RHEINMETALL GROUP

ANNUAL REPORT 2016

KEY FIGURES 2016 | RHEINMETALL GROUP

		2016	2015	2014	2013	2012	2011	2010
ORDER SITUATION								
Order intake	€ million	**5,720**	5,314	5,278	5,609	5,311	4,189	3,974
Order backlog (Dec. 31)	€ million	**7,114**	6,867	6,932	6,442	5,405	4,950	5,136
SALES/RESULTS								
Sales	€ million	**5,602**	5,183	4,688	4,417	4,704	4,454	3,989
of which generated abroad	%	**76**	74	75	73	72	70	69
Operating result	€ million	**353**	287	160	211	268	342	289
Operating result margin	%	**6.3**	5.5	3.4	4.8	5.7	7.7	7.2
EBIT	€ million	**353**	287	102	121	296	354	297
EBIT margin	%	**6.3**	5.5	2.2	2.7	6.3	7.9	7.4
EBT	€ million	**299**	221	22	45	216	295	229
Return on capital employed (ROCE)[1]	%	**12.3**	10.6	3.9	4.7	11.5	14.9	14.6
BALANCE SHEET								
Total equity	€ million	**1,781**	1,562	1,197	1,339	1,465	1,546	1,355
Total assets	€ million	**6,124**	5,730	5,271	4,866	4,899	4,832	4,460
Equity ratio	%	**29.1**	27.3	22.7	27.5	29.9	32.0	30.4
Cash and cash equivalents	€ million	**616**	691	486	445	501	535	629
Total assets less cash and cash equivalents	€ million	**5,508**	5,039	4,785	4,421	4,398	4,297	3,831
Net financial debt[2]	€ million	**(19)**	81	330	147	98	130	76
Leverage ratio[3]	%	**(0.3)**	1.6	6.9	3.3	2.2	2.9	1.9
Net gearing[4]	%	**(1.1)**	5.2	27.6	11.0	6.7	8.4	5.6
CASH FLOW								
Cash flow from operating activities	€ million	**444**	339	102	211	359	290	147
Cash flow from investing activities	€ million	**(436)**	(353)	(274)	(188)	(219)	(251)	(258)
Cash flow from financing activities	€ million	**(89)**	218	210	(76)	(174)	(131)	156
Cash Flow	€ million	**8**	(14)	(172)	23	140	39	(111)
HUMAN RESOURCES								
Employees (Dec. 31) according to capacity		**20,993**	20,676	20,166	20,264	21,767	21,516	19,979
Domestic		**10,181**	10,070	9,827	9,729	10,667	10,708	10,656
Foreign		**10,812**	10,606	10,339	10,535	11,100	10,808	9,323
Defence		**10,002**	9,581	9,184	9,193	9,623	9,833	9,037
Automotive		**10,820**	10,934	10,830	10,927	12,003	11,548	10,816
Holding/service companies		**171**	161	152	144	141	135	126
SHARE								
Stock price, annual closing	€	**63.90**	61.48	36.27	44.85	36.40	34.24	60.17
Stock price, annual high	€	**70.61**	63.19	57.87	46.04	47.23	66.46	60.17
Stock price, annual low	€	**51.47**	34.60	30.69	35.01	31.36	30.35	42.50
Earnings per share	€	**4.69**	3.88	0.47	0.75	4.55	5.55	4.23
Dividend per share	€	**1.45**	1.10	0.30	0.40	1.80	1.80	1.50

[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

OUR VISION

WE WILL BECOME
ONE GROUP
FOR LEADING TECHNOLOGIES
IN MOBILITY AND SECURITY.

ONE Rheinmetall

2 Corporate Sectors

6 Divisions

Customer Countries **130+**

Locations Worldwide **100+**

23,044 Employees

5.6 Sales € billion

CONTENTS

Letter to shareholders
Supervisory Board of Rheinmetall AG

Shareholder representatives

Klaus Greinert
Chairman

First appointed: July 10, 1997

Appointed until close of the 2017 Annual General Meeting

Professor Dr. Andreas Georgi

First appointed: June 10, 2002

Appointed until close of the 2017 Annual General Meeting

Ulrich Grillo

First appointed: May 10, 2016

Appointed until close of the 2021 Annual General Meeting

Professor Dr. Susanne Hannemann

First appointed: May 15, 2012

Appointed until close of the 2017 Annual General Meeting

Detlef Moog

First appointed: July 8, 2010

Appointed until close of the 2021 Annual General Meeting

Professor Dr. Frank Richter

First appointed: January 1, 2006

Appointed until close of the 2017 Annual General Meeting

Klaus-Günter Vennemann

First appointed: May 10, 2016

Appointed until close of the 2021 Annual General Meeting

Professor Dr. Marion A. Weissenberger-Eibl

First appointed: May 10, 2016

Appointed until close of the 2021 Annual General Meeting

Employee representatives

Dr. Rudolf Luz
Vice Chairman

First appointed: January 26, 2001

Appointed until close of the 2017 Annual General Meeting

Roswitha Armbruster

First appointed: May 15, 2012

Appointed until close of the 2017 Annual General Meeting

Daniel Hay

First appointed: May 7, 2014

Appointed until close of the 2017 Annual General Meeting

Dr. Michael Mielke

First appointed: September 1, 2010

Appointed until close of the 2017 Annual General Meeting

Dagmar Muth

First appointed: July 1, 2015

Appointed until close of the 2017 Annual General Meeting

Markus Schaubel

First appointed: July 1, 2014

Appointed until close of the 2017 Annual General Meeting

Sven Schmidt

First appointed: July 1, 2014

Appointed until close of the 2017 Annual General Meeting

Wolfgang Tretbar

First appointed: July 10, 1997

Appointed until close of the 2017 Annual General Meeting

Permanent committees

Personnel Committee
Klaus Greinert (Chairman)
Professor Dr. Andreas Georgi
Dr. Rudolf Luz
Wolfgang Tretbar

Audit Committee
Klaus Greinert (Chairman)
Professor Dr. Susanne Hannemann
Dr. Rudolf Luz
Roswitha Armbruster

Mediation Committee
Klaus Greinert (Chairman)
Professor Dr. Frank Richter
Dr. Rudolf Luz
Dagmar Muth

Nomination Committee
Klaus Greinert (Chairman)
Professor Dr. Frank Richter

Letter to shareholders
Report of the Supervisory Board

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 Company bylaws and its rules of procedure with commitment, responsibility 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. At three Supervisory Board meetings one member was not present in each case. All members attended all other Supervisory Board meetings. All members were present at each of the committee meetings with the exception of the Personnel Committee meeting on November 2, 2016, which was attended by two rather than four members, and the Audit Committee meeting on November 2, 2016, which one member did not attend.

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 Group. We examined the Company's situation, challenges, opportunities and prospects in detail.

The Supervisory Board and/or committees held a total of 16 meetings in 2016 and at four regular meetings of the Supervisory Board and eleven committee meetings addressed in detail matters including the progress of business activities, the current earnings and financial position, general political, economic and business conditions, the Company's prospects 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 competitiveness and future viability. In addition to a number of other topics and important individual issues, the employment situation, the risk position, risk management and the Company's compliance were also discussed. The discussions also covered developments on the capital and currency markets and the resulting changes and uncertainties in the economic environment. We were provided with a detailed explanation whenever actual business performance deviated from previous plans and targets.

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 discussions, 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 I engaged in a close exchange of information and ideas. At regular work meetings, for example, we discussed current developments, pending decisions and significant transactions of importance to the assessment of the situation and the Company's development.

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.

Letter to shareholders
Report of the Supervisory Board

Discussions and decisions of the Supervisory Board

One agenda item at the annual accounts meeting which took place in Düsseldorf on **March 16, 2016** was discussion of the single-entity and consolidated financial statements of Rheinmetall AG as at December 31, 2015, 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 2015 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 as well as the approach and focal points of their 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 2016 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 2016.

Furthermore, we addressed the achievement of targets by members of the Executive Board for fiscal 2015 and determined the Executive Board members' targets for 2016. We determined the appropriateness of the level of Executive Board remuneration for 2014 and 2015 based on an independent remuneration study. On the recommendation of the Personnel Committee we resolved to reappoint Armin Papperger, Horst Binnig and Helmut P. Merch and approved the associated extension of their employment contracts.

The second Supervisory Board meeting of the year was held in Berlin on **May 9, 2016**. 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 2016. During its presentation on the business situation, the Executive Board explained to us the data on the Company's shareholder structure collected at the end of 2015.

It provided detailed and comprehensive information regarding the changes associated with the introduction of the German Audit Reform Act (AReG) and the EU Market Abuse Regulation (MAR) as well as their relevance to the work of the Supervisory Board. There was a brief presentation of the findings of an efficiency review conducted using an extensive questionnaire that was handed out at the December 2015 meeting. The Supervisory Board will analyze the results in depth and subsequently include any potential improvements in its work.

We approved the Executive Board's motion to exercise the first option to extend the revolving syndicated loan concluded for five years in September 2015 by an initial period of one year. The term of this credit facility will now end in 2021 rather than in 2020 as originally envisaged.

The Executive Board provided detailed information on the background and content of the internal "ONE Rheinmetall" program it initiated in April 2016. The aim of the program is to create an integrated group for leading technologies in the core business areas of mobility and security.

Following the Annual General Meeting on **May 10, 2016**, the Supervisory Board held a constitutive meeting where Professor Dr. Andreas Georgi was elected to the Personnel Committee as the successor of Toni Wicki, who had held the office since March 15, 2012.

On **August 25, 2016**, the Executive Board explained the development of the business in the first half of 2016 as well as the business performance expected for 2016 as a whole and in this context also addressed important individual issues in the corporate sectors. The Executive Board gave us a detailed presentation on the status quo in the area of electric mobility, provided an assessment of the market situation and presented the resulting strategic options, challenges, opportunities and risks for Rheinmetall Automotive.

The Executive Board reported on the results of the annual audit relating to the European Market Infrastructure Regulation. According to the certificate issued by the independent auditor, the Company's system for ensuring compliance with the requirements under Section 20 (1) of the German Securities Trading Act (WpHG) was appropriate and effective overall and in all material respects during the period from January 1 to December 31, 2015. Later in the meeting we also adopted the declaration of conformity in accordance with Section 161 of the German Stock Corporation Act (AktG) that must be updated on an annual basis and contained two deviations from the code.

In accordance with the resolution of the Personnel Committee from March 2016 we addressed the appropriateness of the current level of remuneration provided to members of the Executive Board, basing our assessment on an MDAX remuneration study from 2016. In addition, we discussed the pros and cons of extending the Executive Board to cover the area of Human Resources. To enable the members of the Supervisory Board to form a final opinion on these two agenda items we deferred further discussion on these matters to the next Supervisory Board meeting in December 2016.

The Chief Financial Officer explained the current status of the financing measures at the Rheinmetall Group. We approved the Executive Board's motion to conclude an agreement with the European Investment Bank for a loan of €250 million with a term of up to seven years. We also granted approval for the as yet unutilized issue volume for promissory notes or bonds also to be used for other financing measures, provided that the terms achieved are the same or more favorable than those originally agreed.

At the last meeting of the year, which took place in Düsseldorf on **December 8**, the Executive Board firstly presented its report for the third quarter of 2016. It informed the plenary assembly regarding the current business situation and provided a forecast for the Group's economic performance to the end of the fiscal year. We then discussed planning for the 2017 fiscal year and medium-term planning up to 2019. In addition to the investment master budget for 2017, we also approved an investment in a production site of the Weapon and Ammunition division in Italy.

On the recommendation of the Personnel Committee and following in-depth discussions, we approved adjustments to the Executive Board members' remuneration and the conclusion of new employment contracts for the Executive Board members and also established an Executive Board position for Human Resources, appointing Peter Sebastian Krause as both a member of the Executive Board and Director of Industrial Relations. Furthermore, we addressed matters concerning liability with respect to compliance processes. The Executive Board also gave a progress report on the "ONE Rheinmetall" program.

In addition, we passed a resolution to mandate PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, Düsseldorf branch, which was elected at the Annual General Meeting on May 10, 2016, to audit the single-entity and consolidated financial statements together with the summarized management report for Rheinmetall AG and the Rheinmetall Group for the 2016 fiscal year.

Work of the committees in 2016

To enable it to prepare better for its consultations and decisions, the Supervisory Board has established four committees, 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. Decision-making powers of the Supervisory Board were transferred to the committees to the extent that this was permitted by law. As the Supervisory Board Chairman, I chair all committees and report in detail to the plenary assembly on the content and results of meetings. Information on the duties of the committees can be found in the corporate governance report on page 105 et seq.

The **Personnel Committee** prepares HR-related decisions for the Supervisory Board, particularly the appointment and removal of Executive Board members as well as decisions regarding the remuneration of Executive Board members and its components. It met in March, twice in August and in November and December 2016. The committee members recommended that Armin Papperger, Horst Binnig and Helmut P. Merch be confirmed in their offices and reappointed as members of the Executive Board until December 31, 2021. Furthermore, the committee arranged for the appointment of Peter Sebastian Krause to the Executive Board of Rheinmetall AG as of January 1, 2017. The Personnel Committee also addressed the appropriateness of the remuneration system for the Executive Board members, determined the variable remuneration of the Executive Board members for fiscal 2015 based on assessments regarding the achievement of the relevant targets, extended the contracts of the Executive Board members and concluded an employment contract with Peter Sebastian Krause.

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, operating highlights and key financial figures. The Audit Committee 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 2016. Apart from specific matters relating to the Automotive and Defence sectors, other issues discussed at the meetings included the development of the risk management and compliance management systems. We were also informed regarding the Company's financing activities. In addition, the Executive Board provided information on the significance and impact of the German Audit Reform Act (AReG) and on the German government's draft Act on Implementation of the CSR Guideline (CSR-Richtlinie-Umsetzungsgesetz). At the December meeting, members of the Audit Committee were informed in detail and as scheduled of the auditing activities of Internal Auditing in 2016, the results of audits in 2016 and the planning of audits for 2017. The Chief Compliance Officer also presented the compliance report for 2016, 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 **Mediation Committee**, formed in accordance with the provisions of Section 27 (3) of the German Codetermination Act (MitbestG), did not convene during the past fiscal year.

The **Nomination Committee** convened once during the year under review. With a view to the forthcoming election of shareholder representatives at the Annual General Meeting on May 10, 2016, candidate nominations were made and presented to the full Supervisory Board in order for a resolution to be passed at the meeting on March 16, 2016.

Corporate governance and declaration of conformity

In August 2016, the Executive and Supervisory Boards submitted their joint declaration of conformity in accordance with Section 161 AktG, which is printed on page 109 of this annual report. This declaration, together with notes on deviations from the recommendations of the German Corporate Governance Code, has been made permanently accessible on the Company's website. In their joint corporate governance report on pages 103 to 109, the Executive and Supervisory Boards provide information on corporate governance at Rheinmetall in accordance with Item 3.10 of the current German Corporate Governance Code.

Conflicts of interest

There were no indications of conflicts of interest relating to mandates among members of the Supervisory Board or Executive Board in fiscal 2016 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, nor were any such conflicts of interest reported.

No former members of the Executive Board of the Company belong to the Supervisory Board.

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.

Particulars of the Supervisory Board

The mandates of DDr. Peter Mitterbauer, Detlef Moog, Dr. Siegfried Goll and Toni Wicki as members of the Supervisory Board ended at the close of the Annual General Meeting on May 10, 2016. The Annual General Meeting followed the proposals of the management and elected Detlef Moog as well as new members Ulrich Grillo, Klaus-Günter Vennemann and Professor Dr. Marion A. Weissenberger-Eibl to the Supervisory Board as shareholder representatives. Her period of office will run until the end of the Annual General Meeting that will resolve upon the approval of activities for the 2020 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.

At the constitutive meeting held after the Annual General Meeting, the Supervisory Board resolved to appoint Professor Dr. Andreas Georgi to the Personnel Committee. He succeeds Toni Wicki, whose membership of the Supervisory Board ended at the close of the Annual General Meeting on May 10, 2016.

Particulars of the Executive Board

We focus on continuity within the Group's management. At the Supervisory Board meeting of March 16, 2016, Armin Papperger, Horst Binnig and Helmut P. Merch were confirmed in their offices and appointed for a further five years until December 31, 2021. They have constituted the Executive Board of the Rheinmetall Group in this form since January 2014. Armin Papperger has been Chairman since January 2013.

In light of the Group's continuing growth and the significance of Human Resources for the Company's further development, at our meeting on December 8, 2016 we appointed Peter Sebastian Krause as a new member of the Executive Board of Rheinmetall AG with effect from January 1, 2017 for a term of three years until December 31, 2019. He is responsible for the area of Human Resources on this board. He has also been appointed Director of Industrial Relations. Until December 31, 2016 this role was performed by Armin Papperger.

Letter to shareholders
Report of the Supervisory Board

Single-entity and consolidated financial statements for 2016

The single-entity financial statements prepared by the Executive Board in accordance with German GAAP as at December 31, 2016 and the consolidated financial statements prepared on the basis of Section 315a of the German Commercial Code (HGB) in conformity with International Financial Reporting Standards (IFRS) as adopted by the EU, together with the summarized management report for Rheinmetall AG and the Rheinmetall Group, including the accounts, were audited by PricewaterhouseCoopers Aktiengesellschaft 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 during the Audit Committee's meeting on March 9, 2017 and the Supervisory Board's annual accounts meeting on March 22, 2017 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 2016 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 €1.45 per share that is entitled to a dividend for the year under review.

However, it is not only data and key indicators that count – in particular it is the people who identify with their Company and its objectives, show commitment across divisions and national borders and contribute their skills and ideas who thus make Rheinmetall's success and further growth possible in the first place. On behalf of my colleagues, I would like to thank the Executive Board, managers and employees for their hard work and high degree of personal commitment during 2016. We would also like to thank all of our customers and shareholders for the confidence they have placed in the Company.

Düsseldorf, March 22, 2017

On behalf of the Supervisory Board
Klaus Greinert
Chairman

Letter to shareholders
Executive Board of Rheinmetall AG

Horst Binnig, Helmut P. Merch, Peter Sebastian Krause, Armin Papperger (from left to right)

Armin Papperger, engineering graduate
Born in 1963

CEO from January 1, 2013
Member of the Executive Board from January 1, 2012
Appointed up to December 31, 2021
Employee of Rheinmetall since 1990

Armin Papperger has been Chairman of the Management Board Defence since January 1, 2012.

Horst Binnig, engineering graduate
Born in 1959

Member of the Executive Board from January 1, 2014
Appointed up to December 31, 2021
Employee of Rheinmetall since 1999

Horst Binnig represents the Automotive sector on the Executive Board of Rheinmetall AG.

Horst Binnig has been Chairman of Rheinmetall Automotive AG since January 1, 2014.

Helmut P. Merch, business graduate
Born in 1956

Member of the Executive Board from January 1, 2013
Appointed up to December 31, 2021
Employee of Rheinmetall since 1982

Helmut P. Merch is CFO of Rheinmetall AG and CFO on the Management Board Defence.

Peter Sebastian Krause, lawyer
Born in 1960

Member of the Executive Board from January 1, 2017
Appointed up to December 31, 2019
Employee of Rheinmetall since 1997

Peter Sebastian Krause has been a member of the Executive Board of Rheinmetall Automotive AG since July 1, 2007 and a member of the Management Board Defence since January 1, 2014. He represents the area of Human Resources on these boards as well as on the Executive Board of Rheinmetall AG.

Rheinmetall on the capital markets

Rheinmetall share basic information

	2016
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 goods
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

		2016	2015	2014	2013	2012
Equity as at end of the year						
Shared capital	€ million	111.51	111.51	101.37	101.37	101.37
Issued shares	Thousands of shares	43,559	43,559	39,599	39,599	39,599
Free float (incl. treasury stocks)	%	100	100	100	100	100
Treasury stock	%	2.0	2.4	3.1	3.9	4.8
Share price						
Share price at end of fiscal year (Xetra)	€	63.90	61.48	36.27	44.85	36.40
Performance over the year	%	+4	+70	-19	+23	+6
Highest closing price (Xetra)	€	70.61	63.19	57.87	46.04	47.23
Lowest closing price (Xetra)	€	51.47	34.60	30.69	35.01	31.36
Stock exchange data						
Stock market value of all shares as at end of the year	€ billion	2.8	2.7	1.4	1.8	1.4
Average turnover per trading day	Thousands of shares	204	242	227	215	271
MDAX ranking at year-end of shares						
according to market capitalization		21	19	33	25	25
according to stock exchange turnover		23	22	20	23	12
Key figures						
Earnings per share	€	4.69	3.88	0.47	0.75	4.55
Equity per share	€	41.78	40.07	31.34	35.30	35.54
Cash flow per share	€	11.66	9.39	5.91	6.09	9.34
Dividend						
Total payout	€ million	61.9	46.8	11.5	15.2	67.9
Payout ratio	%	31	28	64	53	36
Dividend per share entitled to dividends	€	1.45	1.10	0.30	0.40	1.80
Dividend yield	%	2.3	1.8	0.8	0.9	4.9

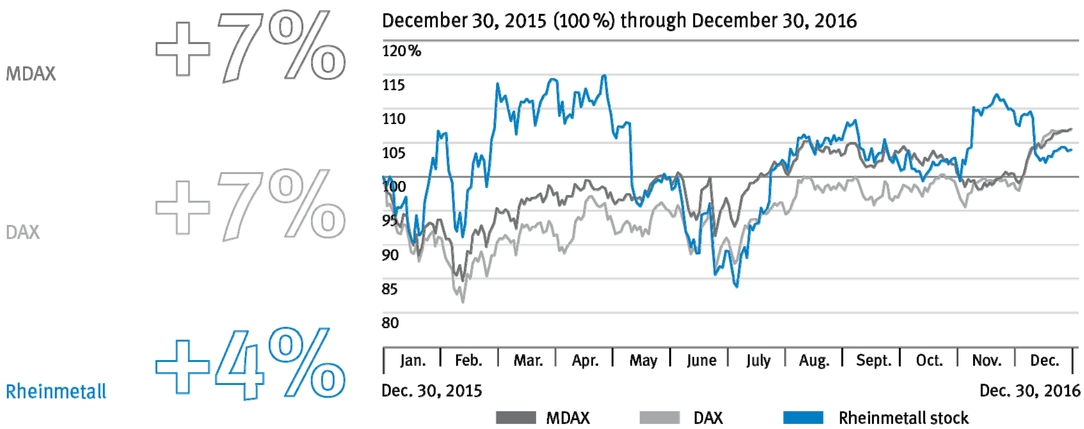
2016 on the stock markets: Brexit and US elections are prominent events

There was a weak start to the 2016 trading year in the first quarter. In China, fears over trends in the country's economic growth, in particular, led to pressure on exchange rates and to exchange rate losses on the stock markets. Combined with declining oil prices, this caused prices on the stock markets to fall. This was compensated to some degree by the capital market-friendly policies of the ECB, which included measures such as extending bond purchases and further reduction of refinancing rates. The DAX suffered a loss of 7% compared to the first quarter of 2015.

Share prices tended to move sideways in the second quarter until Britain's decision to leave the EU then put significant pressure on the stock markets once again. In the third quarter, the stabilization of economic growth in China, historically low interest rates and recovering oil prices caused prices broadly to recover, with the DAX rising by 9% before uncertainty regarding political currents and economic developments – presidential elections in the USA and the constitutional referendum in Italy – had a renewed dampening effect on share prices towards the end of the quarter.

The final quarter was then impacted by the capital markets' unexpectedly positive response to the outcome of the US election. The statements and announcements made by the newly elected president boosted hopes for significantly stronger growth in the US economy, bringing about price increases worldwide that were reflected positively in a rise of 9% on the DAX. Overall, the DAX and MDAX each rose by 7% over the course of the year, reaching 11,481 and 22,189 points respectively as at year-end.

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



Rheinmetall stock price closes 2016 on a slightly positive note after a volatile year

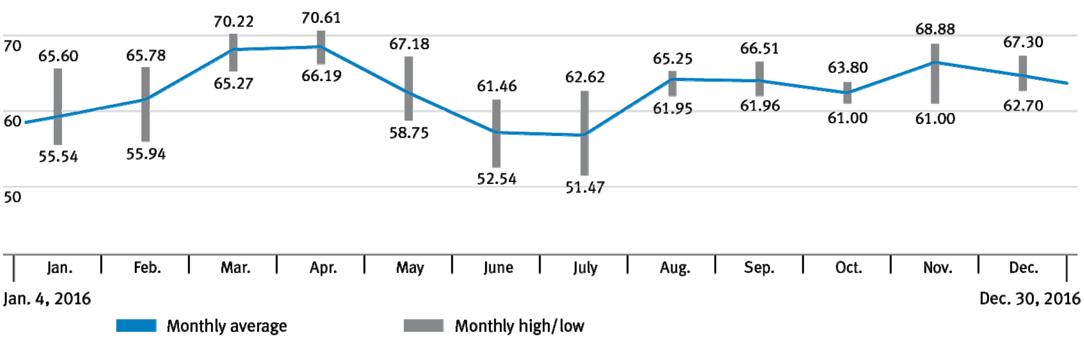
Very pleasingly, the Rheinmetall stock price outperformed the general trend on the German stock market indices until the end of the first quarter of 2016. The shares rose by a very impressive 14%, while both the DAX and MDAX recorded falls of 7% and 2% respectively. The share price dropped significantly in the second quarter due to fears of a decline in sales in the Automotive sector, where sales decreased slightly against the previous year, and lagged behind the performance of the benchmark indices. As the year progressed, however, it became clear that these assumptions were unfounded. The confirmation of the annual Group sales forecast and increase in guidance for sales and the operating margin at the presentation of quarterly figures in August and November 2016 supported the positive performance of the share price, which improved by 4% overall in comparison with the previous year.

Letter to shareholders
Rheinmetall on the capital markets

The final quarter was once again characterized by a high degree of volatility. Following the defense industry's very positive reaction to the outcome of the US presidential election in November, the Rheinmetall share price declined again at year-end, although it closed 2016 overall with a price increase of almost 4% at a price of €63.90.

Rheinmetall share price performance in €

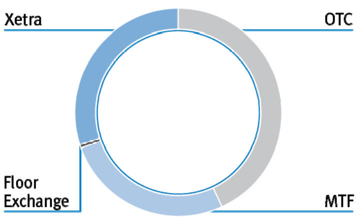
January 4, 2016 through December 30, 2016



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. In light of the trend in turnover on the respective trading platforms, a decline in Xetra trading can also be observed in relation to Rheinmetall AG shares.

Rheinmetall shares processed via trading platforms %



Trading platform	2016	2015
Xetra	29.9	34.1
Over the Counter (OTC)	43.1	40.2
Multilateral Trading Facility (MTF)	26.5	24.9
Floor Exchange	0.5	0.8

Ranking in the MDAX

The Rheinmetall share has been included in the MDAX since it was launched in January 1996. It comprises 50 companies which immediately follow the shares contained in the DAX based on rankings of market capitalization of free float and stock exchange turnover. In accordance with the guidelines of Deutsche Börse, a stock corporation's membership of an index depends mainly on two criteria: market capitalization and the trading volume of shares. The market capitalization is determined based on the free float of shares issued, measured at the respective share price. The Rheinmetall AG shares numbered 43,558,850 on the balance sheet date. To calculate the free float, the annual average holdings of treasury shares at Rheinmetall AG (December 31, 2016: 870,788 shares; previous year: 1,035,785) are deducted from this. Accordingly, the free float rose from 97.6% at the end of 2015 to 98.0% at the 2016 balance sheet date. The closing price for the shares of €63.90 at the end of the year resulted in a stock market value of around €2.783 billion for 100% of the shares. The stock market value in terms of free float is around €2.728 billion. In the corresponding index ranking of Deutsche Börse, the Rheinmetall share was in 21st place compared to 19th place the year before.

Ranking in the MDAX by market capitalization of the free float

	2016	2015	2014	2013	2012
Number of shares	43,558,850	43,558,850	39,599,000	39,599,000	39,599,000
Free float of shares	98.0 %	97.6 %	96.9 %	96.1 %	95.2 %
Closing share price	€ 63.90	€ 61.48	€ 36.27	€ 44.85	€ 36.40
Market capitalization	€2.8 billion	€2.7 billion	€1.4 billion	€1.8 billion	1.4 billion
Ranking	21	19	33	25	25

In terms of stock exchange turnover, Rheinmetall shares achieved a medium ranking among MDAX stocks in Deutsche Börse's index rankings at the end of the year, coming in 23rd place (previous year: 22nd place). The average daily trading volume of Rheinmetall shares was around 181,000 shares in 2016, well below the previous year's level. In contrast, the volume of shares traded via OTC platforms each day rose again year-on-year.

Stock exchange turnover – all German stock exchanges

	2016	2015	2014	2013	2012
Average sales per trading day	204,101	241,607	227,256	214,938	271,000
Ranking	23	22	20	23	12

Dividend distribution for fiscal 2016

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. Care is taken 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 9, 2017, the Executive Board and Supervisory Board intend to propose a dividend payment of €1.45 per share that is entitled to a dividend (previous year: €1.10). The total amount paid out will thus be €62 million (previous year: €47 million). Subject to approval by shareholders, the dividend will be paid on the third business day after the Annual General Meeting. Based on the closing price of the shares of €63.90 at the end of 2016 (previous year: €61.48), this results in a dividend yield of 2.3% (previous year: 1.8%). The payout ratio, i.e. the dividend in relation to earnings per share, will stand at 31% in the reporting year (previous year: 28%).

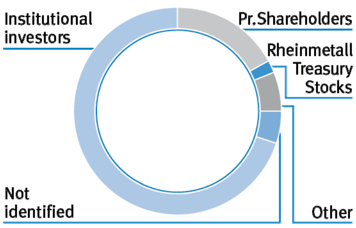
Letter to shareholders
Rheinmetall on the capital markets

A broad international shareholder base

Rheinmetall has a stable and large proportion of institutional investors, which has changed only slightly in recent years. We commissioned an external service provider to analyze our shareholder structure in January 2017. This involved evaluating publications issued by investment companies and other institutional shareholders.

The findings show that the proportion of institutional investors from Europe has risen again by approximately 8 percentage points to 45%. These investors are primarily based in Germany, the UK, France and Scandinavia. The proportion of institutional investors from North America – most of whom are based in the USA – has fallen and now stands at approximately 24%, compared with 29% in the previous year. A further 31% of shares (previous year: 34%) are held by private investors, Rheinmetall AG itself and investors who were not identified during the survey. The 50 largest institutional investors hold around 60% of shares (previous year: 57%).

Shareholder structure as at December 31, 2016 %



	2016	2015
Institutional investors	70	66
Europe	45	37
North America	24	29
Rest of world	1	0
Private Shareholders	17	17
Rheinmetall Treasury Stocks	2	2
Other	6	8
Not identified	5	7

Treasury stock

The Annual General Meeting on May 6, 2014 authorized the Executive Board to acquire treasury shares. This authorizes the Executive Board to acquire treasury bearer shares equivalent to a maximum of 10% of the current share capital of €101,373,440 up until May 5, 2019. Once again, Rheinmetall AG did not exercise this right in fiscal 2016.

The proportion of own shares held as treasury stock was 870,182 shares or 2.0% on the balance sheet date for 2016 (previous year: 1,035,785 shares or 3.1%). Of the treasury stock, 90,633 shares (previous year: 94,245 shares) entered the employee share purchase program and 74,364 shares (previous year: 95,481 shares) were used for the long-term incentive program in the year under review.

Purchase and deployment of treasury stock

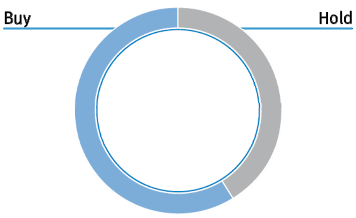
	2016	2015	2014	2013	2012
Acquisition of shares	0	0	0	0	800,319
Used for employee share purchase program	90,633	94,245	175,385	142,857	106,798
Used for long-term incentive program	74,364	95,481	123,337	214,557	162,716
Portfolio on December 31	870,788	1,035,785	1,225,511	1,524,233	1,881,647
Share of treasury stocks in Rheinmetall shares	0	0	0	0	0

Broad 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.

17 equity research analysts (previous year: 20) published their analyses of current development at the Rheinmetall Group and their assessments and recommendations regarding its shares at regular intervals in fiscal 2016, which may also lead to the development of new investor groups. As at December 31, 2016, ten analysts gave Rheinmetall shares a "buy" rating, while a further seven recommended holding the shares. None of the analysts issued a "sell" rating.

Investment recommendations for Rheinmetall shares as at December 31, 2016



Rating	Institution	Headquarters
Buy	Alpha-Value	London
	Bankhaus Lampe	Düsseldorf
	Berenberg Bank	London
	DZ Bank	Frankfurt am Main
	Independent Research	Frankfurt am Main
	Kepler Cheuvreux	Frankfurt am Main
	LBBW	Stuttgart
	Metzler Research	Frankfurt am Main
	Quirin Bank	Frankfurt am Main
	S&P Capital IQ	London
Hold	Citigroup	London
	Commerzbank	Frankfurt am Main
	Deutsche Bank	Frankfurt am Main
	HSBC	Düsseldorf
	Oddo Seydler	Frankfurt am Main
	UBS	Frankfurt am Main
	Warburg	Hamburg

Since October 2016, our investor relations website has provided 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 Vara Research, an established independent service provider that is well known in the industry, to form a consensus that is updated at regular intervals.

Letter to shareholders
Rheinmetall on the capital markets

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 of the German Securities Trading Act (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 at December 31, 2016

Shareholders	Reporting threshold	Total voting rights in %	Publication by Rheinmetall
Dimensional, Austin, TX, USA	3 %	3.01 %	22.08.2014
Prudential, London, GB	3 %	3.01 %	11.04.2016
BlackRock, Inc., Wilmington, DE, USA	3 %	3.71 %	08.12.2016

Regular dialog with the capital market

Providing up-to-date information and ensuring continuity and transparency when preparing reports, as well as credibility and reliability, form the basis for our direct dialog and trusting relationships with institutional investors, private shareholders, potential investors and analysts. The aim of our investor relations work is to provide 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 management and the investor relations team stay in close contact with participants in the capital market. We held around 175 meetings with investors and analysts during the period under review. A large proportion of these took place at a total of nine investor/analyst conferences and roadshows. We targeted major financial centers in Europe, including Frankfurt am Main, London and several North American financial centers. 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.

Other important dates in the investor relations calendar included telephone conferences on the quarterly reports and the accounts press conference and analyst conference on March 17, 2016, at which the results for the 2015 fiscal year were presented. The Annual General Meeting is 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.

An important event of 2016 was the Capital Markets Day held at the Group's headquarters in Düsseldorf on December 9, 2016. The Executive Board and representatives from the management of both sectors gave the large number of analysts and investors who had traveled to the event a comprehensive overview of market developments and trends, the operating business, strategies and prospects. The participants made full use of the opportunity to hold in-depth discussions with the Executive Board.

Up-to-date information concerning Rheinmetall shares can be found on our website at www.rheinmetall.com in the Investor Relations section. Annual and interim reports, analysts' current estimates and presentations for roadshows, conferences and capital markets days are published here, among other things.

Money and capital market financing

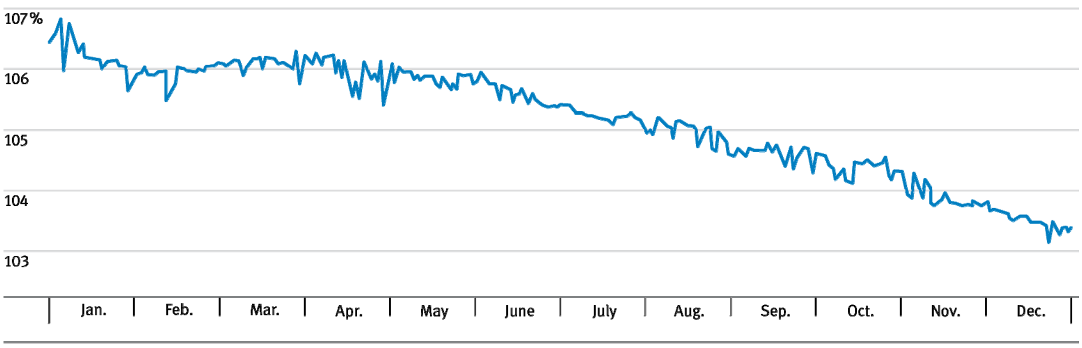
Rheinmetall did not conclude any debt transactions on the capital market in fiscal 2016. The bond with a nominal volume of €500 million issued in 2010 thus remains the only external financing arranged via the capital market within the broadly diversified financing portfolio.

The Rheinmetall bond is authorized for trading on various German and international stock exchanges with the ISIN XS0542369219 and will mature in September 2017. It contains a two-stage step-up coupon relating to Rheinmetall's credit rating: The nominal interest rate is 4% with an investment grade issuer rating from a recognized rating agency such as Standard & Poor's, Moody's or Fitch; below this level it is 5.25%. As Rheinmetall has had a non-investment grade rating of Ba1 (Moody's) since 2014, the coupon currently stands at 5.25% and will therefore remain at that amount until maturity.

