corporate Compliance	Controlling		
Corporate Development	Taxes		
Corporate Social Responsibility	Treasury		
Internal Audit	Insurances		
Law	Procurement of Non-production Materials (NPM)		

As of January 1, 2018

Working methods of the Executive Board

The Executive Board is responsible for the overall management of the company. It defines long-term strategic orientation and corporate policy as well as the structure and organization of the Rheinmetall Group and allocates resources. The Executive Board manages the company with the aim of creating sustainable value added under its own responsibility and free from instructions from third parties in accordance with the relevant laws, the company's Articles of Association and the applicable Rules of Procedure and having regard for the resolutions of the Annual General Meeting. It represents the company to third parties.

The Rules of Procedure for the Executive Board govern the Board's work, the allocation of duties among the respective Executive Board members, matters reserved for the Executive Board as a whole and the majority required for Executive Board resolutions. In accordance with the Rules of Procedure for the Executive Board, each member of the Executive Board manages the area of responsibility assigned to him under the business distribution plan independently and on his own responsibility, whereby the Executive Board as a whole must be informed on an ongoing basis of key processes and developments relating to business and important measures. Any matters that are of fundamental importance or that have far-reaching consequences require a resolution to be passed by the Board as a whole.

The Executive Board develops the strategic orientation of the company, agrees it with the Supervisory Board and ensures its implementation. The Executive Board decides on basic issues relating to business policy and on annual and multi-annual planning. It ensures effective management of opportunities and risks as well as risk controlling at the company, implements appropriate measures to ensure that laws, provisions, official regulations and internal corporate guidelines are observed and helps to ensure that subsidiaries comply with these. Furthermore, the Executive Board bears in mind diversity when filling management positions at the company and makes sure that adequate attention is given to women.

Corporate governance

Corporate governance report

Details of cooperation between the Executive and Supervisory Boards can be found in the company's Articles of Association and the Rules of Procedure for the Supervisory Board of Rheinmetall AG, which govern the Executive Board's information and reporting requirements as well as transactions and measures requiring approval. This applies, for example, to the acquisition and sale of shareholdings, investment planning, issuing bonds and taking out long-term loans. The Executive Board informs the Supervisory Board regularly, promptly and comprehensively regarding business performance, financial position and results of operations, planning and achievement of targets, as well as regarding compliance issues, strategy and the risk situation. On the basis of these reports, the Supervisory Board monitors the legality, correctness, appropriateness and economic efficiency of management by the Executive Board.

The Chairman of the Supervisory Board shall be informed immediately by the Executive Board of any important events or business developments that could have a significant influence on the company's financial position, results of operations and net assets.

Composition of the Supervisory Board

The statutory provisions by which the Supervisory Board of the company is elected are explained on page 121.

As a rule, members of the Supervisory Board are elected for five years. They may be re-elected. The Supervisory Board members have the same rights and obligations, are required to perform their mandate in the best interests of the company and are not bound by any orders or instructions.

When candidates are proposed for election to the Supervisory Board, attention is paid to their professional qualifications and personal skills as well as to legal regulations on diversity in the composition of the Board and to independence as defined by the German Corporate Governance Code.

The Supervisory Board believes it already has a suitable number of independent members who do not bear a business or personal relationship to the company or members of the Executive Board that could cause a conflict of interests. To ensure the further prevention of potential conflicts of interest, the Supervisory Board does not include any members who hold board positions or perform advisory activities for key competitors of Rheinmetall AG and its Group companies.

Former Executive Board members of Rheinmetall AG are not represented on the Supervisory Board. The composition of the Supervisory Board and the terms of office of its members are outlined on page 2 of this annual report.

Working methods of the Supervisory Board

The Supervisory Board performs its activities in accordance with statutory provisions, the Articles of Association of Rheinmetall AG and its Rules of Procedure. The main contents of the Rules of Procedure concern the composition, tasks and responsibilities of the Supervisory Board, the convention, preparation and chairing of meetings, the rules pertaining to committees and quorum requirements. The Chairman of the Supervisory Board coordinates the work of the Supervisory Board, chairs its meetings and represents the Board externally. Each year he explains the activities of the Supervisory Board and its committees in the report of the Supervisory Board printed within the annual report and orally at the Annual General Meeting.

The Supervisory Board advises the Executive Board on the management of the company and monitors its management activities. The Chairman of the Supervisory Board is elected from among its members. Supervisory Board meetings are held in accordance with the provisions of the German Stock Corporation Act (AktG). As a general rule, four Supervisory Board meetings take place each calendar year, which are attended by members of the Executive Board unless otherwise stipulated by the Chairman of the Supervisory Board. Resolutions may be passed in writing, by telex (telefax or e-mail) or by telephone. The Supervisory Board passes its resolutions by means of a simple majority of members participating in the passing of the resolution. In the event of a tied vote, the Chairman of the Supervisory Board has the casting vote.

The Supervisory Board of Rheinmetall AG reviews the efficiency of its activities at regular intervals, as required by the provisions of the German Corporate Governance Code. Here, the working methods of the Supervisory Board and its committees, the routing of information from the Executive Board to the Supervisory Board and the interaction of the two boards is discussed and evaluated. The plenary assembly debates possible improvements in an open discussion and decides on any measures. No consultancy agreements or other service or work contracts existed between members of the Supervisory Board and Rheinmetall AG during the period under review.

Structure and working methods of the Supervisory Board's committees

In compliance with legislation and commercial interests, the Supervisory Board has created five committees to perform its control and monitoring tasks efficiently. In doing so, it pursues the aim of making its work more efficient by having complex, time-consuming matters requiring extensive discussion dealt with in smaller groups and prepared for the entire Supervisory Board in the same way as proposed resolutions for decision by the Supervisory Board as a whole. In individual cases, the committees also have decision-making powers if these have been transferred by the Supervisory Board. With the exception of the Nomination Committee, which consists of two shareholder representatives, the committees are based on joint representation, with two or three shareholder representatives and two or three employee representatives in each case. The composition and tasks of committees are set out in the Rules of Procedure for the respective committees. The committee chairmen report in detail on the subjects and resolutions of the committee meetings to the entire Supervisory Board in each case.

Personnel Committee –v Tasks that are the responsibility of this committee include selecting suitable candidates to fill Executive Board positions, making preparations for the appointment and withdrawal of Executive Board members and the conclusion, amendment and termination of employment contracts of members of the Executive Board and other agreements with them. It is also responsible for appraising the performance of the Executive Board, regularly examining the amount, suitability and customary level of Executive Board remuneration and overseeing the structure of the Executive Board remuneration system.

Audit Committee – It is the job of the Audit Committee to support the Supervisory Board when performing its supervisory functions. It looks in particular at the consolidated and single-entity financial statements and quarterly accounts and – in addition to the accounting process – the adequacy and effectiveness of the internal control system, Internal Audit, the risk management system and the compliance management system. Its activities also include monitoring the independence and selection of the auditor, determining the focal points of the audit and agreeing the fees.

Strategy Committee – The Strategy Committee deals with the strategic perspective, focus and development of the Rheinmetall Group. It discusses the principles for the Rheinmetall Group's overall strategy including the business policy and corporate orientation of the company and its corporate sectors with the Executive Board and addresses significant, specific strategic programs and measures.

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Mediation Committee – The Mediation Committee formed in accordance with section 27(3) of the German Codetermination Act (MitbestG) submits to the Supervisory Board a slate of candidates for Executive Board membership if these have not received the required two-third majority of Supervisory Board member votes in the first ballot.

Nomination Committee – The Nomination Committee submits recommendations to the shareholder representatives on the Supervisory Board for the nomination of shareholder representative candidates for election to the Supervisory Board by the Annual General Meeting.

The Supervisory Board is regularly informed by the chairmen of the committees in the subsequent plenary meeting of the activities of the committees and of the content and outcome of discussions held in the respective committee meetings.

Remuneration of board members

The basic components of the remuneration system and remuneration for individual members of the Executive and Supervisory Boards are explained on pages 135 et seq. of the remuneration report, which forms part of the summarized management report.

Managers' transactions

Any transactions involving shares or debt instruments of Rheinmetall AG or derivatives or other financial instruments relating to them that have been carried out by members of the Supervisory and Executive Boards or related parties (managers' transactions in accordance with Article 19 of Regulation (EU) No. 596/2014 of the European Parliament and of the Council on market abuse (Market Abuse Regulation – MAR)) were published by the company in the prescribed manner immediately after notification of the transaction was received, including on the company's website. Dr. Michael Mielke, a member of the Supervisory Board, informed us in October 2017 of the over-the-counter purchase of 200 Rheinmetall shares at a price of €59.86 per share, in May 2017, Detlef Moog, as a member of the Supervisory Board, about the sale of 700 Rheinmetall shares at a price of €85.58 via Xetra, in April 2017, Ms. Jutta Roosen-Grillo, as a related party of a member of the Supervisory Board, about the purchase of 200 Rheinmetall shares at an average price of €78.37 per share via Xetra and in March 2017, the members of the Executive Board about the over-the-counter purchase of Rheinmetall shares at a price of €71.43 per share (allocation of shares as a remuneration component as part of Executive Board remuneration – Armin Papperger: 7,314 shares; Helmut P. Merch: 3,657 shares; Horst Binnig: 3,657 shares). Dr. Michael Mielke was allocated 292 shares over-the-counter at a price of €71.43 per share in March 2017 within the framework of the long-term incentive program for managerial staff.

D&O insurance

Rheinmetall has taken out Directors' and Officers' liability insurance (D&O insurance) which covers the activities of members of the Executive Board and Supervisory Board. This insurance provides for the statutory deductible under section 93(2) sentence 3 AktG for the Executive Board and the deductible recommended by item 3.8(3) of the German Corporate Governance Code for the Supervisory Board.

Preventing conflicts of interest

In making decisions and performing their duties, members of the Executive and Supervisory Boards must not pursue their personal interests or take advantage of any business opportunities arising for the company for their own personal gain, or grant unfair advantages to other persons. In accordance with item 4.3.3 and 5.5.2 of the German Corporate Governance Code, any potential conflicts of interest involving members of the Supervisory Board or Executive Board must be disclosed immediately. No conflicts of interest were reported to the company by any members of the Executive or Supervisory Board in the year under review.

Compliance

Operating in a way that is sustainable from an economic, ecological and social viewpoint is an essential element of Rheinmetall's corporate culture. This also includes integrity in dealings with employees, business partners, shareholders and the public, which is expressed through exemplary conduct. Compliance includes all instruments, guidelines and measures which ensure that procedures in the companies of the Rheinmetall Group comply with country-specific legislation, general legal conditions, regulatory provisions and the company's internal directives and that conduct in accordance with the law and regulations is assured. Compliance activities focus on corruption prevention, export controls and cartel law. Additional statements on compliance in the Rheinmetall Group are provided on pages 110 to 114.

Share of women in the company

The German Act on Equal Participation of Women and Men in Executive Positions in the Private and the Public Sector passed by the Bundestag on March 6, 2015 regulates the setting of targets for the share of women in governing bodies and at senior management levels.

The Supervisory Board currently has four female members: two female employee representatives and two female shareholder representatives. The company therefore complies with the statutory quota in accordance with section 96(2) AktG having objected to total compliance in accordance with section 96(2) sentence 3 AktG.

At its meeting of August 31, 2017, the Supervisory Board of Rheinmetall AG resolved an unchanged target of 0% for the share of women on the Executive Board of Rheinmetall AG until June 30, 2022.

In the year under review, the Rheinmetall Group employed 2,415 managers across its four levels below the Executive Board (previous year: 2,451), 215 or 8.9% of whom were women (previous year: 247 or 10.1%). The ratio of women among the senior management staff of 273 people in the year under review (previous year: 282) was 5.5% (previous year: 3.6%).

At Rheinmetall AG, Rheinmetall Electronics GmbH, Rheinmetall Landsysteme GmbH, Rheinmetall Waffe Munition GmbH, Rheinmetall MAN Military Vehicles GmbH, Rheinmetall Automotive AG, Pierburg GmbH, KS Kolbenschmidt GmbH, KS Gleitlager GmbH and KS HUAYU AluTech GmbH, the targets set for the share of women in the Executive Board/senior management and the next two levels of management levels by June 30, 2017 were all at least achieved.

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At KS Kolbenschmidt GmbH, the target figures were achieved for the share of women in the Executive Board/senior management but not for the first and second level of management, while at Pierburg Pump Technology GmbH, the targets were achieved for the Executive Board/senior management and the first level of management but not for the second level. The failure to achieve the targets set was the result of changes to organizational structures and allocations to management levels.

At Rheinmetall Electronics GmbH, Rheinmetall Landsysteme GmbH, Rheinmetall Waffe Munition GmbH, Rheinmetall MAN Military Vehicles GmbH, Rheinmetall Automotive AG, Pierburg GmbH, KS Kolbenschmidt GmbH, KS Gleitlager GmbH and Pierburg Pump Technology GmbH, the targets set for the share of women in the Supervisory Board by June 30, 2017 were at least achieved. The Supervisory Board of KS HUAYU AluTech GmbH constituted the exception. The co-shareholder of this joint venture replaced a female with a male Supervisory Board member as part of his right to determine and designate.

New minimum targets were set for Rheinmetall AG and its subsidiaries subject to codetermination, which take account of sector-specific circumstances, at the end of the first period for achieving targets:

Minimum targets for the share of women in management levels by June 30, 2022

Company	Executive Board/ management	1 st management level	2 nd management level
Rheinmetall AG	0%	14.80%	27.30%
Rheinmetall Electronics GmbH	0%	11.11%	4.88%
Rheinmetall Landsysteme GmbH	0%	7.14%	12.96%
Rheinmetall Waffe Munition GmbH	0%	8.70%	7.10%
Rheinmetall MAN Military Vehicles GmbH	0%	7.69%	10.53%
Rheinmetall Automotive AG	0%	14.30%	0%
Pierburg GmbH	0%	16.70%	12.50%
KS Kolbenschmidt GmbH	0%	8.30%	14.30%
KS Gleitlager GmbH	0%	0%	0%
KS HUAYU AluTech GmbH	0%	30.00%	0%
Pierburg Pump Technology GmbH	0%	0%	4.17%

Minimum targets for the share of women on supervisory boards by June 30, 2022

Company	Target
Rheinmetall AG	30.00%
Rheinmetall Electronics GmbH	30.00%
Rheinmetall Landsysteme GmbH	0%
Rheinmetall Waffe Munition GmbH	0%
Rheinmetall MAN Military Vehicles GmbH	0%
Rheinmetall Automotive AG	8.33%
Pierburg GmbH	30.00%
KS Kolbenschmidt GmbH	16.67%
KS Gleitlager GmbH	16.67%
KS HUAYU AluTech GmbH	11.11%
Pierburg Pump Technology GmbH	30.00%

Effective risk management and internal control system

Responsible handling of opportunities and risks is part of good corporate governance. The risk management system, including the accounting-related internal control system, is presented in the report on risks and opportunities on pages 72 to 88.

Accounting and auditing

Rheinmetall AG prepares the single-entity financial statements that are relevant for the dividend payment in accordance with the provisions of the German Commercial Code (HGB) and the German Stock Corporation Act. The company's consolidated financial statements are prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted in the European Union and in accordance with the supplementary provisions of section 315e(1) HGB. PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PwC), Frankfurt am Main, Düsseldorf branch, was elected by the Annual General Meeting on May 9, 2017 to audit the single-entity and consolidated financial statements for 2017. The Supervisory Board had previously satisfied itself that the auditor was independent.

Transactions involving related third parties

Transactions involving related third parties are listed in the notes to the consolidated financial statements on page 191.

Supervisory Board and Executive Board members' membership of other supervisory boards

In accordance with the recommendations of the German Corporate Governance Code (item 5.4.5 (1)), none of the Executive Board members performed more than three mandates on supervisory boards of listed stock corporations that were not part of the Group or on supervisory boards of companies external to the Group with comparable requirements. An overview of the memberships of members of the Supervisory Board and Executive Board of Rheinmetall AG of other statutory supervisory boards and comparable control bodies of commercial enterprises in Germany and abroad can be found from page 214.

Transparency in reporting

In a time in which markets are interconnected and the flow of information is becoming increasingly globalized, communications and the quality of information are becoming more and more important to the company's success. Rheinmetall communicates openly, actively and in detail. Investors, potential investors, customers, employees, lenders, business partners, analysts and interested members of the public are informed regularly, promptly and without discrimination of the company's economic and financial situation, key developments, significant changes in business and any facts of relevance to valuation on the Internet at www.rheinmetall.com. Facts and circumstances that may influence the share price on the stock market are published immediately in ad hoc notifications in accordance with the legal regulations. Rheinmetall publishes securities transactions that are subject to reporting requirements in the media required by law and on its website.

Declaration of conformity in accordance with section 161 AktG

"The Executive Board and Supervisory Board of Rheinmetall AG hereby declare that since it issued its last declaration of conformity dated August 25, 2016, Rheinmetall AG has complied with and will continue to comply with the recommendations of the Government Commission of the German Corporate Governance Code as amended on May 5, 2015, officially published in the electronic Federal Gazette on June 12, 2015, and the recommendations of the Government Commission of the German Corporate Governance Code as amended on February 7, 2017 in the version applicable at the time, officially published in the electronic federal gazette on April 24, 2017, with two exceptions until the end of the Annual General Meeting on May 9, 2017, and since the end of the Annual General Meeting on May 9, 2017 with the recommendations of the Government Commission of the German Corporate Governance Code as amended on February 7, 2017, officially published in the electronic Federal Gazette on April 24, 2017, with one exception.

Corporate governance

Corporate governance report

1. Exceptions until the end of the Annual General Meeting on May 9, 2017

Chairmanship of the Audit Committee

By way of derogation from item 5.2(2) of the German Corporate Governance Code, the Chairman of the Supervisory Board was also the Chairman of the Audit Committee. In view of the Supervisory Board Chairman's expertise in the areas of accounting and auditing, together with his many years of experience at Rheinmetall AG and resulting detailed knowledge of the company's corporate sectors, the Executive and Supervisory Boards believe that a deviation from the recommendations of the Code is appropriate and in the interests of good corporate management.

Regulatory limit on membership of the Supervisory Board

The Supervisory Board of Rheinmetall AG has decided not to stipulate any regulatory limit on membership of the Supervisory Board beyond the existing age limit for Supervisory Board members. It is convinced that a rigid regulatory limit on membership of the Supervisory Board, without looking at the respective individual Supervisory Board members, is not a suitable means of ensuring the further improvement and professionalization of the work of the Supervisory Board. Instead, it is hoped that a flexible composition for the Supervisory Board, including members who have belonged to the Board for different periods and have different experience, and a practical focus on a mixed age structure when searching for candidates will better serve the company's interests. Finally, the company has for some time published information on the length of time that the respective members have belonged to the Supervisory Board, thus enabling shareholders to decide for themselves whether individual Supervisory Board members are suitable for re-election.

2. Exception until the end of the Annual General Meeting on May 9, 2017

Regulatory limit on membership of the Supervisory Board

The Supervisory Board of Rheinmetall AG has decided not to stipulate any regulatory limit on membership of the Supervisory Board beyond the existing age limit for Supervisory Board members. It is convinced that a rigid regulatory limit on membership of the Supervisory Board, without looking at the respective individual Supervisory Board members, is not a suitable means of ensuring the further improvement and professionalization of the work of the Supervisory Board. Instead, it is hoped that a flexible composition for the Supervisory Board, including members who have belonged to the Board for different periods and have different experience, and a practical focus on a mixed age structure when searching for candidates will better serve the company's interests. Finally, the company has for some time published information on the length of time that the respective members have belonged to the Supervisory Board, thus enabling shareholders to decide for themselves whether individual Supervisory Board members are suitable for re-election.

Düsseldorf, August, 2017
Rheinmetall Aktiengesellschaft
The Supervisory Board The Executive Board"

The declaration of conformity dated August 31, 2017, along with previous versions, has been published on the company's website (www.rheinmetall.com) in the section "Group – Corporate Governance".

Corporate governance

Disclosures required by takeover law

Explanatory report by the Executive Board in accordance with section 176(1) sentence 1 AktG on disclosures required under takeover law in accordance with sections 289a(1) and 315a(1) HGB as of December 31, 2017.

Composition of the subscribed capital

The subscribed capital (share capital) of Rheinmetall AG amounted to €111,510,656 as of December 31, 2017 (previous year: €111,510,656), and was divided into 43,558,850 (previous year: 43,558,850) ordinary bearer shares with no nominal value (no-par value shares), each of which represented €2.56 of the common stock. The shares are fully paid. Different classes of shares do not exist. In accordance with Article 5(2) of the Articles of Association, no shareholder is entitled to a physical share certificate. The company is authorized to issue bearer share certificates that document several shares.

Shareholder rights and obligations

The same rights and obligations are attached to all shares, as set out in the German Stock Corporation Act, in particular sections 12, 53a et seq., 118 et seq., and 186 AktG. The shareholder is entitled to asset-related and administrative rights. Asset-related rights primarily include the right to a share in the profits under the terms of section 58(4) AktG, the right to net liquidation assets following the dissolution of the company in accordance with section 271 AktG and share subscription rights in the event of capital increases according to section 186(1) AktG.

Administrative rights comprise the right to attend the Annual General Meeting and the right to speak there, ask questions, submit motions and exercise voting rights. Any shareholder may enforce such rights, in particular through actions for information, avoidance or rescission.

Each share in Rheinmetall AG grants one vote at the Annual General Meeting. This does not include treasury shares held by the company in accordance with section 71b AktG, which do not entitle the company to any rights, particularly any voting rights.

The Annual General Meeting elects shareholder representatives on the Supervisory Board as well as the auditor. It decides on the appropriation of net income and approval of the activities of the members of the Executive Board and Supervisory Board. The Annual General Meeting passes resolutions on the Articles of Association and the objective of the company, key corporate measures such as affiliation agreements and conversions, the issuing of new shares, convertible bonds and bonds with warrants and authorization to acquire treasury shares, as well as the performance of a special audit, the early removal of Supervisory Board members and the dissolution of the company.

Subject to other overriding legal provisions, the Annual General Meeting adopts its resolutions by means of a simple majority of votes cast and, where the law prescribes both a voting and shareholding majority, by means of a simple majority of the common stock represented in the passing of the resolution.

Restrictions on voting rights and share transfer

The shares of Rheinmetall AG were not subject to any voting restrictions under the Articles of Association or legislation as of the end of the reporting period. To the extent that Rheinmetall AG issues shares under its long-term incentive program to Executive Board members and other senior management staff, these shares are subject to a four-year lockup period. However, this does not apply to retired members of the Executive Board. Eligible staff in Germany and other European countries were offered Rheinmetall AG shares to purchase on preferential terms as part of the employee share purchase program during the period under review. A two-year lockup period applies to these shares.