ISIN	Coupon	Maturing	Volume	Issue price	Price 12/31/2016	Price 12/31/2015
XS0542369219	5.25 %	2017	500 MioEUR	99.122 %	103.4 %	106.7 %
until 9/21/2014	4.00 %					

The price of the bond fell over the course of 2016 from 106.7% at the beginning of the year to 103.4%. The yield dropped from 1.4% to 0.5% in the same period. The linear price decrease is attributable to the short remaining term of less than a year, during which the premium will gradually decline to the nominal value of 100%. As the money market interest rates for the term to maturity will move by 0%, they only have a marginal influence on the price.

Price development of the Rheinmetall bond in 2016 %



Rheinmetall has been present on the money market since 2002 through its €500 million commercial paper program and made use of this market again in 2016, particularly in the second and third quarters to cover peaks in working capital financing requirements. As Rheinmetall's issuer rating is below investment grade, from an investor's point of view its commercial papers represented one of the few investment opportunities in the present low-interest environment that could generate yields of over 0% for short-term investments. Thanks to this particularly attractive characteristic of Rheinmetall commercial papers, Rheinmetall was able to finance its ongoing working capital requirements at any time by issuing commercial papers and thus to benefit from continuing considerably lower interest rates as it had in the previous year.

SUMMARIZED **MANAGEMENT REPORT**

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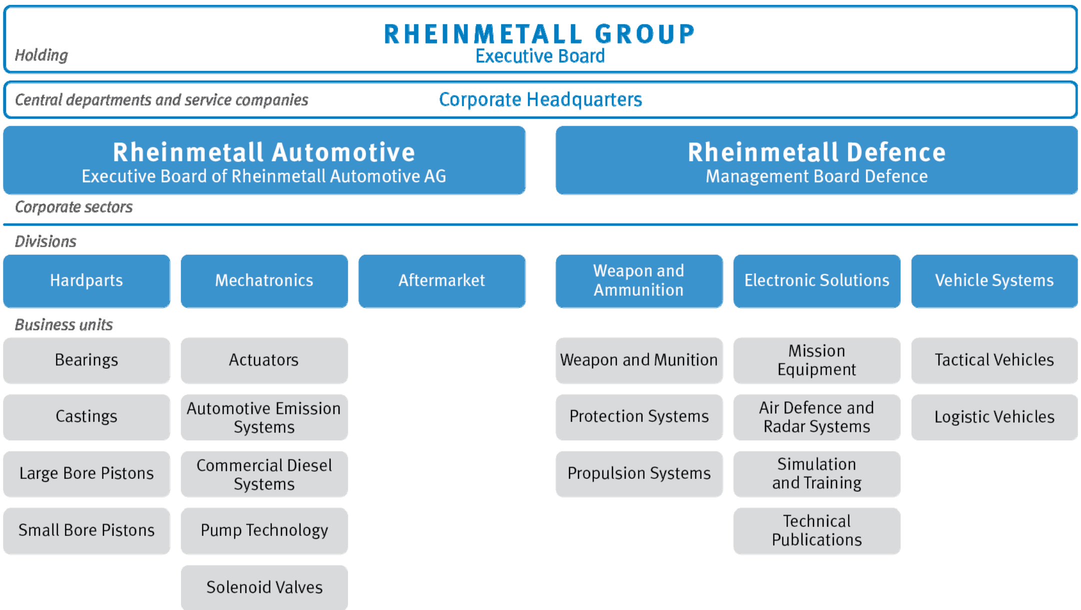
Basic information on the Rheinmetall Group
Corporate structure

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 Company bylaws were last amended on 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 at January 1, 2017

Rheinmetall AG holds direct or indirect stakes in 177 companies in Germany and abroad (previous year: 168) that belong to the Rheinmetall Group. A total of 143 companies (previous year: 136) are fully consolidated in the consolidated financial statements. 33 companies are carried at equity (previous year: 31). As in the previous year, one joint operation was included in the consolidated financial statements of Rheinmetall AG on a pro rata basis. The scope of consolidation is shown in the Notes to the consolidated financial statements on pages 175 to 179.

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 mobility and security are consistently aligned towards the three largest economic regions of Europe, the USA and Asia. In the year under review we concluded sales with customers in 138 countries. We are represented at 38 locations in Germany, a further 38 in Europe (excluding Germany), 13 on the American continent, 15 in Asia, six in Africa and three in Australia.

The business activities of the companies in the Rheinmetall Group have a strong international focus. The proportion of sales achieved abroad in fiscal 2000 was still approximately 60%, whereas it now stands at around 76% in 2016. We now employ 11,584 staff abroad (previous year: 11,317 employees), which represents 49.9% of our total workforce (previous year: 50.0%). This figure still stood at only 38% in 2002.

Basic information on the Rheinmetall Group
Corporate management and control

Corporate management and control

The Executive Board of Rheinmetall Aktiengesellschaft, which comprised three members in the year under review and has been composed of four members since January 1, 2017, is the governing body of the Rheinmetall Group. It 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. The division heads report to the members of the sectors' executive boards on current business performance in regular review and strategy meetings and discuss strategies, targets and operating and economic measures 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 16 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 on pages 103 et seq.

At the Rheinmetall Group, the Automotive and Defence sectors are controlled and the economic success of the operational entities is assessed by means of the key figures 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 of values as at the December 31 balance sheet date 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 parameter.

Central management indicators

		2016	**2015**
Sales	€ million	5,602	5,183
Operating result	€ million	353	287
EBIT	€ million	353	287
EBT	€ million	299	221
Return on capital employed (ROCE)	in %	12.3	10.6

In addition, the volume of capital expenditure, research and development expenditure and the headcount represent further indicators that are relevant to management.

Basic information on the Rheinmetall Group
Business model

Rheinmetall Group

Rheinmetall is an international group for leading technologies in the mobility and security sectors. 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 plain 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	Cutting emissions 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

The global market for vehicles in the class up to 6.0 t has been characterized by steady growth over the last five years. In all likelihood, the megatrend towards the expansion of individual mobility is set to continue. The positive development of the automotive industry is therefore expected to continue in the future.

Rheinmetall Automotive's business performance is largely dependent on the development of our 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 primarily involve B2B transactions. We have only a relatively low number of internationally operating automotive manufacturers as potential customers. Our customer structure is nevertheless diversified. 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 global production.

Our presence in China, now the world's largest market for passenger cars, consists of a regional holding company as well as joint ventures with a major Chinese partner and wholly owned subsidiaries. B2B business also dominates 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 diesel engine has fallen into disrepute, not least due to the discovery that individual automotive manufacturers manipulated exhaust gas data. The crux of the matter is that although diesel engines consume less fuel and are more CO_2-efficient than gasoline engines, they also produce fine particulate matter and in particular nitrous gases during the combustion process. While particulates can for the most part be eliminated inexpensively using particle filters, nitrous gases remain a problem. Technologies for cleaner diesel engines are available: Modern Euro 6 diesel engines pass every pollutant test – the technology required is not cheap, however. At present, around every second automobile that is newly licensed in Germany and Western Europe is a vehicle with a diesel engine. It is currently not possible to predict whether this will continue to be the case in the future.

The automotive industry is faced with far-reaching changes, including alternative drive system concepts as well as 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. However, 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. According to data from the German Federal Motor Transport Authority (KBA), out of a total of approximately 45 million passenger cars in the Federal Republic of Germany in January 2016, 25,502 vehicles were equipped with an electric drive and 130,365 vehicles with a hybrid drive. Although almost all the manufacturers have announced further electric vehicle models, the proportion of electric vehicles is set to increase only slowly. The combustion engine will remain the main drive system for the transportation of passengers and goods for the foreseeable future.

In the "5th Global Top Automotive Suppliers 2015" study produced by Berylls Strategy Advisors in April 2016, Rheinmetall Automotive was ranked 89th based on sales during fiscal 2015, after coming 84th in the 2015 study based on sales in 2014.

Regulatory environment of Rheinmetall Automotive

Mobility is still inevitably associated with emissions of substances that are harmful to the environment and to health due to the use of combustion engines. For this reason, many countries introduced policies defining limits on emissions of pollutants and greenhouse gases both from passenger vehicles and light and heavy commercial vehicles with the aim of reducing the negative impact on air quality. The focus here was on emissions of hydrocarbons (HC), nitrous gases (NO_X), carbon monoxide (CO) and dioxide (CO_2) and particulates (PM) caused by road traffic.

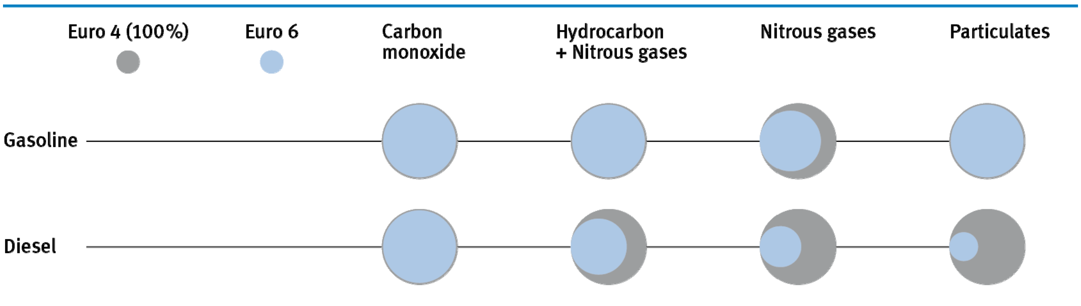
In the European Union, the limits on emissions of pollutants have gradually become stricter since the introduction of the Euro 1 standard in 1992. The level of permissible emissions for gasoline engines was largely prescribed through the introduction of Euro 4 in 2006. No material reductions were associated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

Basic information on the Rheinmetall Group
Business model

This is not the case 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 are to 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 (UBA) (August 2016)

The Euro standards are being adapted by many countries worldwide and introduced simultaneously or with a time delay. Some countries, primarily the USA 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 (CO_2), an upper limit of average emissions of 130 g CO_2 per kilometer currently applies to all new cars in Europe, which corresponds to consumption of around 5.6 liters of gasoline per 100 kilometers or 4.9 liters of diesel per 100 kilometers. In the medium term, the European Commission has adopted a target of 95 g CO_2/km by 2021 (consumption of 4.1 liters of gasoline per 100 kilometers or 3.6 liters of diesel per 100 kilometers).

The maximum limit for light commercial vehicles in Europe has been set at 175 g CO_2/km or 6.6 liters of diesel per 100 kilometers by 2017. This limit will be reduced by 16% to 147 g CO_2/km by 2020, with a fuel consumption of around 5.6 liters of diesel per 100 kilometers.

Non-compliance with the CO_2 fleet figures will be expensive 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 from the International Council on Clean Transportation (ICCT), average CO_2 emissions of passenger cars sold in the EU in 2015 amounted to around 120 g CO_2/km, thus lying approximately 8% below the limit for 2015. None of the manufacturers had to pay a fine.

In international terms, in the past the EU has assumed a pioneering role with respect to the limits on CO_2 emissions. Some large countries have now adopted limits equivalent to the EU target of 95 g CO_2/km. This includes the USA and Canada, each with 97 g CO_2/km from 2025, as well as South Korea, also with 97 g CO_2/km but from as soon as 2020. China has set itself the target of 93 g CO_2/km by 2025, which is even slightly lower than the EU limit.

At present, it is compulsory to determine the values for fuel consumption and emissions of pollutants and CO_2 required for type approval in Europe in accordance with the New European Driving Cycle (NEDC). This laboratory test was introduced in 1996 and is now regarded as outdated, in view of the technical progress that has been made in vehicle construction. As of 2017, a modernized test procedure will be introduced in the form of the mandatory Standard Worldwide Harmonised Light Vehicles Test Procedure (WLTP). The switch will lead to an increase in the figures reported for consumption and the emissions measured. The EU is therefore planning to convert the NEDC-based maximum limit of 95 g CO_2/km for 2020 to the new conditions in accordance with the WLTP standard.

As the new WLTP standard is also a laboratory test, the measurements taken will not necessarily correspond to actual conditions on the road. As of September 2017, therefore, a supplementary "real driving emissions test" will become 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 NEDC laboratory value until 2019 and 1.5 times higher thereafter.

Operating activities of Rheinmetall Defence

The Defence sector of the Rheinmetall Group is among the defense 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.

Rheinmetall Defence stands for many years of experience and innovation in armored vehicles, weapons and ammunition and in the areas of air defense and electronics – including for the requirements of the navy and air force and for internal security. Whether it is for requirements specific to different branches of the armed forces or overall requirements, whether it is 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 defense, 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	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
	Vehicle Systems	Armored tracked vehicles NBC protection systems Turret systems Wheeled logistics vehicles Wheeled tactical vehicles

Markets of Rheinmetall Defence

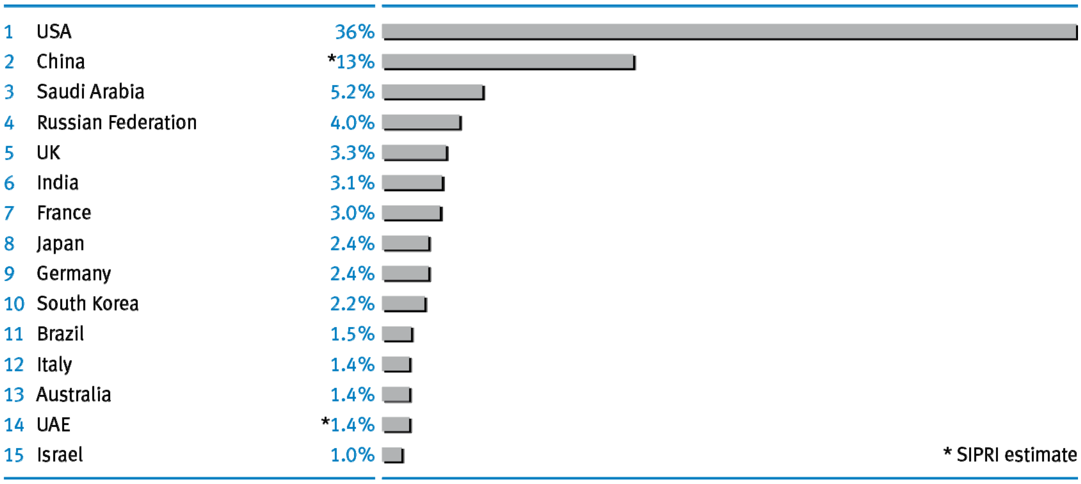
The world of the 21st century occasionally still faces very tense security situations as well as complex and sometimes new threats. Blurred boundaries between peace and war, latent trouble spots, the outbreak of unresolved conflicts and their unintentional or intentional military escalation, competing notions of regional order, military interventions, conflicts played out in new forms due to technical developments, the spread of terrorism, shifts of power between major regional players, migration flows on an unprecedented scale, new possibilities to influence opponents' domestic politics due to digitalization, organized crime as a transnational threat 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 defense 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 defense budgets of customer nations. Rheinmetall Defence is still in an international growth market in the medium term, even though national defense budgets fluctuate to varying degrees, depending on the security situation.

The overall trend towards increased spending is due to complex existing and new geostrategic challenges in terms of security and defense policy, the continuing significant need for modernization in the armed forces of many emerging and developing countries, demand for new military applications 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.

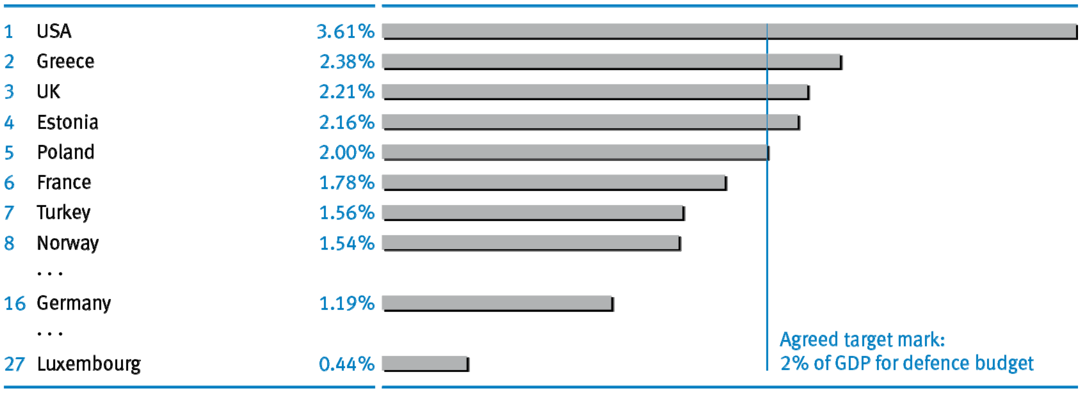
Share of the 15 countries with the highest defense spending in worldwide defense spending in 2015



Source: SIPRI World Military Expenditures, April 2016

At their summit in the Welsh town of Newport in September 2014, the NATO states agreed to invest more funds in their defense budgets once again. Within a decade, each NATO member state is to reach the target of at least 2% of gross domestic product. The aim is for around one fifth of defense spending to flow into major armaments and research projects.

Defense spending of selected NATO member states as a proportion of gross domestic product in 2016



Source: NATO, July 2016

This target could create additional opportunities for Rheinmetall Defence in the next few years, particularly with respect to procurement projects in the European market. The German defense budget will increase continuously and significantly over the next few years from €34.3 billion in 2016 to €39.2 billion in 2020, primarily in order to improve and/or 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 2016, we achieved around 45% of Defence sales with customers outside Europe, with a balanced mix of short-term and long-term systems activities. In the global rankings of the sector news service "Defense News" from July 2016, Rheinmetall Defence was ranked 27th in 2015 based on sales during the fiscal year, compared with 28th 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 Basic Law (Grundgesetz – GG), the War Weapons Control Act (Gesetz über die Kontrolle von Kriegswaffen – KrWaffKontrG) and the Foreign Trade and Payments Act (Außenwirtschaftsgesetz – AWG) in conjunction with the German Foreign Trade and Payments Regulation (Außenwirtschaftsverordnung – AWV).

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 defense 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 defense 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 Art. 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.

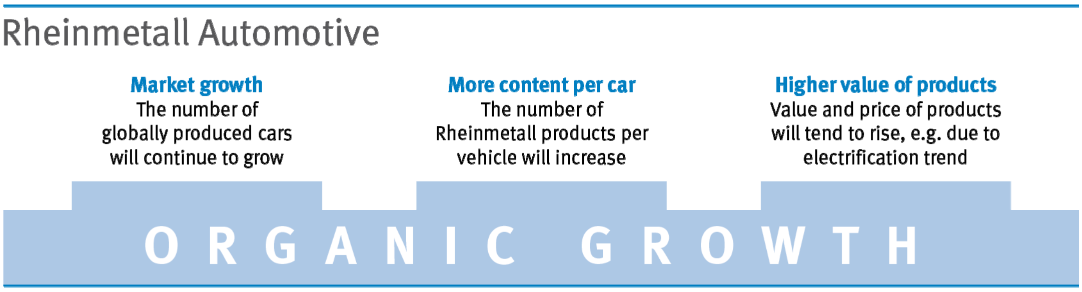
Decision of the German government on exports of military equipment – The German government makes decisions on exports of military equipment based on its “Political Principles for the Export of War Weapons and Other Military Equipment”. A key component of these principles is the “European Union’s Code 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

Strategic development geared towards profitable growth

We will continue to pursue Rheinmetall's strategic development as a strong international partner for mobility and security with a focus on profitable growth. The two corporate sectors, Automotive and Defence, have potential for organic growth. These growth opportunities result from expected positive developments in the respective markets, which – in relation to our 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.

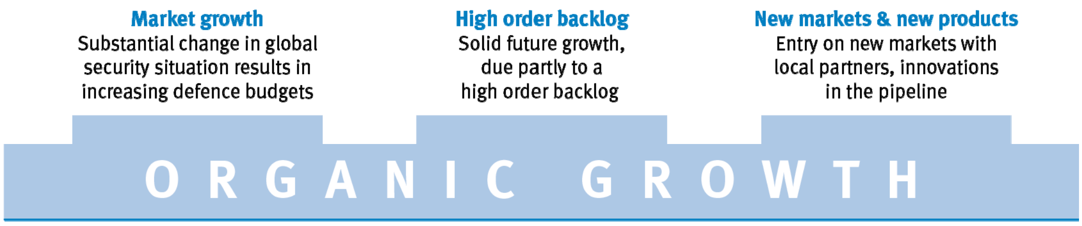
In the medium to long term we also intend to support our Company's growth with products that are not directly derived from the existing portfolio or that promote the transfer of technologies between our Automotive and Defence sectors. As a first step towards this aim we called upon our employees worldwide to enter an ideas contest ("Intrapreneur Award"), selected the best product ideas that resulted from this in a multi-stage process and backed these innovations with specific business plans. From 2017 onwards these activities, which may also be supplemented by investments in existing startup companies, will be continued under the umbrella of a Rheinmetall venture capital company. They currently encompass products and services in the fields of cyber security, 3D printing and sensor technology, for example. We monitor all the activities we support with venture capital very closely and provide mentors to our startup companies to assist them during the entire setup phase.



The **Automotive** sector's growth prospects are focused on global expansion of automotive production, and the sector is already present on all the world's major automotive markets – Europe, the USA, China and India. Analysts at IHS Automotive currently anticipate worldwide growth in the light vehicle segment (vehicles up to 6.0 t) of 0.9% to around 93.5 million vehicles in 2017. We wish to participate in the forecast expansion of automotive production and achieve growth at Rheinmetall Automotive that exceeds growth achieved by the market as a whole. Taking into account the joint ventures in China, around a third of sales at Rheinmetall Automotive currently come from outside Europe. We want to expand this share systematically, primarily by continuing our internationalization strategy 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 EBIT margin at around 8%, a figure we achieved or surpassed in fiscals 2015 and 2016. As well as market growth driven purely by the number of units, our Automotive sector will also benefit from mandatory regulations on fuel consumption (CO_2 reduction) and emissions of pollutants. These will cause the number, complexity and value of our products that are used per vehicle to increase, which will help automotive manufacturers to comply with legal requirements. We want to increase the proportion of the Automotive sector's total sales achieved with products that help to reduce emissions and fuel consumption around the drive train.

The trend towards hybridization, i.e. a combination of conventional and electric drives, can make an important contribution to this, as it paves the way for the integration of additional products from our portfolio such as electric pumps. In the medium term, the Automotive sector's research and development strategy is geared towards the minimization of risk with regard to dependence on certain types of drives (drive neutrality). That means that we will tailor our development activities, and consequently also our production capacity, to foreseeable demand for gasoline, diesel, hybrid and electric drives and will continue in future to make our product range less dependent on applications relating purely to engines and on classic automotive applications in general, as we have been doing for the last few years. Our target is to generate approximately half of our sales with products aimed at electrification of the drive train in classic combustion engines or alternative drive types by 2020.

Rheinmetall Defence



In the Defence sector, the international security situation, which is fraught with uncertainty, and the growing number of conflicts are leading to a turnaround in the development of defense budgets. Experts anticipate a rise in defense 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. There is new market potential for us, arising not least from the obligation on the part of the NATO member states, renewed again in 2016, to bring their defense spending up to the level of 2% of their respective gross domestic products and based on this to invest 20% of total spending in modernizing and expanding military equipment.

As part of the continuation of our internationalization strategy, we will focus on markets that we can responsibly supply and that promise sustainable growth according to industry data and our own assessment. These are countries in the MENA region and in Asia, Australia, and selected European countries that we have not yet supplied or have supplied only to a limited extent, such as those in Eastern Europe. We will also take advantage in future of opportunities arising from the formation of partnerships with local suppliers.

We expect annual sales growth of between 5% and 10% in our Defence sector in the medium term. This expectation for growth is based not least on a very high order backlog, which is more than double our current annual sales. This growth, together with the effects of measures implemented in the last few years to improve cost efficiency, are expected to lead to a gradual increase in profitability in the medium term. In the medium term we are aiming for an EBIT margin of 6% to 7% in Defence business, compared with 5% in the year under review.

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 the 2016 fiscal year, consolidated sales rose by €419 million year-on-year to €5.6 billion. Both the Automotive and Defence sectors posted rising sales and achieved improvements in operating earnings.

Rheinmetall Group – actual vs. forecast business performance in 2016

		2016	Forecast Q3/2016	Forecast Q2/2016	Forecast Q1/2016	Forecast 2016	2015
Sales	€ billion	5.6	5.6	~ 5.5	~ 5.5	~ 5.5	5.2
Operating result	%	6.3	~6	~6	~6	6	5.5

Following consolidated sales of €5.2 billion in fiscal 2015, in March 2016 we forecast that the Rheinmetall Group would achieve sales of approximately €5.5 billion in the year under review, with a contribution of €2.7 billion from Rheinmetall Automotive and €2.8 billion from the Defence sector. At that time, we planned to achieve an operating margin of around 6% for the Group, with a figure of 8% anticipated for Rheinmetall Automotive and a margin of between 4.5% and 5% for Rheinmetall Defence.

In view of our positive business performance in the first half of 2016, with sales adjusted for currency effects up 8.6% year-on-year at €2,599 million, in August 2016 we confirmed our forecast of consolidated sales of €5.5 billion for 2016. In the year under review we continued to anticipate sales for the Automotive and Defence sectors of €2.7 billion for Automotive and €2.8 billion for Defence. We confirmed our previous outlook for operating earnings of the Rheinmetall Group and the Automotive and Defence sectors in 2016.

Based on the highly positive sales performance in the Defence sector, we raised our forecast for the Rheinmetall Group's sales in 2016 to €5.6 billion in November 2016. Taking positive data on trends in global automotive production into account, we retained our previous forecast of annual sales of around €2.7 billion for Rheinmetall Automotive. Following the most recent estimate of sales of €2.8 billion at Rheinmetall Defence, we anticipated sales of around €2.9 billion for fiscal 2016 at that time. For the Automotive sector, we still expected profitability to grow steadily and thus to achieve the forecast margin of 8%. In the Defence sector we expected an operating margin of between 4.5% and 5% in view of the sales growth achieved in the first nine months of the fiscal year. Taking account of holding costs of approximately €20 million, this resulted in a margin expectation for the Rheinmetall Group of approximately 6%.

Operating segments – actual vs. forecast business performance in 2016

	Sales			Operating result		
	2016	Target 2016	2015	2016	Target 2016	2015
Automotive	€2.7 billion	€2.7 billion	€2.6 billion	8.4 %	8 %	8.3 %
Defence	€2.9 billion	€2.8 billion	€2.6 billion	5.0 %	4.5 - 5 %	3.5 %

Economic report
General economic conditions

Subdued economic momentum overall and new risks for the global economy

According to calculations by the International Monetary Fund (IMF), the global economy grew by 3.1% in 2016. The growth rate was therefore 0.1 percentage points lower than that of the previous year. Initial modest expansion of the global economy was compensated by slightly accelerated growth in the second half of 2016. Overall, in January 2017 the IMF described economic development in the year under review as “flat” in its “World Economic Outlook Update”, according to which economic growth in the mature economies lagged significantly behind the previous year’s growth of 2.1% at 1.6%. In the USA, in particular, the upturn lost momentum, with gross domestic product increasing by just 1.6% in 2016, compared to 2.6% in the previous year.

At 1.7%, growth in the euro region in 2016 was slightly lower than the previous year’s figure of 2.0%, although the economic recovery continues to progress. Although the British Brexit vote caused great uncertainty initially, by the end of the year the economy in the euro region had shown itself to be largely unaffected by the British decision to leave the European Union. Even in the United Kingdom itself, economic growth in 2016 remained approximately at the the previous year’s level (2.2%) with an increase of 2.0%. In Germany, economic growth rose again by a further 1.7% in the year under review following growth of 1.5% in 2015. The upturn was primarily attributable to driving forces within the domestic economy and on the whole remained unaffected by the numerous international crises. Inflationary pressure in Germany increased more sharply than expected in December 2016 owing chiefly to the increasing price of oil. At 1.7%, the inflation rate experienced an unexpectedly strong surge in December 2016, compared to 0.8% in both October and November. Nevertheless, the ifo business climate index, which is considered an early indicator of economic performance in Germany, sent out a positive signal at the end of the year. The ifo business climate index reached 111 points at the end of 2016, its highest level since July 2011.

Japan’s economy grew more strongly in 2016 than originally forecast by the IMF thanks to an upturn in exports. However, growth remained at a comparatively low level with an increase of 0.9% (previous year: 1.2%). According to the IMF’s assessment, the emerging and developing countries exhibited differing trends in 2016. In particular, the gross domestic product in China climbed more sharply than initially expected again thanks to an expansive economic policy. At 6.7%, Chinese economic growth more or less reached the previous year’s figure of 6.9% again. The Indian economy also continued its dynamic growth in 2016, although at 6.6% the increase was no longer as pronounced as the previous year’s figure of 7.6%. In contrast, some Latin American countries already affected by recessions, such as Argentina and Brazil, fell short of expectations. Thus there was still no anticipation of a turnaround in Brazil, where there was a contraction of 3.5% (previous year: -3.8%). On the other hand, the recession in Russia was at least mitigated by the rising oil price, with the result that the decline of -0.6% in Russian gross domestic product was significantly lower in 2016 than in the previous year (-3.7%).

Uncertainties resulting from Brexit and the US election

Uncertainty in the economy and on the financial markets was initially extremely high when voters in the United Kingdom unexpectedly voted for Britain to exit the European Union (“Brexit”) in a referendum on June 23, 2016. In October 2016, new British Prime Minister Theresa May announced that the withdrawal process would be set in motion by the end of March 2017. According to the British government’s plans, the withdrawal is to take place in March 2019 following a two-year negotiation period.

Economic report
General economic conditions

Although the economic effects of Brexit are for the most part categorized as negative, no notable economic effects were yet discernible in the euro zone or the United Kingdom in the year under review. According to IMF Chief Economist Maurice Obstfeld, the economic impact of the Brexit decision was still “very unclear”. The election of Donald Trump as the 45th president of the USA on November 8, 2016 also brought about a high degree of uncertainty. However, no direct economic effects were recorded in 2016 due to the foreseeable policy change here, either. During his election campaign, Donald Trump announced that he intended to boost the American economy through tax cuts and increased capital expenditure on infrastructure. On the other hand, however, he also announced protectionist measures that the IMF categorized as an economic risk.

A good year for the automotive industry despite differing market trends

The development of worldwide production of passenger cars and light commercial vehicles up to 6.0 t is of particular relevance to the business of Rheinmetall Automotive. This market segment remained on a growth course in 2016. According to calculations by analysts at IHS Automotive, production of vehicles up to 6.0 t rose by 4.4%. Around 92.7 million passenger cars and light commercial vehicles were produced worldwide. In the previous year it was 88.7 million, which equates to around four million fewer vehicles.

The three largest automotive markets of China, NAFTA and Western Europe developed positively, although growth differed significantly according to region. While production in China increased considerably by 13.1% compared to the previous year, the NAFTA region and Western Europe recorded slight increases of 2.0% and 4.1% respectively. The upward trend in the above markets was once again offset by falling production figures in Japan (-0.7%), Brazil (-9.4%) and Russia (-7.8%), although the declines were less pronounced than in the previous year. The automotive industry in all three countries was significantly affected by the tense overall economic situation. In Russia, the sanctions imposed as a result of the crisis in Ukraine also continued to have a negative impact.

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

Country	2016	2015	Change in %
World	92.68	88.74	4.4
Western Europe (incl. Germany)	16.15	15.52	4.1
Germany	5.97	5.94	0.5
Eastern Europa	5.34	5.42	-1.5
Russian Federation	1.19	1.29	-7.8
NAFTA	17.85	17.50	2.0
USA	11.99	11.84	1.3
Brazil	2.11	2.33	-9.4
Asia (incl. Japan)	49.34	46.07	7.1
Japan	8.72	8.78	-0.7
China	26.79	23.68	13.1
India	4.13	3.81	8.4

Source: IHS Automotive as at January 2017

As our customer portfolio is well balanced in terms of regions we are able to benefit consistently from growth opportunities while simultaneously avoiding dependence on individual markets. Our sales in the year under review were distributed as follows: 67% were attributable to Europe (Western and Eastern Europe, including Germany), 16% to the NAFTA region and 5% to China. The proportion of sales attributable to Brazil was 3% and India contributed 2%.

Mixed growth in the international truck markets

Besides production of passenger cars and light commercial vehicles up to 6.0 t, global production of engines for trucks over 6.0 t is a further important indicator of the business environment in which Rheinmetall Automotive operates. Production figures varied strongly according to region in 2016. While more engines for heavy commercial vehicles over 6.0 t were produced in Western Europe (+1.7%), Germany (+7.4%) and Asia (+15.9%), the NAFTA region was not able to reach the production figures of the previous year (-11.8%). The Brazilian market contracted again on account of the poor overall economic situation (-20.8%). According to IHS Automotive, a total of around 2.76 million engines for heavy commercial vehicles over 6.0 t were manufactured worldwide in the year under review.

Production of engines for heavy commercial vehicles over 6.0 t in selected countries Thousands of units

Land	2016	2015	Change in %
World	2,757	2,680	2.9
Western Europe (incl. Germany)	485	477	1.7
Germany	159	148	7.4
NAFTA	456	517	-11.8
USA	301	321	-6.2
Brazil	57	72	-20.8
Asia (incl. Japan)	511	441	15.9
Japan	293	303	-3.3
China	830	740	12.2
India	374	305	22.6

Source: IHS Automotive as at January 2017

Components for combustion engines and electrified drive systems

While at present the focus is on further developing combustion engines in the direction of less consumption and fewer emissions, an increasing trend towards electric and hybrid drive systems is also emerging. The associated changes are not only presenting major technological challenges but also transforming processes between manufacturers and suppliers that have been well established for decades. Rheinmetall Automotive has competence in engines with both current and future drive types as well as a broad product portfolio. We also have a strong presence in the growth markets of China, NAFTA and Western Europe.

The major orders awarded to us in 2016 by well-known automotive manufacturers for innovative components for the reduction of consumption and exhaust gases in combustion engines and the creation of production capacity for electric vehicle components are clear examples of this.

In China we received major orders for modern control and exhaust gas technology from Pierburg in 2016. In the next few years we will supply electric throttle and control valves, differential pressure valves, electric water circulation pumps, mechanical switchable water pumps and high and low-pressure exhaust gas recirculation valves for gasoline and diesel engines to a Chinese manufacturer. The components will be manufactured in the Chinese Pierburg sites in Shanghai and Kunshan as well as in European Pierburg plants in Hartha (Germany), Abadiano (Spain) and Ústí (Czech Republic). The orders acquired have a total volume of €375 million.

Economic report
General economic conditions

There is increased global demand for steel pistons for passenger cars, as the high strength of the material makes more compact construction methods possible, thus providing assembly space and weight benefits – a major advantage in modern engine manufacturing. Steel pistons reduce fuel consumption and CO_2 emissions by 3% to 5%. The major order from a premium manufacturer for the production of steel pistons for passenger cars and piston pins and rings underlines our leading market position as a single-source provider of piston systems. We will manufacture the piston modules, with a total value of €118 million, in the Czech Republic and install them in our customer's four and six-cylinder diesel engines.

KS HUAYU AluTech, a joint venture of Rheinmetall Automotive and HUAYU Automotive Systems, which belongs to the Chinese SAIC Group, is expanding its production capacity at the Neckarsulm site. The reason behind this is the constant growth in new business for aluminum die castings. In this area, KS HUAYU consistently focuses on components for new drive types as well as for outside the drive train without neglecting its traditional business in engine blocks. The decision to invest in the expansion was made at the end of 2016. It includes the new construction of an additional foundry as well as the repurposing of several existing halls. The construction project is to be concluded in summer 2018.

Turnaround towards increased defense spending worldwide

In 2016, geopolitical upheaval and changing threat scenarios put further pressure on many armed forces to modernize. Following a period in which budgets tended to decline or stagnate, in the year under review the trend turned towards a slight increase in defense spending.

According to calculations by defense analysts at IHS Jane's, defense budgets worldwide came to a total volume of USD 1,581 billion, compared with USD 1,565 billion in the previous year. Different regional trends in spending were once again observed, however, partly due to different modernization requirements and to the security policy challenges faced by armed forces and were partly the result of the respective national budget restrictions and cost-cutting measures. At their Warsaw summit in July 2016, the NATO states again affirmed their intention to adjust defense spending in each member state to 2% of the respective countries' gross domestic product by 2025. Germany's figure recently amounted to around 1.2%.

In the USA, the country with the world's largest armaments budget, defense spending rose to USD 637 billion in 2016 from USD 628 billion in the previous year. The USA thus continues to spend over three times as much on armaments as China, although the Chinese defense budget also grew slightly recently. The defense budgets of Russia, India, Saudi Arabia and Britain assumed the subsequent positions in 2016.

Defense budgets of selected countries

Country	Currency	2016	2015	Change in %
Germany	€ billion	34.29	32.97	4.0
World	USD billion	1,580.62	1,564.57	1.0
USA	USD billion	636.68	627.88	1.4
Russian Federation	USD billion	55.75	57.74	-3.4
India	USD billion	51.88	47.32	9.6

Sources: Federal Ministry of Defense – "Detailed plan 14/2016 compared with budget for 2015"; IHS Jane's, as at January 2017

Defense budgets of selected countries

Country	Currency	2016	2015	Change in %
Saudi Arabia	USD billion	49.95	53.24	-6.2
Great Britain	USD billion	47.96	47.69	0.6
France	USD billion	43.84	43.71	0.3
Australia	USD billion	27.56	28.01	-1.6
UAE (United Arab Emirates)	USD billion	18.66	18.16	2.8
Algeria	USD billion	10.47	9.85	6.3
Netherlands	USD billion	8.75	8.43	3.8
Poland	USD billion	8.60	9.24	-6.9
Indonesia	USD billion	7.46	7.76	-3.9
South Africa	USD billion	3.78	3.85	-1.8

Sources: IHS Jane's as at January 2017

In 2016, the NATO member states spent more money on armaments again for the second year in succession following many years of declining defense spending. IHS Jane's recorded the largest growth rates in the Baltic States, which increased their investments in modernizing their armed forces in light of the Ukraine crisis and due to the perceived threat from their Russian neighbor, raising military spending from USD 1.1 billion in 2015 to USD 1.4 billion in the year under review. This represents a rise of around 27%.

Germany's defense budget for 2016 was around €34.3 billion, showing a slight upward tendency compared to the previous year's figure of €33 billion. In view of the backlog that had built up over earlier years with regard to capital expenditure on modernizing equipment and armaments, a particularly positive factor was the increase of around €400 million or 8% in Germany's capital expenditure to €5.4 billion in 2016.

Opportunities exploited in relation to armed forces' increased need for modernization

Taking into account general conditions in terms of foreign policy and security policy as set out by the German government, Rheinmetall Defence made targeted use of market opportunities arising from changes in the overall geopolitical conditions and the ongoing need for significant modernization in many armed forces in 2016. With our expertise as a systems supplier for armored vehicles, weapon systems and ammunition as well as air defense and defense electronics, we were able to benefit from numerous modernization plans within NATO and friendly nations.

In 2016 we received a major order from a customer outside Germany to modernize Skyguard air defense systems. The contract volume amounts to €390 million. Furthermore, we won a bid in the mid-double-digit millions of euros range for maintaining the value of air defense systems for the Swiss armed forces. Rheinmetall is also supplying four air defense systems to Thailand. We attach particular strategic importance to this order as the Royal Thai Army is a new customer in Asia.

Economic report
General economic conditions

The changed threat level in the Baltic States combined with increasing arms spending is also reflected in Rheinmetall's order situation. Rheinmetall and Krauss-Maffei Wegmann will thus supply 88 armored transport vehicles of the Boxer type to the Lithuanian armed forces. The total volume of this export order amounts to around €390 million.

In 2016, we also demonstrated our future viability in the area of vehicle systems when we presented the new Lynx infantry fighting vehicle at Eurosatory 2016. This highly armored and agile tracked vehicle provides superiority on the battlefield and is suitable for all types of operation – from peace-keeping missions to high-intensity battles. With the new Lynx family, Rheinmetall is once again underlining its claim to leadership among high-technology companies for security and mobility.

We further consolidated our strategic position in the USA in 2016, founding a joint venture with US family company Day & Zimmermann (D&Z). The company bundles the expertise of Rheinmetall and D&Z and will design, develop and manufacture the latest generation of ammunition for the US market as a general contractor or subcontractor.

Development of the metal and energy markets in 2016

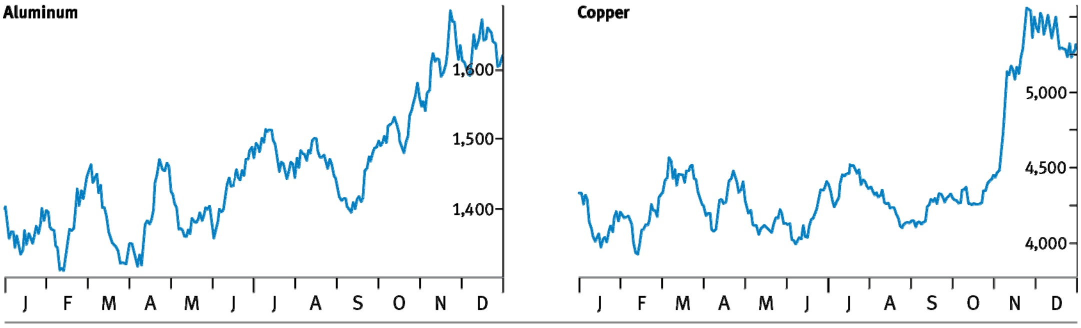
Commodity prices did not follow the previous year's downward trend in 2016. For the first time since 2011, the index of listed industrial metals on the London Metal Exchange (LMEX) posted an increase of 21% in value.

Metal prices were boosted by considerable increases on the stock markets – the Dow Jones Industrial Average posted a record high – that reflected the market participants' greater readiness to take risks. Metal prices were evidently also driven upward in expectation of higher demand, as during the US election campaign Donald Trump announced that he would not only lower taxes but also invest heavily in the country's infrastructure. For example, he explicitly mentioned building roads and overhauling airports and bridges. The USA is the world's second largest consumer of metals after China with market shares of between 6% and 15%. In addition to the USA, market participants also mainly focused on China in the year under review. The government and central bank introduced fiscal and monetary policies there with the aim of achieving growth targets. Noteworthy on an infrastructure level are, for example, large investments in the electricity grid (over USD 300 billion by 2020) and expansion of the rail network (over USD 400 billion by 2020), which brought about a rise in demand for metals.

Although demand for many industrial metals is declining, in absolute terms China needs significantly larger volumes than previously.

Speculative financial investors also contributed to the high degree of volatility in relation to metal prices. Substantial shifts in position led to considerable price fluctuations.

Aluminum and copper prices 2016 €/t



Source: Thomson Reuters Eikon

Energy prices also experienced rises in 2016. However, the largest increase was in the price of crude oil.

Following two consecutive years in which the price for a barrel of Brent crude oil fell very dramatically, a notable rise of around 45% was recorded in 2016. For the first time in eight years, OPEC agreed to a cut in production that is to begin in January 2017 and run for six months. This agreement between OPEC and non-OPEC countries was confirmed again in mid-December 2016.

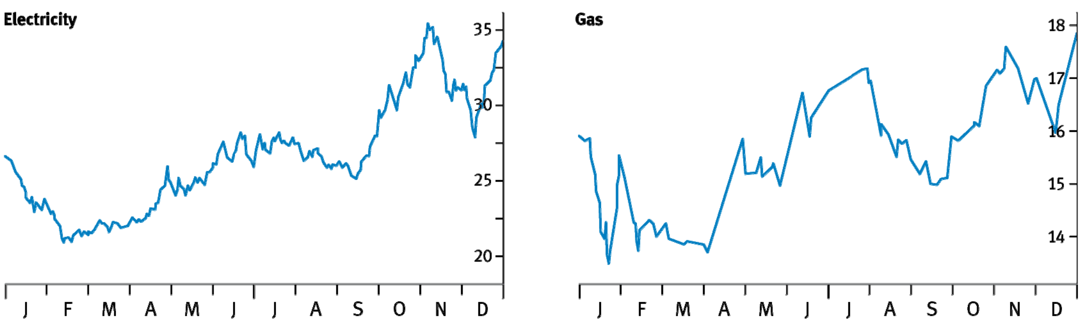
Electricity and gas prices rose slightly on both the spot market and the futures market in the year under review, having declined in 2014 and 2015. This was largely attributable to increased primary energy prices (crude oil, gas and coal).

Forward prices for base-load electricity for supply in 2017 climbed by 29% over the course of 2016. The EEX price for supplies of natural gas in 2017 stood at €17.85 per MWh at the end of the year, which was 13% 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 we could not make full use of the decline in EEX prices in 2016 for our own procurement activities.

The EEG levy aimed at promoting renewable energies rose slightly from 6.17 cents per kWh in 2015 to 6.35 cents per kWh in the year under review, having amounted to 2.05 cents per kWh back in 2010.

Electricity and gas prices 2016 €/MWh



Source: www.eex.com

KEY FACTS 2016
RHEINMETALL GROUP

5,602 **Sales** € million

Operating Result € million **353**

23,044 **Employees**

Capital Expenditure € million **258**

7.1 **Order Backlog** € billion

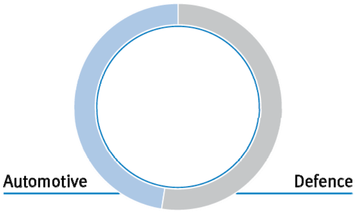
4.6% **R&D Intensity**

Economic report
Rheinmetall Group business performance

Consolidated sales up 8% at €5,602 million

Rheinmetall AG achieved consolidated sales of €5,602 million for fiscal 2016. Sales were thus up 8% compared with the previous year's figure of €5,183 million; with adjustments for currency effects, growth totaled 9%.

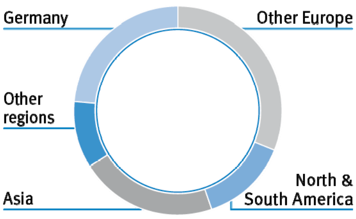
Sales € million



	2016	2015
Rheinmetall Group	5,602	5,183
Automotive	2,656	2,592
Defence	2,946	2,591

Both sectors contributed to the growth in sales at the Group. The Defence sector achieved sales of €2,946 million in the past fiscal year, an increase of 14% on the previous year's figure. The Automotive sector increased its sales by 2.5% to €2,656 million. At 76%, the international share of consolidated sales in fiscal 2016 was higher than in the previous year (74%). In particular, sales in Australia rose significantly and the other regions increased their share from 7% to 13%, while the proportion of sales achieved in Europe (including Germany) fell from 61% to 55%.

Sales by region € million



	2016	2015
Rheinmetall Group	5,602	5,183
Germany	1,315	1,361
Other Europe	1,748	1,806
North & South America	766	698
Asia	1,196	1,084
Other regions	577	234

Operating result for the Group at €287 million

The operating result (EBIT before special items) climbed to €353 million in the 2016 fiscal year, compared to €287 million in the previous year. The operating margin rose to 6.3% (previous year: 5.5%). The Defence sector achieved an operating result of €147 million, well above the previous year's figure of €90 million. The Automotive sector also increased its result by 3% to €223 million (previous year: €216 million). The operating result for Others/Consolidation includes the result for Rheinmetall AG.

Operating result € million

	2016	2015
Rheinmetall Group	**353**	**287**
Automotive	223	216
Defence	147	90
Others/consolidation	-17	-19

Economic report
Rheinmetall Group business performance

Once again, no non-recurring effects were recognized in fiscal 2016. EBIT thus corresponded to the operating result in both the year under review and the previous year.

Net interest was negative at €-54 million, below the previous year's figure (€-66 million). The Rheinmetall Group's earnings before taxes (EBT) were €299 million, compared with €221 million in the previous year.

Earnings after taxes increased from €160 million in 2015 to €215 million in the year under review. Following inclusion of earnings attributable to minority interests, this brings earnings per share to €4.69 (previous year: €3.88).

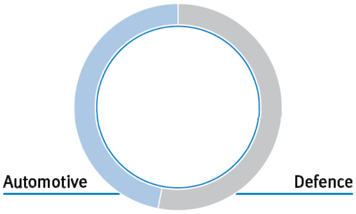
Group net income € million

	2016	2015
EBIT	**353**	**287**
Net interest	(54)	(66)
EBT	**299**	**221**
Income taxes	(84)	(61)
Group net income	**215**	**160**
of which:		
Minority interests	15	9
Rheinmetall AG shareholders	200	151
Earnings per share from continuing operations (€)	**4.69**	**3.88**

Order intake once again above sales

At €5,720 million (previous year: €5,314 million), the order intake for fiscal 2016 was once again above sales. The order intake in the Defence sector came to €3,050 million, significantly exceeding the previous year's figure of €2,693 million. The order intake of the Automotive sector rose from €2,621 million in 2015 to €2,670 million in the year under review.

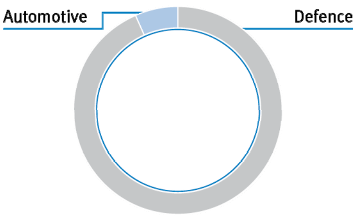
Order intake € million



	2016	2015
Rheinmetall Group	5,720	5,314
Automotive	2,670	2,621
Defence	3,050	2,693

At €7,114 million, the Rheinmetall Group has an order backlog that is at roughly the same level as in the previous year (€6,867 million).

Order backlog € million



	2016	2015
Rheinmetall Group	7,114	6,867
Automotive	458	445
Defence	6,656	6,422

Cash flow statement

In line with higher earnings after taxes, cash flow improved to €425 million in the 2016 reporting year (previous year: €366 million). Cash flow from operating activities was €444 million, up €105 million on the previous year's figure of €339 million.

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 €161 million (previous year: €29 million). After accounting for cash receipts from the disposal of fixed assets and divestments and payments for acquisitions, the free cash flow came to €8 million (previous year: €-14 million), which was up €22 million year-on-year.

Cash flow statement € million

	2016	2015
Gross cash flow	**429**	**366**
Changes in working capital and other	15	(27)
Net cash provided by operating activities	**444**	**339**
Investments in intangible assets and property, plant and equipment	(283)	(310)
Operating free cash flow	**161**	**29**
Cash receipts from the disposal of intangible assets, property, plant and equipment and investment property	1	9
Net cash outflow from financial investments in/divestments of consolidated subsidiaries and other financial assets	(14)	(2)
Payments for the purchase of short-term commercial papers	(140)	(50)
Free cash flow	**8**	**(14)**

Asset and capital structure

In fiscal 2016, the Rheinmetall Group's total assets rose by €394 million or 7% to €6,124 million. As at December 31, 2016, non-current assets represented 45% of total assets, compared with 46% in the previous year. They increased by €114 million to €2,762 million. This increase was mainly due to a rise of €64 million in property, plant and equipment. Current assets increased by €280 million overall year-on-year to €3,362 million. €140 million of this increase was attributable to liquid financial assets and €179 million to trade receivables.

Economic report
Rheinmetall Group business performance

Asset and capital structure € million

	Dec. 31, 2016	%	Dec. 31, 2015	%
Non-current assets	2,762	45	2,648	46
Current assets	3,362	55	3,082	54
Total assets	**6,124**	**100**	**5,730**	**100**
Equity	1,781	29	1,562	27
Non-current liabilities	1,629	27	2,123	37
Current liabilities	2,714	44	2,045	36
Total equity and liabilities	**6,124**	**100**	**5,730**	**100**

The equity ratio is 29%, following 27% in the previous year. In fiscal 2016, the equity of the Rheinmetall Group rose by €219 million, or 14%, to €1,781 million. This increase mainly resulted from earnings after taxes (€215 million). The €498 million decline in non-current liabilities to €1,625 million resulted from the reclassification of the bond to current liabilities. These increased – due, among other things, to a rise in current provisions and trade payables – by €673 million to €2,718 million.

In terms of the total assets adjusted for cash and cash equivalents, the equity ratio was 32%, compared with 31% in the previous year. Financial debts decreased by €35 million or 4% year-on-year, to €787 million. As at the balance sheet date, cash and cash equivalents totaled €616 million, following €691 million on the balance sheet date of the previous year. An additional €190 million was held in commercial paper as liquidity reserves (previous year: €50 million). Net financial debts for 2016 totaled €-19 million, following €81 million in the previous year. The proportion of net financial debts in relation to adjusted total assets was 0% in the fiscal year, compared to 2% in the previous year.

Capital structure € million

	Dec. 31, 2016	%	Dec. 31, 2015	%
Equity	**1,781**	**32**	**1,562**	**31**
Current financial debts	567	10	63	1
Non-current financial debts	220	4	759	15
Total financial debts	**787**	**14**	**822**	**16**
Near-cash assets	(190)	(3)	(50)	(1)
Cash and cash equivalents/financial resources	(616)	(11)	(691)	(14)
Net financial debts	**(19)**	**0**	**81**	**2**
Total assets adjusted for cash and cash equivalents	**5,508**	**100**	**5,039**	**100**

Significant increase in value added

In fiscal 2016, the Rheinmetall Group generated added value of €1,832 million, significantly surpassing the previous year's figure of €1,688 million. The Group's total operating performance came to €5,999 million, compared with €5,546 million in the previous year. The ratio of added value to the Group's total operating performance was 31%. Value added per employee rose by 7% from €82,000 to €88,000. The workforce benefited from the largest share of value added in fiscal 2016 at 80%. 5% was apportioned to the Treasury. Interest payable to lenders in the year under review was 3%. At €62 million, the shareholders of Rheinmetall AG received a 4% share of value added. €153 million remained within the Rheinmetall Group, compared with €113 million in the previous year.

Source and use of value added € million

	2016	%	2015	%
Source				
Group's total operating performance	5,999	100	5,546	100
Input	(3,939)		(3,655)	
Amortization and depreciation	(228)		(203)	
Value added	**1,832**	31	**1,688**	30
		%		%
Use				
Employees	1,465	80	1,389	82
Treasury	93	5	71	4
Lenders/banks	59	3	68	4
Shareholders	62	4	47	3
Companies	153	8	113	7
Value added	**1,832**	**100**	**1,688**	**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 excluding personnel expenses, interest and taxes.

Liquidity

Cash and cash equivalents decreased by €75 million in the reporting year to €616 million. An additional €190 million was held in commercial paper as liquidity reserves (previous year: €50 million).

KEY FACTS 2016
RHEINMETALL AUTOMOTIVE

2,656 **Sales** € million

Operating Result € million 223

11,913 **Employees**

Capital Expenditure € million 149

458 **Order Backlog** € million

6.9% **R&D Intensity**

Economic report
Rheinmetall Automotive business performance

Sales grow 2.5% to around €2.7 billion

In fiscal 2016, Rheinmetall Automotive's sales grew by €64 million, or 2.5%, to €2,656 million. After adjustment for currency effects the increase rises to 3%. The sales growth of the sector as a whole was thus slightly lower than that of global light vehicles production at 4%. This is chiefly attributable to a decline in sales from non-automotive business. This was due, in particular, to weaker global demand for large-bore pistons and falling sales in the continuous casting business caused by metal prices. In the automotive business itself, Rheinmetall Automotive experienced growth of 5%, thereby exceeding the growth of the market.

Sales € million

	2016	2015
Rheinmetall Automotive	**2,656**	**2,592**
Mechatronics	1,527	1,450
Hardparts	921	952
Aftermarket	305	285
Others/consolidation	(97)	(95)

Total sales do not include the sales of Rheinmetall Automotive's Chinese joint ventures in which we hold 50% of the shares and which are carried at equity. In fiscal 2016, these companies' sales amounted to €825 million, which corresponds to year-on-year growth of 5%, or 10% after adjustment for currency effects. In comparison, production of passenger cars and light commercial vehicles in China rose 13% compared to the previous year. While Kolbenschmidt Pierburg Shanghai Nonferrous Components increased sales significantly with products such as engine blocks and cylinder heads (+8%), Kolbenschmidt Shanghai Piston recorded a drop in sales of small-bore pistons (-6%). Pierburg Huayu Pump Technology achieved particular success, albeit with a relatively low level of sales, doubling sales of pumps year-on-year to €18 million.

The castings business in Germany in which we hold a 50% stake is also carried at equity and is therefore not included in Rheinmetall Automotive's total sales either. The KS HUAYU AluTech Group's sales amounted to €289 million in fiscal 2016 compared to €261 million in the previous year (+11%). For the first time, this figure includes the sales of KS HUAYU Bearbeitungs GmbH, which took over the material assets and customer contracts of Albert Hackerodt Maschinen- und Werkzeugbau. In operational terms, the business was chiefly expanded to include non-engine-related products as well as engine-related products using the die-casting process.

A breakdown of 2016 sales by region shows that their distribution remained virtually unchanged compared to the previous year. In fiscal 2016, the proportion of sales achieved with customers abroad was 80% as in the previous year. Accordingly, the proportion of sales generated with customers in Germany was 20%. At 47%, the largest proportion of customers we supplied outside Germany were in Western and Eastern Europe (previous year: 48%). As in the previous year, sales achieved with customers in North and South America represented a 19% share of sales; this includes the NAFTA economic region (USA, Canada, Mexico), which remained the same at 16%. Sales achieved with customers in Asia represented a 13% share of sales (previous year: 12%), 5% of which was with customers in China, as previously. Customers in all the remaining countries again accounted for around 1% of total sales.

Economic report
Rheinmetall Automotive business performance

In fiscal 2016, Mechatronics was once again the division that generated the highest proportion of sales among the three divisions in the Automotive sector with 56% (previous year: 54%). The Hardparts division contributed a 33% share of sales (previous year: 35%). As in the previous year, the Aftermarket division contributed 11% of sales.

Target margin of 8% achieved again

In the past fiscal year, earnings before interest and taxes (EBIT) in the Automotive sector grew by €7 million year-on-year to €223 million. The target EBIT margin of around 8% was thus achieved again and at 8.4% was slightly higher than the previous year's margin (8.3%).

Operating result € million

	2016	2015
Rheinmetall Automotive	**223**	**216**
Mechatronics	142	119
Hardparts	62	73
Aftermarket	27	27
Others/consolidation	(8)	(3)

No material non-recurring effects were recorded in 2016, so operating earnings (before special items) corresponded to EBIT.

Besides the result from Rheinmetall Automotive AG, EBIT of €-8 million (previous year: €-3 million) from the Others/Consolidation unit mainly includes the results of other holding, financing and real estate companies as well as the relevant consolidation measures and allocations to provisions.

Mechatronics division

The Mechatronics division continued its growth course in 2016. Compared to the previous year, sales increased by over 5% to €1,527 million. Thanks to the division's broad product portfolio and continued high demand from automotive manufacturers for solutions for the reduction of CO_2 emissions, growth once again exceeded the increase in global light vehicle production.

Sales in our Automotive Emission Systems product range remained stable against the previous year. While sales of exhaust gas flaps and exhaust gas recirculation valves increased, sales of radiator modules were lower than in the previous year due to the scheduled phase-out of a major project for a European customer. In order to consolidate and expand our market position in Asia, we founded a joint venture with a Chinese radiator manufacturer that will produce and distribute exhaust gas recirculation radiator modules in the future. The rise in sales recorded in the Commercial Diesel Systems product range was chiefly attributable to exhaust gas flaps and complex module applications. In the Solenoid Valves product range, strong demand for divert-air valves and electro-pneumatic valves led to a significant increase in sales. We were particularly successful in the Chinese market, where sales doubled.

The Pump Technology business unit developed positively in 2016, increasing sales by 6% and thus exceeding the growth of the market. The substitution of conventional pumps with modern variable pumps that react to the performance requirements of the respective engine continued. Therefore, as in previous years, we primarily recorded growth for variable oil pumps and tandem pumps.

The Mechatronics division achieved EBIT of €142 million in fiscal 2016, compared with €119 million in the previous year. This 19% rise in earnings was due to the increase in sales realized. This more than compensated for modest cost increases resulting from capital expenditure and the development of indirect employees. The EBIT margin increased year-on-year from 8.2% to 9.3% in 2016.

Hardparts division

Sales of the Hardparts division fell by 3% year-on-year to €921 million in 2016. Sales in the area of pistons, in particular large-bore pistons, declined, which was attributable to a drop in global demand for large engines. Small-bore pistons experienced a slight drop in sales. The bearings business did not quite equal the previous year's sales either, although this was almost completely attributable to the continuous casting product range. Weaker copper prices were reflected in lower purchase and sales prices in continuous casting. Sales in the core plain bearings business largely remained at a stable level.

The Hardparts division generated EBIT of €62 million in 2016, which was below the previous year's figure of €73 million (-15%). With an EBIT margin of 6.7%, it did not match the profitability of 7.7% in the previous year. This decline in earnings performance was largely due to the pistons business. The slump in sales of large-bore pistons was also reflected in a corresponding drop in earnings. The decline in earnings in the small-bore pistons business in Brazil was only partially offset by improved earnings from other companies. Earnings in the plain bearings business reached the level of the previous year. By contrast, the earnings of joint ventures in the castings business in Germany and China carried at equity improved slightly.

Aftermarket division

Sales of the Aftermarket division climbed by 7% year-on-year to €305 million in 2016. In particular, products from the Automotive sector's own brands, Kolbenschmidt and Pierburg, proved to be growth drivers. From a geographical perspective, the business performance of the Eastern European, American and South American sales regions particularly stood out. By contrast, business from customers in the Middle East was adversely affected by the crises and wars in that region, leading to a corresponding decline in sales.

As in the previous year, EBIT in the Aftermarket division amounted to €27 million. The increase in profit contributed by the additional sales realized were countered in particular by increased startup costs for the small-series piston plant in the Czech Republic. The EBIT margin fell to 8.9% (previous year: 9.5%).

KEY FACTS 2016
RHEINMETALL DEFENCE

2,946 **Sales** € million

Operating Result € million **147**

10,938 **Employees**

Capital Expenditure € million **95**

3.1 **Order Income** € billion

6.7 **Order Backlog** € billion

2.5% **R&D Intensity**

Economic report
Rheinmetall Defence business performance

Rheinmetall Defence creates leading military vehicle manufacturer in Europe

Business activities in the field of military tracked and wheeled vehicles were brought together in the new Vehicle Systems division at the start of 2016. For this purpose, the tracked vehicles business area (Rheinmetall Landsysteme), which had previously been part of the Combat Systems division, was integrated into the new division. The remaining Combat Systems business units now form the new Weapon and Ammunition division. The Electronic Solutions division is not affected by these changes. The Rheinmetall Defence divisions' figures for the previous year have been adjusted where necessary.

Rheinmetall Defence achieves double-digit sales growth again

Sales of the Defence sector amounted to €2,946 million in the period under review, an increase of €355 million, or 14%, compared with the previous year's figure of €2,591 million. When adjusted for currency effects, the growth was 13%. The significant sales increase was achieved among other things by a larger partial delivery of marine ammunition (primarily trading sales) to an international customer as well as by 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. Sales in the Electronic Solutions division were slightly lower than in the previous year.

Sales € million

	2016	2015
Rheinmetall Defence	**2,946**	**2,591**
Vehicle Systems	1,392	1,195
Weapon and Ammunition	1,112	881
Electronic Solutions	745	759
Others/consolidation	(303)	(244)

Rheinmetall Defence acquired orders worth €3,050 million in the period under review, compared to €2,693 million in the previous year. This represents an increase of €357 million, or 13%, against the previous year. Order intake was heavily influenced by the acquisition of several major projects.

Of primary significance here was an order worth €411 million for the supply of ammunition to a customer from the MENA region. Furthermore, we obtained an order for modernization of an air defense system (€389 million), also for a customer based in the MENA region. We also received substantial individual orders for the supply of infantry fighting vehicles (€166 million) as well as modernization orders for armored transport vehicles and battle tanks with net order values of €114 million and €220 million respectively. The book-to-bill ratio was thus higher than 1 again in 2016.

Order intake € million

	2016	2015
Rheinmetall Defence	**3,050**	**2,693**
Vehicle Systems	956	1,006
Weapon and Ammunition	1,171	908
Electronic Solutions	1,015	947
Others/consolidation	(92)	(168)

Economic report
Rheinmetall Defence business performance

As at December 31, 2016, the order backlog had reached €6,656 million. Compared to the previous year's figure of €6,422 million, this represents a rise of €234 million, or 4%. The biggest individual orders in the order backlog are the Land 121 program for Australia (military trucks) and Puma infantry fighting vehicles for Germany, both of which are in the delivery phase.

Defence's operating result increases significantly

In fiscal 2016, the operating result (EBIT before special items) amounted to €147 million, compared with an operating profit of €90 million in the previous year. This represents a rise of 63%. The operating margin rose by 1.5 percentage points from 3.5% to 5.0%.

Non-recurring effects did not have a negative impact in 2016. EBIT thus corresponded to the operating result in the period under review.

Operating result € million

	2016	2015
Rheinmetall Defence	**147**	**90**
Vehicle Systems	29	3
Weapon and Ammunition	108	74
Electronic Solutions	25	26
Others/consolidation	(15)	(13)

In particular, this significant improvement in results was achieved thanks to the positive performance of the Weapon and Ammunition and Vehicle Systems divisions. In particular, this was due, among other factors, to high-margin ammunition sales as well as better capacity utilization in the Vehicle Systems business. The negative result from the Other Companies/Consolidation unit resulted firstly from the planned expansion of international sales activities and secondly from the negative results reported by Rheinmetall International Engineering GmbH, which is consolidated at equity.

Vehicle Systems division

The division recorded a rise in sales of about 17% to €1,392 million in 2016 (previous year: €1,195 million). In business with tactical vehicles, a significant volume of sales resulted from the supply of protected wheeled vehicles to Western Europe and the MENA region. Substantial sales were also realized in connection with series production of the Puma infantry fighting vehicle for the German armed forces. The logistics vehicles unit generated a growing contribution to sales from increasing production for the major Land 121 truck order from Australia.

The Vehicle Systems division's order intake amounted to €956 million in the year under review, compared to €1,006 million in the previous year. Incoming orders in 2016 were significantly impacted by three major orders. Besides the order for the supply of 88 new Boxer infantry fighting vehicles to Lithuania (€166 million), these included the order for the modernization of 128 Leopard 2-type battle tanks for Poland (€126 million) as well as a further modernization order for 90 Fuchs armored transport vehicles for the German armed forces with a total net value of €114 million.

The Vehicle Systems division improved its operating result by €26 million from €3 million in 2015 to €29 million in the year under review. The operating margin thus rose from 0.3% in 2015 to 2.1% in fiscal 2016. Besides increased sales, higher capacity utilization and an improved product mix were the key drivers behind the improved profitability in the Vehicle Systems division.

Weapon and Ammunition division

In fiscal 2016, the Weapon and Ammunition division achieved sales of €1,112 million, which represents growth of 26% on the previous year's figure of €881 million. This rise in sales is attributable to ammunition sales achieved with an international customer. Furthermore, the division's sales were boosted by sales of weapon stations with onboard electronics in connection with the Tactical Armoured Patrol Vehicle (TAPV) program with a customer from North America and supplies of ammunition and propellants to several Asian customers.

The division's order intake totaled €1,171 million, exceeding the previous year's figure of €908 million by €263 million. This was mainly due to a large ammunition order worth €411 million from an international customer and an order with a total value of €89 million covering our entire range of 155 mm artillery ammunition, including the associated propellants, from a customer abroad. The division also received several orders from the United Kingdom for the supply of ammunition totaling more than €47 million.

The Weapon and Ammunition division achieved an operating result of €108 million in fiscal 2016, compared with €74 million in the previous year. This substantial growth in earnings is attributable to high-margin ammunition sales in the MENA region and Asia, among other things. As a result, the operating margin improved by 1.3 percentage points from 8.4% in the previous year to 9.7% in the past fiscal year.

Electronic Solutions division

In 2016, the Electronic Solutions division achieved sales of €745 million; this represents a decline of 2% compared to the previous year (€759 million). The division realized substantial sales with orders for the supply of air defense systems for the Thai army as well as for the supply and modernization of air defense systems for two customers in the MENA region. In addition to sales relating to supplies of a civil simulation and training center in Mexico, it realized sales relating to various small and medium-sized orders for electro-optic components, infantry equipment and simulators.

Electronic Solutions reported incoming orders worth €1,015 million in fiscal 2016, compared to €947 million in the previous year. In particular, this included a major order with a volume of €389 million for the modernization of an air defense system for a customer from the MENA region. In the period under review we also received an order in the mid-double-digit millions of euros range for the modernization of air defense systems for the Swiss army. The Electronic Solutions division received an order worth €61 million for the modernization of 128 Leopard 2-type Polish battle tanks.

At €25 million, the operating result in the Electronic Solutions division was €1 million lower than in the previous year. The operating margin remained unchanged at 3.4%. Sales relating to the training center in Mexico and supplies of Leopard 2 components to a customer from the MENA region had a positive impact on the margin. However, the earning situation was adversely affected by losses at a subsidiary in Norway again.

Economic report
Employees

Key figures

Employees in the Rheinmetall Group

	2016	2015	2014	2013	2012
Employees (capacity on reporting date)	20,993	20,676	20,166	20,264	21,767
Employees	**23,044**	**22,640**	**22,065**	**23,082**	**23,471**
Men	18,476	18,066	17,636	18,669	19,267
Women	4,568	4,573	4,429	4,413	4,474
Trainees	747	822	838	911	899
Germany	392	480	495	561	578
Abroad	355	342	343	350	321
Part-time staff	938	898	813	800	768
Interns (in the course of the year)	289	380	289	319	309
Graduates (in the course of the year)	133	127	127	126	178
Disabled persons Germany	493	552	539	625	627
Foreign employees in Germany	755	705	694	895	878
Length of service in years	13.7	13.7	14.0	14.0	14.1

Employees in Germany and abroad

	2016	2015	2014	2013	2012
Total	23,044	22,640	22,065	23,082	23,471
Germany	11,536	11,323	11,024	11,815	11,947
Abroad	11,508	11,317	11,041	11,267	11,794
Europe excl. Germany	5,498	4,102	3,762	3,694	3,857
North America	2,171	1,321	1,299	1,363	1,469
South America	1,168	2,176	2,310	2,533	2,464
Asia	1,235	1,167	1,119	1,064	1,148
Africa	1,268	1,132	1,160	1,121	1,299
Australia	168	119	98	56	25
Ratio abroad	49.9	50.0	50.0	48.8	49.7

Female employees by area

	Automotive		Defence		Holding + Service Companies		Rheinmetall Group	
	Number	%	Number	%	Number	%	Number	%
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
2012	2,580	19.7	1,818	17.3	76	48.7	4,474	18.9

Other key figures

		2016	2015	2014	2013	2012
Personnel expenses	€ million	1,465	1,390	1,272	1,308	1,337
Personnel expenses/employees	€ '000	64	61	58	57	63
Sales/employees	€ '000	243	229	212	200	217
Personnel expenses ratio	%	26	27	27	28	28

23,044 employees are committed to Rheinmetall's success

Rheinmetall Automotive and Rheinmetall Defence operate in highly competitive markets that are shaped by rapid change and increasingly complex technologies, processes and products. With their knowledge, skills and dedication, employees of the Rheinmetall Group play an important part in the achievement of corporate targets and in helping to secure and expand the Rheinmetall Group's economic success on a sustainable basis in the long term.

In the year under review, just over half of the workforce (49.9%; previous year: 50.0%) was employed at Rheinmetall companies outside Germany. In 2016, 755 employees at our German companies were foreign nationals (previous year: 705). In addition, 82 German employees were posted to Rheinmetall Group locations outside Germany (previous year: 56) in the period under review. In the year under review, Rheinmetall's German companies employed 8,797 staff covered by collective wage agreements, 1,351 staff with contracts not covered by collective wage agreements and 230 managerial staff.

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 defense 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. In the year under review, the Rheinmetall Group employed 2,459 managers across its first four levels below the Executive Board (previous year: 2,112), of whom 247 or 10% were women (previous year: 166 or 7.9%). The average age of managers in the German Rheinmetall companies was 49.3 years; the average tenure with the Company among this group of people was 17 years. Of the senior management staff comprising approximately 282 people in the year under review (previous year: 285), 3.6% were women (previous year: 3.5%).

Demographic change – a challenge for the future

In Germany and other developed countries, the companies are facing new challenges in response to the changing age structure. The population structure is changing as birth rates decrease and life expectancy rises to unprecedented levels. This trend also impacts the composition of workforces. In this context it is also important to ensure that HR policies and adequate health and support programs maintain long-term employees' ability to work and learn, their motivation in their careers and their physical and mental agility, as their knowledge, wealth of experience and expertise are key for our Company and our competitiveness.

Our challenge therefore involves identifying available potential, recruiting and training junior staff and developing our employees' skills further in order to ensure a smooth handover. 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.

In the year under review, 7,827 employees (33.9% of the workforce) were aged 50 years or more, with the previous year's figure at 7,679 (33.9%).

Economic report
Employees

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 allow Rheinmetall employees to improve their performance in their field of work and expand their knowledge 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 opportunities 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, which replaced the Rheinmetall College in 2015 and was founded in order to ensure a stronger focus on entrepreneurship and leadership in the development of managers, 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, 989 employees (905 men, 84 women) attended 75 (previous year: 70) single- or multi-day events at the Rheinmetall Academy, compared to 797 (708 men, 89 women) in the previous year. Approximately 58% of the participants came from the Defence sector, with 37% coming from companies in the Automotive sector. The proportion of female participants declined to 8.5%, compared to 11% in fiscal 2015.

In 2016, Rheinmetall invested €5.7 million (previous year: €4.7 million) in specialized, interdisciplinary and management-related training programs in Germany alone. 9,625 male and 2,065 female participants (total: 11,690 persons; previous year: 9,451 employees) benefited from 3,996 qualification measures in 2016 (previous year: 3,392) over 20,177 days (previous year: 17,273).

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 2016, 747 young people (previous year: 822) in Rheinmetall companies in Germany and abroad received vocational training, 392 of whom (previous year: 480) were based in Germany. In the year under review, 66% of the young people in the Rheinmetall Group received industrial technical training, 15% received training for commercial careers, while 19% completed a dual course of study.