Corporate governance

Disclosures required by takeover law

In the case of acquisition of a defence technology company in Germany, sections 60 et seq. of the German Foreign Trade and Payments Regulation allow the German government to prohibit foreign investors from acquiring 25% or more of the shares. This regulation aims to safeguard material security interests of the Federal Republic of Germany.

Shareholdings exceeding 10% of voting rights

The company did not receive notification from any investors during the reporting year stating that their shareholdings had risen above the threshold of 10%.

Rheinmetall AG is not aware of any indirect shareholdings as defined by section 22 of the German Securities Trading Act that exceed 10% of the voting rights.

Shares with special rights conferring controlling privileges

None of the shares issued by Rheinmetall AG vest rights which confer special control privileges on their holders.

Type of voting control if employees have shareholdings and do not exercise their rights of control directly

To the extent that Rheinmetall AG issues shares under its long-term incentive program and employee share purchase program, these shares are directly transferred to these individuals subject to a resale lockup period of four or two years. In the case of retired members of the Executive Board, the four-year lockup period does not apply.

As with other shareholders, these beneficiaries are also able to directly exercise the rights of control to which they are entitled based on the transferred shares, subject to the provisions of the law and Articles of Association.

Appointment and removal of Executive Board members and amendments to the Articles of Association

The appointment and removal of the members of the Executive Board of Rheinmetall AG is based on sections 84 and 85 AktG and section 31 MitbestG in conjunction with Article 6 of the Articles of Association. Executive Board members are appointed by the Supervisory Board for a maximum of five years and may be reappointed or have their term of office renewed, for a maximum period of five years in each case.

The provisions of sections 179 et seq. AktG apply to any amendment of the Articles of Association of Rheinmetall AG.

In accordance with Article 12 of the Articles of Association, amendments that affect only the version or wording of the Articles of Association with regard to the amount and utilization of authorized capital can be carried out by the Supervisory Board without the passing of a resolution by the Annual General Meeting.

Issuing new shares and repurchasing treasury shares

According to section 202 AktG, the Annual General Meeting can authorize the Executive Board for a maximum period of five years to increase the common stock by issuing new shares in return for capital contributions. The authorization granted by the Annual General Meeting of May 6, 2014 to increase the share capital by up to €50,000,000 was partially utilized by the increase of share capital of €10,137,216 on November 11, 2015. By way of resolution of the Annual General Meeting of May 10, 2016, the Executive Board was authorized, with the approval of the Supervisory Board, to increase the share capital of the company up to May 9, 2021, by issuing once or several times new no-par shares in return for contributions in cash and/or in kind, up to a total of €50,000,000 (new authorized capital). The new shares can also be issued to employees of Rheinmetall AG or any subsidiary it controls. The disapplication of pre-emption rights that the Executive Board can resolve with the approval of the Supervisory Board is governed by Article 4(3) of the Articles of Association.

For the purpose of granting shares when options and/or conversion rights are exercised and when option and/or conversion obligations are fulfilled for the holders of bonds with warrants and/or convertible bonds issued on the basis of the authorization, a contingent increase of up to €20 million was carried out on the company's common stock (contingent capital) by way of a resolution of the Annual General Meeting on May 10, 2016. Furthermore, the Executive Board of the company was authorized by resolution of the Annual General Meeting of May 10, 2016 to issue interest-bearing bearer bonds with warrants and/or convertible bonds with a total nominal value of €800 million with a term of up to 20 years on one or several occasions up to May 9, 2021, and to grant the holders of the respective bonds, which carry the same rights, options and conversion rights on new shares of the company up to a total of 7,812,500 shares, in accordance with the more detailed provisions of the conditions for bonds with warrants and/or convertible bonds.

The authorization to acquire and use treasury shares resolved by the Annual General Meeting of May 6, 2014 had not been utilized to acquire treasury shares by the 2016 Annual General Meeting and expired on May 5, 2019. The purchase of treasury stock is governed by section 71 AktG. The Annual General Meeting on May 10, 2016 authorized the Executive Board, in accordance with section 71(1) No. 8 AktG and canceling the previous authorization to acquire treasury shares, to repurchase treasury bearer shares of Rheinmetall AG not to exceed 10% of the current common stock of €111,510,656, up to May 9, 2021. Such treasury shares may be acquired via the stock exchange or by public bid directed at all shareholders or by public invitation to submit a purchase bid.

Further information on the treasury shares can be found in the notes to the consolidated financial statements.

Agreements terminable upon a change of control

The granting of extraordinary rights of termination in the event of a change of control is standard practice especially in long-term credit business.

In the case of the syndicated credit facility for €500 million, the contract provides for negotiations on the continuation of the loan, if more than half of the Rheinmetall AG shares are held directly or indirectly by one person or several persons acting in concert, or if the person or persons acting in concert fulfill the conditions for appointing members of the Supervisory Board. At the end of such negotiations, the lending banks may terminate the agreement in part or in full.

Corporate governance

Disclosures required by takeover law

The loan agreement with the European Investment Bank for €250 million contains a change-of-control clause. This provides for the possibility of negotiations on continuation of the loan, after which the loan is repaid early in full if more than half of the Rheinmetall AG shares are held directly or indirectly by one person or several persons acting in concert, or if the person or persons acting in concert fulfill the conditions for appointing members of the Supervisory Board (change of control). There is also the possibility of full early repayment of the loan following a change of control even without negotiations being commenced.

The promissory note loans totaling €243 million outstanding as of December 31, 2017, which mature between 2019 and 2024 include an extraordinary right of termination in the event of a change of control.

No preventive precautions have been taken against a public takeover bid, the successive acquisition of a controlling stake via share purchases on the stock markets, or control being gained by buying blocks of shares.

Compensation arrangements of the company

No compensation arrangements have been made with members of the Executive Board or employees.

Remuneration report

Remuneration of the Executive Board

Remuneration of the Executive Board

Rheinmetall AG's pay system is geared towards sustainable corporate development. Using an assessment basis spanning several years, incentives are provided for a sustainable corporate management strategy, in particular as part of the long-term incentive program (LTI). The Supervisory Board of Rheinmetall AG resolves upon and regularly reviews the amount of Executive Board remuneration and any significant employment contract elements following preparation work carried out by the Personnel Committee.

The Supervisory Board has performed an extensive review of the remuneration system of the Executive Board on the basis of all relevant information, and has looked in particular at whether the total remuneration of Executive Board members is proportionate to the scope of responsibilities of the Executive Board member in question, his personal performance and the economic situation and success of the company in comparison with industry peers and ensuring that this remuneration does not exceed standard remuneration unless there are special reasons for this.

Remuneration is calculated in such a way as to ensure that it is competitive on a national and international scale, thus offering an incentive for dedicated and successful work. The Supervisory Board most recently reviewed the suitability of Executive Board remuneration at its meeting on August 25, 2016 and adjusted it to standard market conditions at its meeting on December 8, 2016 effective January 1, 2017.

Total remuneration is performance-based and is made up of various components. These comprise fixed annual remuneration not linked to performance, performance-related variable remuneration comprising a short-term incentive program (STI) and a long-term incentive program (LTI) as well as fringe benefits and pension commitments. The fixed component makes up 60% and the STI 40% of the annual target salary.

Fixed remuneration

The fixed component is paid out on a monthly basis in twelve equal portions. In addition, Executive Board members receive fringe benefits in the form of non-cash remuneration. This mainly consists of contributions to statutory social pension insurance (or any exempting life insurance in lieu) plus the use of a company car.

Performance-related variable remuneration

Performance-related variable remuneration comprises two elements, the STI and the LTI.

The target value (100%) for the STI is based on planning for the fiscal year. This is subject to the development of two key figures, EBT and return on capital employed (ROCE), which are each weighted at 50% and used as criteria for determining this figure. The amount paid from the STI ranges between 0% and 200% of the target amount. 200% of the target amount is paid if the planned value is exceeded by 10%. No payment is made from the STI if target achievement falls 30% below the planned value. In the case of intermediate target achievement values, a corresponding value within the range is paid out. The target parameters are also used, in combination with others, by managerial staff in order to ensure the uniformity and consistency of the target system in the Group as a whole in this respect.

Remuneration report

Remuneration of the Executive Board

In order to gear the Executive Board remuneration structure more strongly towards sustainable corporate development, an LTI is part of the Executive Board remuneration. The LTI provides for a distribution at the end of the fiscal year in question based on the calculation of the average adjusted EBT from the last three fiscal years. This distribution amount is divided into a cash portion and an equity portion. The number of shares granted is based on a reference share price which corresponds to the average price on the last five trading days in February of the subsequent fiscal year.

The shares granted are subject to a four-year lockup period, during which they are subject to all opportunities and risks inherent in capital market performance. The vesting period is canceled if a member of the Executive Board retires. As part of the LTI, the figure to be taken into account when calculating the distribution amount (average adjusted EBT from the last three fiscal years) is limited to a maximum of €300 million. This is therefore a cap that is intrinsic to the system. The cash portion is mainly used to pay the tax bill incurred upon receipt of the shares and the cash portion. Average adjusted EBT for fiscal 2016 was €209 million. Average adjusted EBT totaled €305 million for fiscal 2017. Only €300 million was taken into account for the LTI on account of the cap.

The employment contracts make provision for the ability of the Supervisory Board to grant, in exceptional cases and at its own discretion, a special bonus exclusively in the following cases: (i) for special achievements or specific efforts, (ii) if and to the extent to which the Executive Board member has made a particular difference to the company through his activities. Executive Board members are not entitled to the granting of this special bonus.

In addition to salaries, a group accident and invalidity insurance policy and a D&O insurance policy (Directors' and Officers' liability insurance) are also in place, whereby a deductible of 10% of the loss or one and a half times the annual fixed remuneration has been agreed. The contracts of Executive Board members provide for compensation in the event that the position on the Executive Board is terminated prematurely without cause. This is limited to a maximum of two years' salary including fringe benefits (compensation cap) and shall not provide any more payment than the remaining term of the employment contract. The members of the Executive Board did not receive any benefits or equivalent entitlements from third parties with regard to their activities as Executive Board members in fiscal 2017 or in the previous year.

Total remuneration of the Executive Board

Individual details of the remuneration of the Executive Board in fiscal 2017 and pension commitments attributable to individual members of the Executive Board can be found in the following table, in addition to the respective values for the previous year:

Benefits granted € '000

	Armin Papperger CEO from January 1, 2013 ¹		Helmut P. Merch Member of the Executive Board from January 1, 2013	
	2017	2016	2017	2016
Fixed remuneration	1,200	840	660	582
Fringe benefits	25	25	28	28
Total	1,225	865	688	610
One-year variable remuneration (STI)	1,600	1,120	880	776
Multi-annual variable remuneration (LTI)	1,650	1,150	825	575
Total	4,475	3,135	2,393	1,961
Pension expenses	1,113	630	904	570
Total remuneration	5,588	3,765	3,297	2,531

¹ Member since January 1, 2012

Benefits granted € ' 000

	Horst Binnig Member of the Executive Board from January 1, 2014		Peter Sebastian Krause Member of the Executive Board from January 1, 2017	
	2017	2016	2017	2016
Fixed remuneration	600	510	443	–
Fringe benefits	22	22	32	–
Total	622	532	475	–
One-year variable remuneration (STI)	800	610	616	–
Multi-annual variable remuneration (LTI)	825	575	578	–
Total	2,247	1,717	1,669	–
Pension expenses	681	542	470	–
Total remuneration	2,928	2,259	2,139	–

There is no minimum amount of variable remuneration, although there is an upper limit. Remuneration from the STI can amount to a maximum of €1,600 thousand for the CEO Armin Papperger, a maximum of €880 thousand for Helmut P. Merch, a maximum of €800 thousand for Horst Binnig and a maximum of €616 thousand for Peter Sebastian Krause. Remuneration from the LTI can amount to a maximum of €1,650 thousand for the CEO Armin Papperger, up to a maximum of €825 thousand for both Helmut P. Merch and Horst Binnig and up to a maximum of €578 thousand for Peter Sebastian Krause.

Remuneration report

Remuneration of the Executive Board

Amounts paid € '000

	Armin Papperger		Helmut P. Merch	
	CEO from January 1, 2013 ¹		Member of the Executive Board from January 1, 2013	
	2017	2016	2017	2016
Fixed remuneration	1,200	840	660	582
Fringe benefits	25	25	28	28
Total	1,225	865	688	610
One-year variable remuneration (STI)	1,600	1,120	880	776
Multi-annual variable remuneration (LTI)				
Payment	900	627	450	314
Transfer of shares	750	523	375	261
Total	4,475	3,135	2,393	1,961
Pension expenses	–	–	–	–
Total remuneration	4,475	3,135	2,393	1,961

¹ Member of the Executive Board since January 1, 2012

Amounts paid € '000

	Horst Binnig		Peter Sebastian Krause	
	Member of the Executive Board from January 1, 2014		Member of the Executive Board from January 1, 2014 ²⁰¹⁷	
	2017	2016	2017	2016
Fixed remuneration	600	510	443	–
Fringe benefits	22	22	32	–
Total	622	532	475	–
One-year variable remuneration (STI)	800	610	616	–
Multi-annual variable remuneration (LTI)				
Payment	450	314	315	–
Transfer of shares	375	261	263	–
Total	2,247	1,717	1,669	–
Pension expenses	–	–	–	–
Total remuneration	2,247	1,717	1,699	–

On the basis of the reference share price of €71.43 for the end of February 2017, a total of 14,628 shares were transferred to the Executive Board of Rheinmetall AG on April 4, 2017, effective March 30, 2017, as part of the LTI for fiscal 2016. The CEO, Armin Papperger, received 7,314 shares, while Helmut P. Merch and Horst Binnig each received 3,657 shares. The transfer of shares for the LTI for fiscal 2017 will take place at the beginning of April 2018 based on the reference share price as of the end of February 2018.

Pensions

As of January 1, 2014, the defined benefit contributions in the form of pensions agreed on the basis of individual contracts were replaced by modular defined benefits. A transitional arrangement also applies to Executive Board members who are currently in office. The amount of the defined benefits is determined on the basis of a share of the annual target salary, which is an average of 27.5%. The retirement age is 63. The company has recognized provisions for future claims.

Remuneration report

Remuneration of the Supervisory Board

Remuneration of the Supervisory Board

The remuneration of the Supervisory Board of Rheinmetall AG is regulated in Article 13 of the Articles of Association. According to these, Supervisory Board members receive remuneration comprising a fixed component of €60,000 payable after the end of the fiscal year, in addition to reimbursement of expenses and meeting attendance fees. The Supervisory Board Chairman and Vice-Chairman each receive double this compensation. Supervisory Board members receive fixed remuneration of €15,000 for any committee membership, which is payable after the end of the fiscal year. The chairman of a committee receives €30,000. Supervisory Board and committee members who belonged to the Supervisory Board or committee for only part of the fiscal year receive remuneration on a pro rata basis. The attendance fee for Supervisory Board meetings is €1,000. When attending committee meetings that are not held on the same day as a Supervisory Board meeting, the attendance fee is €500.

The shareholder representatives on the Supervisory Board received the following remuneration for fiscal 2017:

		2017	2016
Ulrich Grillo	Chairman of the Supervisory Board and Chairman of the Strategy, Personnel, Mediation and Nomination Committees and a member of the Audit Committee	186,082	38,525
Klaus Greinert	Chairman of the Supervisory Board and Chairman of the Personnel, Audit, Mediation and Nomination Committees (until May 9, 2017)	84,822	240,000
Professor Dr. Andreas Georgi	Member of the Supervisory Board and member of the Personnel Committee as well as Chairman of the Audit Committee	94,397	69,631
Dr.-Ing. Dr.-Ing. E. h. Klaus Draeger	Member of the Supervisory Board and member of the Strategy Committee (since May 9, 2017)	48,493	–
Professor Dr. Susanne Hannemann	Member of the Supervisory Board and member of the Audit Committee	75,000	75,000
Dr. Franz Josef Jung	Member of the Supervisory Board and member of the Nomination Committee (since May 9, 2017)	48,493	–
Detlef Moog	Member of the Supervisory Board and member of the Strategy Committee	69,699	60,000
Professor Dr. Frank Richter	Member of the Supervisory Board and member of the Mediation and Nomination Committees (until May 9, 2017)	31,808	90,000
Klaus-Günter Vennemann	Member of the Supervisory Board and member of the Nomination Committee	69,699	38,525
Univ.-Prof. Dr. Marion A. Weissenberger-Eibl	Member of the Supervisory Board and member of the Mediation Committee	69,699	38,525
Total for shareholder representatives		778,192	720,000

Figures excluding VAT

Remuneration report

Remuneration of the Supervisory Board

The employee representatives in the Supervisory Board, who forward their Supervisory Board remuneration to the Hans Böckler Foundation in accordance with the guidelines of the Federation of German Trade Unions, received the following remuneration for fiscal 2017:

€		2017	2016
Dr. Rudolf Luz	Deputy Chairman of the Supervisory Board and member of the Strategy, Personnel, Audit and Mediation Committees	174,699	165,000
Roswitha Armbruster	Member of the Supervisory Board and member of the Audit Committee	75,000	75,000
Daniel Hay	Member of the Supervisory Board and member of the Personnel Committee	69,699	60,000
Dr. Michael Mielke	Member of the Supervisory Board	60,000	60,000
Reinhard Müller	Member of the Supervisory Board and member of the Mediation Committee (since May 9, 2017)	48,493	–
Dagmar Muth	Member of the Supervisory Board and member of the Strategy Committee	75,000	75,000
Markus Schaubel	Member of the Supervisory Board and member of the Strategy Committee	69,699	60,000
Sven Schmidt	Member of the Supervisory Board and member of the Audit Committee	69,699	60,000
Wolfgang Tretbar	Member of the Supervisory Board and member of the Personnel Committee (until May 9, 2017)	26,507	75,000
Total for employee representatives		668,795	630,000
Total for the Supervisory Board		1,446,986	1,350,000

Figures excluding VAT

In addition, Rheinmetall refunds VAT on Supervisory Board remuneration to the members of the Supervisory Board.

Supplementary report

Events after the end of the reporting period

No events of special significance that could have affected the company's net assets, financial position and results of operations occurred at Rheinmetall AG between the end of the reporting period on December 31, 2017 and the date on which the consolidated financial statements 2017 were prepared.

Düsseldorf, February 28, 2018

Rheinmetall Aktiengesellschaft
The Executive Board

Armin Papperger

Helmut P. Merch

Horst Binnig

Peter Sebastian Krause

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Rheinmetall Group

Balance sheet as of December 31, 2017

€ million	Note	Dec. 31, 2017	Dec. 31, 2016
Assets			
Goodwill	(7)	550	554
Other intangible assets	(7)	229	265
Property, plant and equipment	(8)	1,387	1,378
Investment property	(9)	46	53
Investments carried at equity	(10)	242	240
Other non-current financial assets	(14)	22	13
Other non-current assets	(15)	51	23
Deferred tax assets	(29)	185	236
Non-current assets		2,712	2,762
Inventories	(11)	1,172	1,098
Trade receivables	(12)	1,217	1,306
Liquid financial assets	(13)	119	190
Other current financial assets	(14)	73	43
Other current receivables and assets	(15)	117	125
Income tax receivables		11	10
Cash and cash equivalents	(16)	757	616
Assets held for sale	(8), (9)	8	-
Current assets		3,474	3,388
Total assets		6,186	6,150
Equity and liabilities			
Share capital		112	112
Additional paid-in capital		540	532
Retained earnings		1,209	1,074
Treasury shares		(25)	(32)
Rheinmetall AG shareholders' equity		1,836	1,686
Minority interests		119	95
Equity	(17)	1,955	1,781
Provisions for pensions and similar obligations	(18)	1,080	1,186
Other non-current provisions	(19)	185	135
Non-current financial debts	(20)	572	220
Non-current financial liabilities	(21)	6	8
Other non-current liabilities	(22)	48	48
Deferred taxes	(29)	14	32
Non-current liabilities		1,905	1,629
Other current provisions	(19)	595	516
Current financial debts	(20)	74	567
Current financial liabilities	(21)	112	97
Trade liabilities		760	766
Other current liabilities	(22)	711	741
Income tax liabilities		74	53
Current liabilities		2,326	2,740
Total liabilities		6,186	6,150

Rheinmetall Group

Income statement for fiscal 2017

€ million	Note	2017	2016
Sales		5,896	5,602
Changes in inventories and work performed by the enterprise and capitalised		115	109
Total operating performance	(23)	6,011	5,711
Other operating income	(24)	152	160
Cost of materials	(25)	3,262	3,120
Personnel expenses	(26)	1,548	1,465
Amortization, depreciation and impairment	(27)	241	228
Other operating expenses	(28)	734	715
Income from investments carried at equity		28	28
Other net financial income		(21)	(18)
Earnings before interests and taxes (EBIT)		385	353
Interest income		9	5
Interest expenses		(48)	(59)
Earnings before taxes (EBT)		346	299
Income taxes	(29)	(94)	(84)
Earnings after taxes		252	215
Of which:			
<i>Minority interests</i>		28	15
<i>Rheinmetall AG shareholders</i>		224	200
Earnings per share	(30)	€ 5.24	€ 4.69

Statement of comprehensive income for fiscal 2017

€ million	2017	2016
Earnings after taxes	252	215
Remeasurement of net defined benefit liability from pensions	29	(50)
Revaluation of properties	-	1
Other income from investments carried at equity	-	(2)
Amounts not reclassified in the income statement	29	(51)
Change in value of derivative financial instruments (cash flow hedge)	19	64
Currency conversion difference	(67)	27
Other income from investments carried at equity	(11)	3
Amounts reclassified in the income statement	(59)	94
Other comprehensive income (after taxes)	(30)	43
Comprehensive income	222	258
Of which:		
<i>Minority interests</i>	29	33
<i>Rheinmetall AG shareholders</i>	193	225