The percentage of female trainees in the Rheinmetall Group was around 12%, while the percentage in Germany reached 14.3% (previous year: 15.8%). The apprenticeship ratio was 4.0% of the workforce for the German locations (previous year: 4.9%) and 3.7% for the Rheinmetall Group as a whole.

In 2016, 149 people (previous year: 146) started their training at Rheinmetall companies in Germany. In the same year, 103 trainees (previous year: 117) took up temporary or permanent employment after successfully completing their training.

Within the wide spectrum of 19 industrial technical and four commercial training courses as well as ten 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.

Rheinmetall invested €11.7 million (previous year: €11.1 million) in training at sites in Germany in 2016.

Recruiting

Companies in the Rheinmetall Group are faced with increasingly tough competition from other companies to gain qualified personnel. Acquiring skilled professionals for these companies is therefore a key task in HR work. In addition to performance-based remuneration and progressive benefits, Rheinmetall attaches 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 professional and personal development.

In addition to its own training for junior employees, Rheinmetall uses traditional and modern employee selection methods 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. The attractive employer profile and target-group-specific appearances at university fairs, graduate conferences, recruitment events and online job sites are increasingly bearing fruit.

The “trendence study” once again calculated the attractiveness of German engineering 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 56th place (previous year: 55th). In the Universum rankings (Germany Top 100 Ideal Employers) in the field of engineering, Rheinmetall came 44th in the year under review, moving up considerably again from 55th place in the previous year. Rheinmetall took only 101st place in both rankings in fiscal 2009.

We received 31,172 applications via our TalentLink applications platform in the year under review (previous year: 31,141). In the year under review we recorded a total of 2,574 people joining and 2,027 people leaving the Rheinmetall companies around the world.

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Employees

Attractive remuneration systems

Fair, transparent pay systems are a key aspect in recruiting and retaining dedicated staff at the Company. Rheinmetall offers attractive contractual terms. These are based on the scope of activities, responsibility and performance and are linked to market rates. In addition to fixed remuneration components, 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: 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.

A better 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. Rheinmetall also offers parents financial support in helping them to find individual childcare solutions for their child or children. The option to obtain parental benefit for a longer period is also utilized in the Rheinmetall companies. Since 2016, we have provided a family service throughout Germany to support employees in matters concerning career and children and career and care through advice and assistance.

In 2016, 319 employees (previous year: 151) were on parental leave in the German companies (109 female employees, 210 male employees; previous year: 84 female employees, 67 male employees).

In the year under review, 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.

Equal opportunities for all

Whether young or old, a new employee at Rheinmetall or a long-standing one, our corporate culture is designed to ensure that each and every employee can incorporate their personal qualities, skills, expertise and commitment and contribute to the long-term achievement of our corporate goals. In 2016, the average age of employees (excluding trainees and interns) in the Rheinmetall Group was 42.7 (previous year: 43.7). The average age in the German companies was 45.3 in 2016, while the average age of the workforce in the Rheinmetall companies outside Germany was 40.2.

In the year under review, the average tenure with the Company was 12.8 years in the Automotive sector and 14.8 years in the Defence sector. In the holding/service companies this was 10.9 years, while the average within the Rheinmetall Group in 2016 was unchanged from the previous year at 13.7 years. On average, employees in the Rheinmetall companies outside Germany worked at the Company for 12.5 years, while those in the German companies averaged 14.9 years.

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 individually adapted work stations that offer good opportunities for development and 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 493 severely disabled people (previous year: 552), who are represented by the Group representative body for severely disabled employees.

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.

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 5.6% in the year under review (previous year: 5.2%).

Economic report
Research and development

Technology and product developments open up growth opportunities

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. Important success factors that will ensure Rheinmetall's further growth and secure its competitiveness in the long term are the consistent development of its current product portfolio and the opening up of related areas of business, as well as forward-looking and user-oriented products that are in line with the market and will ensure more security and environmentally friendly mobility.

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.

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. Mobility and security will remain major global megatrends in the coming years too.

The ideas contest launched in 2015 to encourage more innovation and entrepreneurship attracted 186 proposals from all parts of the Rheinmetall Group. A jury comprising representatives from throughout the Group and from various disciplines assessed the entries. Five product concepts made it into the final round in spring 2016 following an intensive selection process carried out over several stages. The contestants presented their business ideas during the annual Rheinmetall management meeting in April 2016. In recognition of the high degree of business potential shown by the innovative proposals, the Executive Board of the Group decided to pronounce all the finalists winners of the Rheinmetall Intrapreneur Award. Their product innovations will now be developed to maturity.

€258 million was spent on research and development across the Group in 2016, following €239 million in the previous year. Of this, €42 million (previous year: €41 million) incurred in connection with customer contracts and €31 million (previous year: €24 million) capitalized as development costs. The share of R&D expenditure in the Rheinmetall Group was 4.6% (previous year: 4.6%), compared with 6.9% in Automotive (previous year: 6.4%) and 2.5% in Defence (previous year: 2.8%), whereby the figure for Defence relates solely to the share of self-financed projects.

R&D in the Rheinmetall Group € million

	2016	2015
Employees in research and development	3,220	3,003
Employees in research and development as % of total workforce	14.0	13.3
R&D: Expenses	258	239
of which capitalized	31	24
Innovation ratio (research and development expenses in relation to sales)	4.6	4.6

Rheinmetall Automotive: A future characterized by decarbonization and digitalization

Two major technological trends will define mobility in the future - decarbonization and digitalization. The legislators have continued to introduce environmental measures aimed at developing a climate-neutral traffic system (decarbonization), putting increasing pressure on the combustion engine. Increasingly stringent legal regulations on fuel consumption and urgent requirements for a further reduction in emissions of substances that are harmful to health are becoming ever more important factors in the development of combustion engines. Electromobility is gaining importance as a result of decarbonization – particularly for the individual mobility of people, but over the long term also for the transportation of goods. Rheinmetall Automotive's development activities thus continue to focus on the topic of efficient and low-emission drives.

The second key technological trend, digitalization, is already playing a leading role in the area of transport mobility. This was evident at the International Commercial Vehicles Motor Show in Hanover in September 2016, for example, where the topics of digitalization and networking were ever present. The automotive industry is undergoing a digital transformation. Vehicles of the future will be increasingly networked and automated or provide self-driving mobility solutions. Development in the automotive sector will increasingly focus on modern information technologies and data security.

R&D at Rheinmetall Automotive € million

	2016	2015
Employees in research and development	1,091	1,035
Employees in research and development as % of total workforce	9.2	8.6
Research and development expenses	184	167
Innovation ratio (research and development expenses in relation to sales)	6.9	6.4

R&D – a basis for innovative products

The key condition for the development of new vehicle drive concepts that are efficient and cause the lowest possible emissions, including their peripheral equipment, is a sound fundamental understanding of both the technical and market-relevant relationships coupled with ever-expanding expertise regarding the interdependencies of individual systems and components in the vehicle. In addition to product developments in the Mechatronics and Hardparts divisions, Rheinmetall Automotive has a central Research and Technology unit, whose "Engineering Services" department supports the activities of series developers. Among other things, the "New Drive Technologies" unit enhanced the heat pump system for extending the range of hybrid and electric vehicles in the year under review and was also involved in identifying and designing product ideas specifically for hybrid vehicles and vehicles powered by electric batteries. The heat pump system was tested under real conditions in an electric production vehicle and the measurement results presented to industry professionals and potential customers at the Aachen Colloquium Automobile and Engine Technology 2016, among other places.

Economic report
Research and development

The diesel engine – an essential component in the achievement of climate protection targets

Despite the scandal involving the manipulation of exhaust emissions, the diesel engine remains indispensable, especially in Europe in the passenger car and particularly the commercial vehicle sector: The diesel engine still offers an advantage over the gasoline engine in terms of consumption. Moreover, the EU-wide target of not exceeding the limit of 95 g CO_2/km on environmentally harmful carbon dioxide emissions by 2021 can only be achieved with the use of diesel engines. The diesel engine – an essential component on the road to zero emissions by means of all-electric vehicles while at the same time using electric energy generated from renewable resources – therefore remains a key area for Rheinmetall Automotive in the development of new solutions in order to meet growing demands for lower consumption of fossil fuels and reduced emissions of harmful substances.

Steel pistons for passenger cars are in line with current trends in diesel engine technology and have been in greater demand for some time now. They reduce fuel consumption and lower CO_2 emissions by 3% to 5%, depending on application and reference cycle. This is achieved thanks to thermodynamic optimization of the combustion processes and the lightweight construction, as well as to lower mechanical friction in the piston-cylinder assembly. The height and wall thickness of the piston are reduced due to the high strength of steel, which means less assembly space is needed and weight benefits are achieved.

Lower fuel consumption is important to commercial vehicle developers, too, together with the reliability of all engine components. The American Clean Air Act, together with greenhouse gas legislation, is aimed at keeping the air clean and protecting the ozone layer. Particularly in North America, this is increasing the need for innovative solutions for reducing fuel consumption and CO_2 emissions. The required limits must demonstrably be met over the entire lifetime of the engine.

Pierburg has developed an innovative exhaust gas recirculation flap valve (FlexVent) with integrated sensor technology for mass flow measurement specifically for large-volume diesel engines for commercial vehicles. It is characterized by particularly high measuring accuracy and allows for the application of optimized nitrous gas control strategies to reduce exhaust emissions and fuel consumption. According to initial calculations, it is possible to achieve fuel savings of around 1%. By integrating mass flow sensor technology into the exhaust gas recirculation valve, in future it will be possible to switch the current exhaust gas recirculation control from "position control" to "mass flow control". As a rule, up to now the engine control unit has adjusted the exhaust gas recirculation mass flow while evaluating the measurands – damper angle of the exhaust gas recirculation valve, temperature and absolute and differential pressure. In this process, the target damper angle of the exhaust gas recirculation valve is calculated and adjusted by the engine control unit. The new FlexVent valve offers a more robust and effective control routine as compared with conventional venturi applications. In addition, less assembly space is required due to the omission of a separate venturi measuring tube. There is also a reduction in electrical interfaces, enabling cabling to be dispensed with and thus reducing installation costs. The product is in the prototype phase at present and is currently undergoing extensive testing in collaboration with a customer.

The suspension, gears or axle-lift device are also served by a pressurized air cell in some vehicles, depending on the respective equipment they carry or their area of application. Great demands are placed on the compressor in terms of its reliability and efficiency as well as its smoothness. Plain bearings under the brand name “Permaglide” serve as bearing shells or bushes as well as crankshaft bearings, connecting rod bearing shells and connecting rod bushes. They meet the specified requirements particularly well thanks to geometrics developed specifically for these applications. In the case of friction-reducing bearing shells made from the Permaglide material KS P141, product expertise and process experience from the field of bearing shells used in engines was applied in order to create highly precise, high-performance plain bearings for compressors.

Pump solutions for modern combustion engines and electrified drive systems

Modern gasoline engines frequently fail to create a sufficient vacuum in the intake pipe due to turbocharging and thus also stronger dethrottling. However, this is required, in particular, to increase braking force and for a variety of additional applications. For this reason, vacuum pumps are also increasingly used in turbocharged gasoline engines. In this process, the newly developed electric vacuum pumps from Pierburg realize a saving of up to 1 g of CO_2/km in accordance with the New European Driving Cycle (NEDC) when compared to conventionally powered components as they are only switched on when required. They also relieve the engine’s lubrication system. In future, electric vacuum pumps will find further potential applications in modern alternative drive concepts. In hybrid vehicles, electric vacuum pumps make it possible to drive using electricity only, as they maintain full braking force support at all times. The pumps also enable use of the “sailing” operating mode, where the drive system is switched off and decoupled as the vehicle drives along. There is an additional energy saving due to the reduced resistance.

In the year under review we acquired a major order for electric vacuum pumps from a German automotive group with international operations. They will be delivered to a customer plant in North America. Production of the pumps will start in 2017 at Pierburg’s Hartha site in Saxony. The electric motor used in the pumps was also developed in Hartha.

A further development in the area of electric pumps was a new pump that extracts fuel vapors from the tank system and then directs them under pressure to the intake system of turbocharged gasoline engines for complete combustion. This technology serves to reduce emissions from unburned hydrocarbons that are created through the retention of fossil resources, specifically gasoline in this case. In particular, legal standards in North America require this type of technology. Pierburg can thus offer a further pump solution to the growing global market for turbocharged gasoline engines.

Mechatronics division – entering markets in new product areas

Pierburg developed a new variable valve control system for a renowned Asian automotive manufacturer. This new “UpValve” valve control system can achieve consumption benefits of up to 5% in turbocharged gasoline engines, depending on the reference cycle. Based on the “UniValve” valve control system, which has been optimized for years, “UpValve” was developed through to production maturity and applied to the customer application. The system is currently undergoing extensive testing. “UpValve” is optimized compared to the previous solution in terms of high-speed performance, package and response behavior. The system simultaneously allows for cylinder deactivation as required. The “UpValve” control system will initially be installed on the inlet side of the engine and primarily enables a reduction in gas exchange losses as well as targeted charge movement.

Economic report
Research and development

The system will be used in a four-cylinder turbocharged gasoline engine designed in cooperation with Pierburg engineers. In this process, Pierburg is the development partner for the entire valve control system, including the actuators and electronic driver. Production is scheduled to start in 2019.

In order to open up further product areas, Pierburg developed a new application variant based on electric throttle control (ETC) in the area of actuator technology: The recirculation valve, which is integrated in the air pathway in turbocharged engines. Further new developments, such as a multi-port valve, also termed a combi-control valve (CCV), and a multi-purpose actuator (MPA) have also been implemented. In particular, the MPA allows for entry into both powertrain and non-powertrain applications. Its first series application is set to begin soon at an automotive manufacturer outside Germany.

Further innovations were also launched on the market in the area of solenoid valve technology. An example of this is the variable oil hydraulic valve for activating or deactivating the oil-spray cooling system for the pistons in highly thermally stressed combustion engines. This electrically operated valve allows the oil-spray cooling system, which up to now has always been operated passively, to be actively operated to optimum effect specific to the operating point. The active switching achieves optimum thermal protection for the piston or piston system while at the same time making it possible to significantly reduce the oil pump drive power. This leads to a decrease in overall friction and ultimately to lower fuel consumption.

Besides this technical solution in the area of engine-transmission assembly lubrication and thermal conditioning, the integrated thermal management of a combustion engine or that of an alternative drive train is also very interesting to our developers. In addition to the existing mechanical, electrified and fully electric coolant pumps, in the year under review we concentrated heavily on developing coolant control or regulating valves. Based on familiar solenoid valve technology, Pierburg has realized an attractive portfolio of coolant regulating valves and for the first time also received a series contract for this technology from a German automotive manufacturer. This achieved important progress towards integrated thermal management. Growing expertise in the areas of electric coolant pumps and valves is also reducing dependency on drive systems run with combustion engines in favor of alternative drive systems.

Hybrid drive trains in commercial vehicles – new opportunities for the plain bearings division

The hybridization of drive trains for small and medium-weight commercial vehicles is progressing inexorably. With some time delay, the trend is following developments in passenger cars and is bringing with it a considerable increase in the complexity of drive systems. Emissions of harmful substances, particularly from inner-city delivery traffic, are reduced by commercial vehicles pulling off in electric driving mode, as well as regenerative braking. This simultaneously reduces diesel consumption and thus operating costs. All tribologically active components of a hybridized commercial vehicle combustion engine are subjected to mixed friction significantly more frequently than in a conventionally powered combustion engine owing to the high number of start-stop processes. This particularly affects all the plain bearings inside the engine. Here, the Bearings business unit is able to draw on its many years of experience from applications for passenger car engine bearings. It has developed a comprehensive and high-performance product portfolio for them over previous years, based consistently on new lead-free material and coating technologies. Commercial vehicle manufacturers can thus prepare for any potential requirement for lead-free engines for vehicles in the 3.5 t and over class.

The Bearings business unit offers the two-material KS R53 bearing for commercial vehicle main bearings running under wear-critical conditions. It has already demonstrated its outstanding wear resistance in extensive test runs in a new commercial vehicle engine. Wear under start-stop conditions is reduced by approximately half with the new bearing type.

The Bearings business unit offers the KS S203D galvanic bearing for highly stressed commercial vehicle connecting rod bearings mounted on the rod side. It is completely lead-free and outperforms the lead-containing predecessor models by over 20% in terms of its load-bearing capacity. Due to its wear resistance, KS S203D is far superior to three-material bearings containing lead. For commercial vehicle engines with even higher specific characteristics, we offer innovative KS S203W lead-free sputter bearings equipped with an "intelligent" layer architecture. The new bearing has around 20% more load-bearing capacity than lead-free galvanic bearings.

Aluminum casting – diversification is the watchword

In our aluminum casting division, which Rheinmetall Automotive operates with its joint venture partner HUAYU Automotive Systems, development activities are focused on the engine block of combustion engines. Series production of engine blocks for high-performance sports car engines was launched at the beginning of 2017. In line with the trend towards smaller but no less high-performance turbo gasoline engines, engine blocks and cylinder heads for four-cylinder gasoline engines for customers with international operations are at the center of current development and project plans.

Following the trend towards light construction in development and production, Rheinmetall Automotive has achieved commercial success with the structural components for chassis it developed in-house using aluminum casting. A new suspension subframe meeting very stringent and particularly complex requirements that we developed for a German automotive manufacturer is just about to go into series production. Lightweight vehicle construction using aluminum casting technology is also showing great promise in the "Alternative Drive Systems" business. For example, this enables paraxial integration of electric drives and also production of filigree and cooled housing structures for electric traction motors and batteries. We see great future potential in the research and development of diversified aluminum casting products for a wide variety of structural components.

Electromobility – both a great challenge and a great opportunity

Although there have already been many approaches to electric drives for individual transport in the past, only recently has it become increasingly clear that a great future lies ahead for electrically powered vehicles in many fields. However, the global problems of climate change and emissions cannot be solved simply by using this type of drive. Too many questions regarding vehicle range and costs, as well as electricity generation and charging infrastructure, have yet to be adequately answered. Nevertheless, we must assume that electric drives, either coupled with a combustion engine (hybrid vehicles) or alone (battery electric vehicles), will proliferate significantly and must be considered an opportunity in both technological and economic terms. Apart from electrification of the drive train, hybrid or electric vehicles also require a variety of electrified auxiliary units and Rheinmetall Automotive has been active in this very sector for many years. This is in addition to development focused on the areas of electric traction, thermal management and energy storage for electric vehicles.

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Research and development

Rheinmetall Defence: protection of people and equipment is the foremost aim of development

The Defence sector 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. Multinational deployments to prevent crises and deal with conflicts are becoming increasingly common. 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.

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 defense, to the networking of function sequences and in the areas of simulation and training. Whether it is for requirements specific to different branches of the armed forces or general requirements of the armed forces as a whole, whether it is for external or internal security, the ability to integrate components to create effective overall solutions makes Rheinmetall Defence a strong partner to armies and civil national security forces.

R&D at Rheinmetall Defence € million

	2016	2015
Employees in research and development	2,129	1,968
Employees in research and development as % of total workforce	19,5	18.8
Research and development expenses (self-financed) (w/o product specific developments)	74	73
Innovation ratio (research and development expenses in relation to sales)	2.5	2.8

High-energy laser effectors for anti-drone applications

In the year under review, Rheinmetall Defence continued its research and testing of high-energy laser effectors that can be used by all branches of the armed forces. The current threat analysis concludes that the greatest risk potential comes from remotely controlled drones in what is known as the low, slow and small class (LSS). These drones are very difficult to detect, can fly autonomously to waypoints and also appear in self-organizing swarms. They represent a major threat both to stationary infrastructure facilities and mobile targets.

Using the high-energy lasers (HEL) that had already been tested successfully and fitted to the HEL MLG 27 (sea) and HEL Boxer (land) technological demonstrators, Rheinmetall Defence conducted extensive studies and tests aimed at combating LSS drones, both at the Company’s own testing center in Unterlüß and at the German armed forces’ military training area in Putlos, Schleswig-Holstein. While studies in 2015 focused on automatic optical tracking under difficult optical and spatial conditions, the focus in the year under review was on ascertaining the potential weak points and degree of vulnerability of different drone types. To this end, LSS drones were examined extensively and the results of the analysis verified by irradiating free-flying LSS drones with the high-energy laser effectors.

In a test campaign that took place on the Baltic Sea in October 2016 and lasted several weeks, high-energy laser effectors fitted to the technological demonstrators successfully neutralized numerous LSS drones in flight at distances of up to 1.5 km in a large number of different test set-ups by, for example, weakening their structure, severing key electrical connections or targeting and destroying their drive units. The LSS drones crashed in each case. These results successfully demonstrate that the highly precise high-energy laser effectors are suitable for use in combating LSS drones in virtually unlimited situations.

Detection of bombardment in a helicopter

Experiences gained during deployments over the last few years have shown that helicopters, too, are at risk of coming under fire from handguns. Since the application of ballistic protection to helicopters is heavily restricted for various reasons, it is very important to warn the crew of bombardment at an early stage. During the year under review, work continued on testing sensors of this kind on a helicopter, taking into account existing research findings relating to the detection and location of gunmen using optronic and acoustic sensors. For the test flights with a transport helicopter of the Sikorsky CH-53 type, which is used by the German armed forces to transport personnel and materials, the sensors were adapted and prepared for installation in the helicopter. Four uncooled infrared cameras and five microphone antennas were also mounted on the fuselage of the CH-53 for the tests.

The platform-specific signatures were registered in a first measurement campaign without fire. These include, for example, the exhaust gas plumes of the engines flowing through the infrared cameras' field of vision, or the noise of the turbines and rotors. The reference source used was a propane gas cannon, which emulates both a muzzle flash and a muzzle blast when fired. These shots could be detected in both hover and cruise flight.

The first flight trials with simultaneous targeted live passing shots from weapons of up to 20 mm caliber took place in November 2016 at the Bundeswehr Technical Center for Weapons and Ammunition in Meppen. A number of trials were conducted during the two-week testing phase, including flybys with flying speeds of up to 110 km/h as well as hover flights. Key results, such as detection messages, were transmitted live to the trial managers and measurement teams via a telemetry link. Initial analysis of the test results confirmed the potential of the sensor technology used on the helicopter for locating gunmen. In 2017, the algorithms will be optimized further based on detailed analysis of the trial data and tested in two further measurement campaigns. A decision as to potential further development towards product maturity will be made following conclusion of the test flights aimed at demonstrating the performance capability of the solution presented.

Economic report
Research and development

Networked reconnaissance and combat group

Research projects in previous years have already dealt with the fitting and upgrading of IT equipment in military land vehicles. One key aspect is the networking of land vehicles compatible with NATO standards in a group with the aim of exchanging real-time information and using it jointly. In 2015, an investigation commissioned by the German Federal Ministry of Defense (BMVg) looked into the extension of capabilities through the joint use of sensor data (e.g. camera signals or position data of objects) and vehicle-wide target recognition processes, extending to the effective combating of enemy units.

In the year under review, Rheinmetall Defence continued its development work on the networked reconnaissance and combat group and based on the findings of the research realized an operational demonstrator composed of several vehicles. Sensor data were used in cross-vehicle processes to produce and present a shared perspective for the reconnaissance and combat group in real time. This provided an impressive demonstration of how the target is conveyed within the networked reconnaissance and combat group in real time. In 2017, the results so far will be evaluated in extensive trials in order that insights can flow into the implementation phase the same year.

Communication between vehicles is another focal point of the research. It places particularly high demands on radio-based vehicle networking. Conventional military radio devices in the HF, UHF and VHF range are designed mainly for voice radio. The next generation of radio devices will have to be able to transmit speech and data in parallel and will need to fulfill increased requirements in terms of bandwidth and latency. The aim is to demonstrate the necessary technical specifications on deployment using a demonstrator by the time the project is expected to end in 2017.

INVIDEON – civil remote tower application

The monitoring and processing of air traffic requires the use of highly qualified technicians and a large number of support staff at airfields for approach and space control, even if the volume of traffic is expected to be low, either temporarily (e.g. at night) or in the long term. Further investigations were therefore conducted in the year under review to determine the extent to which optronic systems can transmit precise video data in real time to a central control station in a different location (“remote tower”) for optical monitoring of air traffic at the airport and for monitoring of aircraft that are taking off and descending.

In the reporting year, the German Federal Ministry for Economic Affairs and Energy (BMWi) issued a funding commitment for the INVIDEON project in connection with the fifth aviation research program. Under the coordination of Rheinmetall Defence, the German Aerospace Center (DLR), DFS Aviation Services and the Fraunhofer Institute of Optronics, System Technologies and Image Exploitation (IOSB) are examining methods of automatically detecting and tracking flying objects with visual and infrared cameras for remote tower applications.

Initially, the requirements of a remote tower system will be defined together with the air traffic controllers and potential solutions simulated. These include different methods of visualizing video material (e.g. multispectral overlay), computer-aided augmented reality or automatic object tracking. By the end of the project in 2019, trials will be conducted at an airport using prototypes under real conditions in order to find the best technical solution, following which the prototype will be prepared for series production.

Future main armaments for tanks

The fall of the wall between the two German states in November 1989 and the dissolution of the Warsaw Pact in July 1991 that brought about the end of the Cold War led to political and economic rapprochement between former adversaries. A conflict in Europe conducted using armored forces appeared increasingly unlikely as the years went by. As a result, fleets of armored combat vehicles were decommissioned on a large scale in the East and West. Developments for effectively combating future threats were discontinued and combat performance upgrades were only implemented to a reduced degree based on projects initiated at the end of the 1980s.

In Germany, there have been no further performance upgrades, such as increasing combat strength for more powerful capabilities in one-on-one battle tank versus battle tank situations, 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. At the same time, many nations who use the Leopard 2, which has been in production since 1979, have decided to use the weapon system for a further 15 to 20 years.

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 (kinetic energy) ammunition. The timescale of these activities is coordinated with that of the modernization program for the German armed forces' Leopard 2 fleet. If required, a comparable solution in technical terms will also be offered for the standard L44 barrel of the Leopard 2A4 type (L44A1).

With regard to initial considerations regarding the main armaments for future battle tanks, in the year under review Rheinmetall Defence initiated a self-financed demonstrator program for the 130 mm caliber system with which to examine and analyze the considerable improvement in performance ascertained, including against modern threats under live fire. This would enable future combat vehicles from the next Leopard 2 generation to prevail against a better protected opponent in one-to-one situations with superior firepower from greater distances.

Economic report
Capital expenditures

Supporting market opportunities through targeted 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 €258 million in 2016, compared with €291 million in the previous year. This is equivalent to 4.6% of consolidated sales (previous year: 5.6%). Capital expenditure was met with amortization and depreciation of €228 million (previous year: €203 million).

Capital expenditure € million

	2016	2015
Rheinmetall Group	**258**	**291**
Automotive (Net investments[1])	149	167
Defence	95	96
Other	14	28

[1] Total capital expenditure minus payments of €25 million received from customers (previous year: €19 million).

Advance payments at Rheinmetall Automotive reduced

In 2016, the Automotive sector invested €149 million in intangible assets and property, plant and equipment, which was around €18 million less than in the previous year. On the one hand, the decline in capital expenditure resulted from lower volume for infrastructure measures (including expansion of the foundry at the Niederrhein plant and plant buildings in the Czech Republic for the Aftermarket division). On the other, capital expenditure was allocated in a more optimized manner with the aim of improving liquidity and increasing capital productivity. In 2016, capital expenditures included capitalized development costs of €13 million, compared with €9 million in the previous year. The investment ratio amounted to 5.6% of sales, compared to 6.4% in the previous year.

Rheinmetall Automotive's capital expenditures in 2016 were divided between Germany and abroad at a ratio of 45% to 55%, compared to 40% to 60% in the previous year. The rise in the German portion resulted from higher capital expenditure at companies in the Mechatronics and Aftermarket divisions, while capital expenditure abroad, primarily on the North and South American sites, was scaled back.

In fiscal 2016, as in the previous year, investing activities focused on the Mechatronics division. The division's share of Rheinmetall Automotive's capital expenditure volume rose to 55% (previous year: 49%), while capital expenditure in the Hardparts division was scaled back to 38% (previous year: 43%). The Aftermarket division's share of the Automotive sector's capital expenditure was 7% (previous year: 8%).

In 2016, the volume of capital expenditure in the Mechatronics division remained at the previous year's level at €82 million. By optimizing production concepts and using a worldwide production network, it was possible to limit the investment ratio to 5.4%. Capital expenditure was chiefly allocated to expansion of capacity due to new customer projects and to the industrialization of new products. Expansion of the foundry at Pierburg's Niederrhein site was concluded in 2016. Accordingly, the capital expenditure on this project was lower than that of the previous year. The focus of other capital expenditure in the division was on procuring machinery and systems to produce exhaust gas recirculation and solenoid valves, for example in our companies in the USA and Spain.

The investing activities at Pump Technology continued to be strongly characterized by the trend towards variably adjustable technology products that contribute to reducing consumption. In particular, capital expenditure was allocated to the production of variable oil and water pumps – for example in France and Mexico – in order to meet the increased customer demand. The industrialization of the first customer orders was initiated for the newly developed electric vacuum pump and electric oil pump product groups.

Key capital expenditure in the Mechatronics division

Country – location	Measure
Germany – Neuss	Procurement and general overhaul of casting cells
France – Thionville	Production line, including tools for variable water pumps
Spain – Abadiano	Assembly line, including tools for exhaust gas recirculation valves
Czech Republic – Ústí	Systems/tools for the production of actuators/the assembly of exhaust gas flaps
USA – Fountain Inn	Assembly line, including tools for exhaust gas recirculation valves
Mexico – Celaya	Production line, including tools for variable oil pumps
China – Shanghai	Systems and tools for the production of coils

In fiscal 2016, the Hardparts division scaled back the previous year's high level of capital expenditure on property, plant and equipment and intangible assets considerably to €56 million. All of the units contributed to the decrease, although the two piston units bore a disproportionately large share of it. In business with small-bore pistons, the expansion of capacity for steel pistons in Germany was continued to cover the rising demand. In the Czech Republic, the extension and development of the site was continued with significant investment in new buildings and production facilities. In Brazil and particularly the USA, existing systems were modernized to accept new products. The level of capital expenditure was significantly scaled back in business with large-bore pistons; modernization of the American site was the only measure concluded. As in the previous year, capital expenditure in business with bearings focused on the restructuring of sites in India, which has now largely been concluded.

Key capital expenditure in the Hardparts division

Country – location	Measure
Germany – Neckarsulm	Procurement of a production line for steel pistons for passenger cars
Czech Republic – Ústí	Procurement of a production line for steel pistons for passenger cars
Czech Republic – Ústí	Expansion of buildings/systems for the production of aluminum pistons for passenger cars and trucks
USA – Marinette	Modernization of production lines for aluminum pistons for passenger cars
India – Supa	Preparation and expansion of a plant for the production of primary materials for plain bearings

Capital expenditure in the Aftermarket division of €10 million (previous year: €14 million) related primarily to the continuing construction of a new logistics center in Neuenstadt and the associated equipment as well as the commissioning of an automated small parts store, also at the Neuenstadt site. Both projects were successfully concluded in 2016. In the Czech Republic, systems and tools were procured for the new production plant for pistons for the replacement parts market. In addition, investments were made in software licenses and in factory and office equipment in various companies within the division.

Economic report
Capital expenditures

Rheinmetall Defence's capital expenditure volume at the previous year's level

In 2016, Rheinmetall Defence invested a total of €95 million (previous year: €96 million) in property, plant and equipment and intangible assets. The investment ratio was thus 3.2%, compared with 3.7% in the previous year. Of the capital expenditure volume, €18 million (previous year: €15 million) 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.

Funds totaling €37 million (previous year: €39 million) were invested in the Weapon and Ammunition division. This related, in particular, to the new construction of two rolling mills to expand capacity for the production of propellant powder in Aschau. As a result, the site now has rolling capacity provided by six rolling mills geared towards the current order backlog and expected future order intake. Furthermore, the sites in Aschau and Wellington (South Africa) invested in expanding their plants to restore production capacity following fire damage in 2015. In Neulüß, the plant site's boundary security was modernized with the aim, in particular, of preventing access by third parties and/or sabotage attempts. Further expansion of capacity began in Italy with the construction of a standalone filling system for polymer-bonded explosives (PBX) and the expansion of mixing and filling capacity. The total volume of capital expenditure on this modern PBX equipment over the next two years will be in the double-digit millions of euros range. Furthermore, 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.

Key capital expenditure in the Weapon and Ammunition division

Country – location	Measure
Germany – Aschau, Neulüß	Rolling mills; modernization of the plant site's boundary security
Italy – Domusnovas	Filling system for polymer-bonded explosives (PBX)
South Africa – Boksburg, Wellington	Expansion and rationalization of infrastructure, production, quality assurance and testing capacity; nitrocellulose system

The total capital expenditure volume of the Electronic Solutions division amounted to €32 million in the period under review (previous year: €29 million). Besides modernization measures, the division largely focused capital expenditure on developing and continuing new technological products and systems. Rheinmetall Defence Electronics invested in three demonstrators for the LANCE tower to enable it to present new technical solutions relating to the Land 400 program to international customers such as Australia. These functional demonstrators enable the customer to test the features and capabilities of the tower during the testing phase. As far as pure development was concerned, the areas of focus in 2016 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 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 the previous year, 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 began on upgrading fire protection technology for the simulation technology development, testing and production area. Furthermore, a walk-in climate chamber that takes account of the quality assurance requirements of equipment and systems was commissioned.

Key capital expenditure in the Electronic Solutions division

Country – location	Measure
Germany – Bremen	Site development; LANCE demonstrators and development work in the area of simulation and technology
Germany – Bremen	Development of a radar with greater range

The Vehicle Systems division invested a total of €25 million in 2016, compared with €28 million in the previous year. In the area of tactical vehicles, capital expenditure principally focused on the prototype of the new Lynx infantry fighting vehicle and demonstration vehicles for the wheeled Boxer CRV (combat reconnaissance vehicle). The Lynx infantry fighting vehicle belongs to a new family of modular vehicles with a large number of standardized parts that enable the vehicle classes to be configured for various purposes. This infantry fighting vehicle was presented at Eurosatory 2016 and 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.

The wheeled Boxer combat reconnaissance vehicle is the newest version of the 8x8 armored transport vehicle with the Rheinmetall LANCE tower, a 35 mm automatic cannon and management and reconnaissance architecture from Northrop Grumman. Prototypes of the Boxer are being used in the testing phase of the Australian armed forces' Land 400 procurement program.

With regard to logistics vehicles, capital expenditure focused on enhancing a new modular generation of military trucks in the HX 2 series and constructing a testing station. 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. Every vehicle produced in Vienna, including civil special-purpose vehicles, is subjected to a standardized testing program following the production run. To this end, investments were made in a new testing station that can also be used to test vehicles with low ground clearance, very heavy military vehicles, vehicles with five axles and all-wheel drive or special-purpose vehicles with wide axles or center distances with special dimensions.

Key capital expenditure in the Vehicle Systems division

Country – location	Measure
Germany – Kiel, Kassel and Unterlüß	LANCE tower; Lynx prototype; wheeled Boxer CRV (combat reconnaissance vehicle)
Austria – Vienna	Development of the new generation of military trucks; testing station

Economic report
Financing

Principles and aims of financial management

Apart from Group financing, the financial management of the Rheinmetall Group includes project financing, particularly in the Defence sector. Financial management is also concerned with controlling financial risks such as the liquidity risk or the impact of market price changes on the Group's operating result. 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.

Rheinmetall AG bears central responsibility for the financial management of the Rheinmetall Group and in this role defines the general conditions in the form of financial 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, such as compliance with conditions in strategic loan agreements.

The primary objective of financial management is ensuring the Group is solvent at all times. To this end, as part of liquidity management it pursues the aims firstly of maintaining freely available liquidity and secondly of disposing of sufficient bilateral and firmly committed credit facilities in order to be able to compensate for short-term fluctuations from the operating business. Potentially negative effects resulting from changes in market prices in the area of foreign currencies, interest rates or commodities 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

Rheinmetall has a broadly diversified financing portfolio as regards terms and investors. Key elements here are the €500 million bond due in September 2017 and a syndicated credit facility, also for €500 million. In addition to this, the portfolio is rounded off by bilateral credit facilities with banks, the commercial paper program and various promissory notes. Of the around €2.9 billion of bilateral credit facilities committed, €58 million had been utilized as at December 31, 2016 on account of the utilization of cash and around €1.4 billion for providing guarantees. Besides the traditional financing programs, Rheinmetall regularly uses its asset-backed securities program, through which receivables are sold without recourse, in order to minimize its counterparty risk and optimize its liquidity position. The volume of receivables sold under the asset-backed securities program came to €160 million as of the balance sheet date.

Financing instruments € million

<table>
<tr><th></th><th>Term</th><th>Nominal</th><th>Financing source</th></tr>
<tr><td>Bond</td><td>2017</td><td>500</td><td>Capital market investors</td></tr>
<tr><td>Promissory notes</td><td>2019-2024</td><td>122</td><td>International financial institutions</td></tr>
<tr><td>Commercial paper (CP)</td><td>Indefinite</td><td rowspan="2">500</td><td>Money market investors</td></tr>
<tr><td>Syndicated loan</td><td>2021</td><td>13 banks
(back-up line for the commercial paper program)</td></tr>
<tr><td>Bilateral credit facilities
(Cash and guarantee credit)</td><td>2017-2018</td><td>2,924</td><td>Banks and insurance companies</td></tr>
<tr><td>Asset-backed securities program</td><td>2018</td><td>170</td><td>Money market investors and banks</td></tr>
<tr><td>Development loan from the
European Investment Bank (EIB)</td><td>2017-2023</td><td>250</td><td>Lending commitment (drawdown mid-2017)</td></tr>
</table>

Financing activities in 2016

In 2016, Rheinmetall continued the activities it had initiated in 2014 to replace expiring financing in good time and thus to continue to ensure the financing of the Group over the long term.

Rheinmetall decided not to finance its pension obligations in Germany exclusively through provisions in the future, but rather to build up trust assets gradually in order to service the payments arising from this. A Group trust solution in the form of a contractual trust arrangement (CTA) was selected for this purpose and trust assets of €30 million were allocated for the first time in January 2016.

In 2016, the first of two extension options was exercised in relation to the syndicated credit facility for €500 million recently agreed in 2015 that serves as a back-up credit facility for the €500 million commercial paper program. The new maturity date is thus September 2021.

In October 2016, a loan of €250 million was signed off by the European Investment Bank (EIB). By way of such loans, the EIB, together with the European Fund for Strategic Investments (EFSI), supports research and development activities by companies in member states of the European Union. Through this development loan with favorable terms, Rheinmetall is ensuring that the high degree of innovative strength in the Automotive sector is assured over the long term through financing for research and development expenditure. On account of Rheinmetall's good liquidity situation it was agreed not to draw down the loan funds immediately, but rather in mid-2017.

Also in October 2016, promissory note loans with a nominal value of €57 million were repurchased from various lenders at nominal value thanks to the good liquidity position. Rheinmetall traditionally has a good liquidity position and thus used this to reduce gross debt in the fourth quarter.

As part of its financial diversification strategy, Rheinmetall succeeded in winning a new lender in form of the EIB, thereby further reducing the risk of dependency on individual lenders or instruments and relieving existing credit programs. Moreover, Rheinmetall is now financed over the long term on attractive terms thanks to the promissory note loan agreed in 2014, the syndicated syndicated credit facility set up in 2015 and the EIB loan until 2023/24 signed off in 2016. Combined with the capital increase implemented in 2015, the financing portfolio constitutes a solid basis for Rheinmetall's growth strategy.

Economic report
Financing

Rheinmetall's rating

Rheinmetall has had an issuer rating from the rating agency Moody's since 1999. Following the difficult economic year in 2014, Moody's left the rating unchanged at Ba1 in 2015, although its assessment of Rheinmetall's future business performance changed to "negative". In April 2016, the agency raised the outlook to "stable" again.

Rheinmetall's rating

	2016	2015	2014	2013	2012
Agency	Moody's	Moody's	Moody's	Moody's	Moody's
Long-term rating	Ba1	Ba1	Ba1	Ba1	Baa3
Outlook	stable	negative	negative	stable	negative
Since	Apr. 6, 2016	Dec. 19, 2014	Dec. 19, 2014	Oct. 9, 2013	Nov. 16, 2012

In this new assessment, Moody's is acknowledging the improved credit ratios resulting from the combination of good operating performance in fiscal 2015 and the increased equity ratio following the capital increase implemented at the end of 2015.

Moody's also gave a positive assessment of the fact that the business model in the Automotive sector is very robust and the business prospects for the Defence sector are significantly more positive than recently estimated.

The first allocation to the contractual trust arrangement (CTA), which represented the first step in the gradual funding of German pension obligations, was expressly acknowledged. This is viewed as further evidence of a conservative financial policy, as the large pension provisions on Rheinmetall's balance sheet constitute debt under Moody's definition of indebtedness, thus causing the adjusted debt ratio to deteriorate in relation to operating performance.

Economic report
Notes on Rheinmetall AG

Earnings situation of Rheinmetall AG

The single-entity financial statements of Rheinmetall AG for fiscal 2016 have been prepared in accordance with the accounting regulations of the German Commercial Code (HGB), with due regard to the additional provisions of the German Stock Corporation Act (AktG), and have been issued with an unqualified auditor's opinion by the auditor, PricewaterhouseCoopers Aktiengesellschaft 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. For the first time sales for fiscal 2016 were reported in line with the amendments to the German Commercial Code (HGB) resulting from the German Act implementing the EU Accounting Directive (BilRuG).

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

	2016	2015
Investment income	178	151
Net interest	(11)	(28)
Sales	56	0
Other operational income	49	95
Personnel expenses	33	31
Other expenses	149	122
EBT	90	65
Taxes on income and revenue	(22)	(8)
Net profit for the year	68	57
Changes in retained earnings	(3)	(9)
Net earnings	65	48

Net investment income of €178 million was achieved in fiscal 2016, compared with €151 million in the previous year. The Defence sector accounted for €95 million of this (previous year: €65 million). The Automotive sector achieved net investment income of €83 million (previous year: €85 million).

Net interest from central financing improved by €17 million to €-11 million, compared with €-28 million in the previous year. This improvement in the result is essentially due to decreased interest expense relating to interest on pension provisions and the improved result from intra-Group financing.

In connection with the performance of the duties of a holding company, other operating income and expenses were incurred amounting to a net figure of €-100 million (previous year: €-27 million), along with personnel expenses of €33 million (previous year: €31 million). The overall year-on-year reduction in this net balance by €75 million mainly resulted from write-downs on financial assets taken in the fiscal year amounting to €68 million, compared to €25 million in the previous year.

Earnings before taxes amounted to €90 million (previous year: €65 million). Tax expenses amounted to €22 million in the year under review (previous year: €8 million). After deduction of taxes, there was net income of €68 million for fiscal 2016 (previous year: €57 million). After appropriations to retained earnings, net earnings of €65 million (previous year: €48 million) were reported.

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Notes on Rheinmetall AG

Proposed dividend

The Executive and Supervisory Boards of Rheinmetall AG are to propose to the Annual General Meeting on May 9, 2017 that the net earnings be used to pay a dividend of €1.45 per share, whereby the treasury shares held by Rheinmetall AG as treasury stock (as at December 31, 2016: 870,788; previous year: 1,035,785) are not entitled to a dividend.

Asset and financial situation of Rheinmetall AG

The asset situation of Rheinmetall AG is largely shaped 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 payables owed to Group companies.

Total assets of Rheinmetall AG rose by €479 million to €2,570 million. This was mainly due to a €469 million increase in receivables from affiliated companies.

Financial assets include shares in affiliated companies in the amount of €1,019 million (previous year: €1,048 million). This represents a share in total assets of 40% (previous year: 50%). Receivables from and liabilities to affiliated companies amounted to €900 million (previous year: €431 million) and to €949 million (previous year: €433 million) respectively. They account for 35% and 37% of total assets respectively.

Of the total assets of €2,570 million as at December 31, 2016 (previous year: €2,091 million), €842 million (previous year: €811 million) is financed from equity. The equity ratio decreased from 39% to 33% in the year under review. In equity, the decline of €47 million due to the dividend payment for 2015 and the reduction in holdings of treasury shares by €6 million were offset by net income for the year of €68 million. Liabilities as at December 31, 2016 were up €454 million year-on-year at €1,599 million. Of this increase, €516 million was the result of higher liabilities to subsidiaries.

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

	12/31/2016	12/31/2015
Fixed assets		
Intangible assets, property, plant and equipment	38	36
Financial assets	1,033	1,065
	1,071	1,101
Current assets		
Receivables from affiliated companies	900	431
Other receivables, other assets	238	178
Cash in hand	361	381
	1,499	990
Total assets	2,570	2,091

	12/31/2016	12/31/2015
Equity	842	811
Provisions	129	135
Liabilities		
Bond	500	500
Liabilities due to banks	122	179
Liabilities to affiliated companies	949	433
Other liabilities	28	33
	1,599	1,145
Total liabilities	2,570	2,091

Economic report
Risks and opportunities

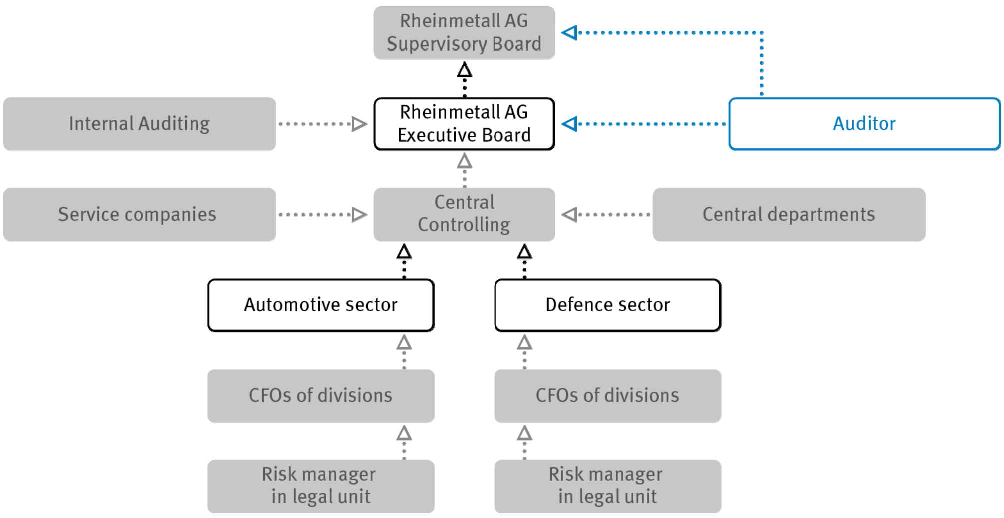
Risk management system

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

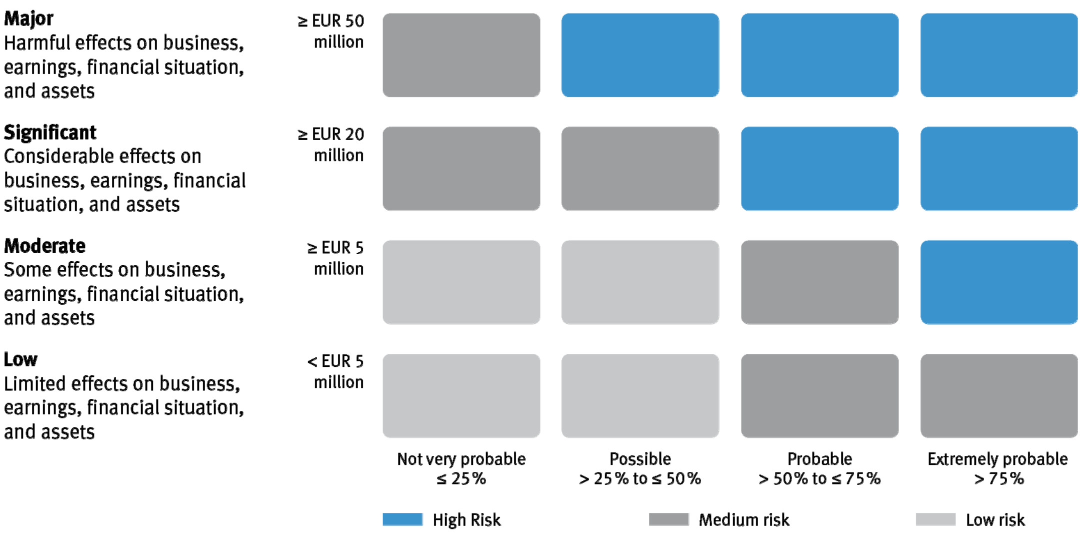


Material risk areas

Overview of key corporate risks

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

Risk classes



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 USA 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. Due to 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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Risks and opportunities

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 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. Disturbances 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 guidelines and adequate precautions to protect against the loss of data, unauthorized access to data or misuse of data. Regular investment ensures 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.

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. Pension amounts are subject to increases that are fixed, variable or linked to inflation. The development of inflation and longevity represents 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 market risks, especially interest rate, spread and share risks. Investment strategies for pension assets as regards value risk and yield expectations are geared towards the maturity structure of the covered obligations.

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.

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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. After the hearing before the 3rd commercial court of the district court of Düsseldorf on July 12, 2012, the court set the amount of cash compensation per share at €36.44 in its decision on August 29, 2012. Rheinmetall lodged an appeal against this decision at the Düsseldorf Higher Regional Court on October 12, 2012. On September 3, 2014, the Higher Regional Court announced that in parallel proceedings the Senate had submitted the question of the valuation standards to be applied, which is also relevant to this case, to the Federal Court of Justice for a decision. The Federal Court of Justice ruled on September 29, 2015 that the valuation standard IDW S1, as amended in 2005, also applies to previous cases, as it rectifies errors and inadequacies in IDW S1 as amended in 2000 and thus comes closer to the “true” value. The Düsseldorf Higher Regional Court asked the parties to comment on the decision of the Federal Court of Justice and gave Rheinmetall a deadline of March 24, 2016 and the joint representative of the minority shareholders a deadline of April 29, 2016 for this. 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. This decision was served on Rheinmetall on January 11, 2017 and published by the Company in the Federal Gazette on January 17, 2017 in accordance with Section 14 of the German Award Proceedings Act (SpruchG). Settlement of the subsequent payment of €4.37 per share plus interest to the external shareholders has been initiated.

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 USA 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. It is designed to prevent any liability risks, risks of incurring a penalty or a fine, and reputational risks, as well as other financial disadvantages, loss or damage that the Company may incur as a result of misconduct or violations of the law.

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 result 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 with 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 at least September 2021, the promissory note loans for €122 million issued in 2014 for five, seven and ten years and the bond that is due to mature in 2017. To further hedge against future liquidity risks, in October 2016 Rheinmetall took up a development loan with favorable terms from the European Investment Bank that is due for disbursement 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 maximum rate of between 50% and 70%, to allow adequate scope for future or unplanned guarantee volumes.

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 banking 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 long-term financing with the bond and the promissory note loans is 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 largely offset 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.

Risks in the Automotive sector

In times of fiercer competition as a result of overcapacity in the triad markets, unexpected changes in regular order placement, shifts in the product range, tighter competition and increasing price pressure are all possibilities. Potential outcomes include fluctuations in prices, volumes and margins.

In parallel to the shorter product life cycles, vehicle manufacturers find themselves exposed to fierce competitive, innovative and cost reduction constraints, which they then pass on to their suppliers. Companies in the Automotive sector are limiting the impact of these trends 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 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.

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. The possibility that some automotive manufacturers will no longer pursue this drive concept or at least limit its use to engines with a capacity of over 2 liters cannot be ruled out. Upheaval is expected in the automotive and automotive supply industries due, among other things, to new drive concepts. Hybridization and electromobility require a large number of new vehicle components, making it necessary to redefine the classic technology and supply chain relationships between manufacturers and suppliers.

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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.

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 a decline in operating activities and/or reduce the value of investments.

Opportunities in the Automotive sector

The global automotive market is expected to continue to grow in the future. Thus, for example, in their January 2017 forecast for the next five years the experts at IHS Automotive anticipate an average increase of 2.1% per year in the production of passenger cars and light commercial vehicles. We also see further opportunities for our Company in addition to this generally positive outlook for international automotive production.

Technological opportunities – 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.

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. Building on this high level of technological expertise, Rheinmetall Automotive will further exploit its capacity for innovation.

However, the role of the combustion engine is set to 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. As a specialist in the field of drive systems we see far more opportunities than risks in any extended portfolio. For example, cast components for battery trays in electric vehicles or complex cooled aluminum housing for electric drives are currently already in development.

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 or in an extreme case by using range extenders developed in-house. Another key starting point for future vehicle concepts is light construction, which we are addressing with aluminum structural components and chassis components.

Geographical opportunities – Rheinmetall Automotive intends to continue optimizing its business activities from a geographical viewpoint in 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.

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.

Opportunities thanks to strong brands – A strong presence on the replacement parts market for automotive drive systems helps to stabilize our business activities. We have a strong position on the global replacement parts market for drive systems because we sell well-known premium brands such as Kolbenschmidt, Pierburg and TRW via the Aftermarket division and have a distribution network that we have built up specifically, as well as offering attractive margins. One of our core assets is an efficient IT system, which allows us to deliver the products ordered by our customers at short notice. The product packages we create for our customers contain our own products and third-party products, which helps us to offer our customers a "one-stop shop" for all parts and tools.

Economic report
Risks and opportunities

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 defense. 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 73% 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.

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 defense 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: Due to constant changes in national and international security and defense 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.

We see additional opportunities arising for our Company over the next few years from the NATO states' voluntary commitment in September 2014 to each scale up their defense budgets to 2% of their respective gross domestic products within a decade.

Opportunities thanks to further internationalization – Despite a recent moderate rise in defense budgets, including those of countries that have traditionally been important Rheinmetall customers, Defense'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 defense 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.

Economic report
Risks and opportunities

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 the 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 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.

Auditing and monitoring – As an authority that is independent in terms of instructions and processes in line with a guideline promulgated by the Executive Board, Internal Auditing examines workflows, structures and procedures for their suitability, effectiveness, security and correctness 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 the auditing companies as mandated by Rheinmetall AG. Risks identified and weaknesses discovered during these audits are promptly eliminated by the management responsible. The Executive Board and Audit Committee of the Supervisory Board are informed of the results of the audit and of the implementation status of improvement measures in a review.

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 Aktiengesellschaft Wirtschaftsprüfungsgesellschaft, examined the early risk identification system of the Rheinmetall Group to ensure that it complies with the provisions of the Stock Corporation Act 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 2016 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 convinced 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
Report on expected developments

Robust economic development despite increased political uncertainties

In spite of the political uncertainties brought about by Brexit and the new US administration, the International Monetary Fund (IMF) sees the strong possibility of an upturn in the global economy in 2017. In their latest "World Economic Outlook Update", the IMF experts forecast global economic growth of 3.4%. The Monetary Fund expects positive impetus due, among other things, to continuing expansive monetary policy, robust economic development in China and fiscal policy measures such as those announced by new US President Donald Trump. According to the IMF forecast, the mature economies' economic output will grow by 1.9% in 2017. In the USA, the economy could grow somewhat more than expected due, in particular, to higher capital expenditure on infrastructure, leading to growth of 2.3%.

According to the IMF, economic recovery in the euro region will continue with a moderate 1.6% increase in economic output. However, the parliamentary elections due to take place in Germany, France, Italy and the Netherlands in 2017 are each associated with a high degree of uncertainty, making predictions regarding the future direction of economic policy in the euro zone difficult. For Germany, the IMF nevertheless expects a 1.5% increase in gross domestic product, which more or less tallies with the German government's Annual Economic Report for 2017, which predicts growth of 1.4% for the German economy. Nonetheless, the mood in German boardrooms dampened slightly at the beginning of the year: The ifo business climate index fell to 109.8 points in January 2017, compared to 111.0 points in December 2016. Although companies were more satisfied with their current business situation again, they are less optimistic about the coming six months.

In spite of the Brexit decision, the British economy remained in good shape at the start of 2017, causing the IMF to raise its economic forecast for the United Kingdom by 0.4 percentage points to 1.5%. The IMF's growth forecast for China is also considerably more optimistic: Economic output there is set to grow by 6.5% in 2017, representing an increase of 0.3 percentage points against the IMF's projection from October 2016. The International Monetary Fund had a more skeptical view of the prospects of other major emerging countries. For example, its projections for Brazil and Mexico were revised sharply downwards. In the case of Mexico, in particular, protectionist measures – as announced by US President Donald Trump – could adversely affect economic development. For the developing and emerging countries as a whole, the IMF projects an expansion of 4.5% in 2017. Growth in India is predicted to be 7.2% in 2017, while the economic situation in Brazil remains tense with slight growth of only 0.2%. The IMF forecast for Mexico was lowered by 0.6 percentage points to 1.7%. In contrast, the positive trend in Russia is continuing on account of the recovery in energy prices, leading to growth of 1.1%.

Increasing risks and a high degree of forecasting uncertainty due to Brexit and the US election

In her keynote speech in January 2017, British Prime Minister Theresa May presented a 12-point plan for a "hard Brexit". "Hard Brexit" means no partial or associated membership of the EU and no freedom of movement within the EU single market either. The United Kingdom also intends to leave the European single market and to no longer fall under the EU's jurisdiction. In January, the United Kingdom's highest court, the Supreme Court, ruled that the British parliament must be involved in the Brexit negotiations and approve the government's related exit plan. Although this represents more of a formal legal hurdle – the parliamentary majority is not challenging the people's vote – difficult negotiations and an arduous path are already looming ahead of the final exit. Despite this, Rheinmetall does not foresee having to fear any direct negative effects from Brexit.

In the Automotive sector only a very small part of production is supplied directly to the United Kingdom and in the Defence business decisions on major projects are in any case primarily made based on clearly defined military requirement profiles.

It is currently also difficult to assess the economic impact of the election of Donald Trump as the 45th president of the USA. With reference to the new US government, IMF Chief Economist Maurice Obstfeld said in January 2017: "There is a wider than usual range of upside and downside risks to this forecast." Trump's announcements could open up opportunities but also conjure up major risks such as trade wars. Due to the expectation of higher government spending and lower taxes, the IMF gave a somewhat better assessment of the US economy's prospects over the short term. On the other hand, the long-term effects of the change of government in the USA were still "completely unclear" at the start of 2017. However, the increasing risks are not only the result of foreseeable changes of course in Washington, but also of the overall growing aversion to free trade, immigration and international engagement in the USA and Europe. The IMF also showed concern regarding the high levels of private and public indebtedness in many parts of the world.

Future mobility: Technological and regulatory challenges

Following a good year for the automotive industry in 2016, the growth curve is expected to level off in 2017. According to estimates from analysts at IHS Automotive, in the current fiscal year growth in the three largest automotive markets of China, NAFTA and Western Europe will be slightly under or slightly over that of the previous year. On the other hand, Brazil and Russia may be able to end their downward trajectory following years of economic decline.

IHS Automotive anticipates slight growth of 0.9% in 2017 in Rheinmetall Automotive's most important segment of passenger cars and light commercial vehicles up to 6.0 t, to around 93.5 million units worldwide. The following table provides an overview of the forecast for 2017 in the regions that are relevant to us.

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

Country	2017	2016	Change in %
World	93.54	92.68	0.9
Western Europe (incl. Germany)	16.34	16.15	1.2
Germany	5.93	5.97	-0.7
Eastern Europe	5.52	5.34	3.4
Russian Federation	1.32	1.19	10.9
NAFTA	17.61	17.85	-1.3
USA	11.36	11.99	-5.3
Brazil	2.14	2.11	1.4
Asia (incl. Japan)	50.02	49.34	1.4
Japan	8.91	8.72	2.2
China	26.78	26.79	0.0
India	4.35	4.13	5.3

Source: IHS Automotive as at January 2017

Economic report
Report on expected developments

Both Brexit and the statements from the new US President with respect to non-American automotive manufacturers and Mexico as a production location are causing uncertainty in the industry. However, the specific effects on the automotive industry are difficult to predict. In the opinion of the Association of the German Automotive Industry (VDA), the Brexit vote will have a noticeable negative effect on new passenger car registrations in the United Kingdom in 2017. In the medium to long term there could also be negative consequences for the Western European market, particularly in the case of a hard Brexit. At the VDA's New Year reception, the President of the Association, Matthias Wissmann, also emphasized the crucial importance of good trade relations between Europe and the USA. "Trade is a two-way street, not a one-way street. Anyone who starts protectionist measures is certain to shoot an own goal over the long term," Wissmann stressed.

Positive prognosis for truck engine production

The analysts at IHS Automotive are optimistic for 2017 as regards the large truck markets. The only exception is Western Europe, which may just fail to reach the previous year's production level. In contrast, Brazil could grow once again (+14.0%). In total, IHS Automotive predicts growth of 3.2% in worldwide production of engines for heavy commercial vehicles over 6.0 t. In absolute terms this corresponds to around 2.85 million units.

Production of heavy commercial vehicles over 6.0 t in selected countries Thousands of units

Country	2017	2016	Change in %
World	2,845	2,757	3.2
Western Europe (incl. Germany)	482	485	-0.6
Germany	160	159	0.6
NAFTA	495	456	8.6
USA	329	301	9.3
Brazil	65	57	14.0
Asia (incl. Japan)	539	511	5.5
Japan	288	293	-1.7
China	844	830	1.7
India	399	374	6.7

Source: IHS Automotive as at January 2017

Electrified drive train harbors more opportunities than risks

The regulatory trend towards reducing emissions of harmful substances is increasingly affecting all areas of mobility, a fact highlighted by the European Union's draft environmental protection treaty, under which carbon dioxide limits are also to be set for trucks for the first time. The EU Commission's 2016 initiative initially provides for carbon dioxide emissions and fuel consumption by trucks to be precisely determined using a new test procedure and subsequently for specific limits to be set. Although a European standard regulating emissions of various harmful substances such as nitrogen dioxide (NO_2) already exists for trucks, up to now it has not covered carbon dioxide.

Apart from further optimizing the combustion engine, at Rheinmetall Automotive we will align our production portfolio even more heavily with electromobility in the coming years. The German manufacturers alone will expand their range of electric vehicles to almost 100 models by 2020, thereby more than trebling it. Rheinmetall Automotive will rigorously exploit this trend. By as soon as the start of the next decade, more than half of our sales are to come from the field of electrification of the drive train. Numerous innovative components for hybrid and fully electric drives are currently being developed and tested. Nevertheless, in our opinion the age of the combustion engine is far from over. Around the world, increasingly stringent regulations on exhaust gases ensure that technological development aimed at reducing fuel consumption and harmful emissions is continuing and producing further innovations. In this process, various technologies compete with or complement one another, as in hybrid vehicles. Despite the negative headlines in the last few years, we believe that even the diesel engine will continue to exist as an option for drive systems. 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, and jointly advance the development of the relevant components.

Continuing trend towards modernization – Trump's political course unclear

Having already risen slightly to USD 1,581 billion in 2016, there is reason to conclude that this trend in global defense spending will continue in 2017 and in subsequent years, not least due to the change in government in the USA. Initial statements from US President Trump indicate that the new US administration will invest not only in modernizing infrastructure, but increasingly also in national security. Based on the original budget plans in the USA, defense analysts at IHS Jane's expect the total volume of the global defense sector to reach at least the previous year's level in 2017. Although current planning stipulates that the USA will leave its defense spending at the previous year's level (USD 637 billion) at USD 632 billion in 2017, it remains to be seen whether US President Trump will change this policy at short notice.

Furthermore, developments in other key regions point to further growth in global defense spending. For instance, IHS Jane's expects India to increase its defense budget from around USD 52 billion to USD 55 billion in 2017. Indian military spending would thereby exceed Britain's defense budget.

Defense budgets of selected countries

Country	Currency	2017	2016	Change in %
Germany	€ billion	37.01	34.29	7.9
World	MrdUSD	1,583.56	1,580.62	0.2
USA	MrdUSD	631.55	636.68	-0.8
Russian Federation	MrdUSD	43.81	55.75	-21.4
India	MrdUSD	55.01	51.88	6.0
Great Britain	MrdUSD	48.21	47.96	0.5
France	MrdUSD	44.10	43.84	0.6
Australia	MrdUSD	28.81	27.56	4.5
UAE (United Arab Emirates)	MrdUSD	19.76	18.66	5.9
Algeria	MrdUSD	10.00	10.47	-4.5
Netherlands	MrdUSD	8.81	8.75	0.7

Sources: Federal Ministry of Defense – "Detailed plan 14/2017 compared with budget for 2016"; IHS Jane's, as at January 2017

Economic report

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In view of the growing requirements of the German armed forces, the German government has announced that it will invest more heavily in personnel as well as in the modernization of military equipment. In doing so, the Federal Republic of Germany is not only reacting to changing threat scenarios around the world, but also taking account of its NATO obligations. The alliance agreed back in 2014 that the defense spending of all member states is to reach the mark of at least 2% of gross domestic product within a decade. Up to now Germany has failed to adhere to the military alliance's agreement, although the share of GDP has already risen from 1.19% in 2015 to 1.22% in 2016. Plans provide for the defense budget to climb to €39.2 billion by 2020. Other NATO states will also have to increase their spending in order to meet the quota. To date, only the USA, Britain, Greece, Estonia and Poland exceed this amount. In view of this, at the end of 2016 newly elected US President Donald Trump called the mainstays of the military alliance into question should the alliance partners not invest more heavily in their defense capabilities. The USA currently spends 3.5% of its gross domestic product on defense.

In a report published in January 2017, the German Parliamentary Commissioner for the Armed Forces, Hans-Peter Bartels, called for reform of the German armed forces to be accelerated. While German Minister of Defence Ursula von der Leyen is planning around 7,000 additional service posts in the armed forces by 2023, Bartels calls for as many as 14,300 new service posts. In his opinion, it is above all necessary to fill gaps where there is a lack of equipment far more quickly. The Chairman of the German Federal Armed Forces Association (DBwV), André Wüstner, also complains about a need for modernization and called for the defense budget to be increased, also in order to send a signal to America.

Opportunities for further growth offered by Germany as an individual market

Changes in the overall global security situation, a modernization backlog in the German armed forces and the obligation towards NATO to increase the defense budget will lead to an increase in German military spending over the coming years. As a leading European systems supplier for defense technology and a long-standing industrial partner for large procurement projects of the German armed forces, Rheinmetall Defence is in a good starting position to benefit from this development on a long-term basis. At the same time, our targeted internationalization strategy has enabled us to participate increasingly in military modernization programs, including outside Germany and NATO. As a defense technology company, we are aware of our responsibility and will pursue our international market activities only in accordance with the general conditions of foreign policy and security policy as set out by the government. For Rheinmetall Defence we see appropriate conditions for further international growth 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.

Through innovative developments Rheinmetall Defence is ensuring that it will be able to exploit all market opportunities in the future, too. An example of such innovation is the new Lynx infantry fighting vehicle, which was introduced to industry professionals for the first time in 2016. This progressive modular family of vehicles is characterized by a very high degree of agility, effectiveness and performance capability.

Executive Board statement on expected development in 2017

Sales growth in both corporate sectors – We expect the Rheinmetall Group to continue its growth course in fiscal 2017. Annual Group sales are expected to grow organically by 4% to 5% in the current fiscal year, based on €5.6 billion in 2016. We expect sales to increase in both corporate sectors. We anticipate that sales growth in the Automotive sector will outstrip the rise in global automotive production currently forecast by experts. Recent forecasts from February 2017 by IHS Automotive experts in respect of light vehicles (vehicles up to 6 t) predict that production will grow by 1.6% year-on-year to total around 94.5 million vehicles in 2017. Based on the slight increase in global military spending anticipated by the IHS experts, the Defence sector will also perform above average. However, in the Defence business we only expect to experience a substantial growth phase like the one achieved in the last fiscal year as of 2018 again on account of the planned project terms.

Sales – 2017 forecast

		Forecast 2017		2016
Rheinmetall Group	Year-on-year growth in %	4 - 5	€ billion	5.6
Automotive	Year-on-year growth in %	3 - 4	€ billion	2.7
Defence	Year-on-year growth in %	5 - 6	€ billion	2.9

Sales performance in the Automotive sector is strongly determined by economic development in the key automotive markets of Europe, North and South America and Asia. Based on current expert forecasts regarding trends in global automotive production this year, we expect Rheinmetall Automotive to achieve sales growth of 3% to 4%.

We project sales growth of 5% to 6% for our Defence sector in fiscal 2017. As in the previous year, sales expectations for 2017 are largely assured based on relatively high coverage through the existing order backlog.

Earnings are also expected to increase further in 2017 – To secure our Company's future growth and gain a foothold in attractive markets relating to our core businesses of mobility and security, we have initiated activities aimed at developing and marketing new product ideas under the umbrella of a newly founded innovation company. In the current fiscal year we will spend a total amount in the low double-digit millions of euros range on the technical implementation and marketing of these innovations at the expense of our operating result. We will also invest a similar amount in machinery and equipment in this connection. These expenses, which are accounted for in our earnings forecast, are allocable to the Group holding company and both sectors.

Operating result – 2017 forecast

		Forecast 2017		2016
Rheinmetall Group	%	~ 6.3	%	6.3
Automotive	%	≥ 8.0	%	8.4
Defence	%	5.0 - 5.5	%	5.0

Economic report
Report on expected developments

We expect the operating result at Rheinmetall Automotive to climb again, generating an operating margin of at least 8%. In the Automotive sector we are currently examining further necessary optimization of the cost and site structures of our plants, particularly in the Hardparts division. We also anticipate that earnings will continue to improve in the Defence sector in 2017 and expect an operating EBIT margin of between 5.0% and 5.5%.

Taking into account holding costs of €20 million to €25 million, this results in a return of 6.3% for the Rheinmetall Group, as in the previous year. With lower net investment income for the Rheinmetall AG management holding, net income in the high double-digit millions of euros is expected in fiscal 2017.

Group EBT and EBT margin set to rise – On the basis of the expected improvement of Group EBIT and a further improvement in the net interest result, we anticipate a corresponding rise in the EBT margin across the Group.

Return on capital employed (ROCE) – As a result of the forecast earnings performance, we expect a moderate increase in capital employed in the current fiscal year. If Group EBIT increases as assumed, we expect the return on capital employed to remain at approximately the previous year's level (2016: 12.3%).

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. This chapter also includes the declaration of corporate governance in accordance with Section 289a (1) HGB in conjunction with Section 315 (5) HGB.

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 bylaws 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 bylaws 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 bylaws. 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 countermotions or nominations from shareholders will also be published. Each share grants one vote in ballots. This excludes treasury shares held by the Company.

The Company's Annual General Meeting took place on May 10, 2016 in Berlin. During voting, 56.45% of the share capital was represented (previous year: 46.47%). Shareholders and shareholder representatives voted with significant majorities of between 85.19% and 99.9% in favor of the eleven 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.

Structure and function of the Executive Board

In accordance with Section 6 (1) of the Company bylaws, the Executive Board of the Company is composed of at least two persons. The number of members is determined by the Supervisory 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 bylaws and the applicable rules of procedure and having regard for the resolutions of the Annual General Meeting. It represents the Company to third parties.

Corporate governance
Corporate governance report

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.

Until December 31, 2016, the Executive Board of Rheinmetall AG comprised three members. On January 1, 2017, the Executive Board was extended to include the area of Human Resources.

Responsibilities of members of the Executive Board of Rheinmetall AG

Armin Papperger	Horst Binnig	Helmut P. Merch	Peter Sebastian Krause
SECTORS			
Defence	Automotive		
CENTRAL DEPARTMENTS			
Corporate Communications	IT	Accounting	Human Resources
Corporate compliance		Controlling	
Corporate Social Responsibility		Taxation	
Internal Auditing		Treasury	
Law		Insurance	

As at January 1, 2017

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.

Details of cooperation between the Executive and Supervisory Boards can be found in the Company bylaws 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.

Structure and function 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, who are generally elected for five years. They may be re-elected. Due to an objection against the overall assessment in accordance with Section 96 (2) Sentence 3 of the German Stock Corporation Act (AktG), the quota for shareholder representatives and employee representatives on the Supervisory Board is to be considered separately so that there are at least two female and at least two male representatives in each case. 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 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.

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. The Supervisory Board performs its activities in accordance with statutory provisions, the bylaws 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 as well as 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 periodically reviews the efficiency of its activities, as required by the provisions of the German Corporate Governance Code. Here, the function 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 function of committees

In order to perform its monitoring tasks efficiently, the Supervisory Board has formed four committees to which it delegates individual tasks. The members of these committees prepare time-consuming topics requiring extensive discussion that are to be dealt with in the plenary assembly and also examine resolutions in advance. 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 shareholder representatives and two employee representatives in each case. The composition and tasks of committees are set out in the rules of procedure for the respective committees.

Corporate governance
Corporate governance report

Personnel Committee – 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 Auditing, 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.

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 Supervisory Board Chairman 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.

Targets for the composition of the Supervisory Board

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. As a group, the members of the Supervisory Board have the necessary 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 areas of operation that are key to the Company, and they have managerial experience in a corporate or operational context. They complement each other in terms of their background, professional career and specialist knowledge.

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.

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, which came into force in May 2015 and must be implemented from January 2016, is complied with, having regard to the provisions of Section 96 (2) Sentence 3 AktG.

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 120 et seq. of the remuneration report, which forms part of the summarized management report.

Shareholdings of Executive Board and Supervisory Board members

As at the balance sheet date of December 31, 2016, members of the Executive Board and related parties held 78,969 shares, representing 0.2% of the share capital (previous year: 67,437 shares or 0.2%). As in the previous year, the shareholdings of members of the Supervisory Board at the end of the fiscal year amounted to no more than 1% of the share capital. 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 (directors' dealings in accordance with Section 15a WpHG until July 2, 2016; since July 3, 2016 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 June 2016 of the over-the-counter purchase of 200 Rheinmetall shares at a price of €39.35 per share.

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 Section 4.3.3 and Section 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. The compliance organization is described in more detail on pages 114 to 116.

Corporate governance
Corporate governance report

Proportion of women in the Company

In accordance with the law on the equal entitlement of women and men to hold management positions in the private sector and in public service, targets for the proportion of women on governing bodies and at the first two levels of management below the Executive Board were set based on the actual status on July 1, 2015.