Rheinmetall Group

Cash flow statement for fiscal 2017

€ million	2017	2016
Earnings after taxes	252	215
Amortization, depreciation and impairments	241	228
Allocation of CTA assets to secure pension and partial retirement obligations	(30)	(30)
Changes in pension provisions	(14)	1
Income from disposition of non-current assets	(6)	2
Changes in other provisions	120	63
Changes in inventories	(97)	(33)
Changes in receivables, liabilities (without financial debts) and prepaid & deferred items	108	(5)
Pro rata income from investments carried at equity	(28)	(28)
Dividends received from investments carried at equity	8	14
Other non-cash expenses and income	(8)	17
Cash flows from operating activities ¹⁾	546	444
Investments in property, plant and equipment, intangible assets and investment property	(270)	(283)
Cash receipts from the disposal of property, plant and equipment, intangible assets and investment property	3	1
Proceeds from divestments of financial assets	23	-
Payments for investments in financial assets	(15)	(14)
Cash receipts from the disposal of current liquid financial assets	362	117
Payments for the purchase of current liquid financial assets	(292)	(257)
Cash flows from investing activities	(189)	(436)
Capital contributions by non-controlling interests	4	-
Dividends paid out by Rheinmetall AG	(62)	(47)
Other profit distributions	(10)	(8)
Shares issued to employees	4	4
Borrowing of financial debts	415	85
Repayment of financial debts	(551)	(123)
Cash flows from financing activities	(200)	(89)
Changes in financial resources	157	(81)
Changes in cash and cash equivalents due to exchange rates	(16)	6
Total change in financial resources	141	(75)
Opening cash and cash equivalents January 1	616	691
Closing cash and cash equivalents December 31	757	616

¹⁾ of which:

Net interest of €-26 million (previous year: €-35 million), net income taxes of €-69 million (previous year: €-50 million)

Rheinmetall Group

Statement of changes in equity

€ million	Shared capital	Additional paid-in capital	Total retained earnings	Treasury shares	Rheinmetall AG shareholders equity	Minority interests	Equity
Balance as at January 1, 2016	112	528	891	(39)	1,492	70	1,562
Earnings after taxes	-	-	200	-	200	15	215
Other comprehensive income	-	-	25	-	25	18	43
Comprehensive income	-	-	225	-	225	33	258
Dividends payout	-	-	(47)	-	(47)	(8)	(55)
Disposal of treasury shares	-	-	-	7	7	-	7
Other changes	-	4	5	-	9	-	9
Balance as at December 31, 2016/ January 1, 2017	112	532	1,074	(32)	1,686	95	1,781
Earnings after taxes	-	-	224	-	224	28	252
Other comprehensive income	-	-	(31)	-	(31)	1	(30)
Comprehensive income	-	-	193	-	193	29	222
Dividends payout	-	-	(62)	-	(62)	(10)	(72)
Disposal of treasury shares	-	-	-	7	7	-	7
Other changes	-	8	4	-	12	5	17
Balance as at December 31, 2017	112	540	1,209	(25)	1,836	119	1,955

Composition of retained earnings

€ million	Difference of currency conversion	Re-measurement of net defined benefit liability from pensions	Land revaluation	Hedge reserve	Other income from investments carried at equity	Other reserves	Total retained earnings
Balance as at January 1, 2016	21	(464)	84	(38)	7	1,281	891
Earnings after taxes	-	-	-	-	-	200	200
Other comprehensive income	23	(47)	1	47	1	-	25
Comprehensive income	23	(47)	1	47	1	200	225
Dividends payout	-	-	-	-	-	(47)	(47)
Other changes	-	-	-	-	-	5	5
Balance as at December 31, 2016/ January 1, 2017	44	(511)	85	9	8	1,439	1,074
Earnings after taxes	-	-	-	-	-	224	224
Other comprehensive income	(63)	29	-	14	(11)	-	(31)
Comprehensive income	(63)	29	-	14	(11)	224	193
Comprehensive income	-	-	-	-	-	(62)	(62)
Other changes	-	-	-	-	-	4	4
Balance as at December 31, 2017	(19)	(482)	85	23	(3)	1,605	1,209

Notes to the consolidated financial statements

Segment reporting

€ million	Automotive		Defence		Other/ Consolidation		Group		
	2017	2016	2017	2016	2017	2016	2017	2016	
Income statement									
External sales	2,861	2,656	3,036	2,946	(1)	-	5,896	5,602	
Operating result	249	223	174	147	(23)	(17)	400	353	
Special items	(22)	-	(2)	-	9	-	(15)	-	
EBIT	(1)	227	223	172	147	(14)	(17)	385	353
<i>of which:</i>									
At Equity income	29	32	(1)	(4)	-	-	28	28	
Amortization, depreciation (scheduled)	130	124	88	91	5	3	223	218	
Amortization, depreciation (non-scheduled)	10	9	8	1	-	-	18	10	
Interest income	8	2	3	3	(2)	-	9	5	
Interest expenses	(13)	(15)	(30)	(31)	(5)	(13)	(48)	(59)	
EBT		222	210	145	119	(21)	(30)	346	299
Other data									
Operating free cash flow	106	105	238	103	(68)	(47)	276	161	
Order intake	2,922	2,670	2,963	3,050	(1)	-	5,884	5,720	
Order backlog December 31	520	458	6,416	6,656	-	-	6,936	7,114	
Employees as at December 31 (capacities)	11,166	10,820	10,251	10,002	193	171	21,610	20,993	
Net financial debts	(2)	(217)	(183)	(305)	(166)	292	330	(230)	(19)
Pension provisions	(3)	399	405	601	670	80	111	1,080	1,186
Equity	(4)	1,025	992	1,123	987	(193)	(198)	1,955	1,781
Capital Employed	(2)+(3)+(4)	1,207	1,214	1,419	1,491	179	243	2,805	2,948
Average capital employed	(5)	1,211	1,189	1,455	1,498	211	173	2,877	2,860
ROCE (in %)	(1) / (5)	18.7	18.8	11.8	9.8	-	-	13.4	12.3

Disclosures according to region

€ million	Germany		Rest of Europe		North America		Asia		Other regions / Consolidation		Group	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
External sales Defence	867	781	528	493	186	177	652	862	803	633	3,036	2,946
External sales Automotive	556	530	1,299	1,260	465	440	418	334	123	92	2,861	2,656
External sales Total	1,423	1,311	1,827	1,753	651	617	1,070	1,196	925	725	5,896	5,602
in % of Group sales	24	24	31	31	11	11	18	21	16	13	-	-
Assets	1,252	1,271	624	630	143	156	101	101	92	92	2,212	2,250

(1) General disclosures

Rheinmetall AG is the parent company of the Rheinmetall Group and has its registered office at Rheinmetall Platz 1, Düsseldorf (Düsseldorf Commercial Register, HRB 39401). The consolidated financial statements of Rheinmetall AG have been prepared in accordance with the regulations of section 315e(1) German Commercial Code (“HGB”) and the International Financial Reporting Standards (IFRS) as adopted by the European Union (EU). The consolidated financial statements and the Group management report, which is combined with the management report of Rheinmetall AG, are submitted to the operator of the Federal Gazette and published in the Federal Gazette.

The fiscal year of Rheinmetall AG and the financial statements of subsidiaries included in the consolidated financial statements is the calendar year. The consolidated financial statements are presented in euro (€). Unless stated otherwise, all amounts – including those for the previous year – are reported in millions of euro (€ million). Non-rounded amounts may differ. The consolidated income statement has been presented in the total cost (nature of expense) format. Only matters significant to the net assets, financial position and results of operations of the Rheinmetall Group are explained in the notes to the consolidated financial statements.

(2) New and amended accounting standards

Accounting standards applied for the first time in fiscal 2017 that have an effect on the Rheinmetall consolidated financial statements

The amendments to IAS 7 “Statement of Cash Flows” require a more detailed presentation of cash flows attributable to financing activities. A statement of reconciliation from January 1 to December 31 was therefore added to the disclosures under note (20).

Accounting standards issued but not yet applied in fiscal 2017 that affect the Rheinmetall consolidated financial statements – The standards and interpretations below were issued in 2017 or earlier and will be applied from 2018.

Standard	Name	Effective date	Endorsement in EU law
IFRS 9	Financial Instruments	2018	Complete
IFRS 15	Revenue from Contracts with Customers	2018	Complete
IFRS 16	Leases	2018	Complete

IFRS 9 – IFRS 9 “Financial Instruments” largely replaces the previous standard IAS 39. It contains amended regulations on the classification and measurement of financial assets and liabilities, the recognition of impairment and hedge accounting. One consequence of the new standard will be that, in the future, customer receivables that satisfy certain criteria and can be sold under the asset-backed securities program will be measured at fair value. These receivables were previously measured at amortized cost. As these receivables are short-term and their amortized cost is almost equal to their fair value, this has no effect on their measurement. There will merely be additional disclosures in the notes for these financial instruments. €384 million of total customer receivables of €898 million as of December 31, 2017 will be measured at fair value from January 1.

Under IFRS 9, the recognition of impairment on financial receivables is based on the expected loss model, rather than the incurred loss model of the previous standard IAS 39. The financial assets of the Rheinmetall Group are predominantly customer receivables. When recognizing these receivables for the

Notes to the consolidated financial statements

Accounting principles

first time, customers' credit risk must be taken into account in the future. Given the customer structure of the Rheinmetall Group, which essentially consists of major automotive manufacturers and government institutions, write-downs are of minor significance. The amended measurement model will therefore have only a minor impact on the Rheinmetall Group.

The new regulations of IFRS 9 apply to hedge accounting in the Rheinmetall Group. In the Rheinmetall Group, the revised hedge accounting regulations result in more extensive options for designating individual risk components, particularly in commodity price hedging. There will be no other significant effect.

IFRS 15 – The new standard IFRS 15 “Revenue from Contracts with Customers” compiles all regulations on the recognition of revenue from contracts with customers. This replaces all previous standards and interpretations on the recognition of sales. In particular, this could give rise to changes in accounting for customer-specific longer-term projects in the Rheinmetall Group, which primarily occur in the Defence sector. Under the previous regulations, revenue from such contracts with customers was recognized over the term of the project in line with the percentage of completion. The application of IFRS 15 to a customer contract can result in revenue being recognized at a different time compared to previous accounting standards. As such contracts are always negotiated with customer individually, an individual analysis is required and a general statement is not possible. The overall result of a contract is not affected.

Interest effects could arise on customer projects with large order volumes and a long production phase. In particular, this would be the case when an extended period passes between customer payments being received and performance being rendered. Revenue must be adjusted for the calculated time value of money in such cases. At Rheinmetall, the payment terms for long-term customer contracts are often designed such that several milestone payments are agreed so that services are rendered at approximately the same time as customer payments.

Other amendments in the standard affect the reporting of items relevant to contracts with customers. Items must be reported in the statement of financial position for contracts with customers if one of the parties has fulfilled its obligation in full or in part. This is calculated as the revenue recognized less prepayments and progress billings received. In the future, a contract asset will be reported if this figure is positive and a contract liability if it is negative. The previous items “Receivables/liabilities from construction contracts” and “Prepayments received”, which were included under trade receivables/payables, will no longer be used. Work in progress was previously reported under inventories. In the future, this will be recognized as contract costs under other assets. Provisions for anticipated losses will be recognized in the context of the measurement at the lower of cost or market value of customer contracts with revenue recognized over a period of time. These losses were previously included in receivables/liabilities from construction contracts. The changes in reporting will increase total assets.

The exact transition effects from adopting the new standard depend on the billing status of contracts as of December 31, 2017. These effects are currently being verified. Based on current information, there will be no significant effects on the Rheinmetall Group's EBIT or earnings after taxes. The addition to total assets will be a high eight-figure amount.

IFRS 16 – The Rheinmetall Group is adopting the new standard IFRS 16 “Leases” early from fiscal 2018. In the future, accounting by the lessee will be amended such that, for all leases, assets must be recognized for the rights of use acquired in addition to corresponding financial liabilities.

The Rheinmetall Group recognized finance lease assets of €11 million as of December 31, 2017. There is a financial liability in the same amount. €50 million was recognized under other operating expenses for operating leases in the year under review. On the initial adoption of IFRS 16 as of January 1, 2018, €158 million will be capitalized as rights of use from leases and a financial liability for leases will be recognized in the same amount. These rights of use relate in particular to land, buildings, technical equipment, machinery and vehicles. The value of the rights of use is the present value of the leases at the time of initial adoption of the standard. This is essentially calculated from the contractual lease payments, the respective remaining terms and the interest rate on which the lease is based. The rights of use are amortized over the shorter of the remaining term of the lease and the remaining useful life. The lease liability is reduced by the repayment portion of the lease payment until the lease expires.

For short-term leases and leases of low-value assets, the agreed lease installments and rent are recognized as an expense.

Option for transition to new standards – The new standards will be adopted retrospectively from 2018 such that the cumulative adjustment amounts will be recognized as of the date of initial adoption, January 1, 2018. The comparative period will be shown in accordance with the previous accounting regulations.

(3) Basis of consolidation

Besides Rheinmetall AG, the consolidated financial statements include all German and foreign subsidiaries over which Rheinmetall AG can directly or indirectly exercise a controlling influence. Rheinmetall AG controls an entity if it holds the majority of voting rights or other rights and is therefore able to steer the significant activities of the investee, is exposed to the risk of variable returns from the investment and can use its power over the investee to influence its returns. Entities over which Rheinmetall AG exercises joint control are included pro rata in the Rheinmetall consolidated financial statements if Rheinmetall AG has rights to assets attributable to it and obligations for the investee's liabilities (joint operations). Jointly controlled entities in which Rheinmetall AG has rights to the net assets of the investee, are included in the consolidated financial statements using the equity method. Entities over which Rheinmetall AG can exert significant influence (associates) are also recognized using the equity method.

Notes to the consolidated financial statements

Accounting principles

Scope of consolidation – companies included

	Dec. 31, 2016	Additions	Disposals	Dec. 31, 2017
Fully consolidated subsidiaries				
Domestic	46	3	-	49
Foreign	97	5	2	100
	143	8	2	149
Joint operations				
Foreign	1	-	1	-
Investments carried at equity				
Domestic	18	-	2	16
Foreign	15	6	-	21
	33	6	2	37

A total of eight companies were founded and added to the group of consolidated subsidiaries in fiscal 2017. Two companies have left the consolidated group as a result of their merger with other Group companies.

The disposal under joint operations relates to the equity investment in Advanced Bearing Material LLC, Greensburg, USA. The previous share of 50% was reduced to 25% as of August 1, 2017. Since then, this equity investment has been accounted for using the equity method.

The additions to equity investments accounted for using the equity method relate to four new companies founded, the reclassification from joint operations described above and an acquisition. The Defence sector acquired 49% of The Dynamic Engineering Solutions Pty Ltd, Magill, Australia.

(4) Consolidation principles

A subsidiary is included in consolidation for the first time in accordance with the acquisition method. The assets and liabilities acquired are carried at fair value at the time of acquisition. Any positive difference between the purchase cost and the pro rata net assets of the acquired company is reported as goodwill under intangible assets. Any negative goodwill is recognized in other operating income. The cost of the acquired subsidiary equals the fair values of the assets given, liabilities assumed, and equity instruments issued by the acquirer in exchange for the acquisition. Any acquisition-related costs incurred are recognized as other operating expenses.

Receivables and payables, expenses and income and intercompany profits/losses among consolidated companies are eliminated. Taxes are deferred for all temporary differences from the consolidation of receivables/payables, income/expenses, and the elimination of intercompany profits/losses.

Joint operations are consolidated proportionately according to the interests held.

Shares in associates and joint ventures are stated at equity. Taking the historical cost of the shares as of the date of their acquisition, the carrying amount of an equity investment is increased or decreased to reflect such changes in the equity of the associate or joint venture as are allocable to the Rheinmetall Group. Goodwill for these equity investments is calculated according to the same principles as for consolidated companies. Any resulting goodwill is included in the carrying amount of the equity investment. If profits arise from transactions between the Rheinmetall Group and the associate or joint venture, these are corrected on a pro rata basis.

(5) Currency conversion

In the separate financial statements of consolidated companies, each foreign currency transaction is recognized at the historical rate. Monetary assets and liabilities denominated in a foreign currency are translated at the closing rate. Other assets and liabilities are translated at the rate prevailing at the time of the transaction if they are accounted for using the historical cost convention. These assets and liabilities are translated at the rate prevailing at the respective measurement date if they are measured at fair value. Any currency translation differences that arise are duly recognized in the net financial result.

The single-entity financial statements of Group companies whose functional currency is not the euro are translated into euro as the Group currency. Assets and liabilities are translated at the middle spot exchange rate as of the end of the reporting period and the income statement items at the average annual rate. The translation differences resulting from this are recognized in, and only in, equity as other comprehensive income (OCI).

(6) Accounting policies

The key accounting policies applied to Rheinmetall AG's consolidated financial statements are described below.

Cost – Cost includes the purchase price and all incidental costs that can be directly attributed to the purchase (with the exception of company acquisitions as defined by IFRS 3 and financial instruments measured at fair value). In the event of an exchange, cost equals the fair value of the asset given in an exchange of assets transaction as of the date of the exchange, whereby any cash compensation is accounted for accordingly.

Cost includes all expenditures that are directly attributable to the production process and an appropriate share of production-related overheads. The latter also comprise material and production overheads including production-related depreciation and social security expenses. Overheads are allocated to production costs on the basis of the production facilities' normal capacity utilization.

Financing costs are capitalized as costs if they relate to assets which are produced or purchased over a period exceeding one year.

Grants and allowances – Government grants provided for the acquisition of an asset are deducted from the corresponding capital expenditures. Any government grants for expenses for purposes other than investment activities are recognized as deferred income and amortized to profit via other operating income when the related expenses are incurred. Private investment-related grants from customers are also recognized as deferred income and amortized to profit over the contract term. If the grant involves the transfer of economic ownership of the capital good to the customer, sales are recognized on the date of the transfer.

Notes to the consolidated financial statements

Accounting principles

Impairment – If there are indications of impairment on an asset and the recoverable amount is less than the amortized cost, an impairment loss is recognized. If indications for impairment cease to exist, impairment losses are reversed, with the exception of goodwill. The reversal cannot exceed the value what would have resulted for amortized cost that would have resulted if no impairment had been charged.

Goodwill – Goodwill in the amount of the potential benefit is allocated to the cash-generating units at the level of which management monitors goodwill. It is tested once a year for impairment and during the year if there are indications of impairment. The impairment test compares the carrying amount to the recoverable amount. The value in use, which is calculated using the discounted cash flow method based on the current corporate planning, is used as the recoverable amount. If this value is below the carrying amount, a check is made as to whether the net fair value (NFV: fair value less costs to sell) is higher. If the carrying amount exceeds the recoverable amount, an impairment loss is then recognized in the amount of the difference, which is reported as a write-down. The subsequent reversal of write-downs is not permitted.

Goodwill is not amortized.

Other intangible assets – Intangible assets are capitalized at cost. Research costs are always recognized in expenses. Development costs are only capitalized if a newly developed product or process can be clearly defined, is technically feasible and is intended either for own use or marketing purposes. Furthermore, capitalization requires that the costs can be reliably measured and there is reasonable assurance of a future economic benefit. Any other development costs are immediately expensed.

Finite-lived intangible assets are amortized by straight-line charges from the date of first use over the economic lives.

The measurement is subject to the following useful lives:

	Years
Concessions and industrial property rights	3-15
Development costs	5-10
Customer relations	5-15
Technology	5-15

Property, plant and equipment – Property, plant and equipment, except land, are carried at cost less accumulated depreciation and any impairment. Depreciation is recognized on a straight-line basis over the expected useful life.

	Years
Buildings	20-50
Other structures	8-30
Equivalent titles	5-15
Production plant and machinery	3-20
Other plant, factory and office equipment	3-15

Land is carried at fair value according to the revaluation method.

Leasing – Agreements that transfer the right to use assets for a specified period of time in return for payment or a series of payments are leases. If lease transactions result in the transfer of virtually all opportunities and risks associated with ownership of an asset to the lessee, these qualify as finance leases. All other lease transactions are reported as operating leases.

Property, plant and equipment used under a finance lease are capitalized at the lower of their fair value or the present value of minimum lease payments and depreciated on a straight-line basis over the shorter of their estimated useful lives or underlying lease terms. At the same time, a financial liability is recognized in the corresponding amount and written down over the term of the lease using the effective interest method. For usage involving operating leases, rent and lease payments are recognized in expenses over the term of the lease on a straight-line basis.

Investment property – Investment property is property held to earn rental income or to benefit from long-term capital appreciation, and not for use in production or administration.

Investment property is carried at cost less cumulative depreciation and any impairment. Depreciation is recognized on a straight-line basis over useful lives of 20 to 50 years.

Financial instruments – A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

The first-time recognition of financial instruments is at fair value. Acquisition-related costs are included here, unless the financial instrument is measured at fair value in subsequent periods. Standard market purchases and sales of financial assets are recognized for the first time on the settlement date. This is the date when the financial instrument is delivered or the payment is made. Notwithstanding this, derivatives are recognized for the first time as of the date when the contract is concluded or the trading date.

Subsequent measurement of financial instruments is based on the respective measurement category as defined by IAS 39: loans and receivables, assets held to maturity, liabilities held for trading and financial liabilities.

Loans and receivables and assets held to maturity are carried at amortized cost. Valuation allowances are recognized for expected default risks, taking into account customer credit rating, specific country risks and the structure of the financing transaction. Non-interest receivables are discounted by applying rates that match their maturity on first-time recognition and written down using the effective interest method.

Notes to the consolidated financial statements

Accounting principles

Cash and cash equivalents fall within the category of loans and receivables. Cash and cash equivalents comprise any liquid assets with a remaining term of less than three months at the date of their purchase.

Derivative financial instruments that serve exclusively to hedge cash flows within the Rheinmetall Group are defined as held for trading. Changes in the fair value of the derivatives are recognized in the income statement. If the conditions under IAS 39 are met, they are accounted for as cash flow hedges. The effective portion of the changes in the fair value of the designated derivative is recognized in equity in the hedge reserve. The cumulative changes in fair value are reclassified from equity to the income statement if the hedged item is recognized in the income statement. Changes in the fair value attributable to the ineffective portion of the hedge are always recognized in the income statement.

Financial instruments in the financial liabilities category are measured at amortized cost using the effective interest method as of the end of the reporting period.

Inventories – Inventories are carried at cost, usually using the weighted average. Inherent risks due to reduced utility or to obsolescence are adequately allowed for. If the net realizable value of inventories is lower than their carrying amount as of the end of the reporting period, they are written down to net realizable value. The write-down is recognized either as cost of materials (raw materials and supplies) or a change in inventories of finished products and work in progress. If the net realizable value of inventories previously written down increases, the ensuing reversal is routinely offset against cost of materials (raw materials and supplies) or recognized as a change in inventories of finished products and work in progress.