At its meeting of August 27, 2015, the Supervisory Board of Rheinmetall AG resolved upon a target of 0% for the proportion of women on the Executive Board of Rheinmetall AG with an implementation deadline of June 30, 2017.

For the first and second levels of management below the Executive Board, the Executive Board of Rheinmetall AG set targets based on the actual status on July 1, 2015 of 0% and 8.3% respectively, each with reference to the implementation deadline of June 30, 2017. For subsidiaries that are subject to codetermination, the targets and deadlines that have been defined for raising the proportion of women on supervisory boards, management bodies and the two levels of management below the management body have been published on our Company's homepage.

The composition of the Supervisory Board with respect to the proportion of women and men met the minimum statutory requirements during the period under review.

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 80 to 95.

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 required in the European Union. PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft (PwC), Frankfurt am Main, Düsseldorf branch, was elected by the Annual General Meeting on May 10, 2016 to audit the single-entity and consolidated financial statements for 2015. 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 171.

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 is presented on page 186 et seq.

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 Rheinmetall AG has carried out and will continue to carry out the recommendations of the Commission of the German Corporate Governance Code as amended on May 5, 2015, officially communicated in the electronic Federal Gazette on June 12, 2015, since it issued its last declaration of conformity dated August 27, 2015 in full, with two exceptions.

Exceptions:

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 is 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.

Düsseldorf, August 2016
Rheinmetall Aktiengesellschaft
The Supervisory Board The Executive Board"

The declaration of conformity dated August 25, 2016, 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 regarding disclosures required by takeover law in accordance with Sections 289 (4) and 315 (4) HGB.

Composition of the subscribed capital

The subscribed capital (common stock) of Rheinmetall AG amounted to €111,510,656 at the balance sheet date of December 31, 2016 (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. According to Section 5 (2) of the bylaws, 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 (AktG), 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 excludes 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 bylaws 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

As at the 2016 balance sheet date, the shares of Rheinmetall AG were not subject to any voting restrictions under the bylaws or legislation. 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 may purchase Rheinmetall AG shares on preferential terms as part of the employee share purchase program. A two-year lockup period applies to these shares.

In the case of acquisition of a defense technology company in Germany, Sections 60 et seq. of the German Foreign Trade and Payments Regulation (AWV) 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 (WpHG) 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 bylaws.

Appointment and removal of Executive Board members and amendments to the bylaws

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 Section 6 of the bylaws. 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 bylaws of Rheinmetall AG.

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

Corporate governance
Disclosures required by takeover law

Issuing new shares and repurchasing treasury shares

According to Section 202 AktG, the Annual General Meeting may 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 €50,000,000.00 has been partially utilized by increasing the share capital by €10,137,216.00 on November 11, 2015. The Annual General Meeting of May 10, 2016 resolved to cancel the authorized capital remaining after the partial utilization and authorized the Executive Board to increase the common stock of the Company, with the approval of the Supervisory Board, through the issue of new no-par shares in return for contributions in cash and/or in kind on one or several occasions up to May 9, 2021, up to an aggregate €50,000,000.00 (authorized capital). The new shares may also be issued to employees of Rheinmetall AG or any subsidiary it controls. The disapplication of subscription rights upon which the Executive Board may resolve with the approval of the Supervisory Board is governed by Section 4 (3) of the bylaws.

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, pursuant to 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 €111,510,656.00, 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

In September 2010, Rheinmetall AG issued a €500 million bond maturing in September 22, 2017. Upon a change of control, bond holders may call in the bond and request redemption of the bond principal plus interest.

In October/November 2014, Rheinmetall issued promissory note loans for a total of €179 million with terms of five, seven and ten years respectively. Tranches totaling €57 million of this amount were terminated in September 2016 and repaid in October 2016. Further five-year promissory notes amounting to €27 million were issued in December 2016 and are due for disbursement in April 2017. All promissory note holders were contractually granted an extraordinary right to terminate in the event of a change of control. The agreement of these types of rights of termination is standard practice, particularly when granting longer-term loans.

In September 2015, a banking consortium provided Rheinmetall AG with a syndicated credit facility of €500 million with a duration of five years. This credit facility includes two options to extend the facility by one year, the first of which was exercised in 2016 with the result that the term now ends in 2021. 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, the agreement states that negotiations must be held on the continuation of the credit facility, after which the terms and conditions of the agreement may be terminated in whole or in part.

In October 2016, Rheinmetall AG and the European Investment Bank (EIB) concluded an agreement for a loan of €250 million with a term of six years from disbursement in August 2017. This loan will serve to finance Rheinmetall Automotive's European research and development activities. The contract 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.

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.

Corporate governance
Corporate compliance

Corporate compliance

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. 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.

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.

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 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. Rheinmetall AG's 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 traditions, customs, moral concepts 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 2016 Corruption Perceptions Index from Transparency International, which ranks 176 countries in terms of the degree of perceived corruption in the public sector, in the year under review we generated around 70% of our sales in countries with a very low or low corruption risk.

Compliance organization

Compliance at Rheinmetall is 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 four direct employees at holding level, the six Regional Compliance Officers for Europe, Brazil, India, China, Japan and the NAFTA sales region in the Automotive sector and the Compliance Officers from the three divisions in the Defence sector are assigned on a technical level to the Chief Compliance Officer, who reports directly to the CEO of Rheinmetall AG. In addition, Compliance Officers in the Rheinmetall Automotive and Rheinmetall Defence companies undertake preliminary work for the six aforementioned Regional Compliance Officers. We have gradually increased the number of staff in the compliance organization since it was restructured in 2014. This ensures 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 Chief Compliance Officer, who regularly reports to Executive Board meetings on the latest 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 through monthly reports prepared by the Compliance Officer for the Corporate Compliance Office as well as through routine and special audits conducted by Internal Auditing and the compliance organization.

In the area of sales support, guidelines and handbooks for dealing with business partners have been created in addition to the development of a platform containing information on over 90 countries and regions. Moreover, the tender process was optimized 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.

Rheinmetall Defence is regularly assessed by Transparency International UK, a non-governmental organization that has dedicated itself to the global fight against corruption. The 2015 rating examined 163 defense companies from 47 countries. Taking into account publicly accessible information and additional information submitted internally, compliance at Rheinmetall was awarded the rating "B (good evidence)" on a scale of "A (extensive evidence)" to "F (almost no evidence)".

Corporate governance
Corporate compliance

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 buyers or sales staff. Legislation and important regulations are explained, further content is provided, attention is 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.

Compliance Officers also monitor important transactions in the companies, such as mergers and acquisitions, the establishment of joint ventures 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.

Handling information

If employees have information about questionable activities that have been observed, breaches of regulations or business practices that may be prohibited, they can either 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. 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.

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.

Insider information

Persons with insider knowledge as defined by Article 18 of Regulation (EU) No. 596/2014 of the European Parliament and of the Council on market abuse (Market Abuse Regulation – MAR), which came into force on July 3, 2016, are listed in an insider directory and undertake to comply with the associated provisions.

Corporate responsibility
Corporate Social Responsibility

Responsibility, sustainability, success

The public's interest in corporate governance, compliance, sustainability, environmental protection, conservation and corporate responsibility is increasing. More and more people from all areas of society are demanding to know more about our business. Expectations regarding transparency and requirements in terms of comparability are growing. Investors are looking for sustainable investments. Employees want a secure job, but at the same time increasingly want to create a healthier balance between their professional goals and their family and private interests. Eco-friendly products are in ever greater demand. Legislators, authorities and also nongovernmental stakeholders are demanding compliance with ever more stringent regulations and limits. People living close to industrial sites worry about impairments to their quality of life. Meanwhile, communities, associations and aid organizations value the support provided by companies to their social, cultural and sporting activities.

Rheinmetall is committed to acting in a way that is legal and socially and ethically responsible, as well as to open world trade and fair competition. We also expect the same from our suppliers and other business partners. When implementing its business targets, the Group strives to take account of the concerns of its shareholders, employees and other groups associated with the Company, as well as ecological and social aspects. The Code of Conduct laid down the principles of social responsibility back in 2003. The Code of Conduct addresses matters including responsible entrepreneurship in the ongoing process of globalization, observance of human rights and safe working conditions.

Preservation of natural resources

The careful use of natural resources is part of the Rheinmetall Group's corporate culture and the way the 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.

Accordingly, our employees' sense of responsibility towards the environment is encouraged at every level of the value-added chain. Rheinmetall makes 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. Environmentally relevant procedures in the companies are subject to strict monitoring. Country-specific regulations and the requirements of international standards for quality (ISO 9001, TS 16949 and AQAP 2110-2210), 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, 27 companies/sites are certified in accordance with ISO 14001, six are certified in accordance with ISO 50001 and four are certified in accordance with OHSAS 18001. In the Defence sector, eleven companies/sites are currently certified in accordance with ISO 14001, eight companies are certified in accordance with ISO 50001 and four are certified in accordance with OHSAS 18001.

Corporate responsibility
Corporate Social Responsibility

Conservation and biodiversity

We believe 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 by two full-time forest rangers 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.

Environmentally friendly construction

Sustainable construction is becoming increasingly important. "Green" buildings meet high ecological standards. Their modern features save energy and thus protect the environment. The Lighthouse and casa altra buildings on Rheinmetall AG's former plant site in Düsseldorf-Derendorf hold a silver certificate from the German Sustainable Building Council (DGNB), while the doubleU building was awarded gold certification. The new building on the last available plot of land in the entrepreneur city into whose north wing the employees of the Rheinmetall head office moved in March 2016 is also certified in accordance with the DGNB's guidelines and according to current assessments fulfills the criteria for the gold rating.

The Automotive sector's Niederrhein plant, which was commissioned in November 2014, was awarded the DGNB certificate in gold. Among other things, environmentally friendly use of construction materials and efficient heat recovery in the compressed air system and during utilization of waste heat from the foundry furnaces made a contribution to meeting the stringent criteria. Overall, the building's readings were more than 25% lower than those required of a new building by the German Energy Saving Ordinance (EnEV).

Industrial solutions for environmentally friendly engine technology

Rheinmetall Automotive is working on eco-friendly automotive technology solutions and, with its products, is helping to ensure that the ever-growing demand for mobility does not come into conflict with environmental protection. In these times of ever-increasing traffic on the roads and global warming, the trend towards saving fuel, cutting CO_2 emissions and reducing harmful emissions generally – a trend supported through increasingly strict legislation – has over the past few years progressed at an accelerated rate. Declining fossil fuel resources, the obvious effects of climate change and, not least, demographic developments are reasons to rethink mobility concepts. Major levers for new, modern solutions are increasing the efficiency of conventional combustion engines and developing alternative drives that use renewable energy. As a key development partner to the national and international automotive industry, Rheinmetall Automotive offers numerous innovative and technologically sophisticated engine technology components, modules and systems that make a significant contribution to reducing harmful emissions, cutting fuel consumption, reducing weight and optimizing performance.

Corporate responsibility
Corporate Social Responsibility

Investing in knowledge

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. 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. Over the course of 2016, a total of 289 interns (previous year: 380) gained their first experiences of day-to-day Company life.

We invest in the future of young people out of conviction. This also applies to refugees, who would largely have no opportunities on the employment market without assistance from businesses. In addition to creating 50 training positions at short notice, we also enabled 50 young refugees to take up paid internships within the Rheinmetall Group. Our objective is to offer refugees who have a prospect of remaining in Germany a real professional opportunity and to integrate them into society. Furthermore, through the Rheinmetall Scholarship Program, into which 16 sponsorships were incorporated, we are involved with the Deutschlandstipendium, a scholarship set up by the German Federal Ministry of Education and Research (BMBF).

The increasing electrification of the drive train leads to diverse possibilities for increasing efficiency and further reducing emissions from combustion engines. Rheinmetall Automotive recognized the signs of the times early and endowed a junior professorship at RWTH Aachen for research and development of mechatronic systems in combustion engines. This professorship also conducts research into virtual engine development and the development of hybrid drives.

Commitment to the local community

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 Rheinmetall is a living, breathing part of society and participates actively in it. We get involved in the areas of education, sport and culture and also provide direct support for local social projects and charitable organizations.

Corporate social responsibility reporting

In the first half of 2017 the Rheinmetall Group will publish its first corporate social responsibility report, which will provide our stakeholders with information on the main sustainability topics at Rheinmetall as well as important key indicators. Our orientation towards version 4.0 of the internationally recognized and renowned Global Reporting Initiative (GRI) reporting standard is helping to make reporting on sustainability in the Rheinmetall Group transparent and comparable as well as aid understanding of selected aspects of sustainability that are specific to the Company. We are therefore also prepared for the requirements of the German Act on Implementation of the CSR Guideline (CSR-Richtlinie-Umsetzungsgesetz), which will implement Directive 2014/95/EU amending Directive 2013/34/EU relating to the disclosure of non-financial information and information concerning diversity by certain large companies and groups into German law. As of fiscal 2017, large public interest entities must report on strategies, risks and results in respect of environmental, social and employee matters, observance of human rights and fighting corruption and bribery as well as diversity in management and supervisory bodies.

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 with effect from 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.

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. 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. At its meeting on December 11, 2012, the Supervisory Board resolved to waive observance of the four-year lockup period for members of the Executive Board who are retiring. Average adjusted EBT for fiscal 2015 totaled €146 million. Average adjusted EBT totaled €209 million for fiscal 2016.

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 (e.g. restructuring success in a particularly difficult market environment). Executive Board members are not entitled to the granting of this special bonus. Mr. Helmut P. Merch was granted a special bonus of €200,000 in fiscal 2015 for his outstanding performance and his special dedication during the restructuring phase in 2013/2014. In fiscal 2016 no bonus was granted to the members of the Executive Board.

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 a compensation payment 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 2016 or in the previous year.

Total remuneration of the Executive Board

Individual details of the remuneration of the Executive Board in fiscal 2016 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:

Granted benefits € '000

	Armin Papperger CEO from January 1, 2013[1]		Horst Binnig Member of the Executive Board from January 1, 2014		Helmut P. Merch Member of the Executive Board from January 1, 2013	
	2016	**2015**	**2016**	**2015**	**2016**	**2015**
Fixed remuneration	840	840	510	510	582	582
Fringe benefits	25	41	22	22	28	28
Total	**865**	**881**	**532**	**532**	**610**	**610**
One-year variable remuneration (STI)	1,120	1,120	610	659	776	976
Multi-annual variable remuneration (LTI)	1,150	803	575	402	575	402
Total	**3,135**	**2,804**	**1,717**	**1,593**	**1,961**	**1,988**
Pension expenses	630	666	542	570	570	594
Total remuneration	**3,765**	**3,470**	**2,259**	**2,163**	**2,531**	**2,582**

[1] Member since January 1, 2012

Remuneration report
Remuneration of the Executive Board

There is no minimum amount of variable remuneration, although there is an upper limit. Remuneration from the STI can amount to a maximum of €1,120,000 for the CEO Armin Papperger, €680,000 for Horst Binnig and €776,000 for Helmut P. Merch. Remuneration from the LTI can amount to a maximum of €1,650,000 for the CEO Armin Papperger and a maximum of €825,000 each for Horst Binnig and Helmut Merch.

Inflows € '000

	Armin Papperger CEO from January 1, 2013[1]		Horst Binnig Member of the Executive Board from January 1, 2014		Helmut P. Merch Member of the Executive Board from January 1, 2013	
	2016	**2015**	**2016**	**2015**	**2016**	**2015**
Fixed remuneration	840	840	510	510	582	582
Fringe benefits	25	41	22	22	28	28
Total	**865**	**881**	**532**	**532**	**610**	**610**
One-year variable remuneration (STI)	1,120	1,120	610	659	776	976
Multi-annual variable remuneration (LTI)						
Payment	627	438	314	219	314	219
Transfer of shares	523	365	261	183	261	183
Total	**3,135**	**2,804**	**1,717**	**1,593**	**1,961**	**1,988**
Pension expenses		-		-		-
Total remuneration	**3,135**	**2,804**	**1,717**	**1,593**	**1,961**	**1,988**

[1] Member since January 1, 2012.

On the basis of the reference share price of €63.30 for the end of February 2016, a total of 11,532 shares were transferred to members of the Executive Board of Rheinmetall AG who were in office in fiscal 2015 on April 4, 2016 as part of the LTI for fiscal 2015. The CEO, Armin Papperger, received 5,766 shares, while Horst Binnig and Helmut P. Merch each received 2,883 shares. The transfer of shares for the LTI for fiscal 2016 will take place at the beginning of April 2017 based on the reference share price as at the end of February 2017.

Pensions

On January 1, 2014, the defined benefit pension commitments in the form of pension amounts agreed on the basis of individual contracts were replaced by modular defined benefits including a transitional arrangement. 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 proportion of the annual target salary, which is an average of 28%. The retirement age has been fixed at the age of 63. The Company has set up 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 Section 13 of the bylaws. 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 2016:

€

		2016	2015
Klaus Greinert	Chairman of the Supervisory Board and Chairman of the Personnel, Audit, Mediation and Nomination Committees	240,000	240,000
Professor Dr. Andreas Georgi	Member of the Supervisory Board and member of the Personnel Committee (since May 10, 2016)	69,631	60,000
Dr. Siegfried Goll	Member of the Supervisory Board (until May 10, 2016)	21,475	60,000
Ulrich Grillo	Member of the Supervisory Board (since May 10, 2016)	38,525	--
Professor Dr. Susanne Hannemann	Member of the Supervisory Board and member of the Audit Committee	75,000	75,000
DDr. Peter Mitterbauer	Member of the Supervisory Board (until May 10, 2016)	21,475	60,000
Detlef Moog	Member of the Supervisory Board	60,000	60,000
Professor Dr. Frank Richter	Member of the Supervisory Board and member of the Mediation and Nomination Committees	90,000	90,000
Klaus-Günter Vennemann	Member of the Supervisory Board (since May 10, 2016)	38,525	--
Professor Dr. Marion A. Weissenberger-Eibl	Member of the Supervisory Board (since May 10, 2016)	38,525	--
Toni Wicki	Member of the Supervisory Board and member of the Personnel Committee (until May 10, 2016)	26,844	75,000
Total for shareholder representatives		**720,000**	**720,000**

Remuneration report
Remuneration of the Supervisory Board

The employee representatives on the Supervisory Board received the following remuneration for fiscal 2016:

€

		2016	2015
Dr. Rudolf Luz	Vice Chairman of the Supervisory Board and member of the Personnel, Audit and Mediation Committees	165,000	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	60,000	60,000
Dr. Michael Mielke	Member of the Supervisory Board	60,000	60,000
Dagmar Muth	Member of the Supervisory Board and member of the Mediation Committee	75,000	31,192
Markus Schaubel	Member of the Supervisory Board	60,000	60,000
Sven Schmidt	Member of the Supervisory Board	60,000	60,000
Wolfgang Tretbar	Member of the Supervisory Board and member of the Personnel Committee	75,000	75,000
Total for employee representatives		**630,000**	**586,192**
Total for the Supervisory Board		**1,350,000**	**1,306,192**

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

Düsseldorf, February 24, 2017

Rheinmetall Aktiengesellschaft
The Executive Board

Armin Papperger Horst Binnig Helmut P. Merch Peter Sebastian Krause

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CONSOLIDATED **FINANCIAL STATEMENTS**

Rheinmetall Group
Balance sheet as at December 31, 2016

€ million	Note	Dec. 31, 2016	Dec. 31, 2015
Assets			
Goodwill	(7)	554	552
Other intangible assets	(7)	265	275
Property, plant and equipment	(8)	1,378	1,314
Investment property	(9)	53	35
Investments carried at equity	(10)	240	203
Other non-current financial assets	(14)	13	4
Other non-current assets	(15)	23	21
Deferred tax assets	(28)	236	244
Non-current assets		**2,762**	**2,648**
Inventories	(11)	1,098	1,052
./. Prepayments received		(26)	(26)
		1,072	1,026
Trade receivables	(12)	1,306	1,127
Liquid financial assets	(13)	190	50
Other current financial assets	(14)	43	49
Other current receivables and assets	(15)	125	111
Income tax receivables		10	28
Cash and cash equivalents	(16)	616	691
Current assets		**3,362**	**3,082**
Total assets		**6,124**	**5,730**
Equity and liabilities			
Share capital		112	112
Additional paid-in capital		532	528
Retained earnings		1,074	891
Treasury shares		(32)	(39)
Rheinmetall AG shareholders' equity		**1,686**	**1,492**
Minority interests		95	70
Equity	(17)	**1,781**	**1,562**
Provisions for pensions and similar obligations	(18)	1,186	1,128
Other non-current provisions	(19)	135	138
Non-current financial debts	(20)	220	759
Other non-current liabilities	(21)	56	67
Deferred taxes	(28)	32	31
Non-current liabilities		**1,629**	**2,123**
Other current provisions	(19)	516	454
Current Financial debts	(20)	567	63
Trade liabilities		766	718
Other current liabilities	(21)	812	764
Income tax liabilities		53	46
Current liabilities		**2,714**	**2,045**
Total liabilities		**6,124**	**5,730**

Rheinmetall Group
Income statement for fiscal 2016

€ million	Note	2016	2015
Sales		**5,602**	**5,183**
Changes in inventories and work performed by the enterprise and capitalised		109	(1)
Total operating performance	(22)	**5,711**	**5,182**
Other operating income	(23)	160	170
Cost of materials	(24)	3,120	2,783
Personnel expenses	(25)	1,465	1,390
Amortization, depreciation and impairment	(26)	228	203
Other operating expenses	(27)	715	701
Income from investments carried at equity		28	31
Other net financial income		(18)	(19)
Earnings before interets and taxes (EBIT)		**353**	**287**
Net interest income		5	3
Interest expenses		(59)	(69)
Earnings before taxes (EBT)		**299**	**221**
Income taxes	(28)	(84)	(61)
Earnings after taxes		**215**	**160**
Of which:			
Minority interests		*15*	*9*
Rheinmetall AG shareholders		*200*	*151*
Earnings per share	(29)	€ 4.69	€ 3.88

Statement of comprehensive income for fiscal 2016

€ million	2016	2015
Earnings after taxes	**215**	**160**
Remeasurement of net defined benefit liability from pensions	(50)	(14)
Revaluation of properties	1	1
Other income from investments carried at equity	(2)	-
Amounts not reclassified in the income statement	**(51)**	**(13)**
Change in value of derivative financial instruments (cash flow hedge)	64	(25)
Currency conversion difference	27	17
Other income from investments carried at equity	3	6
Amounts reclassified in the income statement	**94**	**(2)**
Other comprehensive income (after taxes)	**43**	**(15)**
Comprehensive income	**258**	**145**
Of which:		
Minority interests	*33*	*(2)*
Rheinmetall AG shareholders	*225*	*147*

Rheinmetall Group
Cash flow statement for fiscal 2016

€ million	2016	2015
Net income	215	160
Amortization, depreciation and impairments	228	203
Allocation of CTA assets to secure pension and partial retirement obligations	(30)	-
Changes in pension provisions	1	3
Income from disposition of non-current assets	2	(3)
Changes in other provisions	63	34
Changes in inventories	(33)	(69)
Changes in receivables, liabilities (without financial debts) and prepaid & deferred items	(5)	30
Pro rata income from investments carried at equity	(28)	(31)
Dividends received from investments carried at equity	14	11
Other non-cash expenses and income	17	1
Cash flows from operating activities [1]	**444**	**339**
Investments in property, plant and equipment, intangible assets and investment property	(283)	(310)
Cash receipts from the disposal of property, plant and equipment, intangible assets and investment property	1	9
Investments in consolidated companies and other financial assets	(14)	(2)
Cash receipts from the disposal of of current liquid financial assets	117	-
Payments for the purchase of current liqiud fianancial assets	(257)	(50)
Cash flows from investing activities	**(436)**	**(353)**
Capital increase Rheinmetall AG	-	228
Capital payment to/capital contributions by non-controlling interests	-	(1)
Increase in shares in consolidated subsidiaries	-	(1)
Dividends paid out by Rheinmetall AG	(47)	(12)
Other profit distributions	(8)	(6)
Shares issued to employees	4	4
Borrowing of financial debts	85	69
Repayment of financial debts	(123)	(63)
Cash flows from financing activities	**(89)**	**218**
Changes in financial resources	**(81)**	**204**
Changes in cash and cash equivalents due to exchange rates	6	1
Total change in financial resources	**(75)**	**205**
Opening cash and cash equivalents January 1	**691**	**486**
Closing cash and cash equivalents December 31	**616**	**691**

[1] *Including:*

Net interest of €-35 million (previous year: €-35 million), net income taxes of €-50 million (previous year: €-39 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, 2015	**101**	**310**	**756**	**(48)**	**1,119**	**78**	**1,197**
Net income	-	-	151	-	151	9	160
Other comprehensive income	-	-	(4)	-	(4)	(11)	(15)
Comprehensive income	-	-	147	-	147	(2)	145
Dividends payout	-	-	(12)	-	(12)	(6)	(18)
Changes in shares in subsidiaries	-	-	(1)	-	(1)	(1)	(2)
Disposal of treasury shares	-	-	-	9	9	-	9
Capital increase	11	217	-	-	228	-	228
Other Changes	-	1	1	-	2	1	3
Balance as at December 31, 2015/ January 1, 2016	**112**	**528**	**891**	**-39**	**1,492**	**70**	**1,562**
Net income	-	-	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	**112**	**532**	**1,074**	**(32)**	**1,686**	**95**	**1,781**

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, 2015	1	(448)	83	-19	-	1,139	**756**
Net income	-	-	-	-	-	151	151
Other comprehensive income	20	(13)	1	(19)	7	-	(4)
Comprehensive income	20	(13)	1	(19)	7	151	147
Dividends payout	-	-	-	-	-	(12)	(12)
Changes in shares in subsidiaries	-	(3)	-	-	-	2	(1)
Other Changes	-	-	-	-	-	1	1
Balance as at December 31, 2015/ January 1, 2016	21	(464)	84	(38)	7	1,281	**891**
Net income	-	-	-	-	-	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	44	(511)	85	9	8	1,439	**1,074**

Notes to the consolidated financial statements
Segment reporting

€ million		Defence		Automotive		Other/ Consolidation		Group	
		2016	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Income statement									
External sales		2,946	2,591	2,656	2,592	-	-	5,602	5,183
At Equity income		(4)	6	32	24	-	1	28	31
Amortization, depreciation and impairment		92	85	133	116	3	2	228	203
thereof impairment		*1*	*-*	*9*	*3*	*-*	*1*	*10*	*4*
EBIT	(1)	147	90	223	216	(17)	(19)	353	287
Interest income		3	1	2	3	-	(1)	5	3
Interest expenses		(31)	(26)	(15)	(16)	(13)	(27)	(59)	(69)
Net interest		(28)	(25)	(13)	(13)	(13)	(28)	(54)	(66)
EBT		119	65	210	203	(30)	(47)	299	221
Operating result		147	90	223	216	(17)	(19)	353	287
Other data									
Operating free cash flow		103	(38)	105	96	(47)	(29)	161	29
Order intake		3,050	2,693	2,670	2,621	-	-	5,720	5,314
Order backlog December 31		6,656	6,422	458	445	-	-	7,114	6,867
Employees as at December 31 (capacities)		10,002	9,581	10,820	10,934	171	161	20,993	20,676
Net financial debts	(2)	(166)	(69)	(183)	(80)	330	230	(19)	81
Pension provisions	(3)	670	627	405	381	111	120	1,186	1,128
Equity	(4)	987	947	992	863	(198)	(248)	1,781	1,562
Capital Employed [1]	(2)+(3)+(4)	1,491	1,505	1,214	1,164	243	102	2,948	2,771
Average capital employed [1]	(5)	1,498	1,464	1,189	1,139	173	107	2,860	2,710
ROCE (in %) [1]	(1) / (5)	9.8	6.1	18.8	19.0	-	-	12.3	10.6

[1] *Adjustment of the previous year's figures, as additions to capital employed (accumulated amortization of goodwill in the past) are no longer made for management reporting.*

Disclosures according to region

€ million	Germany		Rest of Europe		North America		Asia		Other regions / Consolidation		Group	
	2016	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
External sales Defence	781	833	493	568	177	176	862	777	633	237	2,946	2,591
External sales Automotive	530	528	1,260	1,238	440	416	334	307	92	103	2,656	2,592
External sales Total	1,311	1,361	1,753	1,806	617	592	1,196	1,084	725	340	5,602	5,183
in % of Group sales	24	26	31	35	11	11	21	21	13	7	-	-
Assets	1,271	1,236	630	627	156	152	101	87	92	74	2,250	2,176

Notes to the consolidated financial statements
Accounting principles

(1) General disclosures

Rheinmetall AG is the parent company of the Rheinmetall Group and has its registered office in Düsseldorf at Rheinmetall Platz 1 (Düsseldorf Commercial Register, HRB 39401). The consolidated financial statements of Rheinmetall AG have been prepared in accordance with the regulations of Section 315a (1) German Commercial Code ("HGB") and hence with the International Financial Reporting Standards (IFRS) as adopted by the European Union (EU). The consolidated financial statements and the Group management report, which is consolidated with the management report of Rheinmetall AG, are to be 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 correspond to the calendar year. The consolidated financial statements are presented in euro (€). Unless otherwise stated, amounts are indicated throughout in € million (including prior-year comparatives). Non-rounded amounts may differ. The consolidated income statement has been presented in the total-cost format.

(2) New and amended accounting standards

Accounting standards applied for the first time in fiscal 2016 that have an effect on the Rheinmetall consolidated financial statements

Standard	**Name**
Amendment to IAS 1	Presentation of Financial Statements
IFRS improvements	2010-2012 cycle
IFRS improvements	2012-2014 cycle

The amendment to IAS 1 "Presentation of Financial Statements" includes in particular clarifications on assessing the materiality of notes to the financial statements, on presenting additional line items in the statement of financial position and statement of comprehensive income, on presenting other comprehensive income from equity-accounted associates and joint ventures, and on the structure of the notes to the financial statements. The Notes to the Rheinmetall consolidated financial statements for 2016 take account of the amendments to the extent that immaterial disclosures are omitted where appropriate.

The improvements to IFRS standards in the 2010-2012 cycle relate mainly to clarifications and corrections to share-based remuneration, business combinations, disclosures on reportable segments, property, plant and equipment, related parties and intangible assets. The changes did not materially affect the net assets and results of operations of the Rheinmetall Group.

The improvements to IFRS standards in the 2012-2014 cycle contain clarifications and specifications regarding the calculation of the discount rate for post-retirement benefits, interim reporting, financial instruments, notes on financial instruments and non-current assets and operations that are held for sale or to be discontinued. This did not materially affect the net assets and results of operations of the Rheinmetall Group.

Accounting standards issued but not yet applied in fiscal 2016 that have an effect on the Rheinmetall consolidated financial statements – The standards and interpretations below were issued in 2016 or earlier but do not have to be applied yet.

Notes to the consolidated financial statements
Accounting principles

Standard	Name	Application as of fiscal year	Endorsement in EU law
IFRS 2	Share-based Payment	2018	Outstanding
IFRS 9	Financial Instruments	2018	Complete
IFRS 15	Revenue from Contracts with Customers	2018	Complete
IFRS 16	Leases	2019	Outstanding
Amendment to IAS 7	Statement of Cash Flows	2017	Outstanding

The amendments to IFRS 2 “Share-based Payment” relate to clarifications on accounting for payment transactions concluded in cash. The share-based remuneration currently in effect at the Rheinmetall Group is not affected by these amendments.

IFRS 9 “Financial Instruments” as well as subsequent amendments were issued in previous years and contain amended regulations on the classification and measurement of financial assets, the recognition of impairment and simplifications relating to hedge accounting. The effects on the financial position and net assets of the Rheinmetall Group were not deemed to be material.

The new standard IFRS 15 “Revenue from Contracts with Customers” including the amendment issued in relation thereto specifies when or during what period sales from contracts with customers are to be recognized. This replaces all previous standards and interpretations on the recognition of sales. An analysis is currently underway at the Rheinmetall Group to assess the effects of the new standard based on existing contracts. We anticipate significant changes in the recognition of customer contracts relating to longer term customer-specific projects. If the requirements for construction contracts under IAS 11 are met, such contracts will be reported accordingly and sales recognized according to the percentage of completion. Due to the amended regulations of IFRS 15 concerning the determination of when sales are recognized at a point in time and when they are recognized over a period of time, there may be changes as regards the recognition of sales compared with the current status, depending on the contractual provisions in the customer contract. In customer projects with large order volumes and longer production phases, interest rate effects may have an impact on sales if the payments received from the customer deviate substantially to the work performed. If order acquisition costs are incurred this will significantly change balance sheet reporting as these amounts will be recognized as an asset in the future and reported as an expense proportionately over the term of the contract.

IFRS 16 is a new standard on leases. It amends the lessee’s accounting such that, for all leases, assets must be recognized for obtained rights of use and liabilities for resulting payment obligations. Up to now, the Rheinmetall Group has recognized leases amounting to €12 million as assets while recognizing a corresponding financial liability, as these are to be qualified as finance leases. As part of implementation of the new standard, all leases existing within the Rheinmetall Group that are managed by the operating companies on a decentralized basis are currently being recorded and analyzed centrally. This change in the balance sheet results in recognition of a right of use as an asset and recognition of a corresponding financial liability approximating the amount of discounted leasing obligations, which amounted to €182 million as of December 31, 2016. Rheinmetall intends to apply the standard early for the fiscal year commencing January 1, 2018.

IAS 7 “Statement of Cash Flows” was amended with regard to disclosures on changes to liabilities from an entity’s financing activities. This will result in the amendment of disclosures in the Notes.

(3) Scope 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, whereby Rheinmetall AG has rights to the net Rheinmetall Group Accounting principles 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 carried at equity.

Scope of consolidation – companies included

	Dec. 31, 2015	Additions	Disposals	**Dec. 31, 2016**
Fully consolidated subsidiaries				
Domestic	44	2	-	46
Foreign	92	6	1	97
	136	**8**	**1**	**143**
Joint operations				
Foreign	1	-	-	1
Investments carried at equity				
Domestic	18	-	-	18
Foreign	13	4	2	15
	31	**4**	**2**	**33**

In fiscal 2016, a total of eight companies were founded and added to the group of fully consolidated subsidiaries and one company was disposed of through an internal merger.

The number of investments carried at equity increased owing to the establishment of two companies and two acquisitions. In the first quarter of 2016, the Automotive sector extended the partnership originated in 2015 with the Japanese piston ring specialist Riken and acquired a 30% stake in Riken Automobile Parts (Wuhan) Co. Ltd. in China. The corresponding agreements were signed in September 2015 and have been implemented having obtained approval from the authorities. Riken Automobile Parts runs a plant for the production of piston rings for passenger cars in Wuhan. In the Defence sector, a 22% investment was acquired in Helios Aero Services B.V. in the area of simulation and training.

(4) Consolidation principles

First-time consolidation of a subsidiary occurs according to 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 prorated net assets of the acquired company is capitalized as goodwill within intangible assets. Any badwill is reported 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.

Notes to the consolidated financial statements
Accounting principles

Receivables and payables, expenses and income and intercompany profits/losses among fully 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.

In the case of joint operations, all consolidation measures are prorated according to the shareholdings.

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 investment book value 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 of investees is determined according to the same principles as full consolidation. Any resulting goodwill is included in the investment book value. 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 rate on the reporting date. Other assets and liabilities are either translated using the historical cost rate if carried at cost, or, if carried at fair value, are recognized at the rate at the date of measuring the 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 at the reporting date 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 and valuation methods applied to Rheinmetall AG's consolidated financial statements are described below.

Cost – Purchase 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 at the date of the exchange, whereby any cash compensation is accounted for accordingly.
The production cost includes the costs directly allocable to the production or conversion process, as well as reasonable portions of production-related overheads, the latter also comprising indirect materials and indirect labor, as well as 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 directly offset against the 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.

Impairment – If there is an indication that the value of an intangible or tangible asset may be impaired, and if the recoverable amount is below amortized or depreciated cost, impairment 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 – is allocated to the cash-generating units when it arises according to its potential benefit. At this level, the management is responsible for monitoring goodwill. Goodwill is tested once a year for impairment and during the year if impairment is indicated. In the impairment test, the carrying amount is compared with the recoverable amount. The value in use, which is calculated using the discounted cash flow method based on the current corporate planning, is generally used as a 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 recognized as a write-down. Subsequent write-up is inadmissible.

Goodwill is not amortized.

Other intangible assets – Intangible assets are capitalized at cost. Research costs are always recognized in expenses. Development costs are not capitalized unless and until a newly developed product or process can be clearly defined and technologically realized and either it is to be used internally or marketing is planned, and if its costs can be reliably measured and there is reasonable assurance that an economic benefit will be derived in future. 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.

Notes to the consolidated financial statements
Accounting principles

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 are carried at cost less accumulated depreciation and any impairment. Depreciation is recognized on a straight-line basis over expected useful lives.

Property, plant and equipment are depreciated over the following periods of economic 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

Essential plots of land owned for business purposes are carried according to the revaluation method at fair value.

Leasing – Agreements which transfer the right to use assets for a specified period of time in return for payment or a series of payments are qualified as leases. If leasing transactions result in the transfer of virtually all opportunities and risks associated with ownership of an asset to the lessee, these are to be qualified as finance leases. All other leasing transactions are to be 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 – These are properties held for investment, i.e. to earn rental income or benefit from long-term capital appreciation, and not for use in production or administration.

Investment properties (unless land) are carried at cost less accumulated 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 based on a 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 occurs at fair value. Acquisition-related costs are generally to be 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 formed 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 upon first-time recognition and written down using the effective interest method.

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 recorded directly 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 as at the reporting date, using the effective interest method.

Inventories and prepayments received – Inventories are recognized at cost. As a rule, this equals weighted average values. Inherent risks due to reduced utility or to obsolescence are adequately allowed for. If the net realizable value (NRV) of any inventories at the balance sheet date is below their carrying amount, 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 shown as a change in inventories of finished products and work in progress.

Prepayments received from customers for contracts which are not manufacturing or construction contracts are openly deducted directly from inventories if production cost has already been incurred for the respective contract, any other prepayments being recognized as liabilities.

Notes to the consolidated financial statements
Accounting principles

Construction contracts – Construction contracts from customers are accounted for in accordance with their percentage of completion. Sales are recognized on the basis of percentage of completion, which is determined on a cost-to-cost basis, i.e. at the ratio the contract costs incurred bear to anticipated contract costs. A receivable from construction contracts is recognized in the same amount as sales in the period. Progress billings with and without payments received and advance payments are deducted from receivables from construction contracts. Any resulting negative balances are recognized as liabilities 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, prorated profits are not realized, but instead sales are recognized only at the level of costs actually incurred (zero profit method).

Deferred taxes – Taxes are deferred for temporary differences between the values of balance sheet items according to IFRS and according to the local tax law 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 determined by applying the local tax rates current or announced in each country at the balance sheet date. For Germany, a tax rate of 30% is used, as was done in the previous year. This rate covers corporate income tax, the solidarity surtax thereon, and municipal trade tax. The tax rates in other countries range from 16% to 39% (previous year: 16% to 38%).

For obligations to the respective national tax authorities that are uncertain in terms of amount and probability of occurrence, tax provisions are recognized on the basis of appropriate estimates. The company-specific tax rate applicable on the balance sheet date is applied. Other factors are also considered, such as experience from previous tax audits and different legal interpretations between taxpayers and fiscal authorities with regard to the relevant issue. Uncertain income tax items are recognized at the most probable value.

No deferred tax liabilities for temporary differences of shares in subsidiaries were recognized, since Rheinmetall can control the reversal of such differences and the reversal is not probable in the foreseeable future.

Pensions – Provisions for pensions and similar obligations are calculated using the projected unit credit method for defined benefit plans. The calculation of the extent of the obligations is predicated on assumptions such as 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 so-called defined benefit asset) is not recognized unless Rheinmetall can actually utilize or realize it. 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 (DCP), the company incurs no obligations other than to pay the contributions to earmarked post-employment benefit plans. The payments incurred are recognized in net income.

The Rheinmetall Group also participates in multi-employer pension plans. As these are defined benefit plans, they are accounted for accordingly.

Provisions – The remaining 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. Provisions are shown, if the effect of discounting is significant, at the settlement amount discounted as of the balance sheet date. The settlement amount also accounts for identifiable future cost increases.

Recognition of sales – Sales result primarily 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 realized with the 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 until final 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 – Preparing the consolidated financial statements required certain assumptions and estimates which impact on the application of accounting principles within the Group and the disclosure of assets and liabilities, income and expenses.

When examining the recognition of goodwill of €554 million as at December 31, 2016 (previous year: €552 million), assumptions and estimates relating to forecasts and discounting future cash flows were made to determine the recoverable amount of the relevant cash-generating units. Details of the parameters used are provided under Note (7).

On an annual basis and on other occasions if appropriate, the carrying amounts as at December 31, 2016, of other intangible assets of €265 million (previous year: €275 million), property, plant and equipment of €1,378 million (previous year: €1,314 million) and properties held for investment of €53 million (previous year: €35 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 €1,182 million as at December 31, 2016 (previous year: €1,128 million) is based on the determination of actuarial parameters such as the discount rate, pension development and the mortality rate. The impact of changes in parameters applied as of the balance sheet date on the present value of the DBO is presented in Note (18). Any discrepancy between the parameters assumed at the beginning of the fiscal year and the actual conditions on the balance sheet date has no impact on earnings after taxes, as gains and losses resulting from the discrepancy based on the remeasurement of the net defined benefit liability are recognized directly in equity.

Sales realization for construction contracts totaling €1,429 million in fiscal 2016 (previous year: €1,313 million) is based on estimates regarding the expected total contract costs and contract revenue. Comparing the actual contract costs incurred with expected total costs shows the percentage of completion as at the balance sheet date, on the basis of which the prorated sales for the period are calculated.

The determination of future tax advantages which reflect the recognition of deferred tax assets (€236 million as at December 31, 2016; previous year: €244 million) is based on assumptions and estimates on the development of tax income over a planning period usually of five years and tax legislation in the countries of the Group companies working there.

In the context of business combinations, the fair values of the identifiable assets, liabilities and contingent liabilities may be based on estimates at the time of acquisition. To determine fair values, independent valuation appraisals or internal calculations are implemented on the basis of recognized measurement procedures, generally on the basis of forecast cash flows. In particular, when measuring intangible assets, assumptions and estimates on expected development of business activities, the expected economic lives and the discount rates are to be made.

When assessing and accounting for legal risks and opportunities, estimates on the possible occurrence and the level 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. Such differences, if impacting on the accounting, 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.

Notes to the consolidated financial statements
Other notes

(7) Goodwill, other intangible assets

€ million	Goodwill	Development costs	Other intangible assets	Total
Cost				
Jan. 1, 2015	552	279	365	1,196
Additions	-	24	10	34
Disposals	-	(2)	(5)	(7)
Book transfers	-	(1)	1	-
Adjustment in scope of consolidation	2	-	1	3
Currency differences	(2)	5	(2)	1
Dec. 31, 2015/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	**554**	**338**	**382**	**1,274**

€ million	Goodwill	Development costs	Other intangible assets	Total
Amortization and depreciation/impairment				
Jan. 1, 2015	-	126	223	349
Current period	-	27	27	54
Disposals	-	-	(5)	(5)
Currency differences	-	2	-	2
Dec. 31, 2015/Jan. 1, 2016	**-**	**155**	**245**	**400**
Current period	-	28	26	54
Disposals	-	-	(2)	(2)
Currency differences	-	-	3	3
Dec. 31, 2016	**-**	**183**	**272**	**455**
Book value as of 12/31/2015	552	150	125	827
Book value as of 12/31/2016	**554**	**155**	**110**	**819**

Until the end of 2015 goodwill was allocated to the Defence and Automotive sectors. In the course of the restructuring of business activities relating to tracked and wheeled vehicles within the Defence sector and the simplification of processes for monitoring the value of goodwill, goodwill was divided between the divisions of the two sectors on January 1, 2016. The allocation was based on the relative goodwill of the divisions in relation to the goodwill of the sector concerned. Goodwill is now managed at division level and regularly tested for impairment. The change in level as regards the monitoring of goodwill does not affect segment reporting, which continues to encompass the two sectors of Automotive and Defence, as the operational management of the sectors itself has not changed. An explanation of segment reporting can be found under Item (32).
Goodwill was tested for impairment as at December 31, 2016. 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 defense 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, as well as on Automotive-specific adjustments to allow for planned product innovations and cost savings.

The discount rate for each sector and the carrying amounts of the goodwill of the divisions are shown below.

€ million	Corporate sector Defence			Corporate sector Automotive	
	Dec. 31, 2016	**Dec. 31, 2015**		**Dec. 31, 2016**	**Dec. 31, 2015**
WACC before taxes	9.3%	9.4%	WACC before taxes	10.9%	10.8%
WACC after taxes	6.5%	6.6%	WACC after taxes	7.6%	7.6%
Goodwill Divisions			**Goodwill Divisions**		
Weapon and Ammunition	179	178	Mechatronics	67	67
Electronic Solution	121	121	Hardparts	89	88
Vehicle Systems	83	83	Aftermarket	15	15

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 on 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.

Research and development costs of €185 million (previous year: €174 million) were recorded as expense.

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Other notes

(8) Property, plant and equipment

€ million	Land, equivalent titles, and buildings	Production plant and machinery	Other plant, factory and office equipment	Prepayments made and construction in progress	Total
Cost					
Jan. 1, 2015	1,063	1,829	529	120	3,541
Additions	14	63	42	157	276
Disposals	(3)	(58)	(29)	(1)	(91)
Change from revaluation	3	-	-	-	3
Book transfers	28	69	19	(118)	(2)
Adjustment in scope of consolidation	(14)	-	-	-	(14)
Currency differences	25	46	-2	1	70
Dec. 31, 2015/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	**1,156**	**2,015**	**594**	**183**	**3,948**

€ million	Land, equivalent titles, 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, 2015	550	1,399	417	-	2,366
Current period	19	94	35	-	148
Disposals	(3)	(58)	(28)	-	(89)
Adjustment in scope of consolidation	(14)	-	-	-	(14)
Currency differences	21	38	(1)	-	58
Dec. 31, 2015/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	**599**	**1,535**	**436**	**-**	**2,570**
Book value as of 12/31/2015	543	476	136	159	1,314
Book value as of 12/31/2016	**557**	**480**	**158**	**183**	**1,378**

The fair value of essential plots of land owned for business purposes included in the item land, equivalent titles, and buildings amounted to €228 million as of December 31, 2016 (previous year: €224 million). The step-up amounted to €120 million (previous year: €117 million). Generally accepted valuation techniques are used to determine fair value, which are in most cases based on the expert reports of an independent appraiser. External appraisal reports are obtained at regular intervals, most recently on the reporting date 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	2016	2015
Cost		
Jan. 01	45	55
Zugänge	2	-
Disposals	-	(12)
Book transfers	17	2
Stand 31.12.	**64**	**45**
Amortization and depreciation/impairment		
Stand 01.01.	10	18
Current period	1	1
Disposals	-	(8)
Currency differences	-	(1)
Dec. 31	**11**	**10**
Book value as of 12/31	**53**	**35**

The investment properties have a total fair value of €60 million (previous year: €42 million), partially determined on the basis of independent external appraisal reports (last reporting date for regularly prepared reports: December 31, 2013) and partially on the basis of own calculations. Generally accepted valuation techniques are used to determine 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 determine 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.

(10) Investments accounted for using the equity method

The major investments carried at equity are firstly the joint ventures Kolbenschmidt Shanghai Piston Co. Ltd., Kolbenschmidt Pierburg Shanghai Nonferrous Components 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 active in the Aluminium-Technologie business unit, is also significant.

Notes to the consolidated financial statements
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The joint venture Rheinmetall International Engineering GmbH, Geisenheim (RIE), operated with Ferrostaal Industrieanlagen GmbH, Essen, is allocated to the Defence sector. This joint venture operates as a general contractor or subcontractor in the field of project planning and implementation for industrial facilities and serves the further internationalization of the Defence business in new markets.

Financial information (100% basis) of the major investments carried at equity

€ million	China Joint Ventures		KS HUAYU		RIE	
	2016	2015	2016	2015	2016	2015
Current assets (Dec. 31)						
Non-current	314	335	89	77	12	18
Cash and cash equivalent	78	57	1	14	4	27
Other current	335	234	101	85	68	83
Financial debts (Dec. 31)						
Non-current	-	-	3	4	-	-
Current	104	91	14	1	11	-
Other liabilities (Dec. 31)						
Non-current	-	-	48	43	9	8
Current	410	349	76	88	82	120
Sales	825	785	289	261	103	234
Amortization and depreciation	67	43	11	9	9	5
Net interest	(4)	(5)	(2)	(1)	(1)	(1)
Income taxes	15	9	-	2	5	7
Net income	43	35	11	9	(21)	(10)

Development of the major investments carried at equity

€ million	China Joint Ventures		KS HUAYU		RIE	
	2016	2015	2016	2015	2016	2015
Net assets Jan. 1	186	152	40	30	-	12
Comprehensive income	45	44	10	10	(18)	(12)
Net income	43	35	11	9	(21)	(10)
Other income	2	9	(1)	1	3	(2)
Dividend	(18)	(10)	-	-	-	-
Net assets Dec. 31	213	186	50	40	(18)	-
Investment in %	50	50	50	50	50	50
Carrying amount of investment Dec. 31	107	93	25	20	-	-
Dividend received	9	5	-	-	-	-

The following table shows the financial information for the investments carried at equity that, considered individually, are immaterial for the Rheinmetall consolidated financial statements. The amounts given all relate to the share held by Rheinmetall:

€ million	2016		2015	
	Joint Venture	Associated companies	Joint Venture	Associated companies
Carrying amount of shares	28	80	24	66
Net income	6	5	10	4
Other income	-	-	-	1
Comprehensive income	6	5	10	5

(11) Inventories

€ million	Dec. 31, 2016	Dec. 31, 2015
Raw materials and supplies	382	391
Work in process	432	394
Finished products	114	88
Merchandise	103	89
Prepayments made	67	90
	1,098	**1,052**
./. Prepayments received	(26)	(26)
	1,072	**1,026**

Additions to write-downs totaled €22 million (previous year: €21 million). In the year under review, inventories previously written down were written up by €1 million (previous year: €2 million).

(12) Trade receivables

€ million	Dec. 31, 2016	Dec. 31, 2015
Customer receivables	981	765
Receivables from construction contracts	325	362
	1,306	**1,127**

Receivables and liabilities from construction contracts

€ million	Dec. 31, 2016	Dec. 31, 2015
Production costs incurred	5,781	4,725
Plus margins / less anticipated losses	780	656
Progress billings / payments received	(6,504)	(5,140)
Total	**57**	**241**
Of which receivables from construction contracts	*325*	*362*
Of which liabilities from construction contracts	*(268)*	*(121)*

Notes to the consolidated financial statements

Other notes

Sales from construction contracts totaled €1,429 million in fiscal 2016 (previous year: €1,313 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, 2016	Of which current	Of which non-current	Dec. 31, 2015	Of which current	Of which non-current
Derivatives	37	27	10	26	25	1
Loans	1	-	1	4	3	1
Securities	4	2	2	4	2	2
Other	14	14	-	19	19	-
	56	**43**	**13**	**53**	**49**	**4**

(15) Other receivables and assets

€ million	Dec. 31, 2016	Of which current	Of which non-current	Dec. 31, 2015	Of which current	Of which non-current
Other taxes	60	60	-	56	56	-
Subsidies/grants receivable	43	27	16	19	7	12
Deferred income	19	16	3	14	11	3
Prepayments made	20	20	-	18	18	-
Other	6	2	4	25	19	6
	148	**125**	**23**	**132**	**111**	**21**

The subsidies/grants receivable relate chiefly to grants paid by public administrative bodies to subsidize the in-house development of new technologies.

(16) Cash and cash equivalents

€ million	Dec. 31, 2016	Dec. 31, 2015
Bank balances in credit institutions, checks, cash in hand	581	583
Short term investments (up to 3 months to maturity)	35	108
	616	**691**

(17) Equity

Subscribed capital – The subscribed capital of Rheinmetall AG remains at €111,510,656 and is divided into 43,558,850 no-par value shares (shares with no nominal value).

Authorized capital – By 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 new no-par shares in return for contributions in cash and/or in kind, up to a total of €50,000,000. In this process, 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.

Contingent capital – The Executive Board was authorized by resolution of the Annual General Meeting of May 10, 2016 to issue bonds with warrants and/or convertible bonds with a total nominal value of up to €800,000,000.00 and to create the associated contingent capital of up to €20,000,000.00.

With the approval of the Supervisory Board the Executive Board may on one or several occasions up until May 9, 2021 issue interest-bearing bonds with warrants and/or convertible bonds and attach options and/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. Statutory shareholder subscription rights remain unaffected. 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. The subscription right is also disapplied for up to 4,355,885 new shares, which corresponds to €11,151,056.60 or 10% of the current share capital. The disapplication of subscription rights is restricted 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 income from investments carried at equity (other income) are also included here.

Treasury shares – By resolution of the Annual General Meeting of 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 may 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 may 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.

Notes to the consolidated financial statements
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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 in Note (36). Sales proceeds from the disposals are used for general financing purposes.
As of December 31, 2016, the portfolio of treasury shares amounted to 870,788 shares with acquisition costs of €32 million. The amount of subscribed capital attributable to treasury shares totaled €2,229,000. This represents a share in subscribed capital of 2.0%.

Other comprehensive income

€ million	2016			2015		
	Gross amount	Tax effect	Net amount	Gross amount	Tax effect	Net amount
Remeasurement of net defined benefit liability from pensions	(70)	(20)	(50)	(18)	(4)	(14)
Land revaluation	1	-	1	1	-	1
Other income from investments carried at equity	(2)	-	(2)	-	-	-
Amounts not reclassified in the income statement	**(71)**	**(20)**	**(51)**	**(17)**	**(4)**	**(13)**
Change in value of derivatives (Cash flow hedges)	87	23	64	(36)	(11)	(25)
Currency conversion difference	27	-	27	17	-	17
Other income from investments carried at equity	3	-	3	6	-	6
Amounts reclassified in the income statement	**117**	**23**	**94**	**(13)**	**(11)**	**(2)**
Other comprehensive income	**46**	**3**	**43**	**(30)**	**(15)**	**(15)**

In fiscal 2016, Rheinmetall AG paid a dividend of €47 million or €1.10 per share (previous year: €12 million or €0.30 per share) to its shareholders from its retained earnings.

At the Annual General Meeting on May 9, 2017, the Executive Board and Supervisory Board intend to propose a dividend payment of €1.45 per share. The total amount paid out will be €62 million.

Minority interests – Major non-controlling interests are held by other shareholders in the subgroup of Rheinmetall MAN Military Vehicles GmbH, Munich, amounting to 49%. The Group's financial information is shown below.

€ million	2016	2015
Minority interests included in equity (Dec. 31)	(11)	(11)
Assets (Dec.31)	644	445
Of which non-current	*149*	*150*
Of which inventories	*168*	*120*
Liabilities (Dec. 31)	667	468
Of which non-current	*125*	*95*
External sales	752	592
Internal sales	3	7
Net income	2	(20)
Of which from minority interests	*1*	(10)
Comprehensive income	1	(22)
Of which from minority interests	-	(11)
Cash flows from operating activities	7	67

Capital management – Capital management is aimed at sustainably increasing the 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 important key figures for capital management in the Rheinmetall Group are the equity ratio and the ratio of net financial debts to equity (gearing).

€ million	Dec. 31, 2016	Dec. 31, 2015
Cash and cash equivalents	616	691
Near-cash assets	190	50
Financial liabilities	(787)	(822)
Net financial liabilities	19	(81)
Equity	1,781	1,562
Equity ratio	29.1%	27.3%
Net Gearing	(1.1%)	5.2%

For more details, see our statements on the financing strategy as well as on the asset and capital structure in our group 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 recognized in personnel expenses. The company does not enter into any further obligations; a provision is not recognized.

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Defined benefit plans – Under its defined benefit plans, Rheinmetall is obligated to meet confirmed benefit obligations to active and former employees. Pension accruals provide 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 levels: 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.

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. Upon 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.

Changes in the present value of the DBO, plan assets and pension provisions are shown below:

€ million	2016			2015		
	Present value of DBO	Plan assets	Pension provision	Present value of DBO	Plan assets	Pension provision
As at Jan. 1	**2,308**	**(1,180)**	**1,128**	**2,195**	**(1,074)**	**1,121**
Current service cost	34	-	34	33	-	33
Interest cost	26	-	26	33	-	33
Interest income	-	(6)	(6)	-	(12)	(12)
Entry benefits/Leaving benefit [1]	(2)	(1)	(3)	(1)	1	-
Amounts recognized in the income statement	**58**	**(7)**	**51**	**65**	**(11)**	**54**
Income from plan assets excluding interest income	-	(33)	(33)	-	(15)	(15)
Actuarial gains (-)/losses (+)						
Change in financial assumptions	118	-	118	24	-	24
change in demographic assumptions	13	-	13	(12)	-	(12)
Empirical adjustments	(28)	-	(28)	(9)	-	(9)
Amounts recognized directly in equity from remeasurement of net defined benefit liability	**103**	**(33)**	**70**	**3**	**(15)**	**(12)**
Employer contributions	-	(29)	(29)	-	(15)	(15)
Employee contributions	9	(10)	(1)	9	(9)	-
Pension payments	(113)	76	(37)	(90)	53	(37)
Currency differences/Other	17	(13)	4	126	(109)	17
As at Dec. 31	**2,382**	**(1,196)**	**1,186**	**2,308**	**(1,180)**	**1,128**
thereof Switzerland	*1,279*	*(1,058)*	*221*	*1,269*	*(1,062)*	*207*
thereof Germany	*941*	*(29)*	*912*	*878*	*(13)*	*865*
thereof others	*162*	*(109)*	*53*	*161*	*(105)*	*56*

[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. €20 million (previous year: €18 million) of the service cost is attributable to internally financed pension plans and €14 million (previous year: €15 million) to externally financed pension plans. Net interest expense is included in net interest.

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Personnel expenses of €74 million (previous year: €70 million) were also incurred in the year under review for defined contribution pension commitments, which mainly related to payments to statutory pension institutions in Germany.

Cash outflows of €34 million (previous year: €36 million) arose as a result of pension payments in connection with internally financed pension plans. Payments from employers and employees totaling €39 million (previous year: €24 million) were made to pension funds for externally financed pension plans. In 2015, €15 million of the payments made to pension funds related to the first allocation to the contractual trust agreement fund.

The following cash outflows are expected in fiscal 2017 as a result of pension obligations:

Estimated cash outflows in the subsequent year

€ million	**2017**
Employer contributions to fund-financed pension plans	10
Employee contributions to fund-financed pension plans	9
Employer's pension payments to internally financed pension plans	33

Pension plans in Germany and Switzerland relate to the following beneficiaries:

Number of people

	Dec. 31, 2016		**Dec. 31, 2015**	
	Germany	Switzerland	Germany	Switzerland
Active employees	9,651	1,167	9,398	1,148
Vested rights of former employees not subject to expiration	2,144	-	2,267	-
Pensioner	10,591	1,911	10,828	1,970
Total	**22,386**	**3,078**	**22,493**	**3,118**

As in the previous year, the average durations of pension obligations are 17 years (previous year: 15 years) at the German companies and 13 years (previous year: 11 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, 2016, and the duration for a mixture of active employees and retirees. The following table presents the key underlying actuarial parameters:

Parameters in %

	Dec. 31, 2016		Dec. 31, 2015	
	Germany	Switzerland	Germany	Switzerland
Discount rate	1.75	0.77	2.21	1.10
Pension growth	1.75	-	1.75	-

The following table shows the parameters where a change in values determined as of the balance sheet date 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. Calculations at German Group companies are based on the "Richttafeln 2005 G" mortality tables produced by Professor Klaus Heubeck, while foreign Group companies use country-specific mortality tables.

Change in present value of DBO in € million

€ million	Dec. 31, 2016		Dec. 31, 2015	
	Germany	Switzerland	Germany	Switzerland
Discount rate - 0.25 %	38	40	33	37
Discount rate + 0.25 %	(33)	(37)	(31)	(35)
Pension development - 0.50 %	(32)	-	(32)	-
Pension development + 0.50 %	37	-	35	-
Increase in life expectancy by 1 year	48	59	42	57

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. Internally financed pension commitments are financed from the cash flow from operating activities of the Rheinmetall Group.

Fair value of the plan assets in %

	Dec. 31, 2016	Dec. 31, 2015
Real estate	40	39
Equities, Funds	27	33
Corporate bonds	13	12
Other	20	16
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.

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(19) Other provisions

€ million	Personnel	Structural measures	Guar-antees	Notice-able losses	Contract related costs	Other provisions	**Total**
As at December 31, 2015	**173**	**31**	**99**	**24**	**151**	**114**	**592**
Utilization	136	9	26	5	36	42	254
Reversal	4	5	11	3	6	9	38
Added / provided for	151	15	45	2	62	88	363
Offsetting of CTA assets	(12)	-	-	-	-	-	(12)
Currency differences / Other	(3)	-	-	1	2	-	-
As at December 31, 2016	**169**	**32**	**107**	**19**	**173**	**151**	**651**
short term	*147*	*16*	*80*	*18*	*145*	*110*	*516*
long term	*22*	*16*	*27*	*1*	*28*	*41*	*135*

Personnel provisions are primarily attributable to bonuses of €88 million (previous year: €80 million) and obligations from vacation/overtime/flexitime accounts of €51 million (previous year: €47 million).

Provisions for restructuring mainly relate to termination settlements and expenses for partial retirement obligations. The CTA assets for partial retirement obligations (see also Item (18)) were set off against the provision for outstanding settlement in the amount of €12 million. Other provisions relate primarily to €21 million of discounts and bonuses (previous year: €14 million), €11 million for environmental risks (previous year: €11 million), and €5 million of legal, consulting and audit fees (previous year: €5 million).

(20) Financial liabilities

€ million	**Dec. 31, 2016**	Of which current	Of which non-current	**Dec. 31, 2015**	Of which current	Of which non-current
Bond	504	504	-	508	-	508
Promissory notes	121	-	121	179	-	179
Bank liabilities	148	60	88	120	60	60
Leasing	11	1	10	12	1	11
Other	3	2	1	3	2	1
	787	**567**	**220**	**822**	**63**	**759**

The €500 million bond issued in September 2010 will mature in September 2017. Since September 2014, the original coupon of 4.0% p.a. has been subject to a step up of 1.25 percentage points and thus totals 5.25% p.a.

As of the reporting date, there are various promissory note loans totaling €121 million, which serve the Group's general corporate financing. In 2016, promissory note loans amounting to €57 million were repaid early.

Promissory notes

€ million			Dec. 31, 2016	Dec. 31, 2015
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	77
November 2019	1.91 %	EUR	10	10
October 2021	2.35 %	EUR	19	19
October 2021	6-months-EURIBOR + 1.65 %	EUR	16	16
October 2024	3.00 %	EUR	25	25
October 2024	6-months-EURIBOR + 1.90 %	EUR	3	4
			121	**179**

The liabilities to banks of €90 million (previous year: €53 million) are secured by land charges and similar rights.

At the end of October 2016, Rheinmetall concluded a loan contract with the European Investment Bank (EIB), Luxembourg, for €250 million at an interest rate of 0.962% p.a. and a term of six years. The loan will be 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.

(21) Other liabilities

€ million	Dec. 31, 2016	Of which current	Of which non-current	Dec. 31, 2015	Of which current	Of which non-current
Advance payments received	328	328	-	337	337	-
Monies in transit from debt collection (ABS program)	61	61	-	86	86	-
Liabilities from other taxes	46	46	-	40	40	-
Liabilities from construction contracts	268	268	-	121	121	-
Derivatives	26	20	6	95	58	37
Liabilities from social security	13	12	1	14	13	1
Other	126	77	49	138	109	29
	868	**812**	**56**	**831**	**764**	**67**
Of which financial liabilities	*105*	*97*	*8*	*212*	*173*	*39*

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(22) Total operating performance

€ million	2016	2015
Sales		
from sale of products	5,172	4,781
from services	233	181
from development contracts	197	221
Total sales	**5,602**	**5,183**
Increase/decrease in inventory of finished and unfinished products and services and WIP	58	(43)
Other work performed by the enterprise and capitalized	51	42
	5,711	**5,182**

(23) Other operating income

€ million	2016	2015
Reversal of provisions	36	41
Disposal of assets/divestments	1	5
Sundry rental agreements and leases	9	10
Refunds	32	45
Other secondary income	82	69
	160	**170**

(24) Cost of materials

€ million	2016	2015
Cost of raw materials, supplies, and merchandise purchased	2,856	2,536
Cost of services purchased	264	247
	3,120	**2,783**

(25) Personnel expenses

€ million	2016	2015
Wages and salaries	1,191	1,130
Social security and related employee benefits	146	143
Pension expenses	108	103
Expenses for redundancy plans, termination indemnities, partial retirement	20	14
	1,465	**1,390**

Annual average head count (FTE)

	2016	2015
Automotive sector	10,923	10,969
Defence sector	9,827	9,442
Rheinmetall AG / Other	160	154
	20,910	**20,565**

(26) Amortization, depreciation and impairment

€ million	2016	2015
Intangible assets	54	54
Property, plant and equipment	173	148
Investment property	1	1
	228	**203**

Total impairment taken in 2016 was €10 million (previous year: €4 million). In the Automotive sector, €2 million related to capitalized development costs (previous year: €3 million) and €7 million to technical equipment (previous year: €0 million), while in the Defence sector €1 million was attributable to technical equipment (previous year: €0 million).

(27) Other operating expenses

€ million	2016	2015
Distribution and advertising costs	97	95
Repairs and maintenance	88	89
Administrative costs	73	69
IT costs	73	63
Rents, leases	57	61
Warranty	33	59
Travel expenses	54	53
Audit, legal and consultancy fees	52	52
Incidental staff costs	53	48
Other	135	112
	715	**701**

The “other” item primarily contains building operating expenses, research and development costs and licensing costs.

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(28) Income taxes

€ million	2016	2015
Current income tax expense	75	56
Earlier-period income taxes	1	-
Deferred taxes	8	5
	84	**61**

The table below presents a reconciliation of expected tax expense to recognized actual tax expense. A tax rate of 30% is applied to earnings before taxes in order to calculate the expected tax expense. This rate covers German corporate income tax, the solidarity surtax thereon and municipal trade tax.

€ million	2016	2015
Earnings from continuing operations before taxes	299	221
Expected income tax expense (tax rate of 30%; previous year: 30%)	**90**	**66**
Foreign tax rate differentials	(2)	(2)
Effects of loss carryforwards and change in value adjustment	10	12
Reduction of tax expense due to previously unrecognized loss carryovers and temporary differences	(16)	(13)
Tax-exempt income	(5)	(6)
Non-deductible expenses	9	7
Earlier-period income taxes	1	-
Taxes on entities carried at equity	(4)	(8)
Taxes on dividend and other withholding taxes	3	7
Other	(2)	(2)
Actual income tax expense	**84**	**61**

Allocation of deferred taxes to balance sheet items

€ million	Dec. 31, 2016		Dec. 31, 2015	
	Deferred tax assets	Deferred tax liabilities	Deferred tax assets	Deferred tax liabilities
Loss carryforwards and tax credits	71	-	82	-
Interest barrier carried forward	-	-	9	-
Fixed assets	13	140	13	138
Inventories and receivables	54	54	40	49
Pension provisions	206	-	185	-
Other provisions	33	17	32	8
Liabilities	57	17	65	18
Other	8	10	7	7
	442	**238**	**433**	**220**
Set off	(206)	(206)	(189)	(189)
	236	**32**	**244**	**31**
Of which noncurrent	*204*	*31*	*212*	*28*

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 €524 million (previous year: €534 million), which cannot be utilized or whose deferred tax assets were adjusted by value adjustments. Of this, €244 million (previous year: €236 million) is allocable to German loss carryovers, €277 million (previous year: €293 million) to foreign loss carryovers and another €3 million (previous year: €5 million) to tax credits. The German loss carryovers, and €163 million of the foreign loss carryovers (previous year: €157 million), are not subject to expiration. Most of the foreign loss carryovers subject to expiration can still be utilized for more than 9 years, as in the previous year. Write-downs of deferred tax assets changed by €-1 million (previous year: €3 million). Within the Group, €10 million (previous year: €37 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 €9 million (previous year: €6 million) relate to the main differences.

(29) 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. Since there were no shares, options or similar instruments outstanding as of December 31, 2016, or December 31, 2015, that could dilute earnings per share, basic and diluted earnings per share are identical. The portfolio of treasury shares is included in the weighted number of shares.

	2016	2015
Weighted number of shares *million*	42.61	38.98
Consolidated net profit for the year for shareholders of Rheinmetall AG	200	151
Earnings per share	**€4.69**	**€3.88**

(30) Adjusted EBIT

€ million	2016	2015
EBIT	**353**	**287**
One-off expenses and income in connection with:		
Properties	-	(3)
Restructuring	16	7
EBIT (adjusted)	**369**	**291**

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(31) Cash flow statement

Of the net interest included in the cash flow from operating activities, as in the previous year €3 million related to interest payments received and €38 million to interest payments made.

The cash outflow for investments in consolidated entities and financial assets of €14 million related mainly to a capital increase at the Pierburg Huayu Pump Technology Co. Ltd. joint venture in Shanghai, China, amounting to €4 million, the acquisition of the associate Riken Automobile Parts (Wuhan) Co., Ltd. in Wuhan, China, amounting to €12 million, and the repayment of a loan to third parties amounting to €-2 million.

(32) 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 Defence sector brings together all activities for the defense 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 defense systems, function sequence networking, simulation hardware and software, and infantry equipment.

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.

As well as 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 at the December 31 balance sheet date of the previous year and the year under review). Capital employed is calculated as the sum of equity, pension provisions and net financial debts. Net financial debts reflect financial debts 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 in Note (4).

The following reconciles the net financial debts of the sectors to those of the Group and the EBIT of the sectors to consolidated EBT:

€ million	Dec. 31, 2016	Dec. 31, 2015
Net financial debts		
Net financial debts of sectors	(349)	(149)
Others	330	230
Consolidation	-	-
Net financial debts of Group	**(19)**	**81**
	2016	**2015**
EBIT		
EBIT of sectors	370	306
Others	50	81
Consolidation	(67)	(100)
Group EBIT	**353**	**287**
Group net interest	(54)	(66)
Group EBT	**299**	**221**

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 properties according to the respective location of the company.

(33) 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.

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Contingent liabilities

€ million	Dec. 31, 2016	Dec. 31, 2015
Letters of comfort	2,223	2,760
Credit enhancement	18	15
Contract performance	3	28
Advance payment guarantees	1	9
Other	11	4
	2,256	**2,816**

The purchasing obligation from firm capital expenditure contracts totals €31 million (previous year: €32 million).

(34) Other financial obligations

Financial commitments in line with customary business standards exist under master agreements with suppliers, as well as under contracts for services.

In the reporting year, €50 million was posted as expenses for operating leasing (previous year: €54 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	2016				2015			
	2017	2018-2021	from 2022	Total	2016	2017-2020	from 2021	Total
Buildings	27	89	43	159	26	70	47	143
Other leases	12	11	-	23	14	15	7	36
	39	**100**	**43**	**182**	**40**	**85**	**54**	**179**

(35) Additional information on financial instruments

Financial instruments by valuation category

€ million	Dec. 31, 2016		Dec. 31, 2015	
	Measurement at amortized cost	Measurement at fair value (Level 2)	Measurement at amortized cost	Measurement at fair value (Level 2)
Loans and receivables				
Receivables from customers	981	-	765	-
Other financial assets without derivates	19	-	27	-
Cash and cash equivalents	616	-	691	-
Assets held to maturity				
Near-cash assets	190	-	50	-
Held for trading purposes				
Derivatives without hedge accounting	-	12	-	24
Derivatives with cash flow hedge [1)]	-	25	-	2
Financial assets	**1,806**	**37**	**1,533**	**26**
Liabilities				
Bond, promissory notes	625	-	687	-
Financial debts excl. leases	151	-	123	-
Trade liabilities	766	-	718	-
Other liabilities excl. Derivatives	79	-	117	-
Held for trading purposes				
Derivatives without hedge accounting	-	16	-	17
Derivatives with cash flow hedge [1)]	-	10	-	78
Financial liabilities	**1,621**	**26**	**1,645**	**95**

[1)] *Not a valuation category as defined by IAS 39.*

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 on the balance sheet date and yield curves are key input factors 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 valuation date. The forward rates applicable on the balance sheet date are used to determine 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.

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€ million

€ million		Dec. 31, 2016		Dec. 31, 2015	
		Book value	Fair value	Book value	Fair value
Bond	Level 1	504	517	508	533
Promissory notes	Level 2	121	123	179	184
Other financial debts excl. leases	Level 2	151	146	123	125

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 accordance with IAS 39. In 2016, the maximum volume of the program was €160 million (previous year: €148 million). As at December 31, 2016, the nominal value of receivables sold came to €160 million (previous year: €139 million).

The retained risks are insignificant for the Group. An asset item of €3 million is established for the maximum continuing involvement (previous year: €2 million), along with a corresponding liability item for the associated liabilities.

Collateral provided – Liens of €2 million (previous year: €2 million) rest on financial assets 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 valuation category as well as liabilities and are composed as follows:

€ million	2016	2015
Interest income	5	2
Interest expenses	(38)	(46)
Guarantee commission	(12)	(10)
Currency result	(6)	3
Income from valuation allowances	(5)	(6)
Other	1	9
	(55)	**(48)**

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 proactively managed to ensure that at the balance sheet date, no significant risks emanate from financial instruments.

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 at the balance sheet date.