The reporting of inventories has changed since the previous period in that prepayments received are now reported under other liabilities. Prepayments were previously deducted from the related inventories. The change in reporting allows greater transparency of assets. The prior-year amounts were restated as follows:

€ million	Dec. 31, 2016	Dec. 31, 2016	Jan.1, 2016	Jan.1, 2016
	new	previous	new	previous
Inventories	1,098	1,072	1,052	1,026
Prepayments received (Other current liabilities)	354	328	363	337
Total assets	6,150	6,124	5,756	5,730

Construction contracts – Construction contracts with customers are accounted for in accordance with their percentage of completion. Sales are recognized on the basis of percentage of completion, which is calculated on a cost-to-cost basis, i.e. at the ratio the contract costs incurred bear to anticipated contract costs. Progress billings with and without payments received and advance payments are deducted from cumulative sales. A positive balance resulting is capitalized as a receivable from construction contracts while any negative balance is recognized as a liability from construction contracts. Expected losses on contracts are recognized in expenses immediately in full. If the net result from a percentage of completion contract cannot be reliably estimated, pro rata profits are not recognized, and instead sales are recognized only in the amount of costs actually incurred (zero profit method).

Deferred taxes – Deferred taxes are recognized for temporary measurement differences between items shown in the statement of financial position under IFRS and according to the local tax laws of the individual companies. Deferred tax assets also include the tax assets receivable from the expected future utilization of tax loss carryovers (if their realization is reasonably certain). Deferred taxes are

calculated on the basis of the tax rates applicable or announced in each country as of the end of the reporting period.

Tax provisions are recognized on the basis of appropriate estimates for obligations to the respective national tax authorities that are uncertain in terms of amount and probability of occurrence. The tax rate specific to the company effective at the end of the reporting period is used. Other factors are also taken into account, such as experience from previous external audits and different legal interpretations between taxpayers and the tax authorities with regard to the issue at hand. Uncertain income tax items are recognized at the most likely amount.

Pensions – Pension provisions for defined benefit plan obligations are calculated using the projected unit credit method. The amount of obligations is calculated based on assumptions concerning mortality, expected future pay and pension increases, plan participant turnover rates, the discount rate and other actuarial parameters. The fair value of the plan assets is deducted from the DBO volume. Any excess of plan assets over the DBO volume (a defined benefit asset) is only recognized if and to the extent that it can actually be utilized. If there are deviations between the actuarial assumptions and the actual development of underlying parameters used to calculate the projected unit credits and the market value of the pension assets, gains and losses arise from remeasurement of the net defined benefit liability. These effects arising from remeasurement and the asset cap are recognized directly in equity under retained earnings in the year they occur.

Under defined contribution plans, the company incurs no obligations other than to pay the contributions to earmarked post-employment benefit plans. The payments incurred are recognized in personnel expenses.

The Rheinmetall Group also participates in multi-employer pension plans. As these are defined benefit plans, they are accounted for accordingly.

Provisions – Other provisions take into account all identifiable commitments and obligations to third parties if based on past transactions or events and if it is probable that an outflow of resources (which can be reliably estimated) embodying economic benefits results. If the time value of money is material, provisions are discounted to their settlement amount as of the end of the reporting period. The settlement amount also accounts for identifiable future cost increases.

Recognition of sales – Sales primarily result from the sale of goods. In addition, sales are generated from services in the context of service and maintenance activities and contracted development work. Sales are measured at the fair value of the consideration received or to be received minus discounts, reductions or other deductions. Sales from supply agreements are recognized on passage of risk to the customer if the sales amount can be reliably estimated and a flow of benefits is probable. Under construction contracts with customers, sales are recognized according to the percentage of completion method. Sales from service contracts and sales from contracted development work are recognized in accordance with the stage of completion, if the result can be reliably estimated. The stage of completion is measured in accordance with the ratio of costs incurred for work performed so far to the estimated total contract costs, or on a pro rata basis in the case of service contracts.

Expenses – Operating expenses are recognized when caused or when the underlying service is used.

Interest and dividends – Interest income and expense are recognized on an accrual basis. Dividends are recognized in income when the legal claim to payment is established.

Notes to the consolidated financial statements

Accounting principles

Summary of main measurement methods:

Assets	
Goodwill	Cost (subsequent measurement: impairment test)
Other intangible assets	(Amortized) cost
Property, plant and equipment	
Essential plots of land owned for business purposes	Cost Subsequent measurement: Remeasurement at fair value
Other	(Amortized) cost
Investment property	(Amortized) cost
Investments accounted for using the equity method	Equity method
Financial assets	
Loans and receivables	(Amortized) cost
Held to maturity	(Amortized) cost
Held for trading purposes	At fair value
Inventories	(Amortized) cost
Trade receivables	(Amortized) cost
Cash and cash equivalents	(Amortized) cost
Equity and liabilities	
Provisions for pensions and similar obligations	Present value of DBO
Other provisions	Discounted settlement amount
Financial debts	(Amortized) cost
Trade liabilities	(Amortized) cost
Other liabilities	
Financial liabilities held for trading	At fair value
Miscellaneous	(Amortized) cost

Estimates – The preparation of the consolidated financial statements requires assumptions and estimates affecting the application of accounting principles within the Group and the disclosure of assets, liabilities, income and expenses.

When examining the recognition of goodwill of €550 million as of December 31, 2017 (previous year: €554 million), assumptions and estimates relating to forecasts and the discounting of future cash flows were made to calculate the recoverable amount of the relevant cash-generating units. Details of the parameters used are provided under note (7).

The carrying amounts as of December 31, 2017 of other intangible assets of €229 million (previous year: €265 million), property, plant and equipment of €1,387 million (previous year: €1,378 million) and investment property of €46 million (previous year: €53 million) are assessed to determine whether there are indications of a possible impairment and whether the recoverable amount is lower than their carrying amount. When calculating the recoverable amounts, assumptions and estimates are made on the cash flows from realizable sales prices, costs and the discount rates. The yield curves used in the measurement of derivatives include assumptions about the expected future development of interest rates, taking into account estimated liquidity risks dependent on terms. Moreover, the measurement models used also incorporate parameters that are based on assumptions about volatilities and discount rates.

The measurement of pension provisions and similar obligations of €1,080 million as of December 31, 2017 (previous year: €1,186 million) is based on the determination of actuarial parameters such as the discount rate, pension development and the mortality rate. The effect of changes in the parameters used as of the end of the reporting period on the present value of the DBO is shown under note (18). Any discrepancy between the parameters assumed at the beginning of the fiscal year and the actual conditions at the end of the reporting period has no impact on earnings after taxes, as gains and losses due to the remeasurement of the net defined benefit liability resulting from the discrepancy are recognized directly in equity.

The recognition of sales for construction contracts in the amount of €1,446 million in fiscal 2017 (previous year: €1,429 million) is based on estimates of the expected total contract costs and contract revenue. Comparing the actual contract costs incurred to expected total costs shows the percentage of completion as of the end of the reporting period, on the basis of which the pro rata sales for the period are calculated.

The calculation of future tax advantages which reflect the recognition of deferred tax assets (€185 million as of December 31, 2017; previous year: €236 million) is based on assumptions and estimates on the development of tax income over a planning period of usually five years and tax legislation in the countries of the Group companies based there.

When assessing and accounting for legal risks and opportunities, estimates on the possible occurrence and the amount of the expected obligations are made. In the process, the management deploys internal legal assessments and evaluations by external attorneys.

The respective assumptions and estimates are based on premises which represent the most recent knowledge. Actual developments may result in amounts differing from these estimates. Changes in accounting estimates are recognized in the period of change where the change affects this period only. If changes in estimates affect both the current period and future periods, these are recognized accordingly in the periods in question.

(7) Goodwill, other intangible assets

€ million	Goodwill	Development costs	Other intangible assets	Total
Cost				
Jan. 1, 2016	552	305	370	1,227
Additions	-	31	9	40
Disposals	-	-	(3)	(3)
Book transfers	-	-	2	2
Currency differences	2	2	4	8
Dec. 31, 2016/Jan. 1, 2017	554	338	382	1,274
Additions	-	15	11	26
Disposals	-	(3)	(5)	(8)
Book transfers	-	-	3	3
Currency differences	(4)	(6)	(9)	(19)
Dec. 31, 2017	550	344	382	1,276

Notes to the consolidated financial statements

Accounting principles

€ million	Goodwill	Development costs	Other intangible assets	Total
Amortization and depreciation/impairment				
Jan. 1, 2016	-	155	245	400
Current period	-	28	26	54
Disposals	-	-	(2)	(2)
Currency differences	-	-	3	3
Dec. 31, 2016/Jan. 1, 2017	-	183	272	455
Current period	-	35	23	58
Write-ups	-	(2)	-	(2)
Disposals	-	-	(5)	(5)
Currency differences	-	(3)	(6)	(9)
Dec. 31, 2017	-	213	284	497
Book value as of 12/31/2016	554	155	110	819
Book value as of 12/31/2017	550	131	98	779

Goodwill is managed at the level of the Automotive and Defence sectors and regularly tested for impairment. Goodwill was tested for impairment as of December 31, 2017. No impairment was revealed. The impairment test uses the value in use of the cash-generating unit, which is calculated using the discounted cash flow method based on a three-year detailed planning period. For periods after the detailed planning phase, cash flows are extrapolated from the last planning period, taking into account growth rates based on the long-term inflation forecast.

In the Rheinmetall Group, the corporate plan is prepared on the basis of empirical and current forecast data. Within the Defence sector, planning is predicated on projects already included in its order backlog, on customer inquiries and, most importantly, on national defence budgets of relevant customers. Key planning assumptions by Automotive are based on the sector forecasts underlying sales plans and covering the worldwide automotive market trend, the planned engine programs of carmakers, specific customer commitments to individual projects and adjustments specific to Automotive adjustments to allow for planned product innovations and cost savings.

The discount rates for each sector and the carrying amounts of the goodwill of the divisions are shown below.

€ million	Dec. 31, 2017			Dec. 31, 2016		
	Book value	WACC before taxes	WACC after taxes	Book value	WACC before taxes	WACC after taxes
Divisions Defence						
Weapon and Ammunition	179	9.93%	7.28%	179	9.38%	6.90%
Electronic Solution	120	9.85%	7.29%	121	8.96%	6.75%
Vehicle Systems	82	9.35%	6.84%	83	8.18%	6.10%
Divisions Automotive						
Mechatronics	67	10.49%	7.66%	67	10.04%	7.32%
Hardparts	87	10.28%	7.54%	89	9.98%	7.28%
Aftermarket	15	11.58%	8.47%	15	11.10%	8.08%

For the period after the last planning year, a growth rate of 1.0% (previous year: also 1.0%) was deducted from the risk-specific pretax discount rate.

In addition to the impairment test, each cash-generating unit was subjected to sensitivity analyses. These analyses assumed scenarios based firstly on a 0.5 percentage point higher discount rate and secondly a 0.5 percentage point lower growth rate. For further sensitivity, the cash flows used to calculate the terminal value were reduced by a flat rate of 10%. None of the sensitivity analyses resulted in impairment of the recognized goodwill.

In addition to capitalized development costs of €15 million, €209 million was recognized as expenses for research and development costs in 2017 (previous year: €185 million).

Notes to the consolidated financial statements

Accounting principles

(8) Property, plant and equipment

€ million	Land, land rights, and buildings	Production plant and machinery	Other plant, factory and office equipment	Prepayments made and construction in progress	Total
Cost					
Jan. 1, 2016	1,116	1,949	559	159	3,783
Additions	20	44	42	135	241
Disposals	(2)	(71)	(35)	(1)	(109)
Change from revaluation	1	-	-	-	1
Book transfers	10	63	21	(112)	(18)
Currency differences	11	30	7	2	50
Dec. 31, 2016/Jan. 1, 2017	1,156	2,015	594	183	3,948
Additions	9	42	37	156	244
Disposals	(4)	(37)	(23)	(1)	(65)
Change from revaluation	-	-	-	-	-
Book transfers	9	75	37	(143)	(22)
Adjustment in scope of consolidation	(1)	(3)	-	-	(4)
Reclassification of assets held for sale	-	-	-	(1)	(1)
Currency differences	(37)	(76)	(10)	(5)	(128)
Dec. 31, 2017	1,132	2,016	635	189	3,972

€ million	Land, land rights, and buildings	Production plant and machinery	Other plant, factory and office equipment	Prepayments made and construction in progress	Total
Amortization and depreciation/impairment					
Jan. 1, 2016	573	1,473	423	-	2,469
Current period	21	110	42	-	173
Disposals	(2)	(70)	(34)	-	(106)
Currency differences	7	22	5	-	34
Dec. 31, 2016/Jan. 1, 2017	599	1,535	436	-	2,570
Current period	21	107	52	-	180
Disposals	(3)	(36)	(22)	-	(61)
Book transfers	(3)	(2)	(3)	-	(8)
Adjustment in scope of consolidation	(1)	(3)	-	-	(4)
Currency differences	(26)	(60)	(6)	-	(92)
Dec. 31, 2017	587	1,541	457	-	2,585
Book value as of 12/31/2016	557	480	158	183	1,378
Book value as of 12/31/2017	545	475	178	189	1,387

The fair value of operating land included in “Land, land rights, and buildings” was €210 million as of December 31, 2017 (previous year: €228 million). The step-up amounted to €117 million (previous year: €120 million). Generally accepted measurement methods are used to calculate fair value, and are essentially based on the expert reports of an independent appraiser. External appraisal reports are obtained at regular intervals, most recently as of December 31, 2013. Based on indicative land values for

the relevant plot of land and additional analyses of transactions involving comparable properties, appropriate premiums or discounts are determined, taking into account the characteristics of the land and the specific use of the property. A 10% change in indicative land values would lead to an equivalent change in fair values, assuming that premiums and discounts remain the same. Indications that could result in a change to fair values are checked for regularly. The measurement method is attributed to level 3 of the measurement hierarchy in IFRS 13.

(9) Investment property

€ million	2017	2016
Cost		
Jan. 01	64	45
Additions	-	2
Disposals	(13)	-
Book transfers	16	17
Reclassification of assets held for sale	(12)	-
Dec. 31	55	64
Amortization and depreciation/impairment		
Jan. 01	11	10
Current period	3	1
Disposals	(4)	-
Book transfers	5	-
Reclassification of assets held for sale	(5)	-
Currency differences	(1)	-
Dec. 31	9	11
Book value as of 12/31	46	53

Investment property has a fair value of €54 million (previous year: €60 million), partially determined on the basis of independent external appraisal reports (date of last regularly prepared reports: December 31, 2013) and partially on the basis of the company's own calculations. Generally accepted measurement methods are used to calculate the fair value – a combination of the discounted cash flow method and the sales comparison approach. Both methods come under level 3 of the measurement hierarchy in IFRS 13. The discounted cash flow method is used to discount annual cash flows of leased properties and to calculate the fair value. A standard market discount rate is used in addition to market rents, which reflects the specific country's local property market and the features of the property. The sales comparison approach is used for land that cannot be rented on a long-term basis and is based on indicative land values or transactions involving similar plots of land.

The reclassification to assets held for sale concerns the planned sale of developed land in Hamburg. Part of this former Automotive production site was already sold in the reporting year. Please refer to the comments in notes (14) and (31).

Notes to the consolidated financial statements

Accounting principles

(10) Investments accounted for using the equity method

The major investments accounted for using the equity method are firstly the joint ventures Kolbenschmidt Shanghai Piston Co. Ltd., Kolbenschmidt Pierburg Shanghai Nonferrous Components Co., Ltd., Pierburg Yinlun Emission Technology (Shanghai) Co. Ltd. and Pierburg Huayu Pump Technology Co. Ltd. (together China Joint Ventures), which are based in Shanghai and operated with the Chinese SAIC Group, and with which the Automotive sector is strengthening its position on the Chinese market for pistons, pumps for automotive applications and other engine parts. Secondly, the joint venture KS HUAYU AluTech GmbH (KS HUAYU), Neckarsulm, likewise conducted with the SAIC Group and operating in aluminum technology, is also significant.

The joint venture Rheinmetall International Engineering GmbH, Geisenheim (RIE), operated with Ferrostaal Industrieanlagen GmbH, Essen, was allocated to the Defence sector. The shares in the company were sold to the joint venture partner. The disposal of shares in May 2017 gave rise to expenses of €10 million, €9 million of which were recognized in net investment income and €1 million of which under other operating expenses.

Financial information (100% basis) on the major investments accounted for using the equity method

€ million	China Joint Ventures		KS HUAYU		RIE	
	2017	2016	2017	2016	2017	2016
Current assets (Dec. 31)						
Non-current	326	314	116	89	-	12
Cash and cash equivalent	51	78	-	1	-	4
Other current	399	335	105	101	-	68
Financial debts (Dec. 31)						
Non-current	11	-	10	3	-	-
Current	141	104	18	14	-	11
Other liabilities (Dec. 31)						
Non-current	7	-	49	48	-	9
Current	375	410	99	76	-	82
Sales	845	825	318	289	-	103
Amortization and depreciation	58	67	12	11	-	9
Net interest	(4)	(4)	(1)	(2)	-	(1)
Income taxes	11	15	-	-	-	5
Net income	49	43	-	11	-	(21)

Development of the major investments accounted for using the equity method

€ million	China Joint Ventures		KS HUAYU		RIE	
	2017	2016	2017	2016	2017	2016
Net assets Jan. 1	213	186	50	40	-	-
Comprehensive income	36	45	-	10	-	(18)
<i>Net income</i>	49	43	-	11	-	(21)
<i>Other income</i>	(13)	2	-	(1)	-	3
Dividend	(7)	(18)	(5)	-	-	-
Net assets Dec. 31	242	213	45	50	-	(18)
Investment in %	50	50	50	50	-	50
Carrying amount of investment Dec. 31	121	107	23	25	-	-
Dividend received	4	9	2	-	-	-

The following table shows the financial information for the investments accounted for using the equity method that, considered individually, are immaterial for the Rheinmetall consolidated financial statements. The amounts given all relate to the share held by Rheinmetall:

€ million	2017		2016	
	Joint Venture	Associated companies	Joint Venture	Associated companies
Carrying amount of shares	33	65	28	80
Net income	7	3	6	5
Other income	-	(3)	-	-
Comprehensive income	7	-	6	5

(11) Inventories

€ million	Dec. 31, 2017	Dec. 31, 2016
Raw materials and supplies	403	382
Work in process	479	432
Finished products	128	114
Merchandise	108	103
Prepayments made	54	67
	1,172	1,098

Additions to write-downs totaled €6 million (previous year: €7 million).

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(12) Trade receivables

€ million	Dec. 31, 2017	Dec. 31, 2016
Customer receivables	898	981
Receivables from construction contracts	319	325
	1,217	1,306

Receivables and liabilities from construction contracts

€ million	Dec. 31, 2017	Dec. 31, 2016
Production costs incurred	6,374	5,781
Plus margins / less anticipated losses	858	780
Progress billings / payments received	(7,215)	(6,504)
Total	17	57
<i>Of which receivables from construction contracts</i>	<i>319</i>	<i>325</i>
<i>Of which liabilities from construction contracts</i>	<i>(302)</i>	<i>(268)</i>

Sales from construction contracts totaled €1,446 million in fiscal 2017 (previous year: €1,429 million).

(13) Liquid financial assets

Liquid financial assets comprise commercial papers with a maturity between three and eleven months issued by companies with short-term investment grade ratings (at least A₃ (S&P) or P₃ (Moody's) or alternative ratings from Euler Hermes with grade 4).

(14) Other financial assets

€ million	Dec. 31, 2017	Of which current	Of which non-current	Dec. 31, 2016	Of which current	Of which non-current
Derivatives	56	46	10	37	27	10
Receivables from the sale of real estate	12	12	-	-	-	-
Receivables from finance leases	8	-	8	-	-	-
Securities	4	2	2	4	2	2
Loans	1	-	1	1	-	1
Other	14	13	1	14	14	-
	95	73	22	56	43	13

The receivable from the sale of real estate relates to the outstanding payment from a partial sale of a developed plot in Hamburg.

The finance lease receivables relate to the letting of a newly built production building to the joint venture KS HUAYU. The lease has a term of 30 years with a renewal option for a further five years and a non-guaranteed residual value of €1 million. The interest rate of 3.62% on which the lease is based was used to calculate the present value of the lease payments.

€ million	Dec. 31, 2017			Dec. 31, 2016		
	2018	2019-2022	ab 2023	2017	2018-2021	ab 2022
Minimum lease payments	-	2	11	-	-	-
Present value of minimum lease payments	-	2	6	-	-	-

The unearned financial income amounts to €6 million as at December 31, 2017.

(15) Other receivables and assets

€ million	Dec.31, 2017	Of which current	Of which non-current	Dec.31, 2016	Of which current	Of which non-current
Other taxes	64	46	18	60	60	-
Subsidies/grants receivable	40	25	15	43	27	16
Deferred income	28	16	12	19	16	3
Prepayments made	18	18	-	20	20	-
Reimbursement claims from insurances	11	11	-	2	2	-
Other	7	1	6	4	-	4
	168	117	51	148	125	23

The subsidies/grants receivable essentially relate to grants paid by public administrative bodies to subsidize the in-house development of new technologies.

(16) Cash and cash equivalents

€ million	Dec. 31, 2017	Dec. 31, 2016
Bank balances in credit institutions, checks, cash in hand	598	581
Short term investments (up to 3 months to maturity)	159	35
	757	616

(17) Equity

Subscribed capital – The subscribed capital of Rheinmetall AG is unchanged at €111,510,656 and is divided into 43,558,850 no-par value shares (shares with no nominal value).

Authorized capital – By way of resolution of the Annual General Meeting on May 10, 2016, the Executive Board was authorized, with the approval of the Supervisory Board, to increase the share capital of the company by up to €50,000,000 in total by May 9, 2021, by issuing new no-par shares in return for contributions in cash or in kind. Shareholder subscription rights for up to 10% of the current share capital of the company can be disapplied at an issue price not significantly below the stock market price. The Executive Board is granted the option of carrying out capital increases in return for contributions in kind for the granting of shares for the purpose of acquiring companies, parts of companies or investments, or of issuing a limited number of employee shares without subscription rights.

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Contingent capital – By way of resolution of the Annual General Meeting on May 10, 2016, the Executive Board was authorized to issue bonds with warrants or convertible bonds with a total nominal value of up to €800,000,000, and to create the associated contingent capital of up to €20,000,000.

With the approval of the Supervisory Board, the Executive Board can issue interest-bearing bonds with warrants or convertible bonds on one or several occasions until May 9, 2021, and attach options or conversion rights to the respective bonds entitling the acquirer to subscribe to a total of up to 7,812,500 shares of Rheinmetall AG. This does not affect shareholders' statutory pre-emptive rights. The Executive Board is also authorized to disapply the statutory right of shareholders to subscribe to bonds within certain limits. The subscription right is to be disapplied to the extent necessary to be able to offset any fractional amounts that may arise when determining the subscription ratio or to be able to grant subscription rights to bearers of bonds with warrants and/or convertible bonds that have already been issued. Subscription rights are also disapplied for up to 4,355,885 new shares, corresponding to €11,151,056.60 or 10% of the current share capital. The disapplication of pre-emptive subscription rights is limited to a maximum of 20% of share capital.

Retained earnings – The retained earnings include earnings generated by the Rheinmetall Group in the past less profit distributed.

Effects from the currency translation of subsidiaries' financial statements not prepared in euro, from the remeasurement of pension plans and essential plots of land owned for business purposes recognized directly in equity, from the measurement of derivatives in cash flow hedges and other comprehensive income from investments accounted for using the equity method (other income) are also reported here.

Treasury shares – By way of resolution of the Annual General Meeting on May 10, 2016, the Executive Board of the company is authorized to acquire treasury bearer shares equivalent to a maximum of 10% of the share capital existing on this date of €111,510,656.00. The acquisition may be via the stock exchange or by public bid directed at all shareholders or by public invitation to submit a purchase bid. In this case, the purchase price per share in the event of an acquisition via the stock exchange must not be more than 10% higher or lower than the average closing price of the shares in Xetra trading on the Frankfurt Stock Exchange on the three preceding trading days. In the event of a public bid or an invitation to submit such a bid, the purchase price offered and paid must not be more than 10% higher or lower than the average closing price of the shares in Xetra trading on the Frankfurt Stock Exchange on the fifth to third trading day prior to publication of the purchase bid.

The Executive Board is authorized to retire or resell the treasury shares acquired on the basis of this authorization or earlier authorizations without further Annual General Meeting resolutions.

As in the previous year, no treasury shares were acquired in the reporting year. Disposals related to the long-term incentive program and the share purchase program for employees, which are described under note (37). Sales proceeds from the disposals are used for general financing purposes. As of December 31, 2017, the portfolio of treasury shares amounted to 679,709 shares with acquisition costs of €25 million. The amount of subscribed capital attributable to treasury shares totaled €1,740 thousand. This represents a share in subscribed capital of 1.6%.

Other comprehensive income

€ million	2017			2016		
	Gross amount	Tax effect	Net amount	Gross amount	Tax effect	Net amount
Remeasurement of net defined benefit liability from pensions	45	-16	29	(70)	20	(50)
Land revaluation	-	-	-	1	-	1
Other income from investments carried at equity	-	-	-	(2)	-	(2)
Amounts not reclassified in the income statement	45	(16)	29	(71)	20	(51)
Change in value of derivatives (Cash flow hedges)	25	(6)	19	87	(23)	64
Currency conversion difference	(67)	-	(67)	27	-	27
Other income from investments carried at equity	(11)	-	(11)	3	-	3
Amounts reclassified in the income statement	(53)	(6)	(59)	117	(23)	94
Other comprehensive income	(8)	(22)	(30)	46	(3)	43

In fiscal 2017, Rheinmetall AG paid a dividend of €62 million or €1.45 per share (previous year: €47 million or €1.10 per share) to its shareholders from its retained earnings.

At the Annual General Meeting on May 8, 2018, the Executive Board and Supervisory Board intend to propose a dividend payment of €1.70 per share. The total amount paid out will be €73 million.

Significant non-controlling interests – Significant non-controlling interests of 49% are held by other shareholders in the subgroup of Rheinmetall MAN Military Vehicles GmbH, Munich. The Group's financial information is shown below.

€ million	2017	2016
Minority interests included in equity (Dec. 31)	(3)	(11)
Assets (Dec.31)	697	644
<i>Of which non-current</i>	143	149
<i>Of which inventories</i>	221	168
Liabilities (Dec. 31)	691	667
<i>Of which non-current</i>	90	125
External sales	903	752
Internal sales	17	3
Net income	26	2
<i>Of which from minority interests</i>	13	1
Comprehensive income	26	1
<i>Of which from minority interests</i>	13	-
Cash flows from operating activities	94	7

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Non-controlling interests in earnings after taxes – The earnings after taxes attributable to Group companies in which other shareholders hold non-controlling interests break down as follows:

€ million	Minority interests	2017	2016
Subgroup of Rheinmetall MAN Military Vehicles GmbH	49%	14	1
Rheinmetall Denel Munition Pty. Ltd.	49%	11	8
Rheinmetall Chempro GmbH	49%	3	2
Other		-	4
		28	15

Capital management – Capital management is geared towards sustainably increasing enterprise value, securing sufficient liquidity and preserving the Rheinmetall Group's credit standing. The Group manages and monitors its capital structure in order to achieve its business targets regarding operations, necessary capital expenditure and strategic acquisitions and to optimize capital costs. Debt management pursues a diversified financing strategy to guarantee continual access to liquid funds both via money and capital markets and via bank financing.

The key figures for capital management in the Rheinmetall Group are the equity ratio and the ratio of net financial liabilities to equity (gearing).

€ million	Dec. 31, 2017	Dec. 31, 2016
Cash and cash equivalents	757	616
Near-cash assets	119	190
Financial liabilities	(646)	(787)
Net financial debt	230	19
Equity	1,955	1,781
Equity ratio	31.6%	29.0%
Net Gearing	(11.8)%	(1.1)%

For more details, see our statements on the financing strategy and on the asset and capital structure in our management report.

(18) Provisions for pensions and similar obligations

Rheinmetall's company pension systems consist of both defined contribution and defined benefit plans.

Defined contribution plans – Under defined contribution plans, the relevant company pays contributions to earmarked pension institutions, which are reported in personnel expenses. The company does not enter into any further obligations; a provision is not recognized.

Personnel expenses of €75 million (previous year: €74 million) were incurred in the year under review for defined contribution pension commitments, which mainly relate to payments to statutory pension institutions in Germany.

Defined benefit plans – Under its defined benefit plans, Rheinmetall is required to meet confirmed benefit obligations to active and former employees. Provisions are recognized for obligations under vested rights and current pensions payable to eligible active and former employees, retirees and surviving dependents, taking into account any plan assets. There are material pension plans at the Rheinmetall Group's German and Swiss companies.

Rheinmetall has implemented a Group-wide defined benefit plan for its subsidiaries based in Germany, which consists of three elements: a basic plan and a corporate performance-related intermediate plan, each of which are financed by the employer, and a supplementary plan financed through deferred compensation. The agreed retirement benefits comprise old-age pensions, invalidity pensions and pensions for surviving dependents. The annual pension contribution or the amount of deferred compensation for each beneficiary in accordance with actuarial principles is converted into a capital component. The total pension capital when benefits become due is based on the sum of all capital components. In the case of the basic plan and intermediate plan, pension capital is paid out in the form of a life-long pension that increases annually in accordance with an agreement. In the case of the supplementary plan financed solely by the employee, the pension capital is paid out as a lump sum when benefits become due.

Other pension plans exist in Germany, but these are no longer available to new employees joining the Group. The agreed retirement benefits comprise old-age pensions, invalidity pensions and pensions for surviving dependents. Depending on the plan, these are based on agreed fixed amounts per year of service or on a percentage of the employee's final salary before leaving the Rheinmetall Group. Ongoing retirement benefits are subject to compensation for inflation.

The pension obligations of the German companies are largely financed internally. Rheinmetall has set up a contractual trust agreement (CTA) with the aim of spreading the financing of its pension and partial retirement obligations across several pillars over the long term. To this end, in 2016 a first tranche of €30 million, from which the pension obligations and partial retirement obligations were allocated €15 million each, was paid into a fund managed by a trustee. A further tranche of €30 million was added to the CTA assets in 2017 to finance pension obligations. Pension payments to the beneficiaries are made by the respective Group companies.

There are pension plans at the Swiss subsidiaries, each of which are managed via pension funds for several companies (multi-employer plans). These are defined benefit plans used to cover pensions and risks arising from invalidity and death for former employees, their relatives and surviving dependents. On retirement, the pension is based on the available retirement assets multiplied by conversion rates determined by pension fund regulations, whereby payment can take place monthly or in certain cases as a lump sum. Pension plans are financed by contributions made by the employer and employee, primarily at a rate of 50% each, which are paid into pension funds. The pension funds are independent foundations that do not belong to the Rheinmetall Group, whose funds are due solely to pension beneficiaries. Any return of assets and income to the contributing companies is excluded. The top bodies in the foundations comprise equal numbers of employer and employee representatives of the relevant companies. The foundations are responsible for investments. Principles of security, risk distribution, yield and liquidity must be observed in this process in order to be able to render the agreed benefits from the foundation's assets when due. Both contributions paid into the pension funds and future benefits arising from these are reviewed regularly by the foundation's bodies and may be changed after taking into account the foundation's financial options. In the event of a shortage of cover, the pension funds can levy remedial contributions from all associated employers if other measures do not lead to the desired result. Liability of the Swiss subsidiaries towards the companies belonging to the pension funds is excluded. At one Swiss subsidiary, benefits from the pension fund provided for in accordance with the pension plan are also covered by an insurance policy.

Notes to the consolidated financial statements

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The present value of the DBO, plan assets and pension provisions developed as follows:

€ million	2017			2016		
	Present value of DBO	Plan assets	Pension provision	Present value of DBO	Plan assets	Pension provision
As at Jan. 1	2,382	(1,196)	1,186	2,308	(1,180)	1,128
Current service cost	34	-	34	34	-	34
Past service cost	(10)	-	(10)	-	-	-
Interest cost	23	-	23	26	-	26
Interest income	-	(6)	(6)	-	(6)	(6)
Entry benefits/Leaving benefits ¹⁾	(1)	-	(1)	(2)	(1)	(3)
Amounts recognized in the income statement	46	(6)	40	58	(7)	51
Income from plan assets excluding interest income	-	(79)	(79)	-	(33)	(33)
Actuarial gains (-)/losses (+)						
Change in financial assumptions	1	-	1	118	-	118
Change in demographic assumptions	3	-	3	13	-	13
Empirical adjustments	30	-	30	(28)	-	(28)
Amounts recognized directly in equity from remeasurement of net defined benefit liability	34	(79)	(45)	103	(33)	70
Employer contributions	-	(45)	(45)	-	(29)	(29)
Employee contributions	9	(9)	-	9	(10)	(1)
Pension payments	(104)	64	-40	(113)	76	(37)
Currency differences/Other	(116)	100	(16)	17	(13)	4
As at Dec. 31	2,251	(1,171)	1,080	2,382	(1,196)	1,186
<i>thereof Switzerland</i>	<i>1,159</i>	<i>(1,007)</i>	<i>152</i>	<i>1,279</i>	<i>(1,058)</i>	<i>221</i>
<i>thereof Germany</i>	<i>941</i>	<i>(60)</i>	<i>881</i>	<i>941</i>	<i>(29)</i>	<i>912</i>
<i>thereof others</i>	<i>151</i>	<i>(104)</i>	<i>47</i>	<i>162</i>	<i>(109)</i>	<i>53</i>

¹⁾ Results from employees at the Swiss subsidiaries changing employer.

The service cost and the balance of entry/leaving benefits are reported under personnel expenses. A negative past service cost (income) arose in 2017 as a result of the adjustment of the regulations of the pension fund of subsidiaries in Switzerland, which led to a reduction in the pension obligation.

Net interest expense is included in net interest.

Employers and employees made total payments of €54 million to plan assets (previous year: €39 million). €30 million (previous year: €15 million) of this relates to the allocation to CTA assets for pension obligations in Germany.

Key pension plans – The statements below refer to the pension plans of Group companies based in Germany and Switzerland.

The pension plans relate to the following beneficiaries:

Number of people

	Dec. 31, 2017		Dec. 31, 2016	
	Germany	Switzerland	Germany	Switzerland
Active employees	9,972	1,109	9,651	1,167
Vested rights of former employees not subject to expiration	2,117	-	2,144	-
Pensioner	10,567	1,876	10,591	1,911
Total	22,656	2,985	22,386	3,078

As in the previous year, the average durations of pension obligations are 17 years at the German companies and 11 years (previous year: 13 years) at companies based in Switzerland.

In order to determine the present value of the DBO in due consideration of actuarial factors, measurement assumptions were made according to standard principles and per country, taking into account the respective economic circumstances. Discount rates are derived from yields on fixed-interest corporate bonds with a suitable duration and currency which are rated "AA" or better. The discount rate for Germany is determined using a standard procedure specified by the Group actuary on the basis of market data as of December 31, 2017, and the duration for a mixture of active employees and retirees. The following table presents the key underlying actuarial parameters:

Parameters in %

	Dec. 31, 2017		Dec. 31, 2016	
	Germany	Switzerland	Germany	Switzerland
Discount rate	1.75	0.74	1.75	0.77
Pension growth	1.75	0.00	1.75	0.00
Life expectancy	2005 G mortality tables by Heubeck	BVG2015 Generation tables	2005 G mortality tables by Heubeck	BVG2015 Generation tables

The following table shows the parameters where a change in values determined as of the end of the reporting period would have a significant impact on the present value of the DBO. Pension commitments in Switzerland are excluded from changes in the present value of the DBO based on assumptions on pension development, as the pension funds' regulations do not stipulate ongoing adjustment to future pensions. Instead, the foundation board decides on any adjustments. The potential impact of a change in mortality expectations was analyzed by increasing the individual statistical life expectancy of each employee by one year.

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Change in present value of DBO

€ million	Dec. 31, 2017		Dec. 31, 2016	
	Germany	Switzerland	Germany	Switzerland
Discount rate - 0.25 %	36	30	38	40
Discount rate + 0.25 %	(34)	(28)	(33)	(37)
Pension development - 0.50 %	(32)	-	(32)	-
Pension development + 0.50 %	35	-	37	-
Increase in life expectancy by 1 year	48	56	48	59

The Rheinmetall Group is exposed to various risks as a result of defined benefit pension commitments. As well as general actuarial risks arising from the measurement of pension obligations, the plan assets harbor investment risks. The investment strategy and composition of assets managed by pension funds are geared towards yield targets, risk tolerance and short-term and medium-term liquidity requirements.

Fair value of the plan assets in %

	Dec. 31, 2017	Dec. 31, 2016
Real estate	43	40
Equities, Funds	32	27
Corporate bonds	10	13
Other	15	20
Total	100	100

The fair values of shares, funds, fixed-interest securities and other investments are determined based on market prices in an active market. The fair values of property are not based on market prices in an active market.

For the following year, the estimated cash outflows for contributions to plan assets are shown below. €40 million of employer contributions relate to the further addition to CTA assets resolved in December 2017.

€ million	2018
Employer contributions to plan assets	48
Employee contributions to plan assets	7

The forecast cash outflows for the payment of pensions from the pension plans are as follows for the following periods:

€ million	Payments from plan assets	Payments from companies
2018	60	33
2019	61	33
2020	60	34
2021	63	34
2022	63	34
2023-2027	316	174

(19) Other provisions

€ million	Personnel	Structural measures	Guarantees	Notice-able losses	Contract related costs	Other provisions	Total
As at December 31, 2016	169	32	107	19	173	151	651
Utilization	127	19	17	4	65	37	269
Reversal	6	3	17	3	6	12	47
Added / provided for	159	44	52	15	100	88	458
Currency differences / Other	(16)	8	(1)	-	(2)	(2)	(13)
As at December 31, 2017	179	62	124	27	200	188	780
<i>short term</i>	160	26	87	27	170	125	595
<i>long term</i>	19	36	37	-	30	63	185

Personnel provisions essentially relate to variable remuneration of €93 million (previous year: €88 million) and obligations from vacation/overtime/flexitime accounts of €55 million (previous year: €51 million).

Provisions for restructuring mainly relate to termination settlements and expenses for partial retirement obligations.

Miscellaneous provisions essentially relate to rebates and bonuses at €22 million (previous year: €21 million) and environmental risks at €27 million (previous year: €21 million).

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(20) Financial liabilities

€ million	Dec.31, 2017	Of which current	Of which non-current	Dec.31, 2016	Of which current	Of which non-current
Bond	-	-	-	504	504	-
Promissory notes	243	-	243	121	-	121
Bank liabilities	382	58	324	148	60	88
Leasing	10	6	4	11	1	10
Other	11	10	1	3	2	1
	646	74	572	787	567	220

The €500 million bond was repaid in September 2017.

Promissory note loans – There are various promissory note loans that serve the Group's general corporate financing of €243 million in total as of the end of the reporting period. Further promissory note loans of €122 million in total with a term of five years and a weighted average interest rate of 1.15% p.a. were issued in 2017.

€ million			Dec. 31, 2017	Dec. 31, 2016
Maturing in	Interest terms	Currency	Nominal value	Nominal value
October 2019	1.83 %	EUR	28	28
October 2019	6-months-EURIBOR + 1.40 %	EUR	20	20
November 2019	1.91%	EUR	10	10
October 2021	2.35%	EUR	19	19
October 2021	6-months-EURIBOR + 1.65 %	EUR	16	16
April 2022	1.31%	EUR	27	-
June 2022	1.09 %	EUR	80	-
July 2022	1.26 %	EUR	10	-
July 2022	6-months-EURIBOR + 1.00 %	EUR	4	-
October 2024	3.00 %	EUR	25	25
October 2024	6-months-EURIBOR + 1.90 %	EUR	4	3
			243	121

Liabilities to banks – The loan agreed with the European Investment Bank, Luxembourg, in the previous year was disbursed in August 2017. This project-related loan will strengthen research and development activities in the Automotive sector, especially with regard to the reduction of emissions from combustion engines and alternative drive technologies.

€ million			Dec. 31, 2017	Dec. 31, 2016
Maturing in	Type of loan	Interest terms	Nominal value	Nominal value
August 2023	EIB loan	0.962 %	250	-
2025	Construction loan DG HYP	1.90 %	29	33
2022-2026	KfW loan	Ø 2.42 %	24	28
2019-2025	Various – medium-term	Ø 1.57 %	34	39
2018 resp. 2017	Various – medium-term		45	48
			382	148

The liabilities to banks of €79 million (previous year: €90 million) are secured by land charges and similar rights.

The cash and non-cash changes in financial liabilities are shown below.

€ million	Bond	Promis- sory notes	Bank liabilities		Leasing	Other	Total
			< 1 year	> 1 year			
Dec. 31, 2016	504	121	60	88	11	3	787
Cash changes	(500)	122	(7)	246	(1)	4	(136)
Borrowing of financial debts	-	122	39	250	-	4	415
Repayment of financial debts	(500)	-	(46)	(4)	(1)	-	(551)
Non-cash changes	(4)	-	5	-10	-	4	(5)
Currency differences	-	-	-4	-	-	-	(4)
Adjustment in scope of consolidation	-	-	-	-	-	(1)	(1)
Interest	(4)	-	-	-	-	-	(4)
Book transfer	-	-	9	(10)	-	5	4
Dec. 31, 2017	-	243	58	324	10	11	646

(21) Other financial liabilities

€ million	Dec. 31, 2017	Of which current	Of which non-current	Dec. 31, 2016	Of which current	Of which non-current
Monies in transit from debt collection (ABS program)	74	74	-	61	61	-
Derivatives	18	14	4	26	20	6
Other	26	24	2	18	16	2
	118	112	6	105	97	8

(22) Other liabilities

€ million	Dec. 31, 2017	Of which current	Of which non-current	Dec. 31, 2016	Of which current	Of which non-current
Advance payments received	331	331	-	354	354	-
Liabilities from other taxes	38	38	-	46	46	-
Liabilities from construction contracts	302	302	-	268	268	-
Liabilities from social security	12	12	-	13	12	1
Other	76	28	48	108	61	47
	759	711	48	789	741	48

Please see note (12) for information on construction contract liabilities.

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(23) Total operating performance

€ million	2017	2016
Sales		
from sale of products	5,416	5,172
from services	294	233
from development contracts	186	197
Total sales	5,896	5,602
Increase/decrease in inventory of finished and unfinished products and services and WIP	83	58
Other work performed by the enterprise and capitalized	32	51
	6,011	5,711

(24) Other operating income

€ million	2017	2016
Reversal of provisions	47	36
Disposal of assets/divestments	12	1
Sundry rental agreements and leases	11	9
Refunds	17	32
Other secondary income	65	82
	152	160

(25) Cost of materials

€ million	2017	2016
Cost of raw materials, supplies, and merchandise purchased	2,776	2,856
Cost of services purchased	486	264
	3,262	3,120

(26) Personnel expenses

€ million	2017	2016
Wages and salaries	1,250	1,185
Social security and related employee benefits	155	146
Pension expenses	99	108
Expenses for redundancy plans, termination indemnities, partial retirement	44	26
	1,548	1,465

Annual average head count (capacity)

	2017	2016
Automotive sector	11,031	10,923
Defence sector	10,169	9,827
Rheinmetall AG / Other	174	160
	21,374	20,910

(27) Amortization, depreciation and impairment

€ million	2017	2016
Intangible assets	58	54
Property, plant and equipment	180	173
Investment property	3	1
	241	228

The impairment losses of €18 million (previous year: €10 million) break down as follows:

€ million	Automotive		Defence	
	2017	2016	2017	2016
Development costs capitalized	5	2	7	-
Technical and other equipment	5	7	1	1
	10	9	8	1

(28) Other operating expenses

€ million	2017	2016
Distribution and advertising costs	97	97
Repairs and maintenance	97	88
Insurances	26	24
IT costs	78	73
Rents, leases	58	57
Warranty	35	33
Travel expenses	56	54
Audit, legal and consultancy fees	53	52
Incidental staff costs	54	53
Other	180	184
	734	715

The “Other” item primarily contains building operating expenses, research and development costs, licensing costs, other taxes and various individual items.

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(29) Income taxes

€ million	2017	2016
Current income tax expense	99	75
Earlier-period income taxes	(8)	1
Deferred taxes	3	8
	94	84

As in the previous year, a tax rate of 30% is used to calculate deferred income taxes for Germany. This includes corporate income tax, the solidarity surcharge and trade tax. The tax rates in other countries range from 16% to 38% (previous year: 16% to 39%).

The table below presents a reconciliation of expected tax expense to reported actual tax expense. A tax rate of 30% is applied to earnings before taxes in order to calculate the expected tax expense. This includes German corporate income tax, the solidarity surcharge and trade tax.