€ million	Dec. 31, 2016		Dec. 31, 2015	
	Assets	**Liabilities**	**Assets**	**Liabilities**
Currency hedges	11	(12)	22	(15)
Interest rate hedges	-	(3)	-	-
Commodity hedges	-	-	1	(1)
Electricity price hedges	1	(1)	1	(1)
Without hedge accounting	**12**	**(16)**	**24**	**(17)**
Currency hedges	19	(10)	2	(69)
Interest rate hedges	-	-	-	(2)
Commodity hedges	5	-	-	(4)
Electricity price hedges	1	-	-	(3)
With hedge accounting	**25**	**(10)**	**2**	**(78)**

In the year under review, overall positive fair value changes in derivatives of €48 million before deduction of deferred taxes (previous year: overall negative fair value changes of €32 million) were recognized in the hedge reserve. Of the reserve, €11 million (previous year: €3 million) was reclassified to sales, €4 million (previous year: €0 million) was reclassified to the cost of materials and €1 million (previous year: €0 million) was reclassified to net interest in the year under review.

There were only immaterial ineffective portions.

Currency risk– Due 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 concluded on a central basis via Rheinmetall Automotive AG. The most important currency hedges contracted by German companies refer to US dollar, Swiss franc, Canadian 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 balance sheet date and recognized at a fair value which is determined according to the DCF method.

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Interest rate risk – As part of the Group-wide management of interest rate risks, Rheinmetall AG uses interest rate hedging instruments (interest rate swaps). 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 income were reclassified to net interest.

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 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 2018. The gas price was secured for the consumption volumes planned for 2017.

Sensitivity analysis – As part of sensitivity analyses for the risk variables concerned, the effects that a change in the relevant underlying instruments as at the balance sheet date would have on other net financial income and the hedge reserve, before taking into account deferred taxes, are examined.

€ million		Other financial results		Cash flow hedge reserve	
		Dec. 31, 2016	Dec. 31, 2015	Dec. 31, 2016	Dec. 31, 2015
Currency	Exchange rates (total) -10% / +10%	-10 / +10	+ 2 / -2	-5 / +5	-10 / +10
Interest rate	Yield curve -100 BP / +100 BP	- / -	- / -	- / -	-4 / +4
Commodity	Price curve for material prices -10% / +10%	- / -	- / -	-4 / +4	-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. For loans granted and customer receivables, the maximum risk is at the level of the values carried in the balance sheet. 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.

In the Rheinmetall Group, the monitoring and the recognition of default risk from customer receivables takes place on a decentralized basis in the operating units. However, there are corporate policies for proper debtor management. Individual assessments (where appropriate, based on current trends and qualitative information) may 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. Due to the type of transaction and the customer structure, non-payment rarely occurs and there is only the need to post defaults. As of the balance sheet date, there were no indications that any unimpaired and overdue receivables of the A/R portfolio amounting to €727 million (previous year: €536 million) would remain unpaid.

Aged analysis of customer receivables past due

€ million	Dec. 31, 2016	Dec. 31, 2015
Trade receivables unimpaired but past due		
for up to 30 days	75	92
for up to 180 days	96	65
for more than 180 days	83	71
	254	**228**

No important credit concentrations exist in the Rheinmetall Group.

Liquidity risk – Sufficient liquidity at all times is ensured by the Rheinmetall Group especially by a cash budget and forecast over a specified time horizon, as well as 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 are listed below as of the balance sheet date.

Cash outflows

€ million	Dec. 31, 2016			Dec. 31, 2015		
	2017	2018-2021	from 2022	2016	2017-2020	from 2021
Bond	526	-	-	26	526	-
Promissory notes	3	100	32	3	125	69
Other bank liabilities	62	61	33	62	43	21
Capital lease liabilities	1	5	18	1	5	21
Other financial debts	2	1	1	2	1	1
	594	**167**	**84**	**94**	**700**	**112**
Derivatives with negative fair value	20	6	-	58	37	-
Derivatives with positive fair value	27	10	-	25	1	-

The fair values of derivatives on the reporting date should be seen in the context of the associated underlyings, whose values generally show an opposite trend to those of the derivatives, irrespective of whether these have already been accounted for 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. In contrast, the capital requirements cover the redemption of financial debts (principal and interest), capital expenditure, and the funds needed for operating activities.

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(36) 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 basis of the calculation of the remuneration amount is the average adjusted EBT of the Rheinmetall Group of the last three fiscal years. The remuneration for fiscal 2016 is based on the average adjusted EBT for the years 2014 to 2016, limited to a maximum of €300 million. Average adjusted EBT for LTI remuneration totaled €209 million for fiscal 2016. This is multiplied by a personal factor according to individual commitment.

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 €11 million (previous year: €9 million) was reported for the LTI program in fiscal 2016.

The reference price in February 2016 was €63.30. For fiscal 2015, a total of 74,364 shares were transferred to the entitled participants of the LTI program on April 4, 2016 (previous year: a total of 95,481 shares were transferred for fiscal 2014 on April 2, 2015).

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 2 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 2016, Rheinmetall Group employees purchased 90,633 shares in total (previous year: 94,245) for €4 million (previous year: €5 million). Expenses of €2 million (previous year: €1 million) were incurred for this program, recognized as personnel expenses. The gain on disposal from the sale of treasury shares to employees totaled €2 million (previous year: loss on disposal of €1 million).

Zeichnungsfrist	Share price in €	Discount per share in €	No. of shares purchased by staff
June 14 - July 4, 2016	56.22	16.87	90,633

(37) Other information on related parties

The Rheinmetall Group's corporate related parties are the joint ventures and associated companies carried at equity. 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.

MioEUR	**Joint Ventures**		**Associated company**	
	2016	**2015**	**2016**	**2015**
Products/services provided	415	376	3	4
Products/services received	8	8	17	16
Receivables Dec.31	84	69	1	1
Liabilities Dec.31	(7)	(7)	(2)	(3)

Please see the comments under Note (33) "Contingent liabilities" for details of the Rheinmetall Group's contingent liabilities in connection with joint ventures.

Business relationships exist 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 Board, and which is managed by a party related to Mr. Armin 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. The volume of products/services received in fiscal 2016 amounted to €1 million.

Remuneration of the Executive Board and the Supervisory Board – The reportable compensation 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:

Notes to the consolidated financial statements
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TEUR	2016	2015
Fixed remuneration incl. fringe benefits	2,007	2,023
Performance based remuneration	2,506	2,755
LTI	2,300	1,607
	6,813	**6,385**
Pensions expenses	1,742	1,830
Total	**8,555**	**8,215**

The net present value of pension commitments, which corresponds to the amount of provisions, totals €12,658,000 for members of the Executive Board active at year-end (previous year: €9,383,000).

Supervisory Board compensation including attendance fees amounted to €1,423,000 (previous year: €1,449,000). 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 a total of €602,000 (previous year: €658,000) from these services.

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.

€2,451,000 (previous year: €2,041,000) was paid to former members of the Executive Board or their surviving dependents. Pension provisions for these persons totaled €32,176,000 (previous year: €31,938,000). As in the previous year, €549,000 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 €8,865,000 (previous year: €8,800,000).

(38) Auditor's fees

In fiscal 2016, the following fees of the statutory auditor PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft (PwC) were expensed in Germany:

'000	2016	2015
End-of-year auditing services	2,147	2,160
Other verification services	106	185
Tax consultancy services	22	64
Other services	142	193
	2,417	**2,602**

The auditing fees 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 mainly relate to activities in the context of audits accompanying projects and due diligence services. All services not related to the audit of the financial statements were approved by the Audit Committee.

(39) Exercise of exemption provisions under HGB

Based on the provisions of Section 264 (3) HGB governing companies and Section 264b HGB governing partnerships, the following German enterprises have elected not to prepare notes or management reports or to disclose their 2016 financial statements:

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
KSPG AG
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 3D TechCenter GmbH
Rheinmetall Ballistic Protection GmbH
Rheinmetall Berlin Verwaltungsgesellschaft mbH
Rheinmetall Defence Electronics GmbH
Rheinmetall Dienstleistungszentrum Altmark GmbH
Rheinmetall Eastern Markets GmbH
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 NewTech Vorrat Nr.1 GmbH
Rheinmetall Soldier Electronics GmbH
Rheinmetall Technical Assistance GmbH
Rheinmetall Technical Publications GmbH
Rheinmetall Verwaltungsgesellschaft mbH
Rheinmetall Waffe Munition GmbH
SUPRENUM Gesellschaft für numerische Superrechner mbH

Notes to the consolidated financial statements
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(40) Corporate governance

In August 2016, Rheinmetall AG published its declaration of conformity according to the German Corporate Governance Code pursuant to Section 161 AktG on the internet at www.rheinmetall.com in the section "Group – Corporate Governance," thus making it available to shareholders.

Düsseldorf, February 24, 2017

Rheinmetall Aktiengesellschaft
The Executive Board

Armin Papperger	Horst Binnig	Helmut P. Merch	Peter Sebastian Krause

Notes to the consolidated financial statements
Other notes

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					
EMG EuroMarine Electronics GmbH, Neckarsulm/Germany			100	31,124	(586)
MEG Marine Electronics Holding GmbH, Düsseldorf/Germany	(1)		100	5,000	0
Rheinmetall Berlin Verwaltungsgesellschaft mbH, Berlin/Germany	(1)	100		213,750	0
Rheinmetall Immobilien GmbH, Düsseldorf/Germany		100		213,062	3,583
Rheinmetall Immobilien Hamburg GmbH, Düsseldorf/Germany		100		1,685	1
Rheinmetall Immobilien Hamburg Objekt Friedensallee GmbH & Co. KG, Düsseldorf/Germany			100	11,479	(251)
Rheinmetall Industrietechnik GmbH, Düsseldorf/Germany	(1)	100		26	0
Rheinmetall Insurance Services GmbH, Düsseldorf/Germany	(1)	100		300	(7)
Rheinmetall Maschinenbau GmbH, Düsseldorf/Germany		100		296	191
Rheinmetall NewTech Vorrat Nr. 1 GmbH, Düsseldorf/Germany			100	25	0
Rheinmetall Verwaltungsgesellschaft mbH, Düsseldorf/Germany	(1)		100	733,843	0
SUPRENUM Gesellschaft für numerische Superrechner mbH, Bremen/Germany			100	(1,397)	0
Defence sector					
ADS Gesellschaft für aktive Schutzsysteme mbH, Lohmar/Germany			74	8,626	(6,512)
American Rheinmetall Defense, Inc., Biddeford, Maine/USA		100		39,978	(3,764)
American Rheinmetall Munition Inc., Stafford, Virginia/USA			100	(10,749)	647
American Rheinmetall Systems, LLC, Biddeford, Maine/USA			100	33,597	2,383
Benntec Systemtechnik GmbH, Bremen/Germany	(2)		49	3,993	841
BIL Industriemetalle GmbH & Co. 886 KG, Grünwald/Germany	(3)	94		245	192
cyel ag, Könitz, BE/Switzerland			60	728	(888)
Eurometaal N.V., Hengelo/Netherlands			100	121	(31)
Laser 2000 AG, Urdorf/Switzerland			80	0	0
LDT Laser Display Technology GmbH, Jena/Germany	(1)		100	1,485	10
Logistic Solutions Australasia Pty. Ltd., Melbourne/Australia			100	1,274	350
Main Street 1455 Propiertary Limited, Somerset West/South Africa			100	0	0
Nitrochemie AG, Wimmis/Switzerland			51	946	3
Nitrochemie Aschau GmbH, Aschau/Germany			55	27,734	10,911
Nitrochemie Wimmis AG, Wimmis/Switzerland			55	50,457	(532)
Oerlikon Contraves GmbH, Zürich/Switzerland		100		21	0
Oerlikon Contraves Pte Ltd., Singapur/Singapore			100	2,870	269
RD Investment AG, Zurich/Switzerland			69	990	(40)
RFEL LTD, Newport, Isle of Wight/Great Britain			100	1,743	229
Rheinmetall Air Defence AG, Zurich/Switzerland		100		22,373	6,626
Rheinmetall Ballistic Protection GmbH, Krefeld/Germany	(1)		100	3,984	(238)

Notes to the consolidated financial statements
Other notes

Company		Direct share of capital in %	Indirect share of capital in %	Equity in € 'ooo	Net income for the year in € 'ooo
Rheinmetall Canada Inc., St.-Jean-sur-Richelieu/Canada		100		65,475	7,033
Rheinmetall Chempro GmbH, Bonn/Germany			51	30,585	5,004
Rheinmetall Combat Platforms North America Inc, Wilmington, Delaware/USA			100	(44)	(44)
Rheinmetall Communication and Simulation Technologies plc, Singapore/Singapore			100	384	219
Rheinmetall Defence Australia Pty Ltd., Deakin West/Australia		100		26	26
Rheinmetall Defence Electronics GmbH, Bremen/Germany	(1)	100		30,335	(3,435)
Rheinmetall Defence Polska sp. z.o.o., Warsaw Poland			100	(72)	(107)
Rheinmetall Defence UK Limited, London/Great Britain		100		5,739	(495)
Rheinmetall Denel Munition Pty. Ltd., Somerset West/South Africa			51	88,460	15,744
Rheinmetall Dienstleistungszentrum Altmark GmbH, Letzlingen/Germany	(1)	100		27	0
Rheinmetall Eastern Markets GmbH, Düsseldorf/Germany	(1)	100		998	166
Rheinmetall Electronics Pty. Ltd., Adelaide/Australia			100	1,856	(280)
Rheinmetall Hellas S.A. i.L., Athen/Greece		100		111	(37)
Rheinmetall International Defence and Security Ltd., Riyadh/Saudi Arabia			100	(429)	(531)
Rheinmetall International Holding AG, Zurich/Switzerland			100	(258)	(4,129)
Rheinmetall International Services Limited, Masdar City/UAE			100	(349)	(371)
Rheinmetall Italia S.p.A., Rome/Italy			100	96,979	5,942
Rheinmetall Laingsdale (Pty) Ltd., Cape Town/South Africa			76	3,206	1,503
Rheinmetall Landsysteme GmbH, Südheide/Germany	(1)	100		23,795	(2,385)
Rheinmetall Ltd, Moskau/Russian Federation			100	540	32
Rheinmetall MAN Military Vehicle Systems RSA (Pty) Ltd., Pretoria/South Africa	(2)		36	20	0
Rheinmetall MAN Military Vehicles Australia Pty Ltd., Melbourne/Australia			51	6,824	4,680
Rheinmetall MAN Military Vehicles Canada Ltd., OttawaCKanada			51	390	(40)
Rheinmetall MAN Military Vehicles GmbH, Munich/Germany		51		78,845	6,809
Rheinmetall MAN Military Vehicles Nederland B.V., Ede/Netherlands			51	(19,510)	(10,646)
Rheinmetall MAN Military Vehicles Österreich GesmbH, Vienna/Austria			51	6,830	3,578
Rheinmetall MAN Military Vehicles Österreich Holding GesmbH, Vienna/Austria			51	100,095	(15)
Rheinmetall MAN Military Vehicles UK Ltd., Swindon/Great Britain			51	(966)	(754)
Rheinmetall Netherlands B.V., Hengelo/Netherlands			100	54,509	905
Rheinmetall Nordic AS, Nøtterøy/Norway		100		33,264	(15,519)
Rheinmetall Projects Development Consultancy LLC, Abu Dhabi/UAE	(2)	49		(91)	44
Rheinmetall Protection Systems Nederland B.V., Ede/Netherlands			100	844	455
Rheinmetall Simulation International AG, Muri/Switzerland			100	616	(21)
Rheinmetall Soldier Electronics GmbH, Stockach/Germany	(1)	100		1,897	(202)
Rheinmetall Savunma Sanayi Anonim Sirketi, Ankara / Turkey			90	83	(133)
Rheinmetall Swiss SIMTEC AG, Thun/Switzerland			100	3,059	(90)
Rheinmetall Technical Assistance GmbH, Kassel/Germany	(1)		51	25	0
Rheinmetall Technical Publications GmbH, Bremen/Germany	(1)	100		1,975	146
Rheinmetall Technical Publications Schweiz AG, Zurich/Switzerland			100	2	(132)
Rheinmetall Waffe Munition ARGES GmbH, Schwanenstadt/Austria	(1)		100	1,668	27
Rheinmetall Waffe Munition GmbH, Südheide/Germany	(1)	100		100,745	(5,819)

Company		Direct share of capital in %	Indirect share of capital in %	Equity in € '000	Net income for the year in € '000
Rheinmetall Waffe Munition South Africa (Pty) Ltd., Somerset West/South Africa			100	25	(219)
RH Mexico Simulation and Training S.A. de C.V., Mexico City/Mexico			100	1,103	(130)
RM Euro B.V., Hengelo/Netherlands		100		54,203	42,795
RTP-UK Ltd., Bristol/Great Britain			100	7,368	1,292
RWM Beteiligungsverwaltung Austria GmbH, Schwanenstadt/Austria			100	13,899	(1,086)
RWM Italia S.p.A., Ghedi/Italy			100	39,341	10,809
RWM Schweiz AG, Zürich/Switzerland			100	15,808	3,629
RWM Zaugg AG, Lohn-Ammannsegg/Switzerland			100	9,590	(1,131)
Vinghøg AS, Nøtterøy/Norway			100	12,411	(13,045)
Automotive sector					
BF Engine Parts LLC, Istanbul/Turkey			100	887	185
BF Germany GmbH, Asperg/Germany	(1)		100	10,156	7
GVG Grundstücksverwaltung Gleitlager GmbH & Co. KG, Neckarsulm/Germany			100	6,552	163
GVMS Grundstücksverwaltung Service GmbH & Co. KG, Neckarsulm/Germany			100	(1,434)	(1,529)
GVN Grundstücksverwaltung Neckarsulm GmbH & Co. KG, Neckarsulm/Germany			100	5,709	624
Intec France S.A.S., Meyzieu/France			100	883	8
Karl Schmidt Trading Company S. de R.L. de C.V. Celaya/Mexico			100	(79)	57
Kolbenschmidt de México, S. de R.L. de C.V., Celaya/Mexico			100	8,523	540
Kolbenschmidt K.K., Yokohama/Japan			100	35,350	4,903
Kolbenschmidt Liegenschaftsverwaltung GmbH Berlin, Neckarsulm/Germany	(1)		100	6,976	118
Kolbenschmidt Pierburg Innovations GmbH, Neckarsulm/Germany	(1)		100	955	(30)
Kolbenschmidt USA Inc., Marinette/USA			100	0	0
KS ATAG Beteiligungsgesellschaft m.b.H., Neckarsulm/Germany	(1)		100	10,263	0
KS ATAG Romania S.R.L., Bukarest/Romania			100	3,719	(32)
KS CZ Motorservice s.r.o., Usti/Czech Republic			100	9,079	9
KS France S.A.S, Basse-Ham (Thionville)/France			100	27,525	122
KS Gleitlager de México S. de R.L. de C.V., Celaya/Mexico			100	6,063	1,425
KS Gleitlager GmbH, St. Leon-Rot/Germany	(1)		100	14,592	377
KS Gleitlager North America LLC, Marinette/USA			100	4,675	(1,508)
KS Grundstücksverwaltung Beteiligungs GmbH, Neckarsulm/Germany	(1)		100	120	8
KS Grundstücksverwaltung GmbH & Co. KG, Neckarsulm/Germany			100	24,429	1,768
KS Kolbenschmidt Czech Rebublic a.s., Usti/Czech Republic			100	39,706	3,652
KS Kolbenschmidt France S.A.S., Basse-Ham (Thionville)/France			100	18,542	1,538
KS Kolbenschmidt GmbH, Neckarsulm/Germany	(1)		100	59,101	995
KS Kolbenschmidt US Inc., Marinette/USA			100	4,204	1,683
KS Large Bore Pistons LLC., Marinette/USA			100	28,329	2,648
KSLP (China) Co. Ltd., Kunshan/China			100	3,010	(1,853)
KSPG (China) Investment Co. Ltd., Shanghai/China			100	48,438	(819)
KSPG Automotive Brazil Ltda., Nova Odessa/Brazil			100	69,078	(8,804)
KSPG Automotive India Private Ltd., Mumbai Maharashtra/India			100	22,979	(5,446)
KSPG Finance & Service Ltd., St. Julians/Malta			100	166,626	2,012

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Company		Direct share of capital in %	Indirect share of capital in %	Equity in € 'ooo	Net income for the year in € 'ooo
KSPG Holding USA Inc., Delaware/USA			100	303,310	14,139
KSPG Malta Holding Ltd., St. Julians/Malta		21	79	222,225	2,745
KSPG Netherlands Holding B.V., Amsterdam/Netherlands			100	84,052	(29)
KSUS International, LLC., Marinette/USA			100	45,713	13,888
Mechadyne International Ltd., Kirtlington/Great Britain			100	3,302	289
MS Motorservice Aftermarket Iberica S.L., Abadiano/Spain			100	5,895	1,475
MS Motorservice Asia Pacific Co. Ltd., Shanghai/China			100	1,840	(443)
MS Motorservice Deutschland GmbH, Asperg/Germany	(1)		100	3,344	44
MS Motorservice France S.A.S., Villepinte/France			100	18,028	2,033
MS Motorservice International GmbH, Neuenstadt/Germany	(1)		100	45,311	1,355
MS Motorservice Istanbul Dis Ticaret ve Pazarlama A.S., Istanbul/Turkey			51	2,936	368
Pierburg China Ltd., Kunshan City/China			100	16,499	6,903
Pierburg Gestion S.L., Abadiano/Spain			100	43,463	607
Pierburg GmbH, Neuss/Germany	(1)		100	119,793	11,410
Pierburg Grundstücksverwaltung GmbH & Co. KG, Neuss/Germany			100	5,585	(174)
Pierburg Mikuni Pump Technology (Shanghai) Corp., Shanghai/China			51	10,117	1,801
Pierburg Mikuni Pump Technology Corporation, Odawara/Japan			51	1,391	(114)
Pierburg Pump Technology France S.à r.l., Basse-Ham (Thionville)/France			100	40,790	7,609
Pierburg Pump Technology GmbH, Neuss/Germany	(1)		100	35,764	2,893
Pierburg Pump Technology Italy S.p.A., Lanciano/Italy			100	39,252	7,870
Pierburg Pump Technology Mexico S.A.de C.V., Mexico City/Mexico			100	6,354	1,007
Pierburg Pump Technology US LLC., Marinette/USA			100	5,798	8,918
Pierburg S.A., Abadiano/Spain			100	30,997	10,025
Pierburg s.r.o., Usti/Czech Republic			100	40,483	24,082
Pierburg Systems S.L., Abadiano/Spain			100	163	60
Pierburg US, LLC , Fountain Inn (Greenville)/USA			100	18,937	4,897
Rheinmetall 3D TechCenter GmbH, Neuss/Germany			100	25	0
Rheinmetall Automotive AG, Neckarsulm/Germany	(1)		100	337,446	746
Société Mosellane de Services S.C.I., Basse-Ham (Thionville)/France			100	10,173	(22)
Joint Operations					
Automotive sector					
Advanced Bearing Materials LLC., Greensburg/USA			50	2,941	(1,307)
Investments carried at equity					
Holding companies / service companies / other					
casa altra development GmbH, Düsseldorf/Germany	(6)		35	382	(593)
LIGHTHOUSE Development GmbH, Düsseldorf/Germany	(4), (6)		10	52	(55)
Unternehmerstadt GmbH, Düsseldorf/Germany	(5)		50	14	(10)

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	3,753	1,024
AIM Infrarot-Module GmbH, Heilbronn/Germany			50	5,486	568
Airbus DS Airborne Solutions GmbH, Bremen/Germany	(6)	49		3,330	3,550
ARGE RDE/CAE (GbR), Bremen/Germany	(5)		50	67	959
ARGE TATM, Bonn/Germany	(5), (6)		50		
ARTEC GmbH, München/Germany	(5)		64	1,022	686
Contraves Advanced Devices Sdn Bhd, Malaka/Malaysia	(5)		49	20,572	2,065
Defense Munitions International, LLC, Wilmington, Delaware/USA	(5)		50	9	0
DynITEC GmbH, Troisdorf/Germany	(6)		35	3,419	1,260
EuroSpike GmbH, Röthenbach/Peg/Germany	(5), (6)		40	1,793	1,634
GIWS Gesellschaft für Intelligente Wirksysteme mbH, Nürnberg/Germany	(5), (6)		50	1,239	(63)
Hartchrom Defense Technology AG, Steinach/Switzerland	(6)		38	1,814	61
Helios Aero Services B.V., Rijen / Netherlands	(5), (7)		22		
HFTS Helicopter Flight Training Services GmbH, Hallbergmoos/Germany	(5)		25	54,387	14,258
HIL Industrie-Holding GmbH, Bonn/Germany	(5), (6)		33	57	(5)
LOG GmbH, Bonn/Germany	(6)		25	539	(589)
ORR Training Systems LLC, Moskau/Russian Federation	(5)		25	(151)	(8)
Oy Finnish Defence Powersystems Ab, Helsinki/Finland			30	76	(5)
PSM Projekt System & Managment GmbH, Kassel/Germany	(5)		50	753	182
RDZM, LLC, Wilmington, Delaware/USA	(5), (7)		50		
Rheinmetall Arabia Simulation and Training LLC, Riyadh/Saudi Arabia	(5)		40	481	33
Rheinmetall BMC Savunma Sanayi Ve Ticaret A.S., Ankara/Turkey	(5), (7)		40		
Rheinmetall International Engineering GmbH, Geisenheim/Germany	(5)	50		(17,874)	(21,194)
Werk Aschau Lagerverwaltungsgesellschaft mbH, Aschau/Germany	(5)		50	25	0
Automotive sector					
Kolbenschmidt Pierburg Shanghai Nonferrous Components Co. Ltd., Shanghai/China	(5)		50	136,099	37,506
Kolbenschmidt Shanghai Piston Co. Ltd., Shanghai/China	(5)		50	73,185	9,035
KS HUAYU AluTech GmbH, Neckarsulm/Germany	(5)		50	49,772	11,465
Pierburg Huayu Pump Technology Co. Ltd., Shanghai/China	(5)		50	3,742	(3,342)
Riken Automobile Parts (Wuhan) Co., Ltd., Wuhan/China			30	27,268	4,095
Shriram Pistons & Rings Ltd., Neu Delhi/India			20	105,933	14,716

(1) Profit transfer agreement
(2) Full consolidation due to majority of voting rights
(3) Structured entity (real estate management company)
(4) Controlling influence owing 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

We represent that, to the best of our knowledge and in accordance with applicable accounting principles, the consolidated financial statements of Rheinmetall AG present a true and fair view of the Rheinmetall Group's assets, financial situation and earnings, and that the Group management report, which is consolidated with the management report of Rheinmetall AG, describes fairly, in all material respects, the Group's business trend and performance, the Group's position and the significant risks and opportunities of the Group's expected future development.

Düsseldorf, February 24, 2017

Rheinmetall Aktiengesellschaft
The Executive Board

Armin Papperger   Horst Binnig   Helmut P. Merch   Peter Sebastian Krause

Auditor's Report and Opinion

Rheinmetall AG, Düsseldorf, Indipendent Auditor's Report and Opinion

„We have audited the consolidated financial statements prepared by the Rheinmetall Aktiengesellschaft, Düsseldorf, comprising the balance sheet, the income statement and statement of comprehensive income, statement of changes in equity, cash flow statement and the notes to the consolidated financial statements, together with the group management report, which is combined with the management report of the Rheinmetall Aktiengesellschaft, Düsseldorf, for the business year from January 1 to December 31, 2016. The preparation of the consolidated financial statements and the combined management report in accordance with the IFRSs, as adopted by the EU, and the additional requirements of German commercial law pursuant to § (Article) 315a Abs. (paragraph) 1 HGB ("Handelsgesetzbuch": German Commercial Code) are the responsibility of the parent Company's Board of Managing Directors. Our responsibility is to express an opinion on the consolidated financial statements and the combined management report based on our audit.

We conducted our audit of the consolidated financial statements in accordance with § 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany) (IDW). Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the consolidated financial statements in accordance with the applicable financial reporting framework and in the combined management report are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of the Group and expectations as to possible misstatements are taken into account in the determination of audit procedures. The effectiveness of the accounting-related internal control system and the evidence supporting the disclosures in the consolidated financial statements and the combined management report are examined primarily on a test basis within the framework of the audit. The audit includes assessing the annual financial statements of those entities included in consolidation, the determination of the entities to be included in consolidation, the accounting and consolidation principles used and significant estimates made by the Company´s Board of Managing Directors, as well as evaluating the overall presentation of the consolidated financial statements and the combined management report. We believe that our audit provides a reasonable basis for our opinion.

Our audit has not led to any reservations.

In our opinion based on the findings of our audit the consolidated financial statements comply with the IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315a Abs. 1 HGB and give a true and fair view of the net assets, financial position and results of operations of the Group in accordance with these provisions. The combined management report is consistent with the consolidated financial statements and complies with the legal requirements and as a whole provides a suitable view of the Group's position and suitably presents the opportunities and risks of future development."

Düsseldorf, Februar 27, 2017

PricewaterhouseCoopers
Aktiengesellschaft
Wirtschaftsprüfungsgesellschaft

Gerd Bovensiepen
Wirtschaftsprüfer (German Public Auditor)

Norbert Linscheidt
Wirtschaftsprüfer (German Public Auditor)

ADDITIONAL INFORMATION

Balance Sheet of Rheinmetall AG
as of December 31, 2016

Assets € ’000

	Note	Dec. 31, 2016	Dec. 31, 2015
Fixed assets	(1)		
Intangible assets		6,384	5,510
Property, plant and equipment		31,774	30,497
Financial assets		1,033,082	1,065,301
		1,071,240	**1,101,308**
Current assets			
Inventories	(2)	113	141
Receivables and other assets	(3)	906,831	447,499
Bonds	(4)	225,000	157,500
Cash in hand	(5)	360,910	381,083
		1,492,854	**986,223**
Deferred income	(6)	**6,329**	**3,726**
Total assets		**2,570,423**	**2,091,257**

Equity and Liabilities € ’000

	Note	2016	2015
Share capital		111,511	111,511
Treasury stock (notional value relating to the share capital)		(2,229)	(2,652)
		109,282	108,859
Capital reserves		534,220	530,535
Retained earnings		133,955	123,416
Net earnings		65,000	48,000
Equity		**842,457**	**810,810**
Provisions	(6)	**128,702**	**135,392**
Liabilities	(7)		
Bond		500,000	500,000
Liabilities due to banks		121,500	178,500
Other liabilities		970,589	466,074
		1,592,089	**1,144,574**
Deferred income		**7,175**	**481**
Total liabilities		**2,570,423**	**2,091,257**

Income Statemant for Rheinmetall AG
for Fiscal 2016

€ ’000

	Note	2016	2015
Investment income	(13)	177,884	151,274
Net interest	(14)	(11,452)	(28,248)
Net financial income		**166,432**	**123,026**
Sales	(15)	56,519	0
Other operational income		48,755	94,884
Staff costs		32,740	31,140
Amortization of intangible and depreciation of tangible assets (incl. write-down)		2,698	2,115
Depreciation of financial assets	(15)	68,191	25,000
Other operating expenses	(16)	77,822	94,943
Extraordinary expenses	(17)	**90,255**	**64,712**
Earnings before taxes (EBT)		(21,978)	(8,262)
Taxes on income and revenue	(18)	**68,277**	**56,450**
Net profit for the year		**68,277**	**56,450**
Appropriations to retained earnings		3,277	8,450
Appropriations of retained earnings		-	-
Net earnings		**65,000**	**48,000**

Supervisory Board

Klaus Greinert
Mannheim

Businessman

Chairman

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

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

Vice Chairwoman of the Group's Works Council
Rheinmetall AG

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

Dr. Siegfried Goll
Markdorf
(up to May 10, 2016)

Consulting engineer

Former CEO of ZF Friedrichshafen AG

Membership in Supervisory Boards

Voss Holding GmbH & Co. KG
Witzenmann GmbH

Ulrich Grillo
Mülheim an der Ruhr
(from May 10, 2016)

Diplom-Kaufmann

Chairman of the Executive Board Grillo-Werke AG G

Membership in Supervisory Boards

Deutsche Messe AG
Klöckner & Co. SE
Grillo Zinkoxid GmbH
RHEINZINK GmbH & Co. KG
Zinacor S.A.
Innogy SE

*) *Elected by the employees*

Supervisory Board

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. Michael Mielke *)
Berlin

Head of Product Division Actuators
Pierburg GmbH, Berlin Plant

DDr. Peter Mitterbauer
Gmunden, Austria
(up to May 10, 2016)

Gmunden, Austria
Member of the Executive Board
Mitterbauer Beteiligungs-AG

Membership in Supervisory Boards

Miba AG
Erste Österreichische Spar-Casse Privatstiftung
Oberbank AG
ROI AG

Detlef Moog
Mülheim an der Ruhr

Consulting engineer

Dagmar Muth *)
Bremen

Chairwoman of Works Council of
Rheinmetall Defence Electronics GmbH

Vice Chairwoman of the Group's Works Council
Rheinmetall AG

Membership in Supervisory Boards

Rheinmetall Defence Electronics GmbH
Vice Chairwoman

Member of the Works Council of the Defence Division

Professor Dr. Frank Richter
Ulm

Chairman of the Executive Board
DURAVIT AG

Membership in Supervisory Boards

Advisory Board Röchling SE & Co. KG

Advisory Board Duralog Duravit Logistik GmbH
Chairman

Duravit Egypt S.A.E.
Chairman

Duravit (China) Sanitaryware Co. Ltd.
Chairman

Duravit Yapi Ürünleri San. Ve. Tic. A.S.
President

Duravit Tunisia S.A.
President

Duravit India Pvt. Ltd.
Chairman

*) *Elected by the employees*

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 ofr
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

Chairman of the Group's Works Council
Rheinmetall AG

Member of Works Council of
Pierburg GmbH, Plant Niederrhein, Neuss

*) *Elected by the employees*

Klaus-Günter Vennemann
Waidring, Austria
(from May 10, 2016)

Consulting engineer

Membership in Supervisory Boards

Rheinmetall Automotive AG
(up to Juni 21, 2016)
NANOGATE AG
Plastik-Design GmbH
Dr. Rudolf Kellermann GmbH

Univ.-Prof. Dr. Marion A. Weissenberger-Eibl
Karslruhe
(from May 10, 2016)

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)
Kuratorium der Steinbeis-Stiftung für Wirtschaftsförderung (StW)
(up to September 30, 2016)

Toni Wicki
Oberrohrdorf, Schweiz
(up to May 10, 2016)

Consulting engineer

Executive Board Rheinmetall AG

Armin Papperger
Düsseldorf

Chairman

Director of Industrial Relations
(up to December 31, 2016)

Defence

Chairman 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 Laingsdale (Pty) Ltd *)
Chairman
(up to January 31, 2016)

Rheinmetall MAN Military Vehicles GmbH *)
Chairman

Rheinmetall Waffe Munition South Africa (Pty) Ltd *)
Chairman
(up to January 31, 2016)

Helmut P. Merch
Erkrath

Finance and Controlling

CFO of Management Board Defence

Membership in Supervisory Boards

Rheinmetall Automotive AG *)

Nitrochemie AG *)

Nitrochemie Aschau GmbH *)

Nitrochemie Wimmis AG *)

Rheinmetall Denel Munition (Pty) Ltd *)

Rheinmetall Waffe Munition South Africa (Pty) Ltd *)
(up to January 31, 2016)

*) *Affiliated mandates*

Horst Binnig
Bad Friedrichshall

Automotive

Chairman of the Executive of 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 Board of Directors

Pierburg Pump Technology GmbH *)
Chairman

Bertrandt AG

Peter Sebastian Krause
Erkrath
(from January 1, 2017)

Human Resources

Director of Industrial Relations
(from January 1, 2017)

Membership in Supervisory Boards

Rheinmetall Defence Electronics GmbH *)

Rheinmetall Landsysteme GmbH *)
Vorsitzender

Rheinmetall Waffe Munition GmbH *)
Chairman

Pierburg GmbH *)

Pierburg Pump Technology *)

KS Kolbenschmidt GmbH *)

KS Gleitlager GmbH *)

KSPG Holding USA Inc. *)
Member of the Board of Directors

*) *Affiliated mandates*

Senior Executive Officers

Dr. Rolf Giebeler, MPA (Harvard)
Bonn

Senior Executive Officer Law
General Counsel
(from January 1, 2017)

Peter Sebastian Krause
Erkrath

Human Resources and Senior Manage
(up to December 31, 2016)

Chief Compliance Officer

Michael Salzmann
Düsseldorf

Executive Board Automotive

Horst Binnig
Bad Friedrichshall

Chairman
Strategy, Marketing, Opera

Peter Sebastian Krause
Erkrath

Human Resources,Law
Director of Industrial Relations

Dr. Peter P. Merten
Herrsching

Finance and Controlling, IT

Management Board Defence

Armin Papperger
Düsseldorf
Chairman

Division Weapon and Ammunition

Helmut P. Merch
Erkrath

Finance and Controlling, IT

Dr. Andreas Schwer
Uhldingen-Mühlhofen

Rheinmetall International

Ben Hudson
Hannover

Division Vehicle Systems
(from January 1, 2016)

Gordon Hargreave
Düsseldorf

Division Electronic Solutions

Peter Sebastian Krause
Erkrath

Human Resources

Legal Information and Contact

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This report was published on March 23, 2017. 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.

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.

RHEINMETALL
GROUP