€ million	2017	2016
Earnings from continuing operations before taxes	346	299
Expected income tax expense (tax rate of 30%; previous year: 30%)	104	90
Foreign tax rate differentials	(4)	(2)
Effects of loss carryforwards and tax rate changes	9	10
Reduction of tax expense due to previously unrecognized loss carryovers and temporary differences	(11)	(16)
Tax-exempt income	(5)	(5)
Non-deductible expenses	12	9
Earlier-period income taxes	(8)	1
Taxes on entities carried at equity	(7)	(4)
Taxes on dividend and other withholding taxes	2	3
Other	2	(2)
Actual income tax expense	94	84

Allocation of deferred taxes to balance sheet items

€ million	Dec. 31, 2017		Dec. 31, 2016	
	Deferred tax assets	Deferred tax liabilities	Deferred tax assets	Deferred tax liabilities
Loss carryforwards and tax credits	55	-	71	-
Interest barrier carried forward	-	-	-	-
Fixed assets	13	136	13	140
Inventories and receivables	32	47	54	54
Pension provisions	187	-	206	-
Other provisions	35	-	33	17
Liabilities	31	1	57	17
Other	4	2	8	10
	357	186	442	238
Set off	(172)	(172)	(206)	(206)
	185	14	236	32
<i>Of which noncurrent</i>	167	13	204	31

In addition to capitalized deferred tax assets from loss carryovers and tax credits, further tax loss carryovers and tax credits exist in Germany and abroad totaling €449 million (previous year: €524 million), which cannot be utilized or whose deferred tax assets were adjusted by value adjustments. €235 million (previous year: €244 million) of this relates to German loss carryovers, €212 million (previous year: €277 million) to foreign loss carryovers and another €2 million (previous year: €3 million) to tax credits. The German loss carryovers, and €145 million of the foreign loss carryovers (previous year: €163 million), are not subject to expiration. Most of the limited foreign loss carryforwards can still be utilized for up to eight years (previous year: more than nine years). The recognized deferred tax assets were reduced by €5 million as a result of the US tax reform. Within the Group, €22 million (previous year: €10 million) in deferred tax assets were recognized at companies with ongoing tax losses due to positive corporate planning. No deferred tax liabilities have been recognized for temporary differences in connection with shares in subsidiaries, as the Group is able to manage the progress of reversal over time and the temporary differences will not be reversed in the foreseeable future. Unrecognized deferred tax liabilities of €10 million (previous year: €9 million) relate to the main differences.

(30) Earnings per share

Earnings per share are calculated as a ratio of the consolidated result of the shareholders of Rheinmetall AG and the weighted average number of shares in circulation during the fiscal year. As there were no shares, options or similar instruments outstanding that could dilute earnings per share as of December 31, 2017 or December 31, 2016, basic and diluted earnings per share are identical. Treasury shares reduce the weighted number of shares.

	2017	2016
Weighted number of shares <i>million</i>	42.80	42.61
Consolidated net profit for the year for shareholders of Rheinmetall AG	224	200
Earnings per share	€5.24	€4.69

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(31) Adjusted EBIT

€ million	2017	2016
EBIT	385	353
One-off expenses and income in connection with:		
Equity investments	10	-
Properties	(9)	-
Restructuring	39	16
Other	(10)	-
EBIT (adjusted)	415	369

The adjustments in equity investments relate to the loss on the disposal of the shares in Rheinmetall International Engineering GmbH. Please refer to the comments in note Investments accounted for using the equity method.

The “Real estate” item includes income from the disposal of developed land at the former production site of the Automotive sector in Hamburg.

Adjusted restructuring expenses mainly relate to the anticipated costs to close the piston production at the Automotive location in Thionville, France (€22 million) and severance payments and expenses for partial early retirement at various locations.

The “Miscellaneous” item include the reimbursement of non-operating insurance benefits.

(32) Statement of cash flows

€9 million (previous year: €3 million) of the net interest income included in the cash flow from operating activities related to interest payments received and €35 million (previous year: €38 million) to interest payments made.

The cash outflow for investments in financial assets of €15 million essentially breaks down as follows: €9 million for the capital increase at the joint venture Rheinmetall International Engineering GmbH, Geisenheim; €2 million for the capital increase at the associate Rheinmetall Barzan Advanced Technologies QSTP-LLC, Doha, Qatar; €2 million for the acquisition of and a capital increase at the associate Dynamic Engineering Solution Pty Ltd, Magill, Australia. In the previous year, €4 million related mainly to a capital increase at the Pierburg Huayu Pump Technology Co. Ltd. joint venture in Shanghai, China, €12 million to the acquisition of the associate Riken Automobile Parts (Wuhan) Co., Ltd. in Wuhan, China, and €-2 million to the repayment of a loan to third parties.

“Proceeds from divestments of financial assets” includes the payment of the sale price of €23 million for the associate Cassidian Airborne Solutions GmbH, Bremen.

(33) Segment reporting

The Group bundles its operations in two sectors, Defence and Automotive, which are organized and run as independent segments where the respective products, services and customer profiles are grouped accordingly. Reporting on these reportable segments is in accordance with the Rheinmetall Group's internal organizational and reporting structures.

The Automotive sector is the mobility segment of the Rheinmetall Group. As a global automotive supplier, Rheinmetall Automotive operates in the areas of air management, emissions reduction and pumps and in the development, production and supply of replacement parts for pistons, engine blocks and plain bearings. As well as supplying automotive manufacturers, the Automotive sector operates in the aftermarket business, supplying wholesalers, engine repair shops and independent garages with replacement parts through a global distribution network.

The Defence sector brings together all activities for the defence and security industry. The service range covers development, manufacturing and service provision and is aimed at German and international armed forces. The product portfolio comprises system and partial system solutions and covers capability in the areas of mobility, reconnaissance, management, effectiveness and protection. Specifically, the product range includes vehicle, protection and weapon systems, air defence systems, function sequence networking, simulation hardware and software, and infantry equipment.

In addition to the Group holding company (Rheinmetall AG), "Other/Consolidation" includes Group service companies and other non-operating companies, plus consolidation transactions. Transactions between the Defence and Automotive sectors are of minor significance and are made at arm's length.

The sectors of the Rheinmetall Group are controlled by means of sales, operating result (EBIT before special items), EBIT, EBT and operating free cash flow performance indicators. Operating free cash flow comprises the cash flow from operating activities and capital expenditure on property, plant and equipment, intangible assets, and investment property.

Profitability is also assessed for management purposes on the basis of ROCE calculated on an annual basis, which represents the ratio of EBIT to average capital employed (average of values as of December 31 of the previous year and the year under review). Capital employed is calculated as the total of equity, pension provisions and net financial liabilities. Net financial liabilities are calculated as financial liabilities less cash and cash equivalents and liquid financial assets. Inter-segment loans within the Group are assigned to cash and cash equivalents.

The indicators for internal controlling and reporting purposes are based on the accounting principles described under note (4).

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The reconciliation of segment net financial liabilities to Group financial liabilities and of segment EBIT to consolidated EBT is shown below:

€ million	Dec. 31, 2017	Dec. 31, 2016
Net financial debts		
Net financial debts of sectors	(522)	(349)
Others	296	330
Consolidation	(4)	-
Net financial debts of Group	(230)	(19)
	2017	2016
EBIT		
EBIT of sectors	399	370
Others	75	50
Consolidation	(89)	(67)
Group EBIT	385	353
Group net interest	(39)	(54)
Group EBT	346	299

When presenting segment information by geographical region, foreign sales in the Defence sector are reported based on the country of destination, while those of the Automotive sector are reported according to where the customer is based. Segment assets include intangible assets, property, plant and equipment and investment property according to the respective location of the company.

(34) Contingent liabilities

Furthermore, several guarantees have been issued in favor of non-consolidated interests as part of joint projects, which are primarily carried out in the form of joint ventures. There are letters of comfort for the purposes of contract performance, whereby Rheinmetall may also be held liable for the performance of the other joint venture partners in its relations with third parties. However, in internal relations, it is only liable for its own share of products and services by virtue of corresponding rights of recourse. Moreover, a letter of comfort involving a joint and several liability has been issued to secure the financing of the capex costs for a joint venture. No cash outflows are expected. In addition, commitments exist in favor of joint ventures and associated affiliates for credit and guarantee facilities granted to the affiliated companies. Rheinmetall's liability is equal to the equity interest held. No cash outflows are expected here.

Contingent liabilities

€ million	Dec. 31, 2017	Dec. 31, 2016
Letters of comfort	1,387	2,223
Credit enhancement	24	18
Contract performance	9	3
Advance payment guarantees	-	1
Other	8	11
	1,428	2,256

The purchase commitment from firm capital expenditure contracts totals €51 million (previous year: €31 million).

(35) Other financial obligations

There are standard financial obligations under master agreements with suppliers and contracts for services.

Payments for operating leases of €50 million were reported in the reporting year (previous year: €50 million). Apart from leases predominantly involving business property, the other standard contracts cover the rental of vehicles and business, factory and office equipment, which includes hardware and software.

The following discounted cash outflows under leases are expected in future periods:

€ million	2017				2016			
	2018	2019-2022	from 2023	Total	2017	2018-2021	from 2022	Total
Buildings	29	86	57	172	27	89	43	159
Other leases	13	18	1	32	12	11	-	23
	42	104	58	204	39	100	43	182

(36) Additional information on financial instruments**Financial instruments by measurement category**

€ million	Dec. 31, 2017		Dec. 31, 2016	
	Measurement at amortized cost	Measurement at fair value (Level 2)	Measurement at amortized cost	Measurement at fair value (Level 2)
Loans and receivables				
Trade receivables	1,217	-	1,306	-
Other financial assets without derivatives	39	-	19	-
Cash and cash equivalents	757	-	616	-
Assets held to maturity				
Near-cash assets	119	-	190	-
Held for trading purposes				
Derivatives without hedge accounting	-	18	-	12
Derivatives with cash flow hedge ¹⁾	-	38	-	25
Financial assets	2,132	56	2,131	37
Liabilities				
Bond, promissory notes	243	-	625	-
Financial debts	403	-	162	-
Trade liabilities	760	-	766	-
Other liabilities without Derivatives	100	-	79	-
Held for trading purposes				
Derivatives without hedge accounting	-	11	-	16
Derivatives with cash flow hedge ¹⁾	-	7	-	10
Financial liabilities	1,506	18	1,632	26

¹⁾ Not a measurement category as defined by IAS 39.

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The market value of financial assets and financial liabilities measured at fair value is determined on the basis of input factors observed directly or indirectly on the market. The foreign exchange rates applicable at the end of the reporting period and the yield curves are key inputs in calculating the fair value of derivatives for currency and interest rate hedges. The discounted cash flow method is used for interest rate swaps, currency swaps and currency forwards. The euro yield curve used to measure the interest rate derivatives takes into account basis spreads. The fair value of the commodity futures is derived from the market price as of the measurement date. The forward rates applicable at the end of the reporting period are used to calculate the market value of energy derivatives (electricity and gas derivatives).

The carrying amounts and fair values of financial instruments that are measured at amortized cost and whose carrying amounts do not approximate fair value are shown below.

€ million		Dec. 31, 2017		Dec. 31, 2016	
		Book value	Fair value	Book value	Fair value
Bond	Level 1	-	-	504	517
Promissory notes	Level 2	243	243	121	123
Other financial debts excl. leases	Level 2	403	393	162	162

The fair value of the bond, the promissory note loans and the other financial liabilities was determined by discounting the associated future cash flows at rates that match the time to maturity of similar debts.

Sale of customer receivables – Under an asset-backed securities program, the Rheinmetall Group sells customer receivables to a financial service provider each month on a revolving basis. The customer receivables sold are recognized as disposals. In 2017, the maximum volume of the program was €164 million (previous year: €160 million). The nominal value of receivables was €164 million as of December 31, 2017 (previous year: €160 million).

The retained risks are insignificant for the Group. An asset item of €3 million has been reported for the maximum continuing involvement (previous year: €3 million), together with a liability item of the same amount for the associated liabilities.

Collateral provided – Financial assets of €2 million (previous year: €2 million) were issued in the form of liens on securities to protect employees from insolvency risks in connection with pension systems.

Net result from financial instruments – Income and expenses for financial instruments mainly relate to the loans and receivables and liabilities categories, and are composed as follows:

€ million	2017	2016
Interest income	9	5
Interest expenses	(32)	(38)
Guarantee commission	(11)	(12)
Currency result	(7)	(6)
Income from valuation allowances	(3)	(5)
Other	(1)	1
	(45)	(55)

Finance market risks – The operations and financing transactions of the Rheinmetall Group as an international group are exposed to financial market risks, mainly from liquidity, counterparty default, electricity, gas and commodity prices, exchange rate volatility and interest rate changes. In accordance with the Group-wide risk management system of Rheinmetall AG, such risks are not only identified, analyzed and measured, but also managed by taking actions to avoid, contain or limit such risks. Inherent financial risks are actively managed to ensure that no significant risks arise from financial instruments as of the end of the reporting period.

Derivative financial instruments – Derivative financial instruments are used to reduce currency, interest rate and commodity price risks. Provided that the necessary criteria are met and automatic offsetting of the hedged item and the hedging instrument is not possible, changes in the fair value of hedging transactions are recognized in the hedge reserve in the context of cash flow hedge accounting. The effectiveness of these transactions is subject to ongoing monitoring, using the critical terms match method prospectively and the dollar offset testing method retrospectively.

The table below shows the fair value of all hedges accounted for as financial assets or financial liabilities as of the end of the reporting period.

€ million	Dec. 31, 2017		Dec. 31, 2016	
	Assets	Liabilities	Assets	Liabilities
Currency hedges	17	(8)	11	(12)
Interest rate hedges	-	(1)	-	(3)
Commodity hedges	-	(1)	-	-
Electricity price hedges	1	(1)	1	(1)
Without hedge accounting	18	(11)	12	(16)
Currency hedges	28	(7)	19	(10)
Interest rate hedges	-	-	-	-
Commodity hedges	8	-	5	-
Electricity price hedges	2	-	1	-
With hedge accounting	38	(7)	25	(10)

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In the year under review, total positive changes in the fair value of derivatives of €31 million before the deduction of deferred taxes (previous year: total positive changes in fair value of €48 million) were recognized in the hedge reserve. €11 million (previous year: €11 million) of the reserve was reclassified to revenue and €4 million (previous year: €4 million) was reclassified to the cost of materials.

There were only immaterial ineffective portions.

Currency risk – Owing to the international nature of the Rheinmetall Group’s business, certain operational currency risks arise from the fluctuating exchange rates between the functional currencies of Group companies and other currencies. Open positions exposed to a currency risk are hedged through derivatives, generally currency forwards, as well as currency swaps. Foreign exchange trading in the Defence sector is contracted almost exclusively with Rheinmetall AG. Here, currency hedge transactions are concluded with subsidiaries and squared either directly or in a portfolio approach via banks. In the Automotive sector, these transactions are predominantly concluded on a central basis via Rheinmetall Automotive AG. The most important currency hedges contracted by German companies refer to US dollar, Swiss franc, Australian dollar and Norwegian krone transactions, while the foreign companies mostly hedge euro-based and US dollar-based purchasing and sales transactions. These hedges are measured as of the end of the reporting period and recognized at their fair value calculated according to the DCF method.

Interest rate risk – Rheinmetall AG uses interest rate hedging instruments (interest rate swaps) as part of its Group-wide management of interest rate risks. The interest rate swaps essentially serve to hedge variable interest on promissory note loans and future variable interest payments. The recognition of interest rate hedges in hedge accounting was discontinued in 2016, as a portion of the promissory note loans was repaid early and thus part of the underlying transaction ceased to exist. The changes in the value of interest rate swaps of €1 million recognized in other comprehensive income were reclassified to net interest income in 2016.

Commodity price risks – The Rheinmetall Group is exposed to price volatility risks from commodity buying, such as metals. By means of materials cost escalator agreements with customers, the major part of these risks from volatile metal prices is shifted to customers, albeit with a time lag. Moreover, the Automotive sector (where most of these risks exist) has also used derivative financial instruments for risk management, mainly commodity futures maturing by 2020 at the latest contracted on the basis of a financial settlement.

Energy price risk (electricity and gas price) – Owing to volatile prices on the energy market, derivative financial instruments have been concluded to secure the price of electricity for the consumption volumes planned for the years up to and including 2019. The gas price was secured for the consumption volumes planned for 2018.

Sensitivity analysis – As part of sensitivity analyses for the risk variables concerned, the effects that a change in the relevant underlying instruments as of the end of the reporting period would have on other net financial income and the hedge reserve, before taking deferred taxes into account, are examined.

€ million		Other financial results		Cash flow hedge reserve	
		Dec. 31, 2017	Dec. 31, 2016	Dec. 31, 2017	Dec. 31, 2016
Currency	Exchange rates (total) -10% / +10%	+4 / -4	-10 / +10	-18 / +18	-5 / +5
Interest rate	Yield curve -100 BP / +100 BP	-1 / +1	- / -	- / -	- / -
Commodity	Price curve for material prices -10% / +10%	- / -	- / -	-5 / +5	-4 / +4
Electricity price	Forward curve for electricity prices -10% / +10%	- / -	- / -	-1 / +1	-1 / +1

Default risk (credit risk) – The default risk from financial assets is that the other contractual party does not fulfill his obligations. The maximum risk for loans granted and customer receivables is the carrying amount recognized. In order to minimize the default risk with derivative financial instrument contracts, the Rheinmetall Group sets high requirements in respect of its counterparties, restricting itself exclusively to German and foreign banks with impeccable ratings.

The Rheinmetall Group monitors and tracks the default risk on customer receivables at the level of its operating units in line with the corporate policies for proper debtor management. Individual assessments (where appropriate, based on current trends and qualitative information) can be used in addition to database-supported rating and default data of an external data supplier. Current del credere risks are covered by valuation allowances.

There are no significant valuation allowances for customer receivables at the Rheinmetall Group. Given the type of business and the customer structure, default rarely occurs and instead there are only delays in payment. As of the end of the reporting period, there were no indications that the debtors of any receivables neither past due nor impaired of €655 million (previous year: €727 million) will fail to make payment.

Analysis of customer receivables past due

€ million	Dec. 31, 2017	Dec. 31, 2016
Trade receivables unimpaired but past due		
for up to 30 days	72	75
for up to 180 days	58	96
for more than 180 days	127	83
	257	254

No important credit concentrations exist in the Rheinmetall Group.

Liquidity risk – In particular, the Rheinmetall Group ensures sufficient liquidity at all times by a cash budget and forecast over a specified time horizon, and through existing, partly unutilized finance facilities, including credit lines granted by banks on a syndicated basis, a commercial paper (CP) program and an asset-backed securities program. For further details of such credit facilities, see the “Financing” section of the management report.

The undiscounted contractually agreed payments from repayment and interest components in connection with financial liabilities and derivative financial instruments as of the end of the reporting period are listed below.

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Cash outflows

€ million	Dec. 31, 2017			Dec. 31, 2016		
	2018	2019-2022	from 2023	2017	2018-2021	from 2022
Bond	-	-	-	526	-	-
Promissory notes	4	226	30	3	100	32
Other bank liabilities	62	66	276	62	61	33
Capital lease liabilities	1	4	18	1	5	18
Other financial debts	10	1	-	2	1	1
	77	297	324	594	167	84
Derivatives with negative fair value	14	4	-	20	6	-
Derivatives with positive fair value	46	10	-	27	10	-

The fair values of derivatives as of the end of the reporting period should be seen in the context of the associated underlyings, whose values develop in the opposite direction to that of derivatives, regardless of whether these have already been recognized or are pending. The derivatives would only produce a cash outflow at the amount shown above if they were terminated early.

The Rheinmetall Group's financial resources comprise cash and cash equivalents, financial current assets available for sale, and the cash provided by operating activities. By contrast, the capital requirements cover the redemption of financial liabilities (principal and interest), capital expenditure and the funds for the ongoing financing of operating activities.

(37) Share programs

Long-term-incentive program – There is a long-term incentive remuneration program (LTI) for the Executive Board and the managers of the Rheinmetall Group in order to involve management in the company's long-term development. Under this program, the beneficiaries are paid performance-related remuneration for the past fiscal year in the subsequent year. The calculation of the amount of remuneration is based on the average adjusted EBT of the Rheinmetall Group for the past three fiscal years, capped at a maximum of €300 million. Average adjusted EBT for fiscals 2015 to 2017 was €305 million. Remuneration for fiscal 2017 is therefore based on the maximum amount, multiplied by a personal factor according to individual arrangement.

The remuneration for members of the Executive Board comprises a component settled in shares of 50% of the assessment basis and a cash component of 60% of the assessment basis. The remuneration for German managers is measured according to the respective assessment basis, with 40% and 60% being settled in shares and cash respectively. Managers working outside Germany receive remuneration of 50% of the determined assessment basis in shares.

The number of shares granted is determined in the subsequent year on the basis of the average price on the last five trading days in February of a year (reference price), with a deduction of 20% in the case of managers (relevant share value). The portion of the assessment basis to be granted in shares is divided by the relevant share value to determine the number of shares to be granted. The shares granted are subject to a lock-up period of four years. If employment is terminated by the employer, the Executive Board member or manager receives remuneration pro rata for each completed calendar month of employment.

An expense totaling €19 million (previous year: €11 million) was recognized for the LTI program in fiscal 2017.

The reference price in February 2017 was €71.43. For fiscal 2016, a total of 98,101 shares were transferred to the entitled participants of the LTI program on April 4, 2017 (previous year: a total of 74,364 shares were transferred for fiscal 2015 on April 4, 2016).

The shares attributable to the Executive Board members are presented in the remuneration report included in the management report.

Share purchase program – As part of the Rheinmetall Group’s share purchase program, eligible staff of the Rheinmetall Group in Germany and other European countries may purchase Rheinmetall AG shares on preferential conditions. Such shares are subject to a lock-up period of two years. Within specified subscription periods, employees are given the opportunity to acquire a limited number of shares at a discount of 30% on the applicable share price. In fiscal 2017, Rheinmetall Group employees purchased 92,978 shares in total (previous year: 90,633) for €6 million (previous year: €4 million). Expenses of €2 million (previous year: €2 million) were incurred for this program, recognized as personnel expenses. The gain on disposal from the sale of treasury shares to employees totaled €4 million (previous year: gain on disposal of €2 million).

Subscription period	Share price in €	Discount per share in €	No. of shares purchased by staff
June 1 - June 21 , 2017	85.52	25.66	92,978

(38) Other information on related parties

The Rheinmetall Group’s corporate related parties are the joint ventures and associated companies accounted for using the equity method. The products/services provided primarily relate to sales proceeds recognized in respect of project companies of the Defence sector from the sale of finished and unfinished goods and from construction contracts. The receivables and liabilities are chiefly attributable to customer receivables, trade payables and prepayments received and made. The scope of related-party transactions is shown in the table below.

€ million	Joint Ventures		Associated Companies	
	2017	2016	2017	2016
Products/services provided	405	416	3	3
Products/services received	15	10	10	17
Receivables Dec.31	107	84	2	1
Liabilities Dec.31	23	8	2	2
Receivables from finance leases Dec.31	8	-	-	-

Please see note (14) for information on the finance lease receivable.

Please see the comments under note (34) “Contingent liabilities” for details of the Rheinmetall Group’s contingent liabilities in connection with joint ventures.

There are business relationships between a subsidiary of Rheinmetall AG and PL Elektronik GmbH, Lilienthal, whose sole shareholder is Mr. Armin Papperger, a member of the Rheinmetall AG Executive

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Board, and which is managed by a related party of Mr. Papperger. PL Elektronik GmbH provides development services and produces and supplies electric igniters to order. The transactions are carried out on an arm's-length basis. As in the previous year, the volume of products/services received amounted to €1 million in fiscal 2017.

Remuneration of the Executive Board and the Supervisory Board – The reportable remuneration of senior management within the Group comprises that paid to active Executive Board and Supervisory Board members.

The expenses for compensation paid or payable to active members of the Executive Board break down as follows:

€ '000	2017	2016
Fixed remuneration incl. fringe benefits	3,010	2,007
Performance based remuneration	3,896	2,506
LTI	3,878	2,300
	10,784	6,813
Pensions expenses	3,168	1,742
Total	13,952	8,555

The net present value of pension commitments, which corresponds to the amount of provisions, totals €17,760 thousand for members of the Executive Board active at year-end (previous year: €12,658 thousand).

Supervisory Board remuneration including attendance fees amounted to €1,542 thousand (previous year: €1,423 thousand). In addition to Supervisory Board remuneration, those employee representatives who are employees of the Rheinmetall Group also receive compensation unrelated to their service on the Supervisory Board. The employee representatives received €706 thousand in total from such activities (previous year: €602 thousand).

For further details and itemization of each member's remuneration, see the Board remuneration report within the combined management report of the Rheinmetall Group and Rheinmetall AG.

€2,236 thousand (previous year: €2,451 thousand) was paid to former members of the Executive Board or their surviving dependents. Pension provisions for these persons totaled €31,087 thousand (previous year: €32,176 thousand). €561 thousand (previous year: €549 thousand) was paid to former Executive Board members of Rheinmetall DeTec AG (merged with Rheinmetall AG in 2005) or their surviving dependents. Pension provisions for these persons totaled €8,655 thousand (previous year: €8,865 thousand).

(39) Auditor's fees

The following fees for the auditor PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PwC) were recognized:

€ '000	Fees Germany	
	2017	2016
End-of-year auditing services	2,305	2,147
Other verification services	40	106
Tax consultancy services	16	22
Other services	227	142
	2,588	2,417

The fees for audits of financial statements cover Rheinmetall AG's single-entity and consolidated financial statements and the accounts of all subsidiaries audited by PwC in Germany. Fees for other services essentially relate to activities in the context of project audits. All services not related to the audit of the financial statements were approved by the Audit Committee.

(40) Exercise of exemption provisions under HGB

Based on the provisions of section 264(3) HGB governing corporations and section 264b HGB governing partnerships, the following German enterprises have elected not to prepare notes or management reports or to disclose their 2017 financial statements:

Amprio GmbH
 BF Germany GmbH
 EMG EuroMarine Electronics GmbH
 GVG Grundstücksverwaltung Gleitlager GmbH & Co. KG
 GVMS Grundstücksverwaltung Service GmbH & Co. KG
 GVN Grundstücksverwaltung Neckarsulm GmbH & Co. KG
 Kolbenschmidt Liegenschaftsverwaltung GmbH Berlin
 Kolbenschmidt Pierburg Innovations GmbH
 KS ATAG Beteiligungsgesellschaft m.b.H
 KS Gleitlager GmbH
 KS Grundstücksverwaltung Beteiligungs GmbH
 KS Grundstücksverwaltung GmbH & Co. KG
 KS Kolbenschmidt GmbH
 LDT Laser Display Technology GmbH
 MEG Marine Electronics Holding GmbH
 MS Motorservice Deutschland GmbH
 MS Motorservice International GmbH
 Pierburg GmbH
 Pierburg Grundstücksverwaltung GmbH & Co. KG
 Pierburg Pump Technology GmbH
 Rheinmetall Automotive AG
 Rheinmetall Ballistic Protection GmbH
 Rheinmetall Berlin Verwaltungsgesellschaft mbH
 Rheinmetall Dienstleistungszentrum Altmark GmbH
 Rheinmetall Electronics GmbH
 Rheinmetall Eastern Markets GmbH
 Rheinmetall Financial Services GmbH

Notes to the consolidated financial statements

Accounting principles

Rheinmetall Immobilien GmbH
Rheinmetall Immobilien Hamburg GmbH
Rheinmetall Immobilien Hamburg Objekt Friedensallee GmbH & Co. KG
Rheinmetall Industrietechnik GmbH
Rheinmetall Insurance Services GmbH
Rheinmetall Landsysteme GmbH
Rheinmetall Maschinenbau GmbH
Rheinmetall Projekt Solutions GmbH
Rheinmetall Soldier Electronics GmbH
Rheinmetall Technical Assistance GmbH
Rheinmetall Technical Publications GmbH
Rheinmetall Verwaltungsgesellschaft mbH
Rheinmetall Waffe Munition GmbH
Solidteq GmbH
SUPRENUM Gesellschaft für numerische Superrechner mbH

(41) Corporate governance

In August 2017, Rheinmetall AG published its declaration of conformity in accordance with the German Corporate Governance Code pursuant to section 161 of the *Aktengesetz* (AktG – German Stock Corporation Act) on the Internet at www.rheinmetall.com in the section “Group – Corporate Governance”, thus making it available to shareholders.

Düsseldorf, February 28, 2018

Rheinmetall Aktiengesellschaft
The Executive Board

Armin Papperger

Helmut P. Merch

Horst Binnig

Peter Sebastian Krause

Notes to the consolidated financial statements

Shareholdings

Company		Direct share of capital in %	Indirect share of capital in %	Equity in € '000	Net income for the year in € '000
Fully consolidated subsidiaries					
Holding companies / service companies / other					
Amprio GmbH, Neuss/Germany	(1)		100	242	5
EMG EuroMarine Electronics GmbH, Neckarsulm/Germany			100	31,259	149
MEG Marine Electronics Holding GmbH, Düsseldorf/Germany	(1)		100	5,000	-
Rheinmetall Berlin Verwaltungsgesellschaft mbH, Berlin/Germany	(1)	100		213,750	-
Rheinmetall Financial Services GmbH, Düsseldorf/Germany		100		31,994	(31)
Rheinmetall Immobilien GmbH, Düsseldorf/Germany		100		216,800	3,749
Rheinmetall Immobilien Hamburg GmbH, Düsseldorf/Germany		100		1,687	1
Rheinmetall Immobilien Hamburg Objekt Friedensallee GmbH & Co. KG, Düsseldorf/Germany			100	21,854	7,285
Rheinmetall Industrietechnik GmbH, Düsseldorf/Germany	(1)	100		26	-
Rheinmetall Insurance Services GmbH, Düsseldorf/Germany	(1)	100		253	(42)
Rheinmetall Maschinenbau GmbH, Düsseldorf/Germany			100	358	115
Rheinmetall Verwaltungsgesellschaft mbH, Düsseldorf/Germany	(1)		100	733,843	-
SUPRENUM Gesellschaft für numerische Superrechner mbH, Bremen/Germany			100	(1,397)	-
Defence sector					
ADS Gesellschaft für aktive Schutzsysteme mbH, Lohmar/Germany			74	18,095	(6,532)
Alpha Air GmbH, Bremen/Germany			100	24	(1)
American Rheinmetall Defense, Inc., Biddeford, Maine/USA		100		20,975	(618)
American Rheinmetall Munition Inc., Stafford, Virginia/USA			100	(8,929)	447
American Rheinmetall Systems, LLC, Biddeford, Maine/USA			100	30,493	1,022
Benntec Systemtechnik GmbH, Bremen/Germany	(2)		49	4,054	532
BIL Industriemetalle GmbH & Co. 886 KG, Grünwald/Germany	(3)	94		(1,956)	225
cyel ag, Könitz, BE/Switzerland			60	(1,730)	(2,522)
Eurometaal N.V., Hengelo/Netherlands			100	116	(4)
Laser 2000 AG, Urdorf/Switzerland			80	-	-
LDT Laser Display Technology GmbH, Jena/Germany	(1)		100	1,468	(17)
Logistic Solutions Australasia Pty. Ltd., Melbourne/Australia			100	1,540	341
Nitrochemie AG, Wimmis/Switzerland			51	871	3
Nitrochemie Aschau GmbH, Aschau/Germany			55	21,478	(100)
Nitrochemie South Africa (Pty) Ltd., Somerset West/South Africa			100	300	(170)
Nitrochemie Wimmis AG, Wimmis/Switzerland			55	51,450	4,597
Oerlikon Contraves GmbH, Zürich/Switzerland		100		19	-
Oerlikon Contraves Pte Ltd., Singapore/Singapore			100	3,135	418
RD Investment AG, Zürich/Switzerland			69	149	(18)
RFEL LTD, Newport, Isle of Wight/Great Britain			100	1,794	113

Notes to the consolidated financial statements

Shareholdings

Company	Direct share of capital in %	Indirect share of capital in %	Equity in € '000	Net income for the year in € '000
RH Mexico Simulation and Training S.A. de C.V., Mexico City/Mexico		100	1,291	305
Rheinmetall Air Defence AG, Zürich/Switzerland	100		32,672	16,797
Rheinmetall Ballistic Protection GmbH, Krefeld/Germany	(1)	100	3,707	(278)
Rheinmetall Canada Inc., St.-Jean-sur-Richelieu/Canada	100		67,227	5,698
Rheinmetall Chempro GmbH, Bonn/Germany		51	26,787	6,438
Rheinmetall Combat Platforms North America Inc, Wilmington, Delaware/USA		100	(83)	(47)
Rheinmetall Communication and Simulation Technologies plc, Singapore/Singapore		100	1,473	177
Rheinmetall Defence Australia Pty. Ltd., Deakin West/Australia	100		1,905	(257)
Rheinmetall Defence Polska sp. z.o.o., Warschau / Poland		100	(268)	(189)
Rheinmetall Defence UK Limited, London/Great Britain	100		(2,523)	(1,158)
Rheinmetall Denel Munition Pty. Ltd., Somerset West/South Africa		51	113,908	22,676
Rheinmetall Dienstleistungszentrum Altmark GmbH, Letzlingen/Germany	(1)	100	30	4
Rheinmetall Eastern Markets GmbH, Düsseldorf/Germany	(1)	100	1,363	404
Rheinmetall Electronics GmbH, Bremen/Germany	(1)	100	41,851	9,118
Rheinmetall Electronics Pty. Ltd., Adelaide/Australia		100	1,595	(176)
Rheinmetall Hellas S.A. i. L., Athen/Greece	100		86	(25)
Rheinmetall International Defence and Security Ltd., Riyadh/KSA		100	1,684	(406)
Rheinmetall International Holding AG, Zürich/Switzerland		100	1,494	(3,906)
Rheinmetall International Services Limited, Masdar City/UAE		100	(1,284)	(1,035)
Rheinmetall Italia S.p.A., Rom/Italy		100	100,385	8,840
Rheinmetall Laingsdale (Pty) Ltd., Kapstadt/South Africa		76	4,763	1,610
Rheinmetall Landsysteme GmbH, Südheide/Germany	(1)	100	23,620	390
Rheinmetall Ltd, Moskau/Russian Federation		100	489	38
Rheinmetall MAN Military Vehicles Australia Pty Ltd., Melbourne/Australia		51	14,639	8,460
Rheinmetall MAN Military Vehicles Canada Ltd., Ottawa/Canada		51	337	(32)
Rheinmetall MAN Military Vehicles GmbH, Munich/Germany		51	94,180	18,336
Rheinmetall MAN Military Vehicles Nederland B.V., Ede/Netherlands		51	(27,172)	(9,798)
Rheinmetall MAN Military Vehicles Österreich GesmbH, Vienna		51	20,472	11,809
Rheinmetall MAN Military Vehicles Österreich Holding GesmbH, Vienna/Austria		51	100,084	(11)
Rheinmetall MAN Military Vehicles RSA (Pty) Ltd., Pretoria/South Africa	(2)	36	20	-
Rheinmetall MAN Military Vehicles UK Ltd., Swindon/Great Britain		51	(1,340)	(414)
Rheinmetall Netherlands B.V., Hengelo/Netherlands		100	55,059	518
Rheinmetall Norway AS, Nøtterøy/Norway		100	28,329	(7,749)
Rheinmetall Project Solutions GmbH, Düsseldorf/Germany	(1)	100	25	-
Rheinmetall Projects Development Consultancy LLC, Abu Dhabi/UAE	(2)	49	(80)	-
Rheinmetall Protection Systems Gulf (FZE), SAIF-Zone, Sharjah/UAE		100	(138)	(218)
Rheinmetall Protection Systems Nederland B.V., Ede/Netherlands		100	1,247	403
Rheinmetall Savunma Sanayi Anonim Sirketi, Ankara / Turkey		90	339	(247)
Rheinmetall Soldier Electronics GmbH, Stockach/Germany	(1)	100	2,640	733
Rheinmetall Swiss SIMTEC AG, Thun/Switzerland		100	1,613	(1,841)
Rheinmetall Technical Assistance GmbH, Kassel/Germany	(1)	51	25	-
Rheinmetall Technical Publications GmbH, Bremen/Germany	(1)	100	3,880	938

Company	Direct share of capital in %	Indirect share of capital in %	Equity in € '000	Net income for the year in € '000
Rheinmetall Technical Publications Schweiz AG, Zürich/Switzerland		100	258	187
Rheinmetall Waffe Munition ARGES GmbH, Schwandenstadt/Austria		100	1,689	12
Rheinmetall Waffe Munition GmbH, Südheide/Germany	(1)	100	100,931	(351)
Rheinmetall Waffe Munition South Africa (Pty) Ltd., Somerset West/South Africa		100	20	-4
RM Euro B.V., Hengelo/Netherlands	100		54,146	(25)
RTP-UK Ltd., Bristol/Great Britain		100	8,404	1,313
RWM Beteiligungsverwaltung Austria GmbH, Schwandenstadt/Austria		100	13,968	70
RWM Italia S.p.A., Ghedi/Italy		100	53,473	15,820
RWM Schweiz AG, Zürich/Switzerland		100	30,482	7,085
RWM Zaugg AG, Lohn-Ammannsegg/Switzerland		100	6,487	(2,433)
Automotive sector				
BF Engine Parts LLC, Istanbul/Turkey		100	765	46
BF Germany GmbH, Tamm/Germany	(1)	100	10,156	-
GVG Grundstücksverwaltung Gleitlager GmbH & Co. KG, Neckarsulm/Germany		100	6,578	190
GVMS Grundstücksverwaltung Service GmbH & Co. KG, Neckarsulm/Germany		100	31	1,465
GVN Grundstücksverwaltung Neckarsulm GmbH & Co. KG, Neckarsulm/Germany		100	5,890	651
Intec France SAS, Meyzieu/France		100	895	12
Karl Schmidt Trading Company S. de R.L. de C.V., Celaya/Mexico		100	21	103
Karl Schmidt Unisia Michigan LLC, Southfield/USA		100	-	-
Kolbenschmidt de México, S. de R.L. de C.V., Celaya/Mexico		100	8,819	1,076
Kolbenschmidt K.K., Yokohama/Japan		100	34,696	3,958
Kolbenschmidt Liegenschaftsverwaltung GmbH Berlin, Neckarsulm/Germany	(1)	100	7,047	71
Kolbenschmidt Pierburg Innovations GmbH, Neckarsulm/Germany	(1)	100	925	-30
Kolbenschmidt USA Inc., Marinette/USA		100	-	-
KS ATAG Beteiligungsgesellschaft m.b.H., Neckarsulm/Germany	(1)	100	10,263	-
KS ATAG Romania S.R.L., Bukarest/Romania		100	3,586	(38)
KS CZ Motorservice s.r.o., Usti/Czech Republic		100	9,617	10
KS France SAS, Basse-Ham (Thionville)/France		100	15,457	(12,069)
KS Gleitlager de México S. de R.L. de C.V., Celaya/Mexico		100	7,416	2,026
KS Gleitlager GmbH, St. Leon-Rot/Germany	(1)	100	16,325	1,471
KS Gleitlager North America LLC, Marinette/USA		100	3,245	(770)
KS Grundstücksverwaltung Beteiligungs GmbH, Neckarsulm/Germany		100	128	7
KS Grundstücksverwaltung GmbH & Co. KG, Neckarsulm/Germany		100	23,679	(750)
KS Kolbenschmidt Czech Republic a.s., Usti/Czech Republic		100	41,336	(2,908)
KS Kolbenschmidt France SAS, Basse-Ham (Thionville)/France		100	11,533	(7,009)
KS Kolbenschmidt GmbH, Neckarsulm/Germany	(1)	100	61,609	1,864
KS Kolbenschmidt US Inc., Marinette/USA		100	(2,317)	454
KS Large Bore Pistons LLC, Marinette/USA		100	25,245	3,017
KSG Pistons, Inc., South Haven/USA		100	-	-
KSLP (China) Co., Ltd., Kunshan/China		100	2,551	(278)
KSPG (China) Investment Co., Ltd., Shanghai/China		100	50,824	3,329

Notes to the consolidated financial statements

Shareholdings

Company	Direct share of capital in %	Indirect share of capital in %	Equity in € '000	Net income for the year in € '000
KSPG Automotive Brazil Ltda., Nova Odessa/Brazil		100	49,744	(11,097)
KSPG Automotive India Private Ltd., Mumbai Maharashtra/India		100	29,384	309
KSPG Finance & Services Ltd., St. Julians/Malta		100	166,557	2,083
KSPG Holding USA Inc., Delaware/USA		100	266,688	(7,408)
KSPG Malta Holding Ltd., St. Julians/Malta	21	79	225,332	3,107
KSPG Netherlands Holding B.V., Amsterdam/Netherlands		100	84,014	(38)
KSUS International LLC, Marinette/USA		100	41,802	8,797
KUS Holding Company Inc., Marinette/USA		100	-	-
Mechadyne International Ltd., Kirtlington/Great Britain		100	3,237	51
MS Motorservice Aftermarket Iberica S.L., Abadiano/Spain		100	7,493	1,598
MS Motorservice Asia Pacific Co. Ltd., Shanghai/China		100	1,910	188
MS Motorservice Deutschland GmbH, Tamm/Germany	(1)	100	3,334	5
MS Motorservice France SAS, Villepinte/France		100	19,960	1,932
MS Motorservice International GmbH, Neuenstadt/Germany	(1)	100	46,541	1,287
MS Motorservice Istanbul Dis Ticaret ve Pazarlama A.S., Istanbul/Turkey		51	3,052	753
Pierburg China Ltd., Kunshan City/China		100	19,611	8,162
Pierburg Gestion S.L., Abadiano/Spain		100	54,320	10,857
Pierburg GmbH, Neuss/Germany	(1)	100	126,288	4,150
Pierburg Grundstücksverwaltung GmbH & Co. KG, Neuss/Germany		100	5,620	35
Pierburg Korea, Ltd., Seoul/South Korea		100	78	-
Pierburg Mikuni Pump Technology (Shanghai) Corp., Shanghai/China		51	9,562	75
Pierburg Mikuni Pump Technology Corporation, Odawara/Japan		51	1,190	(87)
Pierburg Pump Technology France SARL, Basse-Ham (Thionville)/France		100	43,778	4,596
Pierburg Pump Technology GmbH, Neuss/Germany	(1)	100	85,128	(2,803)
Pierburg Pump Technology Italy S.p.A., Lanciano/Italy		100	46,731	7,429
Pierburg Pump Technology México S.A.de C.V., Mexico City/Mexico		100	6,383	592
Pierburg Pump Technology US LLC, Marinette/USA		100	18,312	14,019
Pierburg S.A., Abadiano/Spain		100	30,900	9,518
Pierburg s.r.o., Usti/Czech Republic		100	69,578	23,650
Pierburg Systems S.L., Abadiano/Spain		100	206	44
Pierburg US LLC, Fountain Inn (Greenville)/USA		100	28,820	12,542
Rheinmetall Automotive AG, Neckarsulm/Germany	(1)	100	338,464	925
Société Mosellane de Services SCI, Basse-Ham (Thionville)/France		100	10,175	(21)
Solidteq GmbH, Neuss/Germany	(1)	100	242	8
Investments carried at equity				
Holding companies / service companies / other				
casa altra development GmbH, Düsseldorf/Germany	(6)	35	5	(376)
LIGHTHOUSE Development GmbH, Düsseldorf/Germany	(4), (6)	10	190	139
Unternehmerstadt GmbH, Düsseldorf/Germany	(5)	50	8	(6)

Company		Direct share of capital in %	Indirect share of capital in %	Equity in € '000	Net income for the year in € '000
Defence sector					
Advanced Pyrotechnic Materials Pte Ltd, Singapore/Singapore	(5)		49	3,568	1,027
AIM Infrarot-Module GmbH, Heilbronn/Germany			50	7,211	1,709
ARGE RDE/CAE (GbR), Bremen/Germany	(5)		50	66	1,919
ARGE TATM, Bonn/Germany	(5)		50	-	-
ARTEC GmbH, Munich/Germany	(5)		64	1,176	154
BHIC Systems Integration Sdn Bhd, Kuala Lumpur/Malaysia			49	174	(31)
Contraves Advanced Devices Sdn Bhd, Malaka/Malaysia	(5)		49	22,282	2,241
Defense Munitions International, LLC, Wilmington, Delaware/USA	(5), (6)		50	8	-
DynITEC GmbH, Troisdorf/Germany	(6)		35	3,086	815
EuroSpike GmbH, Röthenbach/Peg/Germany	(5)		40	3,528	1,735
GIWS Gesellschaft für Intelligente Wirksysteme mbH, Nürnberg/Germany	(5)		50	1,239	-
Hartchrom Defense Technology AG, Steinach/Switzerland	(6)		38	1,665	67
Helios Aero Services B.V., Rijen/Netherlands	(5)		22	(53)	(178)
HFTS Helicopter Flight Training Services GmbH, Hallbergmoos/Germany	(5)		25	71,444	15,595
HIL Industrie-Holding GmbH, Bonn/Germany	(5)		33	55	-
LOG GmbH, Bonn/Germany	(6)		25	-	-
ORR Training Systems LLC, Moskau/Russian Federation	(5)		25	(150)	(10)
Oy Finnish Defence Powersystems Ab, Helsinki/Finland			30	71	(5)
PSM Projekt System & Managment GmbH, Kassel/Germany	(5)		50	743	(10)
RDZM, LLC, Wilmington, Delaware/USA	(5), (6)		50	83	(1)
Rheinmetall Arabia Simulation and Training LLC, Riyadh/Saudi Arabia	(5)		40	475	64
Rheinmetall Barzan Advanced Technologies QSTP-LLC, Doha/Quatar			49	8	(36)
Rheinmetall BMC Savunma Sanayi Ve Ticaret A.S., Ankara/Turkey			40	3,188	(2,167)
Romanian Military Vehicle Systems S.A., Moreni, Cambovita County/Romania	(5)		50	19	-
The Dynamic Engineering Solution Pty Ltd, Magill/Australia			49	2,149	-
Werk Aschau Lagerverwaltungsgesellschaft mbH, Aschau/Germany	(5)		50	25	-

Automotive sector

Advanced Bearing Materials LLC, Greensburg/USA			25	2,585	-
Kolbenschmidt Pierburg Shanghai Nonferrous Components Co., Ltd., Shanghai/China	(5)		50	159,322	39,723
Kolbenschmidt Shanghai Piston Co., Ltd., Shanghai/China	(5)		50	77,602	9,162
KS HUAYU AluTech GmbH, Neckarsulm/Germany	(5)		50	45,554	279
Pierburg Huayu Pump Technology Co., Ltd., Shanghai/China	(5)		50	4,229	546
Pierburg Yinlun Emission Technology (Shanghai) Co., Ltd., Shanghai/China	(5)		51	1,404	(603)
Riken Automobile Parts (Wuhan) Co., Ltd., Wuhan/China	(5)		30	31,951	6,521
Shriram Pistons & Rings Ltd., New Delhi/India			20	114,502	17,372

(1) Profit transfer agreement

(2) Included in consolidation due to majority of voting rights

(3) Structured entity (real estate management company)

(4) Significant influence due to distribution of voting rights

(5) Joint ventures

(6) Equity and result from previous years

(7) Equity and result not available (new company)

Responsibility statement

To the best of our knowledge and in accordance with the applicable accounting principles, the consolidated financial statements of Rheinmetall AG give a true and fair view of the net assets, financial position and results of operations of the Group, and the management report of Rheinmetall AG includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group.

Düsseldorf, February 28, 2018

Rheinmetall Aktiengesellschaft
The Executive Board

Armin Papperger

Helmut P. Merch

Horst Binnig

Peter Sebastian Krause

Auditor's report and opinion

INDEPENDENT AUDITOR'S REPORT

To Rheinmetall Aktiengesellschaft, Düsseldorf

REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND OF THE GROUP MANAGEMENT REPORT

Audit Opinions

We have audited the consolidated financial statements of Rheinmetall Aktiengesellschaft, Düsseldorf, and its subsidiaries (the Group), which comprise the balance sheet as at 31 December 2017, the income statement, the statement of comprehensive income, the statement of changes in equity and the cash flow statement for the financial year from 1 January to 31 December 2017 and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of Rheinmetall Aktiengesellschaft, which is combined with the Company's management report, for the financial year from 1 January to 31 December 2017. We have not audited the content of those parts of the group management report listed in the "Other Information" section of our auditor's report in accordance with the German legal requirements.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to § [Article] 315e Abs. [paragraph] 1 HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at 31 December 2017, and of its financial performance for the financial year from 1 January to 31 December 2017 and
- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the group management report does not cover the content of those parts of the group management report listed in the "Other Information" section of our auditor's report.

Pursuant to § 322 Abs. 3 Satz [sentence] 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the Audit Opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with § 317 HGB and the EU Audit Regulation (No. 537/2014, referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report" section of our auditor's report.

Auditor's report and opinion

We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) point (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the group management report.

Key Audit Matters in the Audit of the Consolidated Financial Statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January to 31 December 2017. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In our view, the matters of most significance in our audit were as follows:

- ① Recoverability of Goodwill
- ② Recognition of revenue from construction contracts with customers

Our presentation of these key audit matters has been structured in each case as follows:

- ① Matter and issue
- ② Audit approach and findings
- ③ Reference to further information

Hereinafter we present the key audit matters:

- ① Recoverability of Goodwill

①

In the Company's consolidated financial statements, goodwill in the total amount of EUR 550 million (9 % of total assets) is reported. Goodwill is tested for impairment by the Company once a year or when there are indications of impairment to determine any possible need for write-downs. The impairment test is carried out at the level of those groups of cash-generating units to which the relevant goodwill has been allocated. The carrying amount of the relevant cash-generating unit, including goodwill, is compared with the corresponding recoverable amount in the context of the impairment test.

The present value of the future cash flows from the respective group of cash-generating units normally serves as the basis of valuation. Present values are calculated using discounted cash flow models. For this purpose, the adopted corporate planning of the Group forms the starting point which is extrapolated on the basis of assumptions about long-term rates of growth. Expectations relating to future market developments and assumptions about the development of macroeconomic factors are also taken into account. The discount rate used is the weighted average cost of capital for the relevant group of cash-generating units. The impairment test determined that no write-downs were necessary.

The outcome of the valuation exercise is dependent to a large extent on the estimates made by the executive directors with respect to the future cash inflows from the respective group of cash-generating units, the discount rate used, the rate of growth and other assumptions, and is therefore subject to considerable uncertainty. Against this background and due to the complex nature of the valuation, this matter was of particular significance in the context of our audit.

②

As part of our audit, we assessed the methodology employed for the purposes of performing the impairment test, among other things. After matching the future cash inflows used for the calculation against the adopted corporate planning for the period 2018-2020 of the Group, we evaluated the appropriateness of the calculation, in particular by comparing it with general and sector-specific market expectations. We also evaluated whether the costs for Group functions were considered properly. With the knowledge that even relatively small changes in the discount rate applied can have material effects on the enterprise value calculated in this way, we also assessed the parameters used to determine the discount rate applied, and evaluated the measurement model. In order to reflect the uncertainty inherent in the projections, we assessed the sensitivity analyses performed by the Company and carried out our own sensitivity analysis. Taking into account the information available, we determined that the carrying amounts of the cash-generating units, including the allocated goodwill, were adequately covered by the discounted future cash flows.

Overall, the measurement inputs and assumptions used by the executive directors are in line with our expectations and are also within the ranges considered by us to be reasonable.

③

The Company's disclosures on impairment testing are contained in notes 6 "Accounting policies" and 7 "Goodwill, other intangible assets" to the consolidated financial statements.

Auditor's report and opinion

② Recognition of revenue from construction contracts with customers

①

In the Company's consolidated financial statements as of 31 December 2017, EUR 1,446 million in revenue from construction contracts with customers were recognized in the consolidated income statement. EUR 319 million in receivables from construction contracts and EUR 302 million in liabilities from construction contracts were recognized in the consolidated balance sheet as of 31 December 2017. Revenue from construction contracts is generally recognized in application of the percentage of completion method. The percentage of completion is calculated as the proportion that the contract costs incurred bear to the planned total contract costs (cost to cost method). With respect to the complex production processes, accounting using the percentage of completion method requires in particular an effective internal budgeting and reporting system, including concurrent project costing, as well as a functioning internal control system.

Against this background, the proper application of the accounting standards is considered to be complex and to a certain extent based on estimates and assumptions made by the executive directors. This matter was therefore of particular importance for our audit.

②

In the knowledge that the complexity and the need to make estimates and assumptions give rise to an increased risk of accounting misstatements, we evaluated the Group's processes and controls for recognizing revenue from construction contracts with customers. Our specific audit approach included testing of the controls and substantive audit procedures, in particular:

- evaluating the cost accounting system and other relevant auxiliary systems used to account for construction contracts;
- assessing the proper recognition and allocation of individual costs and the amount and allocation of shared overheads;
- assessing the project costings underlying the construction contracts and the calculation of percentage of completion.

We were able to satisfy ourselves that the systems, processes, and controls in place are appropriate and that the estimates and assumptions made by the executive directors are sufficiently documented and substantiated to ensure that revenue from construction contracts with customers is properly recognized.

③

The Company's disclosures on recognition of revenue from construction contracts are contained in notes 6 "Accounting policies", 12 "Trade receivables" and 22 "Other liabilities" to the consolidated financial statements.

Other Information

The executive directors are responsible for the other information. The other information comprises the following non-audited parts of the group management report:

- the statement on corporate governance pursuant to § 289f HGB and § 315d HGB included in section "Corporate Governance" of the group management report
- the corporate governance report pursuant to No. 3.10 of the German Corporate Governance Code
- the chapter "Energy management" of the non-financial statement pursuant to § 289b Abs. 1 HGB and § 315b Abs. 1 HGB, which is included in section "Non-financial aspects of business activities" of the management report

The other information comprises further the remaining parts of the annual report – excluding cross-references to external information – with the exception of the audited consolidated financial statements, the audited group management report and our auditor's report.

Our audit opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

Responsibilities of the Executive Directors and the Supervisory Board for the Consolidated Financial Statements and the Group Management Report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's report and opinion

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.
- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.
- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with German law, and the view of the Group's position it provides.
- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

Auditor's report and opinion

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the annual general meeting on 9 May 2017. We were engaged by the supervisory board on 6 November 2017. We have been the group auditor of the Rheinmetall Aktiengesellschaft, Düsseldorf, without interruption since the financial year 1927.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

GERMAN PUBLIC AUDITOR RESPONSIBLE FOR THE ENGAGEMENT

The German Public Auditor responsible for the engagement is Norbert Linscheidt.

Düsseldorf, 28 February 2018

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Gerd Bovensiepen
(German Public Auditor)

Norbert Linscheidt
(German Public Auditor)

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Balance Sheet of Rheinmetall AG as of December 31, 2017

Assets € '000

	Note	Dec. 31, 2017	Dec. 31, 2016
Fixed assets	(1)		
Intangible assets		8,621	6,384
Property, plant and equipment		36,394	31,774
Financial assets		1,088,862	1,033,082
		1,133,877	1,071,240
Current assets			
Inventories	(2)	143	113
Receivables and other assets	(3)	667,747	906,831
Bonds	(4)	277,696	225,000
Cash in hand	(5)	412,577	360,910
		1,358,163	1,492,854
Deferred income	(6)	13,776	6,329
Total assets		2,505,816	2,570,423

Equity and liabilities € '000

	Note	Dec. 31, 2017	Dec. 31, 2016
Share capital		111,511	111,511
Treasury stock (notional value relating to the share capital)		(1,740)	(2,229)
		109,771	109,282
Capital reserves		542,083	534,220
Retained earnings		144,002	133,955
Net earnings		73,743	65,000
Equity		869,599	842,457
Provisions	(6)	107,402	128,702
Liabilities	(7)		
Bond		0	500,000
Liabilities due to banks		493,172	121,500
Other liabilities		1,029,468	970,589
		1,522,640	1,592,089
Deferred income		6,175	7,175
Total liabilities		2,505,816	2,570,423

Income Statement for Rheinmetall AG for Fiscal 2017

€ '000

	Note	2017	2016
Investment income	(13)	135,882	177,884
Net interest	(14)	(8,835)	(11,452)
Net financial income		127,047	166,432
Sales	(15)	58,784	56,519
Other operational income		65,042	48,755
Staff costs		39,691	32,740
Amortization of intangible and depreciation of tangible assets (incl. write-down)		3,203	2,698
Depreciation of financial assets	(15)	0	68,191
Other operating expenses	(16)	105,845	77,822
Extraordinary expenses	(17)	102,134	90,255
Earnings before taxes (EBT)		(28,391)	(21,978)
Taxes on income and revenue	(18)	73,743	68,277
Net profit for the year		73,743	68,277
Appropriations to retained earnings		-	3,277
Appropriations of retained earnings		-	-
Net earnings		73,743	65,000

Supervisory Board

Ulrich Grillo

Mülheim an der Ruhr

Diplom-Kaufmann

Chairman of the Board of Grillo-Werke AG

Chairman

(from May 9, 2017)

Membership in Supervisory Boards

Klöckner & Co. SE (up to May 12, 2017)

Innogy SE

Grillo Zinkoxid GmbH

RHEINZINK GmbH & Co. KG

Zinacor S.A.

Klaus Greinert

Mannheim

(up to May 9, 2017)

Businessman

Chairman

(up to May 9, 2017)

Membership in Supervisory Boards

DURAVIT AG
Vice Chairman

DURAVIT S.A.

Dr. Rudolf Luz ^{*)}

Weinsberg

Board of Directors / Head of operating policies
of German Metalworkers' Union
Vice Chairman

Membership in Supervisory Boards

Rheinmetall Automotive AG
Vice Chairman

^{*) Elected by the employees}

Roswitha Armbruster ^{*)}

Schramberg

Chairwoman of Works Council of the
Defence sector of Rheinmetall AG

Chairwoman of Works Council
Rheinmetall Waffe Munition GmbH
Branch Mauser Oberndorf

Chairwoman of the Group's Works Council
Rheinmetall AG

Dr.-Ing. Dr.-Ing. E.h. Klaus Draeger

Munich

(from May 9, 2017)

Former member of the Executive Board of BMW AG

Membership in Supervisory Boards

TÜV Süd

Professor Dr. Andreas Georgi

Starnberg

Professor of Leadership and Control Problems
in Enterprises
Ludwig-Maximilians-Universität Munich

Executive Advisor

Membership in Supervisory Boards

Asea Brown Boveri Aktiengesellschaft
Felix Schoeller Holding GmbH & Co. KG
Oldenburgische Landesbank AG

Professor Dr. Susanne Hannemann

Bochum

Professor of Applied Business Administration,
in particular company taxation and auditing
Bochum University of Applied Sciences

Daniel Hay ^{*)}

Velbert

Trade union secretary of German Metalworkers' Union

Dr. Franz Josef JungEltville am Rhein
(from May 9, 2017)

Lawyer and Notary

Dr. Michael Mielke ^{*)}

Berlin

Head of Product Division Actuators
Pierburg GmbH, Berlin Plant**Detlef Moog**

Mülheim an der Ruhr

Consulting engineer

Reinhard Müller ^{*)}Wabern
(from May 9, 2017)Chairman of the Works Council of
Rheinmetall Landsysteme GmbH, KasselVice Chairman of the General Works Council of
Rheinmetall Landsysteme GmbHMember of the Works Council of the Defence Sector
of Rheinmetall AGMember the Group's Works Council of
Rheinmetall AG

Chairman of the European Works Council

Dagmar Muth ^{*)}

Bremen

Chairwoman of Works Council of
Rheinmetall Electronics GmbHVice Chairwoman of the Group's Works Council
Rheinmetall AG*Membership in Supervisory Boards*Rheinmetall Electronics GmbH
Vice ChairwomanMember of the Works Council of the Defence Sector
of Rheinmetall AG**Professor Dr. Frank Richter**Ulm
(up to May 9, 2017)Chairman of the Executive Board
DURAVIT AG*Membership in Supervisory Boards*Advisory Board Duralog Duravit Logistik GmbH
ChairmanDuravit Egypt S.A.E.
ChairmanDuravit (China) Sanitaryware Co. Ltd.
ChairmanDuravit Yapi Ürünleri San. Ve. Tic. A.S.
PresidentDuravit Tunisia S.A.
PresidentDuravit India Pvt. Ltd.
ChairmanDuravit S.A., Bischwiller / Frankreich
PresidentDuravit Sanitaryware Technology (Shanghai) Co., Ltd.
Chairman^{*)} Elected by the employees

Supervisory Board

Markus Schaubel ^{*)}

Lauffen am Neckar

Chairman of the Works Council of Rheinmetall Automotive AG
KS Kolbenschmidt GmbH
MS Motorservice International GmbH

Chairman of the Sub-Works Council of
Rheinmetall Automotive AG

Vice Chairman of the Group's Works Council
Rheinmetall AG

Membership in Supervisory Boards

Rheinmetall Automotive AG

KS Kolbenschmidt GmbH
Vice Chairman

Sven Schmidt ^{*)}

Wiesloch

Chairman of the Works Council of
KS Gleitlager GmbH, St. Leon - Rot

Chairman of the General Works Council of
KS Gleitlager GmbH

Vice Chairman of the Sub-Works council of
Rheinmetall Automotive AG

Member the Group's Works Council
Rheinmetall AG

Membership in Supervisory Boards

Rheinmetall Automotive AG

Wolfgang Tretbar ^{*)}

Nettetal

(up to May 9, 2017)

Chairman of the Group's Works Council
Rheinmetall AG

Member of Works Council of
Pierburg GmbH, Plant Niederrhein, Neuss

Klaus-Günter Vennemann

Waidring, Austria

Consulting engineer

Membership in Supervisory Boards

Nanogate SE

Nanogate PD Systems GmbH

Dr. Rudolf Kellermann GmbH

Univ.-Prof. Dr. Marion A. Weissenberger-Eibl

Karlsruhe

Head of the Fraunhofer System and Innovation
Research Institute (ISI)

Chairholder „Innovation and Technology Management“
at Karlsruhe Institute of Technology (KIT)

Membership in Supervisory Boards

HeidelbergCement AG

MTU Aero Engines AG

Deutsche Akademie der Technikwissenschaften (acatech)

^{*)} Elected by the employees

Executive Board Rheinmetall AG

Armin Papperger

Düsseldorf

Chairman

Chairman of Management Board Defence

Helmut P. Merch

Meerbusch

Finance and Controlling

CFO of Management Board Defence

Membership in Supervisory Boards

Rheinmetall Automotive AG ^{*)}
Chairman

Nitrochemie AG ^{*)}
President

Nitrochemie Aschau GmbH ^{*)}
Chairman

Nitrochemie Wimmis AG ^{*)}
President

Rheinmetall Denel Munition (Pty) Ltd ^{*)}
Chairman

Rheinmetall MAN Military Vehicles GmbH ^{*)}
Chairman

Membership in Supervisory Boards

Rheinmetall Automotive AG ^{*)}

Nitrochemie AG ^{*)}

Nitrochemie Aschau GmbH ^{*)}

Nitrochemie Wimmis AG ^{*)}

Rheinmetall Denel Munition (Pty) Ltd ^{*)}

^{*)} *Affiliated mandates*

Executive Board Rheinmetall AG

Horst Binnig

Bad Friedrichshall

Automotive

Chairman of the Executive Board
Rheinmetall Automotive AG

Membership in Supervisory Boards

Kolbenschmidt Pierburg Shanghai ^{*)}
Nonferrous Components Co. Ltd.
Chairman

Kolbenschmidt Shanghai Piston Co., Ltd. ^{*)}
Vice Chairman

KS HUAYU Alu Tech GmbH ^{*)}
Vice Chairman

KS Gleitlager GmbH ^{*)}
Chairman

KS Kolbenschmidt GmbH ^{*)}
Chairman

KSPG Holding USA, Inc. ^{*)}
Director

Pierburg GmbH ^{*)}
Chairman

Pierburg HUAYU Pump Technology Co., Ltd. ^{*)}
Vice Chairman of the Board of Directors

Pierburg Pump Technology GmbH ^{*)}
Chairman

KSPG (China) Investment Co., Ltd. ^{*)}
Chairman of the Board of Directors

Bertrandt AG

Peter Sebastian Krause

Erkrath

(from January 1, 2017)

Human Resources

Director of Industrial Relations
(from January 1, 2017)

Member of the Executive Board
Rheinmetall Automotive AG

Member of Management Board Defence

Membership in Supervisory Boards

Rheinmetall Electronics GmbH ^{*)}

Rheinmetall Landsysteme GmbH ^{*)}
Chairman

Rheinmetall Waffe Munition GmbH ^{*)}
Chairman

^{*)} *Affiliated mandates*

Representative Director

Dr. Rolf Giebeler, MPA (Harvard)

Bonn

General Counsel

Representative Director Law

(from January 1, 2017)

Chief Compliance Officer

Michael Salzmann

Düsseldorf

Executive Board Automotive

Horst Binnig

Bad Friedrichshall

Chairman

Strategy, Marketing, Operations

Peter Sebastian Krause

Erkrath

Human Resources, Law

Director of Industrial Relations

Dr. Peter P. Merten

Herrsching

(up to July 31, 2017)

Finance and Controlling, IT

Olaf Hedden

Neuss

(from August 1, 2017)

Finance and Controlling, IT

Management Board Defence

Armin Papperger

Düsseldorf

Chairman

Division Weapon and Ammunition

Helmut P. Merch

Meerbusch

Finance and Controlling, IT

Dr. Andreas Schwer

Uhdlingen-Mühlhofen

(up to December 31, 2017)

Rheinmetall International

Ben Hudson

Hanover

Division Vehicle Systems

Gordon Hargreave

Düsseldorf

Division Electronic Solutions

(up to February 28, 2018)

Region Asia/Pacific

(from March 1, 2018)

Peter Sebastian Krause

Erkrath

Human Resources

Susanne Wiegand

Schönaich

Division Electronic Solutions

(from March 1, 2018)

Legal Information and Contact

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This report was published on March 15, 2018. The editorial deadline was February 26, 2018.

The annual report of Rheinmetall AG is available in German (original version) and English (non-binding translation). Both versions are available to download at www.rheinmetall.com.

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This report contains statements and forecasts referring to the future development of the Rheinmetall Group which are based on assumptions and estimates made by the management. A number of factors, many of which are beyond Rheinmetall's control, influence the business activities, success, business strategy and results of the Company. Statements regarding the future are based on current plans, targets, estimates and forecasts and only take into account findings made up to and including the date this report was produced. If the underlying assumptions do not materialize, the actual figures may differ from such estimates. Uncertain factors include changes in the political and economic environment, changes to national and international laws and regulations, market fluctuations, the development of global market prices for commodities, exchange rate and interest rate fluctuations, the impact of rival products and competitive prices, the acceptance of and demand for new products, the effect of changes to customer structures and changes to the business strategy. Rheinmetall does not intend, nor does it undertake a particular commitment, to update statements referring to the future or to adjust these to events or developments following the publication of this annual report.

MOBILITY. SECURITY. **PASSION.**

